中国两栖爬行动物学



赵尔宓　　鹰岩　　合著

一九九三年

蛇蛙研究会与中国蛇蛙研究会出版



Draco maculatus (female). From a watercolor by Yi-sheng Wang.

HERPETOLOGY OF CHINA

BY ER-MI ZHAO AND KRAIG ADLER

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The Society is greatly indebted to the continuing generosity of Rudolf G. Arndt in support of the *Contributions to Herpetology* series. Professor Arndt has graciously defrayed part of the publication costs of this book in loving memory of his parents, Meta Magnus Arndt and Rudolf Alexander Arndt, who were devoted to books, education, travel, and writing.

The frontispiece, which depicts an adult female of *Draco maculatus*, was reproduced from a watercolor drawing by Yi-sheng Wang. The animal was collected at Dali, a village near Mt. Diaoluo, Lingshui County, Hainan Island, Hainan Province, China, and the specimen is presently number 64III6086 in the collection of the Chengdu Institute of Biology.

A word of explanation is in order concerning the Pinyin version of the name of the second author on the cover and title page. Ordinarily, in transliterating the names of Westerners into Chinese, the characters represent the nearest phonetic equivalent. In this instance, however, the Chinese characters derive from the original meanings of the names: from the Middle English *craig* (a steep, rugged rock or cliff), a word of Celt origin, and from the German *Adler* (eagle).

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INTRODUCTION



CHINA HAS ONE OF THE LARGEST HERPETOFAUNAS OF ANY COUNTRY; with 661 recognized species of amphibians and reptiles, it possesses nearly seven percent of the world's total (see Table 1 on page 8). This number of species is 165 more than that found in North America north of the Rio Grande River (Collins, 1990) and is more than three times the total (187) for all of Europe east to the Ural Mountains, as covered in the series, "Handbuch der Reptilien und Amphibien Europas" (W. Böhme, pers. comm., 1991). Several countries, however, have herpetofaunas larger than that of China (Mittermeier, Carr, Swingland, Werner, and Mast, 1992): Mexico has the largest number of species (999), followed by Brazil (983), Australia (883), Indonesia (870), and Colombia (790). Madagascar has the highest endemism of all (378 of 414 species, or 91.3%), followed by Australia (700 endemics, 79.3%). For comparison, 308 of China's 661 species are endemic (46.6%), including those species restricted to Taiwan and Hong Kong.

The Chinese herpetofauna is also exceedingly diverse—it includes 34 families and 164 genera. China bridges the Oriental and Palaearctic biogeographic zones; many members of the Chinese fauna have their closest affinities to species in South and Southeast Asia and some to other species in Europe and even in North America. Despite the size and relative importance of China's herpetofauna, however, there is no single previous work that comprehensively reviews all recognized taxa.

Purpose and Organization of This Book

In this book we provide a summary of the current taxonomic status and distribution of the amphibians and reptiles of China. Our geographic coverage treats all of mainland China, including two regions in western and southeastern Xizang (Tibet) that are claimed by China, but occupied by India, and two other localities along the Heilong Jiang (Amur River) in northeastern China, where the national boundary between China and the former Soviet Union* has been in dispute. Our book also encompasses the British territory of Hong Kong (which comprises a group of more than 250 islands and a peninsula on the adjacent mainland) and the nearby Portuguese-administered territory of Macao, the large island provinces of Hainan and Taiwan and their associated islands, and several groups of islands, shoals, and banks in the South China Sea. See Figure 1 (page 10) for a map of China that depicts the geographic coverage of this book.

* The political conversion that occurred in the former Soviet Union in 1991 resulted in numerous changes in the names or spellings of republics and cities, and these transformations continue to occur. The terms used in this book are current as of the spring of 1993.

TABLE 1. Genera and species of Chinese amphibians and reptiles. Endemics are those species restricted to China, including Taiwan and Hong Kong.

AMPHIBIA		**43 genera**	**274 species**	**175 endemics**
GYMNOPHIONA	*Caecilians*	(1)	(1)	(1)
Ichthyophiidae		1	1	1
CAUDATA	*Salamanders and Newts*	(13)	(35)	(28)
Hynobiidae		7	16	12
Cryptobranchidae		1	1	1
Salamandridae		5	18	15
SALIENTIA	*Frogs and Toads*	(29)	(238)	(146)
Discoglossidae		1	4	2
Pelobatidae		9	56	43
Bufonidae		2	17	8
Hylidae		1	7	3
Ranidae		6	96	59
Rhacophoridae		6	44	26
Microhylidae		4	14	5
REPTILIA		**121 genera**	**387 species**	**133 endemics**
TESTUDINES	*Turtles and Tortoises*	(22)	(34)	(12)
Platysternidae		1	1	0
Emydidae		9	21	11
Testudinidae		3	3	0
Cheloniidae		4	4	0
Dermochelyidae		1	1	0
Trionychidae		4	4	1
LACERTILIA	*Lizards*	(37)	(152)	(65)
Gekkonidae		10	30	9
Agamidae		10	53	24
Anguidae		1	4	2
Shinisauridae		1	1	1
Varanidae		1	2	1
Dibamidae		1	2	1
Lacertidae		4	23	10
Scincidae		9	37	17
SERPENTES	*Snakes*	(61)	(200)	(55)
Typhlopidae		2	4	1
Acrochordidae		1	1	0
Xenopeltidae		1	2	1
Uropeltidae		1	1	0
Boidae		2	3	0
Colubridae		36	144	45
Elapidae		13	23	1
Viperidae		5	22	7
CROCODYLIA	*Crocodiles and Alligators*	(1)	(1)	(1)
Alligatoridae		1	1	1

We have begun this book with a history of herpetological exploration and investigation in China (page 15). Our purpose is to develop a historical context for current research and also to provide an introduction to contemporary Chinese researchers and their activities, especially for the convenience of our colleagues outside China.

The keys (page 67) should enable readers to identify any adult Chinese amphibian or reptile to genus. In most instances the color plates (following page 96) can provide partial confirmation of generic identity.

The core of the book is an annotated checklist (page 97) and a series of supplementary distribution charts (page 293). The checklist includes every species and subspecies currently recognized as of 31 December 1992. Chinese localities given in the checklist, in those instances in which the names today are different from those used in the herpetological literature, are summarized in Appendix 1 (page 423), which gives equivalent names in Pinyin and minority languages and lists their provincial locations and map coordinates.

The names of mainland Chinese authorities are given in their original romanized form as published, unless an author later used the Pinyin form of transliteration; in such an instance, the original form used in the literature is given in parentheses. As of 1979, given names are officially no longer hyphenated on the Chinese mainland; however, we have retained the hyphen throughout this book since without it a person's initials can sometimes be misinterpreted or their given names and surname (family name) can be confused. The order of these names is given in its Western form throughout this book, with the surname last. Thus, for example, we use the form "Cheng-chao Liu" rather than "Liu Chengchao."

The geographical distribution charts for species (page 293) are arranged in two formats: by political unit and by zoogeographic region. The introduction to this chapter includes a brief summary of the seven major zoogeographical regions of China and of their subdivisions (page 285).

Our annotated bibliography (page 317) is intended as an introduction to the literature on Chinese amphibians and reptiles. The first section provides information on general biology as well as major taxonomic groups, venomous snakes, and snake bite. The second section is organized by geography and is in two parts. The first part covers China and is arranged by province or other political unit; the second part covers the countries surrounding China. In the third section of the bibliography we have listed all of the references cited in this book and some others of special interest.

As an aid for those who will use this book in the field, Appendix 2 (page 451) provides advice on collecting and preserving techniques. We are grateful to John E. Simmons, author of the most extensive guide to herpetological collecting and collections management, for contributing this useful section to our book.



FIGURE 1. Political map of China and surrounding countries. The shaded area in southeastern Xizang (Tibet) is occupied by India, but is claimed by China; species native to this area are included in this book. The islands, shoals, and banks in the South China Sea, enclosed within a dashed line, are also claimed by China. Abbreviated names of countries are: AF Afghanistan, BA Bangladesh, BH Bhutan, KR Kirgizstan, TJ Tajikistan, and UZ Uzbekistan. The Tropic of Cancer is at 23°30' North Latitude. This is a Lambert Azimuthal Equal-Area Projection map.

Since 1972, the majority of articles on Chinese amphibians and reptiles has appeared in one of the herpetological journals published in China. Because of the importance of these journals, the fact that they are not widely available outside China, and their sometimes irregular pagination, numbering, and publication schedule, we have given detailed bibliographic descriptions of them in Appendix 3 (page 467).

In summary, we intend for this volume to be used as a sourcebook for current herpetological investigations in China. In writing it, we have had to reach many decisions concerning taxonomy and other issues based on all the available, although often quite inadequate, data. Many of our conclusions will be revised, based on new information and new interpretations. If our book can prompt such re-evaluations, then it will have had some success, for we see it merely as a starting point. Indeed, the speed with which it is rendered obsolete will be the best measure of its success, since our ultimate goal is to stimulate interest in and to advance the knowledge of the amphibians and reptiles of China.

Acknowledgments

In a project of this size, we have had much assistance from organizations and individuals who have helped us in a multitude of ways. Our book could not have been undertaken unless it were possible for us to work together, side by side, for long periods of time, both in China and in the United States. Our informal discussions began in 1984 when Er-mi Zhao came to the United States (a visit arranged by Kenneth V. Kardong) and to Cornell University, where we first met. That visit was reciprocated in 1985 when Kraig Adler spent two months in China for meetings and discussions, as well as for field work on the mainland and on the islands of Hainan and Taiwan. This trip was undertaken through the auspices of the Distinguished Scholar Program of the Committee on Scholarly Communication with the People's Republic of China (CSCPRC, now called the Committee on Scholarly Communication with China), in cooperation with the United States National Academy of Sciences and the China Association of Science and Technology. We are grateful to Katherine Donahue for facilitating this scholarship award.

In 1987–1988, Er-mi Zhao, who was also a CSCPRC scholar, returned to the United States and Cornell University. It was during this long visit that the first draft of our book was completed. We thank Pamela Peirce for arranging the financial support for this trip. During 1991, Zhao returned once more to Cornell as a Visiting Scholar, supported jointly by Cornell's Office of Sponsored Programs and the research office of the New York State College of Agriculture and Life Sciences; we are grateful to Norman R. Scott and Brian F. Chabot, respectively, for providing the necessary funding. We also thank the Miller Institute for Basic

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Several of our colleagues have reviewed one or more sections of our book. In particular, we wish to thank Kuang-yang Lue, Hidetoshi Ota, and Hobart M. Smith, who reviewed the entire checklist. Other specialists reviewed specific sections of the checklist: (amphibians) Leo J. Borkin, Alain Dubois, Darrel R. Frost, Masafumi Matsui; (turtles) John B. Iverson, Peter C. H. Pritchard; (lizards) Natalia B. Ananjeva, Aaron M. Bauer, Ilya S. Darevsky, Tsutomu Hikida, Theodore J. Papenfuss, Nikolai N. Szczerbak; and (snakes) Ilya S. Darevsky, Philippe Golay, Nikolai L. Orlov, and Kenneth L. Williams. Hobart M. Smith's advice on nomenclatorial issues was especially helpful to us. John S. Applegarth and Alan E. Leviton have reviewed the history chapter. We are most grateful to all. We have not accepted the advice of our colleagues in every instance, however, and in any event we assume full responsibility for the result.

Many colleagues have loaned us color photographs to use for our plates. Their cooperation in allowing us free use of these original materials is highly appreciated and adds greatly to the utility of our book. For this purpose we thank Ray E. Ashton, Jr., Anthony Bogadek, Leo J. Borkin, Arden H. Brame, Jr. II, Chun-mo Cai, Bi-hui Chen, Merel J. Cox, Ilya S. Darevsky, Indrancil Das, David M. Dennis, Peter Paul van Dijk, William A. Dunson, Emmett R. Easton, Valery K. Eremtschenko, Richard C. Goris, Wolfgang Grossmann, Mei-hua Huang, John B. Iverson, Nabhitabhata Jarujin, Zhi-tong Kou, Mitsuru Kuramoto, Michael Lau, James D. Lazell, Kuang-yang Lue, J. Robert Macey, Helmut Mägdefrau, Ulrich Manthey, Masafumi Matsui, William P. McCord, Sherman A. Minton, Edward O. Moll, Robert W. Murphy, T. S. N. Murthy, Fritz-Jürgen Obst, Nikolai L. Orlov, Mark T. O'Shea, Hidetoshi Ota, Klaus-Dieter Schulz, Lucia Liu Severinghaus, Anslem de Silva, Robert B. Stuebing, Sen Takenaka, Nobuo Tamiya, Michihisa Toriba, Anthony T. Tu, Gernot Vogel, Harold K. Voris, Gang Wei, Guan-fu Wu, Shu-hui Wu, Wolfgang Wüster, Da-tong Yang, Suh Yung Yang, Chong-yong Yao, Hon-tsen Yu, Zheng-dong Zhang, Ji Zheng, Jia-xing Zhou, and Yu Zong. In choosing photographs of animals to reproduce, we have given preference to those collected within China, despite aesthetic considerations of extralimital specimens.

For assistance in supplying information and photographs, and for other assistance with the chapter on history, we thank Natalia B. Ananjeva, Anthony Bogadek, Leo J. Borkin, Han-bo Ding, Evgeny A. Dunayev, Hajime Fukada, Mikhail L. Golubev, the late Shu-qin Hu, Shou-hsian Mao, and Hidetoshi Ota. For answering our technical questions, often made in repeated inquiries, we thank

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To verify published information we have had to obtain copies of all titles cited in our bibliography. Given that many of them were published in obscure or old journals and books, this has been no small task. Fortunately, we have had the capable assistance of a number of library personnel, primarily at Cornell University (David W. Corson, Laura Linke, Margaret Rogers, Mary A. Ochs, Caroline T. Spicer), but also at the Field Museum of Natural History (W. Peyton Fawcett) and the British Museum (Nat. Hist.)(Susan Goodman, Ann Datta). Several colleagues, in particular Natalia B. Ananjeva, Leo J. Borkin, Wen-yuan Qü, and Da-tong Yang, have supplied copies of obscure literature, and for other bibliographic assistance we thank John and Betty Johnson and Rudolph W. Sabbot. In addition, the help of Barbara Berthelsen and Robert Kibbee, map librarians at Cornell, has been invaluable to us in finding many mainland Chinese localities. For assistance with other mainland localities, we thank Wen-xuan Cao, Bi-hui Chen, Xin-ping Deng, Mu-peng Huang, Jiong-hua Pan, Ye-tang Wen, Ke-ming Xü, Mu-guang Xue, Chong-yong Yao, Hong Yuan, and Chang-fu Zhong. For assistance with Taiwanese localities, we thank Richard C. Goris, Mitsuru Kuramoto, Kuang-yang Lue, Shou-hsian Mao, Masafumi Matsui, and Hidetoshi Ota.

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Dedication

We dedicate this book to the loving memory of our mothers, Yue-qing Shi and Jennie Belle Adler, who fostered our early interest in amphibians and reptiles, and to our supportive spouses, Mao-li Tu and Dolores P. Adler, who have made it possible for us to continue that interest.

ER-MI ZHAO
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Huangshan, Anhui
20 July 1992

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Studies by Chinese Scholars of Antiquity



CONFUCIUS (THE LATIN NAME FOR FU-TZU K'UNG [FU-ZI KUNG], 551–479 B.C.), the greatest of China's philosophers, may have been the first to provide a written record of his country's amphibians and reptiles. Confucius sought to revive ancient customs and, in about 528 B.C., began to collect and edit records of native folk songs under the title "Shih Ching" (Book of Songs, or Classic of Poetry). These poems included descriptions of venomous snakes, the uses of reptiles as food, and drums covered in alligator skin, among several other herpetological topics.

The "Shan Hai Ching" (Classic of the Mountains and Rivers), written by unknown authors sometime between 500 and 300 B.C., describes the animals and plants of various regions in China. In the "South Mountains" (Nan Ling) of

southern China, for example, two kinds of *fu chong* (probably *Deinagkistrodon acutus* and *Agkistrodon blomhoffii brevicaudus*) are mentioned, as well as pythons (*ba she* or *lin she*) that supposedly ate elephants and digested them for as long as three years before regurgitating the bones (Zhao, 1980). There are also descriptions of some salamanders, the *ni* and *te*, which are probably referable to the giant salamander, *Andrias davidianus*.

Later Chinese writers made increasingly more detailed observations. Quan Yang, in his book "Wu Li Lun" (The Way of Things) of the third century A.D., first mentions the forked tongue of the serpent. During the Tang dynasty (618–906 A.D.), Xun Liu made numerous detailed observations. Contrary to popular notions about the *liang tou she* or two-headed snake (genus *Calamaria*), he remarked that it moved only in one direction, although it had a tail that resembled the head (see Plate 33B). In his book entitled "Ling Piao Lu I" (Strange Ways of Southern Men and Things), which described what is today Guangdong Province in southern China, Liu also gave detailed descriptions of long-tailed fishes with four legs and red bellies, probably one or more species of newts of the family Salamandridae.

Many writings of these times were concerned with materia medica, the remedial substances used in traditional medicine, in which amphibians and reptiles played an important part, as they still do today. In one such book, the "Ben Cao Shi Yi" (Omissions From Previous Pharmacopoeias) published in 739 A.D., Cang-qi Chen described in great detail the various methods for preparing *fu she* (*Agkistrodon blomhoffii brevicaudus*) for medicinal purposes.

Early Chinese authors divided animals into two groups, one of which (*chong*) included all amphibians and reptiles, which were grouped with the invertebrates. This separation from all other vertebrates (*shou*) became embedded within the structure of the language itself (for example, the radical for *chong* was incorporated into the names of some frogs and snakes; Needham, 1986). The mental images connected with the word *chong* made it difficult for the Chinese to properly classify amphibians and reptiles. The rudiments of a more detailed biological classification are seen in the writings of authors of later periods, such as Cheng-shi Duan in his book, "You Yang Za Zhu" (The You Yang Miscellany), published in 863 A.D. Using an ecological classification, Duan divided snakes into four kinds: those that live in water, grass, and trees, and another kind that burrows underground.



FIGURE 2. Shi-zhen Li.

It was not until 1596, however, that the great pharmacologist of the Ming dynasty, Shi-zhen Li (1518–1593; see Chang, 1960), in his book "Ben Cao Gang Mu" (The Great Pharmacopoeia), provided a credible arrangement for animals, but note that the separation of amphibians from *chong* was only partly complete. According to Li there are five kinds of animals:

1. *Chong*: insects and worms, but also frogs and most salamanders;
2. *Lin*: the scaled animals and their relatives, divisible into three groups: the dragons, comprising lizards and the alligator; snakes, including both "golden" and "silver snakes" (the legless lizards, *Ophisaurus*); and fishes, one subgroup of which was scaleless and included the giant salamander (*Andrias davidianus*);
3. *Jai*: molluscs and other shelled animals, such as turtles and tortoises;
4. *Qing*: the birds, including bats; and
5. *Shou*: most mammals.

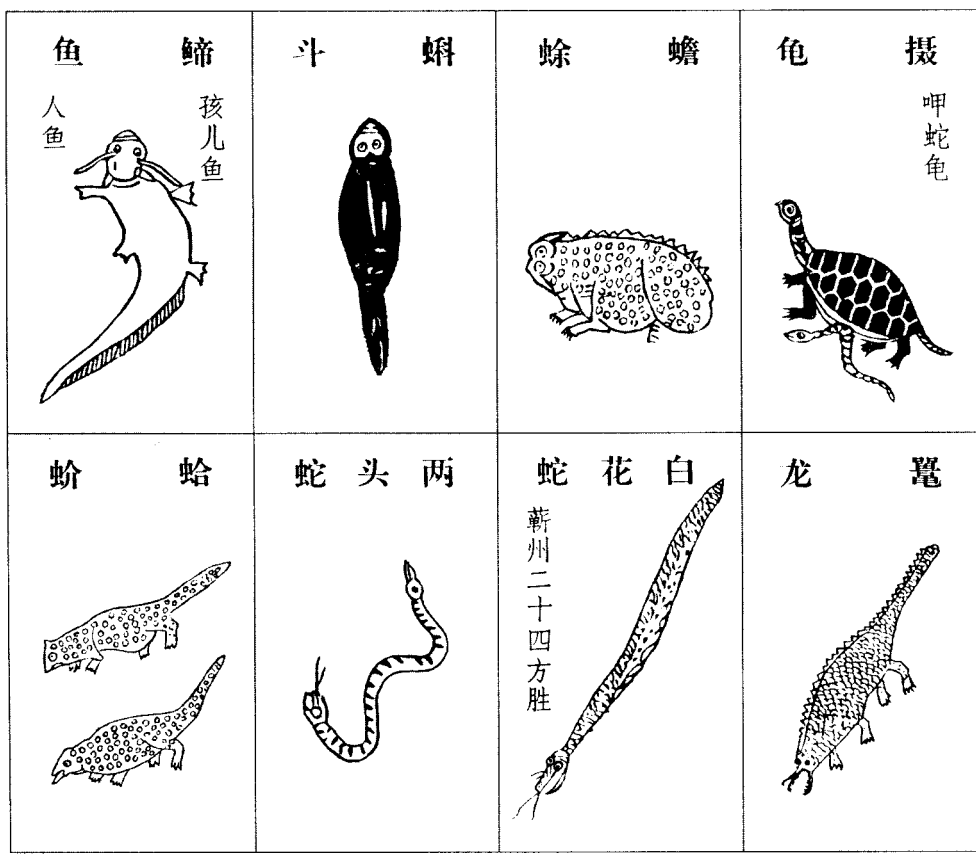

FIGURE 3. Illustrations of amphibians and reptiles from Shi-zhen Li's "Ben Cao Gang Mu" (1596). Top row, from left: *Andrias davidianus*, a frog tadpole, *Bufo*, and *Cistoclemmys flavomarginata* (the "snake-eating turtle"). Bottom row: *Gekko gecko*, *Calamaria* (the "two-headed snake"), *Deinagkistrodon acutus*, and *Alligator sinensis*.

In book 43, covering the *lin*, Li gives the common characteristics of snakes, including the forked tongue, their alleged deafness, the consumption of prey whole, and their manner of shedding skin. He provided lists of species, including synonymies of their common names, their distribution, habits, and habitats, and their uses as food and for medicine, in a format reminiscent of the books of his contemporary, the Renaissance scholar of 16th century Europe, Conrad Gessner (1516–1565), as exemplified in the latter's five-volume series entitled "Historia Animalium" (1551–1587). Li also gave detailed and often accurate descriptions of many species, including the Chinese alligator, or *t'o* (today spelled *tuo*), which he said resembles a dragon. Thus, although many species of reptiles, such as the alligator, were familiar to Chinese scholars for more than a millennium, they did not publish scientific descriptions. The alligator, for example, was not made known officially to science until 1879, and then by a French naturalist.

The Era of Foreign Explorations

The next chapter in the study of China's amphibians and reptiles began with the entry of foreigners, mostly Europeans, into the country. China at that time and until the Opium War of 1839–1842 was a far larger country than it is today. Although the country's boundaries have fluctuated over the centuries, at their maximum extent they encompassed Mongolia, easternmost Siberia (including Sakhalin Island), Korea, the Ryukyu Archipelago of southern Japan, and Taiwan* southward through all of Indochina to Singapore, west to and including Burma, northeastern India, Nepal, the Pamir Mountains of eastern Afghanistan and Tajikistan, and portions of other bordering lands that are today parts of Kazakhstan and Russia (to Lake Balkhash and nearly to Lake Baikal, respectively). For reference, see the map on page 10.

In the following historical discussion, only the main developments and people can be mentioned. For a discussion of the progress of scientific and biological studies in China, as a broader context for this chapter, see Joseph Needham's scholarly treatise (1954–1986). A detailed description of the activities of pre-20th century European naturalists in China, including detailed itineraries of their explorations and lists of their publications, is contained in Emil Bretschneider's "History of European Botanical Discoveries in China" (1898). (The principal writings of some are listed in the technical section of our bibliography.) Sultanov and Persiyanova (1982) published a volume similar to Bretschneider's that covers Middle Asia from 1820 to 1975. Adler (1989) provides biographies of many herpetologists who were active in China or published on the Chinese fauna.

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* Taiwan was named "Ilha Formosa" (beautiful island) by Portuguese mariners late in the 16th century, when it became generally known as Formosa. This practice continued until Japanese occupation in 1895, after which time the Chinese name Taiwan became more prevalent.

Early European Visitors to China

Among the first Europeans to visit China were Venetian merchants—the Polos—in the 13th century. Marco Polo (1254–1324), in fact, recorded many species of reptiles, including alligators. He wrote about them in his manuscripts, which were first published only in 1559 and which described his famous travels to and within the borders of Cathay, as China, or more specifically northern China, was then known in Europe. The Portuguese first became established near Canton (now Guangzhou) in 1514, followed by the Dutch in Taiwan (1622), and the English in Amoy (Xiamen) in 1625 and later in Canton (1637). From the north, the Russians first came to Peking* in 1567 and again in 1619.

These first foreign travelers were merchants and Roman Catholic missionaries. Their activities were confined primarily to southern ports and the northern frontier with Russia. Among them was Pehr, or Peter, Osbeck (1723–1805), who traveled to China and the East Indies in 1751–1752 as chaplain to the Swedish East India Trading Company aboard their merchant ship, the *Prince Charles*. Osbeck had been a student of Carl Linnaeus (•1707–1778) and later graduated from Uppsala University in 1754. His travel book, "Dagbok öfwer en Ostindisk Resa," first published in Stockholm in 1757 and later in German and English editions, includes descriptions of Chinese frogs and lizards. These probably refer to the species now known as *Rana rugulosa* and *Hemidactylus bowringii*, and examples of both were observed by Osbeck at Whampoa (now Huangpu), a port on the Pearl River (Zhu Jiang) just downstream from Canton, where the *Prince Charles* anchored for four months.

Another early visitor was John Reeves (1774–1856), an employee of the British East India Company and its Chief Inspector of Tea in China. Several common species of Chinese reptiles, as well as one of the most spectacular species of pheasants, are named after him. Reeves worked in Macao and Canton from 1812 to 1831, during which period he sent large collections of animal and plant specimens and drawings to London. His son, John R. Reeves (1804–1877), also in the employ of the East India Company in China, likewise sent natural history material to the museum in London. Most of their reptiles were named by John E. Gray (•1800–1875) of the British Museum, who also described and named many other Chinese species from materials collected in British India.

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* The name of China's present capital has changed several times. Historically, it had been Peking (northern capital), but from 1261 was called Dadu. With the removal of the capital to Nanking (today spelled Nanjing) in 1367, it was re-named Peiping (northern peace), and then in 1420 became Peking again. The name was changed to Peiping once more from 1928 to 1949, after which the name Peking was restored until finally, in 1979, it became Beijing when the Wade-Giles system of transliteration to the Roman alphabet was abandoned in favor of Pinyin (phonetic spelling).

• Those naturalists whose biographies are included in Adler's 1989 book are marked with a diamond (•) in this chapter.



FIGURE 4. Pehr Osbeck, John Reeves (senior), and John E. Gray.

The Prussian cargo ship, *Princess Louise*, on a circumnavigation in 1830–1832, briefly visited Hong Kong, Macao, and Canton in 1831. The ship's naturalist, F. J. F. Meyen (1804–1840), a botanist, made some herpetological collections that were later described by A. F. A. Wiegmann (•1802–1841) in Berlin. These collections included the types of several new species, among them *Rana rugulosa* and *Pelodiscus sinensis*. Earlier, Wiegmann's teacher in Berlin, Hinrich Lichtenstein (1780–1857), had described some widespread Central Asian reptiles that are also native to China.

During the 18th and early 19th centuries, many wide-ranging Chinese species were described by foreign naturalists from materials collected in regions adjacent to China in Russian Central Asia, British India, Southeast Asia, and Japan. The German naturalists J. G. Schneider (•1750–1822) and Johann Gravenhorst (•1777–1857), who were colleagues at the university in Breslau (today Wrocław, Poland), were among the first to describe many of these species, based primarily upon specimens brought back to Europe by merchants, sailors, and others traveling in Southeast Asia. Among these were the distinctive species *Rana cancrivora, Cosymbotus platyurus, Acrochordus granulatus, Bungarus fasciatus,* and *Hydrophis fasciatus*. In Indochina, French influence began in the 17th century and large collections made there and in other parts of Asia were returned to the Museum d'Histoire Naturelle in Paris for description by Georges Cuvier (•1769–1832), Constant Duméril (•1774–1860), and Gabriel Bibron (•1806–1848).

The Dutch, whose East India company began trading in the East Indies as early as the 16th century, did not make large collections until the establishment of a natural history commission to the Dutch Indies in 1820. Many species from Java and Japan that are also native to China were thus named by the naturalist-

collectors Heinrich Boie (•1794–1827), J. C. van Hasselt (1797–1823), Heinrich Kuhl (1797–1821), Salomon Müller (1804–1864), and Carl Reinwardt (1773–1854). Their collections were sent to the Rijksmuseum in Leiden for further study and description by Hermann Schlegel (•1804–1884). Some other Chinese species were named by Leopold Fitzinger (•1802–1884) in Vienna and by a Swiss naturalist, Johann J. von Tschudi (•1818–1889), but Fitzinger and Tschudi are best known for having named a large proportion of the genera of Chinese amphibians and reptiles, including the well-known taxa *Ichthyophis, Hynobius, Andrias, Microhyla, Eretmochelys, Mabuya,* and *Elaphe.*

In Central Asia, the Russian government sponsored a number of expeditions to southern Russia and adjacent regions, primarily for military and commercial

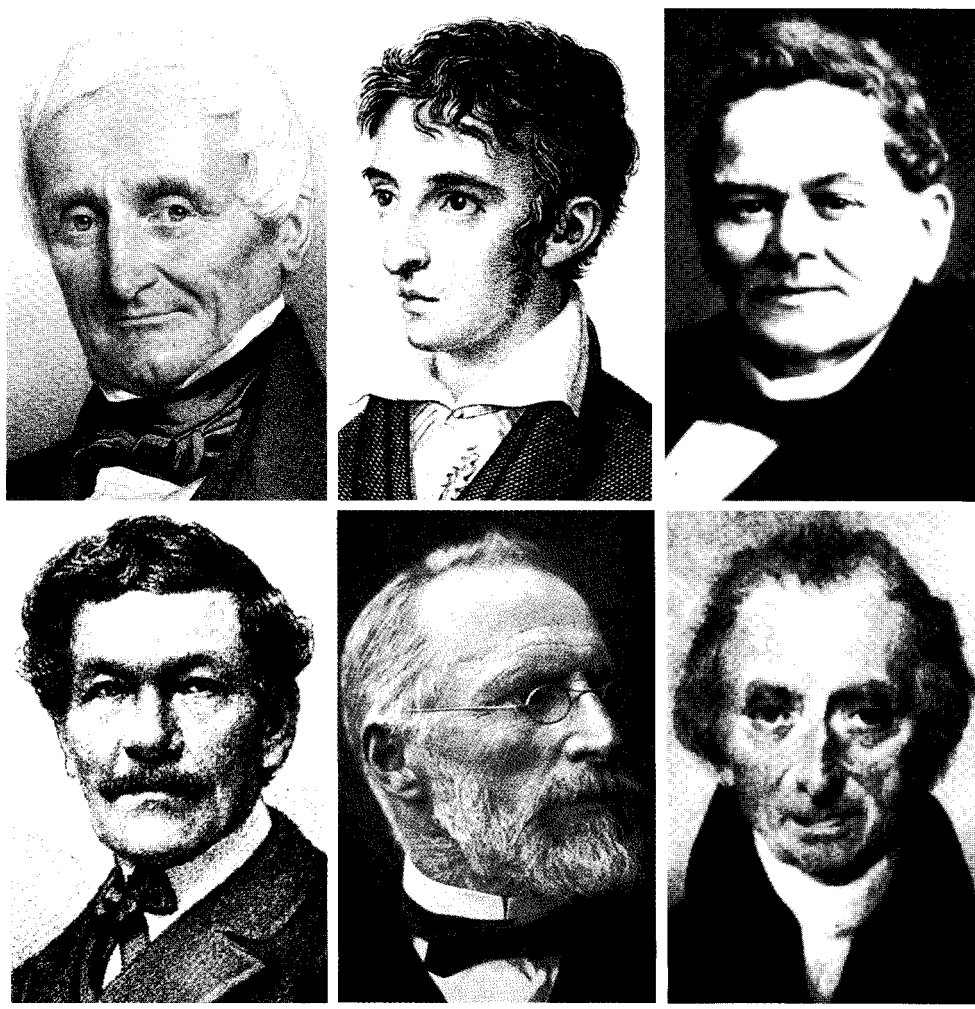


FIGURE 5. Top row: Constant Duméril, Heinrich Boie, and Hermann Schlegel. Bottom row: Leopold Fitzinger, Johann J. von Tschudi, and Peter S. Pallas.

reasons, but large natural history collections were also made. These collections resulted in the description of numerous species of Asian amphibians and reptiles by Peter S. Pallas (1741–1811), Eduard Eversmann (1794–1860), Eduard Eichwald (1795–1876), Edouard Ménétriés (1802–1861), and others. Pallas, in particular, named several of the most widely ranging Chinese species, including *Eryx miliaris, Elaphe dione,* and four species of *Eremias* and *Phrynocephalus.*

Scientific Consequences of the Opium War

Commercial relations between China and the foreigners did not remain peaceful for long. The illegal importation of opium into China from British India produced strong opposition from the Chinese people and government, which led to the Opium War. By the end of the war in 1842 China fell, Hong Kong Island and a peninsula on the neighboring mainland (Kowloon) were ceded to the British (the adjacent New Territories were added in 1898), and five other so-called treaty ports were opened to foreign trade. Within two decades, another eleven ports were opened, some of them far inland, both to unfettered commerce and to Catholic and Protestant missionaries. This series of events in turn led to the first extensive scientific collections of amphibians and reptiles in China.

One immediate effect of the Opium War was to make China more fully accessible to foreign, primarily European, naturalists. One herpetologist actually arrived with the British troops that were involved in the conflict. Theodore Cantor (1809–1860), a Danish naturalist who served as a surgeon to the East India Company in Calcutta, volunteered to accompany British forces sent to China in 1840. His regiment, after first being detained at Lantau Island (Hong Kong), was



FIGURE 6. Theodore Cantor, Robert Swinhoe, and Edward Blyth.

stationed on Chusan (Zhoushan), the largest island in a group of islands of the same name situated southeast of Shanghai, where he made collections of amphibians and reptiles. Among the new species discovered there and named by Cantor were *Bufo gargarizans, Mauremys mutica, Elaphe mandarinus,* and *Zaocys dhumnades*. He published a technical report on these collections in three papers in 1842 and also in the form of a well-illustrated booklet, "Zoology of Chusan" (Calcutta, 1842). Other Chinese species were named by Cantor from specimens collected in India and Malaya, including the king cobra (*Ophiophagus hannah*).

Another zoologist in British service, Robert Swinhoe (1836–1877), went to China in 1854 as a member of the diplomatic corps. He was stationed first in Hong Kong and later at Amoy (Xiamen) and other cities along the mainland coast of China and in Formosa. In these places he made large collections of amphibians and reptiles, which he identified and published himself. Other specimens were sent to colleagues for description, primarily to Edward Blyth (•1810–1873) in Calcutta, and to John E. Gray, mentioned earlier, and Albert Günther (•1830–1914) in London. Appropriately, some of the new species they described bear the names *swinhoana, swinhoei,* or *swinhonis*. Swinhoe also made excursions to Hainan and northern China, and travelled up the Yangtze River (Chang Jiang) as far as Sichuan Province.

During this same period, William Stimpson (1832–1872), a naturalist attached to the American naval squadron comprising the North Pacific Exploring Expedition (1853–1856) under the command of Captain John Rodgers, United States Navy, made collections at Hong Kong, Cum-Sing-Moon (Kap Shui Mun, Lantau Island), and at Whampoa (Huangpu). Among Stimpson's amphibians and reptiles were a number of new species—including the widely distributed frogs *Polypedates megacephalus* and *Microhyla pulchra*—that were described by Edward Hallowell (1808–1860), a physician and amateur naturalist in Philadelphia. Hallowell's paper was published posthumously in 1861 under the editorship of the American zoologist, Edward D. Cope (•1840–1897), who later also described some new Chinese taxa.

In 1882–1885, an Italian corvette, the *Vettor Pisani*, which had visited Korea and Manchuria in 1878–1881, again circumnavigated the earth and briefly stopped in Hong Kong. A naval officer, Paolo Parenti, who also served as the ship's naturalist, reported on the herpetological collections in 1886.

French Missionary and Amateur Naturalists

The many European missionaries to China included two French Catholic priests who were also naturalists: Armand David (1826–1900) and Pierre-Marie Heude (1836–1902). David was a Lazarist missionary (though a confirmed Darwinist)

who arrived in China in 1862 and, until his final departure in 1874, made important collections in many parts of China. These explorations included local excursions in the Peking area during 1862–1865, followed by three major expeditions. The first of these, in 1866, was from Peking westward—through a region that David called "Mongolia" but is today part of Nei Mongol (Inner Mongolia)—to the Ordos Plateau, situated in the great bend of the Yellow River (Huang He). A second trip, in 1868–1870, ascended the Yangtze River to Ch'ung King (Chongqing), then by land to Mupin (Baoxing) in western Sichuan (a region that David referred to as "Tibet"). A third expedition, in 1872–1874, went south from Peking to Honan (Henan) Province, then up the Yellow River to Sian fu (Xi'an) in Shaanxi Province. David collected extensively in various mountainous regions west of Xi'an near the Gansu border before moving overland southeastward to Kiangsi (Jiangxi) and finally to Fukien (Fujian) on the coast.

David's remarkable discoveries in China, made under the patronage of the Museum d'Histoire Naturelle in Paris, include the giant panda and Père David's deer. Although he was primarily an ornithologist, David named several new species of amphibians himself, but his most spectacular herpetological discovery, the giant salamander (*Andrias davidianus*), was named in his honor by a Paris colleague, Émile Blanchard (1819–1900). Other specimens collected by David were described and named by another French specialist, Henri-Émile Sauvage (1842–1917). Father David's diary, describing his travels in China, has been published in English translation (David, 1949, edited by Helen M. Fox; see also Boutan, 1991), and the details of his scientific expeditions in China were included in a book (1875) and several accounts published in the *Nouvelles Archives* series

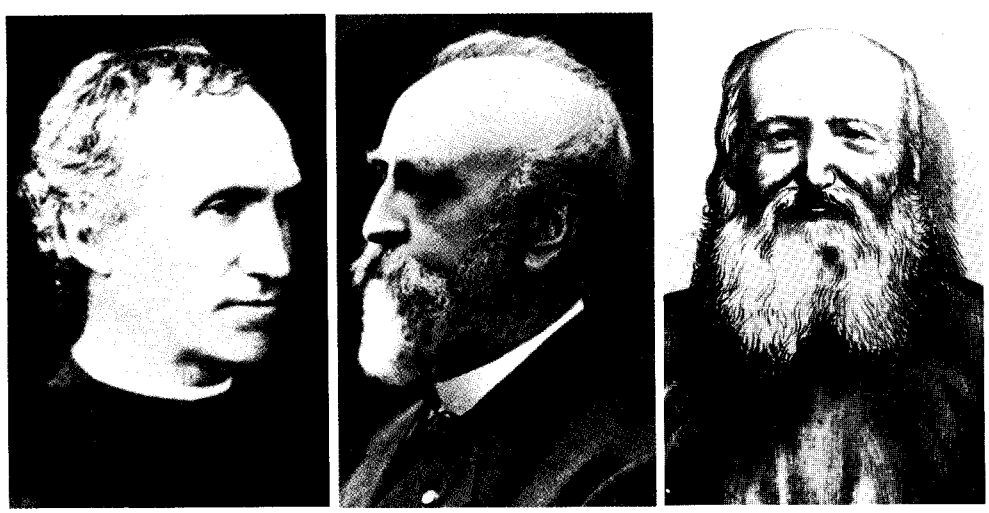


FIGURE 7. Armand David, Henri-Émile Sauvage, and Pierre-Marie Heude.

of the Paris museum, all written by David himself. These major works are listed in the technical bibliography of this book.

Father Heude came to China in 1868 and was stationed at Zi-ka-wei (Xüjiahui), a missionary establishment just southwest of Shanghai. He founded a museum there, which was later transferred to Shanghai and renamed the Musée Heude. Together with his Jesuit colleagues, he founded in 1880 what was the first exclusively natural history journal in China, *Mémoires concernant l'Histoire Naturelle de l'Empire Chinois*, printed by the Catholic mission in Shanghai. In the first volume, Heude published an extensive monograph on trionychid turtles and described as new nine genera and 13 species, none of which is recognized today. In fairness, the systematics of Chinese turtles (and that of trionychids in particular) have long been in confusion, and Heude's monograph is still a valuable source of detailed information on the genera *Pelodiscus* and *Rafetus*. Most of his field work was in Anhui and Jiangsu, but it extended into the adjoining provinces as well. Further details of his research, which primarily concerned mammals, and of his travels in Asia may be found in volume 5 of the *Mémoires* (1906).

Another French amateur naturalist, Albert-Auguste Fauvel (1851–1909), arrived in China in 1872 as an employee of the Imperial Chinese Maritime Customs. At first stationed in Peking, he was transferred to Chefoo (Yantai), where he collected plants and animals in Shandong Province. Later he relocated to Shanghai where, in 1879, he described and officially named *Alligator sinensis*. Although this species had been known to Chinese writers since ancient times, Europeans paid little attention to it. Marco Polo wrote about it, and Swinhoe saw one in a Shanghai market in 1869, but he could not get the owners to part with it. Remarkably, Father Heude, who lived within the alligator's range for 34 years, was never able to obtain a specimen.

Russian and British Military-Scientific Expeditions in China

In the 1860s, the dominant foreign powers surrounding China—Russia to the north in Siberia and Britain to the south in her Indian dominions—began a long series of exploring expeditions into China. The main purpose was for military reconnaissance, but naturalists, including several persons who made significant contributions to Chinese herpetology, were often included in these field parties. The most extensive expeditions were those of Nikolai M. Przhevalsky (1839–1888) who made the first scientific surveys of the full east-west extent of northern China. At the Academy of the General Staff in St. Petersburg, during 1860–1861, Przhevalsky studied military and natural history, geography, and surveying, essential subjects for a future explorer. His ancestry was Russian Cossack and Polish nobility, the latter accounting for the Polish spelling of his name (Przewalski) used for the many new species of Asian plants and animals named for him,

including some lizards and, most famous of all, a new species of wild horse that he discovered in Mongolia.

In all, Przhevalsky made five expeditions to China and wrote a book detailing each of them, as listed in the bibliography of this book; a summary volume, with maps of his expedition routes, also has been published (Rayfield, 1976). His first expedition was to the Amur region of northeast China (1867–1869), part of which had been ceded to Russia in the treaties of 1858 and 1860. There he surveyed the Amur (Heilong Jiang) and Ussuri (Wusuli) river basins, where he observed many turtles. His 1870 book on the subject included natural history observations. Previously, the naturalist Richard K. Maack, or "Maak" (1825–1886), a teacher at Russian schools in Irkutsk, had explored the Amur and Ussuri basins and collected some reptiles that subsequently were described by him and by Johann F. Brandt (1802–1879) at the zoological museum in St. Petersburg.

Przhevalsky's second expedition (1871–1873), his first to Central Asia, was made under the auspices of the Russian Ambassador in Peking, Alexander Vlangali. One species of *Phrynocephalus* was named after Vlangali by the St. Petersburg zoologist Alexander Strauch (•1832–1893), who published the herpetological results of this expedition in 1876. The route included the northern extent of the Huang He (Yellow River), which loops around the edges of the Ordos Plateau, a region that had been explored briefly by Father David in 1866. From there, Przhevalsky travelled westward through Gansu as far west as Kuku Nor (Qinghai Hu [lake]).

Przhevalsky's third Chinese expedition (1876–1878) was further to the west, in what is today Xinjiang Uygur Autonomous Region (formerly Sinkiang) and in



FIGURE 8. Nikolai Przhevalsky, Alexander Strauch, and Jacques von Bedriaga.

the 1870s was called Eastern Turkestan and Dzungaria, which are separated by the Tian Shan range into, respectively, the southern and northern portions of present-day Xinjiang. He journeyed as far east as the large lake Lob Nor (Lop Nur). The fourth expedition (1879–1880) crossed northern Xinjiang and western Mongolia, south to the Tanglha (Tanggula) Mountain Range on the northern border of Tibet, and returned to Russia via Mongolia. Przhevalsky's fifth and last expedition to China (1883–1885) retraced the latter part of his fourth journey, but then travelled a new route in southwestern Xinjiang to Khotan (Hotan), a settlement made famous as part of the silk-trade routes of the Middle Ages, before returning northward to Karakol, near Issyk-Kul (lake) in present-day Kirgizstan.

It was at Karakol, in 1888, that Przhevalsky died as he was about to embark on another Chinese expedition. In 1893, Czar Alexander III re-named the town Przhevalsk to honor the explorer's military accomplishments. Przhevalsky's lieutenants, in particular Peter K. Kozlov (1863–1935) and Vsevolod I. Roborovsky (1856–1910), carried out several additional surveys in China. Collectively, the Przhevalsky expeditions amassed an enormous number of botanical and zoological specimens, all of which were returned to St. Petersburg. The amphibians and reptiles, amounting to some 1200 specimens, were studied primarily by Jacques von Bedriaga (•1854–1906), a Russian expatriate then living in Italy, and the results were published in two papers and also in a major monograph, issued in four parts (1898–1912), under the general title "Wissenschaftliche Resultate der von N. M. Przewalski nach Central-Asien unternommenen Reisen."

Russian activity in China greatly concerned the British, who undertook expeditions of their own. Among those of herpetological interest, the first chronologically was that of John Anderson (•1833–1900), a British physician and naturalist who, in 1864, became curator of the Indian Museum in Calcutta. In 1868, he joined the expedition of Edward B. Sladen to China as medical officer and naturalist. The stated purpose of the trip was to establish trade routes from India to coastal China via the Irrawaddy River of Burma. Anderson's group proceeded only as far as Momein (Tengchong) in western Yunnan Province, for the party was turned back there by the Chinese.

A second attempt to enter Yunnan, in 1875, led by Horace Browne, was even less successful and was stopped only three days' march beyond the Burmese border. Nevertheless, Anderson made large collections in western Yunnan and Burma, which led to his elaborate book, "Anatomical and Zoological Researches . . . of the Two Expeditions to Western Yunnan" ("1878" [1879]). Besides his descriptions of many new species of amphibians and reptiles native to southwestern China, Anderson's book contained the first extensive and illustrated monograph of the rich turtle fauna of Southeast Asia. He also published a popular book describing his two expeditions to China, entitled "Mandalay to Momein" (1876).

Ferdinand Stoliczka (1838–1874), an Austrian geologist and naturalist, became paleontologist to the Geological Survey of India in 1862. He made important zoological surveys in India, Kashmir, and in the western Himalayas. In 1870, the British Government sent a military-scientific expedition under T. Douglas Forsyth to Yarkand (Shache, in western Xinjiang); the herpetological results were published in 1872 by John Anderson. In 1873, a second expedition to Yarkand was organized under Forsyth, to which Stoliczka was attached as naturalist. The party entered China from Kashmir, crossing the snow-capped Karakoram and Kunlun ranges of the western Himalayas into western Xinjiang. Stoliczka visited many places including Yarkand, Kashgar (Kashi, another of the old silk-trade settlements), and the Pamir range, thus preceding Przhevalsky's journey through this region by a decade.

On the return route, Stoliczka became seriously ill re-crossing the Karakoram at a point just east of the second highest peak in the world (variously named Dapsang, Godwin Austen, or K2) and he died in Murghi (Kashmir). His herpetological specimens were studied by William T. Blanford (1832–1905), a colleague at the geological survey in Calcutta, and published in 1878 as part six of the series "Scientific Results of the Second Yarkand Mission" (1878–1891). A popular book about the first expedition, entitled "Lahore to Yarkand," was published in 1873 by Henderson and Hume. Blanford himself published on numerous collections of amphibians and reptiles from Persia and British India, including many species also native to China, and he made one excursion to the Tibetan frontier, via Sikkim, in 1872. Another colleague at the geological survey in Calcutta, William Theobald (1829–1908), also described some species native to China that were based on materials collected at various sites in British India.



FIGURE 9. John Anderson, Ferdinand Stoliczka, and William T. Blanford.

Foreign Collectors in China During 1890–1940

Numerous other foreign naturalists traveled in China, among whom we will mention only the following few who made important herpetological collections. In 1898, Nikolai F. Kashchenko (1855–1935), a Russian naturalist and professor at Imperial Tomsk University, conducted a survey of the vertebrates of the Altai, a mountainous region that comprises the northernmost tip of Xinjiang and adjacent Russia and Mongolia. During the period 1917–1923, one of Kashchenko's former students, Alexander A. Emelianov (1878–1946), made collections in the Altai and also in Manchuria, which was then largely under Russian control. At that time the Trans-Siberian Railway passed through Manchuria, but ended at the Pacific port of Vladivostok, as it still does today. Emelianov collected at stations along the railway route, including the Chinese Eastern Railway, a spur of the Trans-Siberian line, from Harbin south to Port Arthur (Lüshun). Later, after moving to Vladivostok, he published his major work, "Snakes of the Far Eastern District [of Russia]" (1929), which covers many species that are native to northeastern China. Emelianov named two taxa of Chinese pitvipers: *Agkistrodon saxatilis* and *A. ussuriensis*.

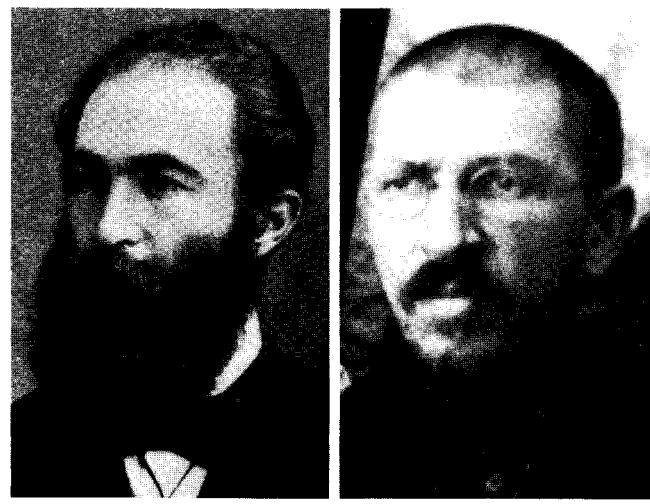


FIGURE 10. Nikolai F. Kashchenko and Alexander A. Emelianov.

Peter A. Pavlov (sometimes spelled Pavloff or Pavlow), a Russian émigré who lived in China following the Bolshevik Revolution and was associated with the Sungari (Songhua) River Biological Station in Harbin, studied the amphibians and reptiles of northeastern China. His first report (1926) covered the herpetofauna of Manchuria, based on collections of the Manchurian Research Society Museum in Harbin. Later, when Pavlov was on the staff of the Musée Hoang ho Pai ho de Tien Tsin (now the Tianjin Museum of Natural History in Tianjin), he published additional papers based on collections in that museum. None of his several new taxa are presently recognized. Anatoly A. Kostin (1913–?), another Russian expatriate who worked in Harbin a decade later, published a number of studies on the herpetofauna of Manchuria.

Several British naturalists made collections in China during this same period. Frank Wall (•1868–1950), a British physician and officer with the Indian Medical Service, had an amateur interest in snakes. He was stationed at various posts throughout the Indian Empire from 1893 to 1925, including India, Ceylon, Burma, and Assam, from which places he described large collections of snakes. These contained many species new to science and included several that are native to China. During 1900–1902, Wall visited China as a member of British expeditionary forces and, coincidentally, was able to examine collections of snakes in the museums in Hong Kong, Shanghai, and at Father Heude's museum in Zi-ka-wei (or "Siccawei" as Wall called it in his summary, which was published in 1903). He also made his own collections in these regions and throughout British India. Wall received large collections of snakes from other people, particularly Father C. Gilhodes, Cyril Gore, W. A. Jacob, and P. M. R. Leonard. Perhaps Wall's most spectacular novelty from China was *Natrix* (now *Thermophis*) *baileyi*, a water snake collected in 1907 by a British military officer, F. M. Bailey, near Tibetan hot springs at an altitude of nearly 4,300 meters.

F. H. Stewart, a British officer attached to the Indian Medical Service, also explored Tibet in 1907 and reported on his collection of amphibians the next year. Arthur Stanley (1869–1931) was a physician resident in Shanghai from about 1905 and was Health Commissioner of the international settlement in the city. He became honorary curator of the Shanghai Museum (today, the Shanghai Museum of Natural History) and reported on collections of amphibians and reptiles from southern and eastern China, including two new species of snakes. Some of his collections, like those of several British explorers in China during this period, went to the British Museum (Natural History) in London for study and description by George A. Boulenger (•1858–1937).

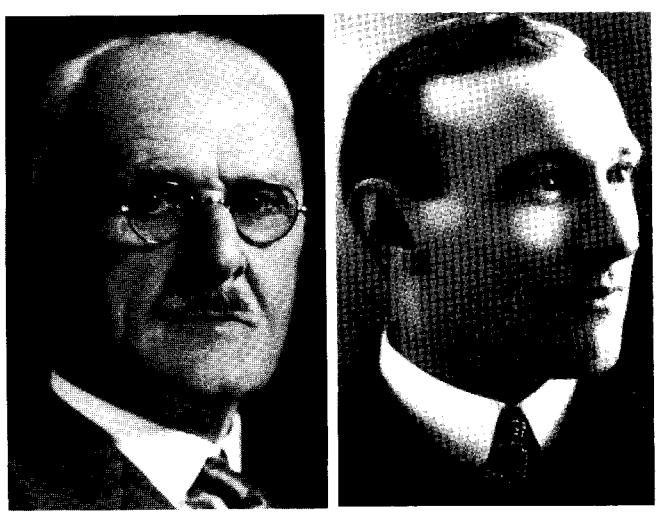


FIGURE 11. Frank Wall and Arthur deC. Sowerby.

Arthur deCarle Sowerby (1885–1954), a descendent of the famous family of English natural history artists, was born in China of missionary parents. He made large collections of vertebrates in Mongolia and in northern and eastern China, as well as in Manchuria (1908–1915) and later in Fujian (1922). He was a

member of the R. S. Clark Expedition to North China during 1908–1909 in Gansu and Shaanxi; the report was later published by Clark and Sowerby in book form, "Through Shen-Kan" (1912). His extensive account of Manchurian amphibians and reptiles was published in his five-volume series, "The Naturalist in Manchuria" (1930). His specimens are in the national museum in Washington (USA), where they were identified by Leonhard Stejneger. Others are in the Shanghai Museum of Natural History, for which Sowerby served as director, as had Fauvel and Stanley before him. In 1925, Sowerby founded *The China Journal*, which became a major outlet for natural history articles, until it was closed down and he was interned by the Japanese during World War II. The itineraries of Sowerby's many excursions in China may be found in his biography (R. R. Sowerby, 1956).

Still another British amateur zoologist, Malcolm A. Smith (•1875–1958), who during 1914–1924 worked as physician to the British Embassy in Bangkok and later also to the Royal Court of Siam, made numerous herpetological excursions in Southeast Asia. In 1923, he made a privately financed expedition to Hainan Island and from those collections he described several new species of reptiles and frogs (published in 1923). Smith is best remembered by students of Asian herpetology for his three volumes in the series, "Fauna of British India" (1931–1943). These monographs, which are still the most detailed and comprehensive reviews of the reptilian fauna of South Asia, also cover adjacent regions in Indochina and southern China as far east as Hong Kong.

Prior to World War I, Imperial Germany established overseas territories and, like the other Great Powers, this interest included China. In 1906, the Munich naturalist Erich Zugmayer (1879–1938) made an expedition to Central Asia, including parts of Xinjiang. He described two new agamid lizards, one of which (*Phrynocephalus erythrurus*) is still recognized.

Another German naturalist, Rudolf Mell (1878–1970), arrived in China in 1908. He taught at and supervised a German-Chinese middle school in Canton until his return home in 1924, after Germany abandoned its overseas possessions and interests following World War I. He collected extensive-



FIGURE 12. Malcolm A. Smith and Rudolf Mell.

ly, mostly in Guangxi and Guangdong provinces, supported by his private funds. At first, his interests centered on snakes and butterflies, but later they broadened to include all vertebrates. He wrote numerous papers in journals published in Canton and Europe, describing many new species, and he also published one technical book, "Grundzüge einer Ökologie der chinesischen Reptilien" (1929). Many of his specimens were sent to the zoological museum in Berlin, where they were described by his colleagues Ernst Ahl, Hans Kanberg, Walter Unterstein, and Theodor Vogt. Vogt, in particular, described a large number of Mell's specimens from southern China, as well as collections made by other collectors in Hainan and Taiwan. Mell's interests included basic taxonomy and extended to behavior, ecology, and zoogeography. In 1955, he published a popular book about the animals of South China that emphasizes amphibians and reptiles.

From 1906 to 1910, Joseph C. Thompson (1874–1943), a United States Navy surgeon and, until 1912, honorary curator at the California Academy of Sciences in San Francisco, collected many amphibians and reptiles in coastal China and in Taiwan, as well as in Korea and Japan. While ashore for military intelligence activities and, coincidentally, to collect specimens, Thompson used the alias "Victor Kühne" (hence the name of a widely distributed Chinese lacertid lizard, *Platyplacopus kuehnei*). These collections contained many new species, which were later described by Thompson and separately by his colleague at the academy, John Van Denburgh (•1872–1924). The rivalry between them to be the first to publish the new Asian species led to much confusion about priority of authorship. For a discussion, see Barbour (1917), Adler (1989), and page 213 in this book. Following Van Denburgh's premature death, the collections were further studied and published by his successor at the academy, Joseph R. Slevin (1881–1957).



FIGURE 13. Joseph C. Thompson and John Van Denburgh.

The Central Asiatic Expeditions of the American Museum of Natural History, under the leadership of Roy Chapman Andrews, made several extended visits to

China and Mongolia, including the Gobi, where they found the first dinosaur eggs in 1923. The party's herpetologist was Clifford H. Pope (•1899–1974), a new graduate from the University of Virginia, who during the period 1921 to 1926 surveyed extensively in southern China, especially in Fujian and Hainan provinces. Large herpetological collections were made, including all life stages and extensive ecological data. Several popular accounts of these trips were published by Pope as well as the book, "China's Animal Frontier" (1940). Pope's specimens were first published on by Karl P. Schmidt (•1890–1957), his American Museum colleague, and later by Pope himself after his return to New York City. These studies culminated in Pope's *magnum opus*, "The Reptiles of China" (1935), which is still the most comprehensive book on the topic, although the lizards were covered less extensively than the other groups and, geographically, western China was hardly treated at all.

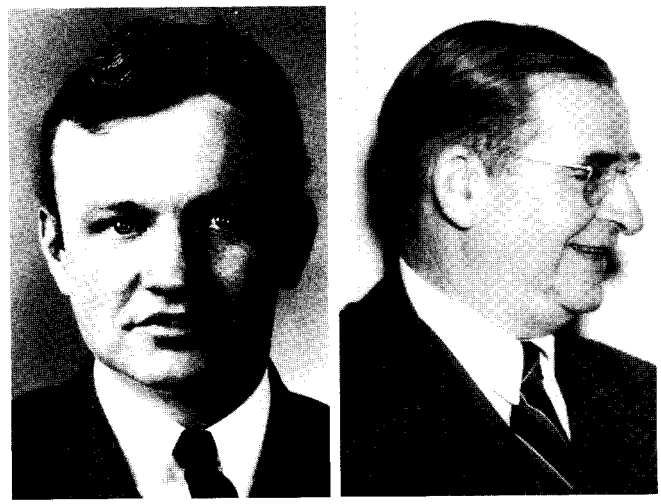


FIGURE 14. Clifford H. Pope and Karl P. Schmidt.



FIGURE 15. Field work in Fujian Province (1925–1926), conducted by the staff of the Central Asiatic Expeditions of the American Museum of Natural History. Left: Clifford H. Pope studying preserved snakes in his cabin on the slope of Guadun Shan; right: Pope and his field team.

J. Linsley Gressitt (1914–1982), an American entomologist who in the 1930s was a student at the University of California at Berkeley and was also associated with Lingnan University (today, Sun Yat-sen or Zhongshan University) in Canton, made important collections of amphibians and reptiles in southern China, including Hainan and Taiwan, during the summers of 1932–1936. He published a number of papers on Chinese herpetology, with descriptions of several new species. Another American, T. Paul Maslin (1909–1984), born in China of missionary parents, became a teacher at a school in Wuchang, Hubei Province, and later at the American School in Kuling (in Lushan), Jiangxi Province, where he made extensive herpetological collections from 1934 to 1936. His particular interest was snakes, especially pitvipers of the genus *Trimeresurus*, on which subject he published several papers.

Foreign Specialists on China During 1855–1930

With the opening of China to foreign visitors beginning at the midpoint of the last century, large numbers of specimens were returned for study by European and, to a lesser extent, American herpetologists. Most of the leading world authorities of the day were involved in describing these collections. None of them made China the sole focus of their work but, rather, it was an integral part of the massive descriptive work of 19th century natural history.

During 1857–1859, the Austrian frigate *Novara* circled the earth and briefly docked at Hong Kong and Shanghai in 1858. The specimens obtained there, together with others collected in Amoy by Swinhoe and in Kashmir by Stoliczka, were described in 1867 by Franz Steindachner (•1834–1919) of the Naturhistorisches Museum in Vienna. Later, he described a collection made in 1877–1880 by Béla Széchenyi in the vicinity of Shanghai (published in 1896) and, later still, a large series of snakes collected in Taiwan by Hans Sauter (1912). Steindachner's colleague at the museum, Friedrich Siebenrock (•1853–1925), described new turtle species from southern China. Another Viennese herpetologist, Franz Werner (•1867–1939), described many new species from several provinces in China, including Guangdong (collected by Rudolf Mell) and Yunnan and Hunan (collected by the botanist, Heinrich von Handel-Mazzetti, 1882–1940).

Only three years after the *Novara* departed, a Prussian ship, the *Thetis*, visited coastal China and Taiwan. Collectors for the "Preussische Expedition nach Ost-Asien," under the direction of Eduard von Martens (1831–1904), returned their specimens to the Museum für Naturkunde in Berlin for later description by Wilhelm Peters (•1815–1883) who also named several additional species from other collections made in China. Other specimens, collected in Taiwan for the museum in Oldenburg by Ernst Ruhstrat, an assistant with the Imperial Chinese Maritime Customs, were described by Johann G. Fischer (1819–1889) in Hamburg.



FIGURE 16. Wilhelm Peters, Oscar Boettger, and Otto von Möllendorff.

Another German herpetologist, Oskar Boettger (•1844–1910) of the Senckenberg Museum in Frankfurt am Main, had a special interest in China. During the 1880s and 1890s, large numbers of Chinese amphibians and reptiles were sent to Boettger by various collectors, including Otto Herz, a naturalist from St. Petersburg, and Bernhard Schmacker, a German merchant in Shanghai. The largest collections were sent by Otto Franz von Möllendorff (1848–1903), a member of the Imperial German diplomatic corps who was posted at various cities in China and after whom *Elaphe moellendorffi* is named. In 1877, Möllendorff published a monograph of the vertebrates of Chihli (now Hebei Province), based in part on his own observations that were made when he was resident in Peking, beginning in 1873.

Willy Wolterstorff (1864–1943), amphibian specialist at the museum in Magdeburg, reported on large herpetological collections made by Martin Kreyenberg, a physician on board the German ship *Jaguar* during 1901–1905, at various, mostly coastal localities from Hong Kong northward to Korea. Another German doctor, Paul Krefft, also made collections in China during this time and, like Kreyenberg, published short reports on them.

Of all the collections sent to foreign specialists, undoubtedly the largest number was sent to British herpetologists working in London or British possessions overseas. At the British Museum (Natural History) in London, Albert Günther and his successor, George A. Boulenger, both mentioned earlier, studied large numbers of Chinese specimens. Günther is justly remembered for his monumental book, "The Reptiles of British India" (1864), which, despite its title, also covered Indochina, Afghanistan, and all of China including Tibet. He had earlier described some of the Swinhoe collections and, later on, the collections of

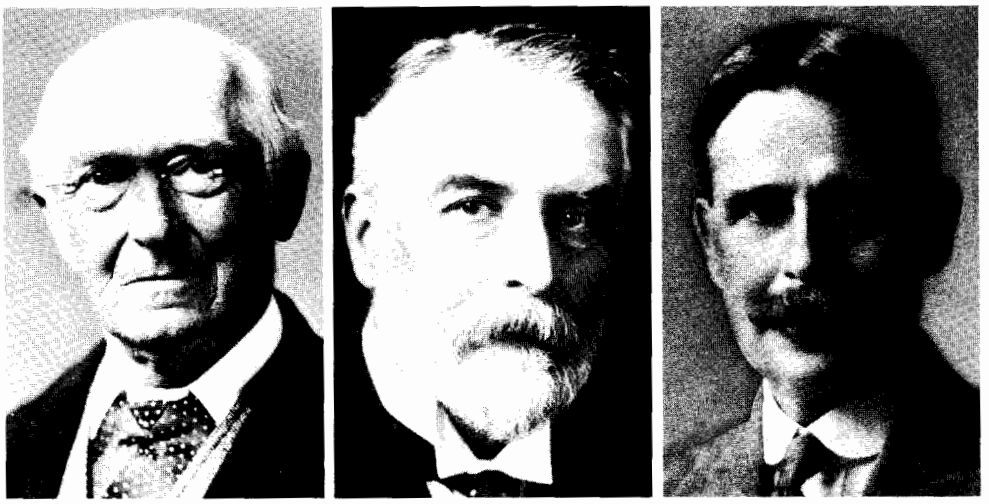


FIGURE 17. Albert Günther, George A. Boulenger, and Nelson Annandale.

the entomologist A. E. Pratt, who journeyed to the upper Yangtze River (Chang Jiang) during the period 1887 to 1890, as described in his travel book, "To the Snows of Tibet" (1892). It was Pratt who collected the specimens of a new pitviper on which Günther based the name *Halys* (now *Deinagkistrodon*) *acutus*. Still later, the authorities in St. Petersburg sent Günther the collections made by two Russian explorers, Grigori N. Potanin (1835–1920) and Mikhail M. Berezowski (1848–1912), in Gansu and Sichuan during 1893 and 1894, from which materials he named the dwarf ranid frog, *Nanorana pleskei*.

Boulenger's Chinese collections were even more extensive. Pratt sent his later materials to Boulenger, who also received collections from Taiwan (made at different times by P. A. Holst, Arnold Moltrecht, and Hans Sauter), the Tibetan border lands (obtained by the Tibet Frontier Commission, headed by British army officers, L. A. Waddell and H. T. Walton), and North China (collected by A. L. Hall). Boulenger studied large numbers of specimens from Fujian Province, sent by J. Preston Maxwell and Arthur Stanley, as well as by J. D. La Touche, an amateur ornithologist and Commissioner of the Chinese Imperial Customs Service, including the type specimens of *Ophisaurus harti* and *Rana latouchii*. Another large series of collections was made in Yunnan by two missionary teachers, John Graham and F. J. Dymond, over the years 1902–1917, and these included a number of new species.

In Calcutta, two other British herpetologists studied Chinese material. Edward Blyth's description of some Swinhoe specimens has already been mentioned. Nelson Annandale (•1876–1924), naturalist at the Indian Museum and, later, the Zoological Survey, re-studied the old Yunnan collections made by John Anderson and identified additional new species, as did Frank Wall. Later,

Annandale published the herpetological report on J. Coggin Brown's expedition to Yunnan in 1909–1910. He was also responsible for describing the amphibians and reptiles collected by Stanley W. Kemp in 1911–1912 in the so-called Abor country of northeastern India, a region that was once referred to as the North East Frontier Agency of Assam and today as Arunachal Pradesh. Currently occupied by India, it is claimed by China as part of Xizang (Tibet)(see Figure 1 on page 10) and, thus, species native to this area—some found nowhere else in China—are included in this book.

Several American herpetologists studied Chinese specimens, including Leonhard H. Stejneger (•1851–1943), author of the still-useful book, "Herpetology of Japan and Adjacent Territory" (1907), the coverage of which includes northeastern China and Taiwan. Stejneger described the amphibians and reptiles obtained by Tsunasuke Tada in Taiwan during 1896–1897, which included several novelties. He also received collections from other parts of China, in particular from Sichuan (David C. Graham), Yunnan (John Graham), and from Fujian and Peking (Arthur deC. Sowerby). Stejneger's protégé, Thomas Barbour (•1884–1946) of Harvard College, utilized material purchased largely from Alan Owston in Yokohama, who employed collectors over a wide area; Barbour's new species came from Hainan, Manchuria, and Taiwan. Other specimens from Sichuan and Hubei were sent to Barbour by Walter R. Zappey, a botanist from Harvard. In 1934, Edward H. Taylor (•1889–1978), of the University of Kansas, reported on a series of amphibians and reptiles largely from Fujian, Hainan, and Jiangsu provinces. For the most part, these specimens were obtained by S. F. Light, an American then on the staff of Amoy University in Fujian Province.



FIGURE 18. Leonhard Stejneger, Thomas Barbour, and Fernand Lataste.

Other important collections were made, primarily in the far west and north of China. In 1880, Fernand Lataste (1847–1934), a French naturalist, reported on collections made by Armand David, mentioned earlier, and by Victor Collin de Plancy, attaché at the French embassy in Peking, for whom the widespread frog *Rana plancyi* was named. François Mocquard (1834–1917), a herpetologist at the Museum d'Histoire Naturelle in Paris who had earlier studied a small collection made by Father J. A. Soulié in Yunnan in 1894, wrote about the specimens obtained by the Pelliot Mission to Central Asia. The Pelliot expedition, which was primarily archeological, traveled through Xinjiang during 1906–1908 and journeyed as far east as Gansu Province; its naturalist was Louis Vaillant, youngest son of Léon Vaillant (•1834–1914), the well-known vertebrate zoologist in Paris and Mocquard's supervisor. Another French expedition, led by René Legendre, made herpetological collections in Sichuan, which were written about by Raymond Despax in 1913. Lajos Méhelÿ (•1862–1952?), a Hungarian zoologist, reported on the herpetological collections brought to Budapest by Jenö Zichy, who obtained them on his journey to Mongolia and northern China in 1898.

Sergei F. Zarevsky (sometimes spelled Tzarewski, Czarevsky, or Carevskij; 1887–1965?), of the Zoological Institute in St. Petersburg, wrote two accounts of the collections made by one of Przhevalsky's former lieutenants, Peter K. Kozlov, who explored Tibet in 1899–1901, Mongolia and Sichuan in 1907–1909, and Mongolia again in 1924–1926. Swedish collectors visited China several times during the 1920s and made large collections of amphibians and reptiles, in particular the expedition of 1927–1928 headed by the anthropologist Sven Hedin; the specimens were studied and published by Hialmar Rendahl (1891–1969), curator of herpetology at the Naturhistoriska Riksmuseet in Stockholm.

Japanese Studies in China (1900–1940)

Several prominent Japanese zoologists made important contributions to Chinese herpetology. After Taiwan was ceded to Japan in 1895, the colonial government established research institutes on the island. Masamitsu Ôshima (•1884–1965) joined the staff of the Central Research Institute as a technician to work on termites. He had studied in Tokyo with Motokichi Namiye (1854–1918), who was interested in snakes and published on Taiwanese venomous snakes in 1908–1909. Ôshima also studied snakes and in 1910 wrote the first list of the island's serpents, including some new species. He later published on sea snakes and wrote a major monograph of the venomous snakes of Taiwan and the Ryukyus (1920).

Two other Japanese specialists on snakes worked in Taiwan. Seiichi Takahashi* (1874–1932), a professional artist with an amateur interest in natural history,

* Not to be confused with Sadae Takahashi (1903–1935), a Japanese marine biologist who worked in Taiwan and who published on the sea snakes of Kôtôsho (Lanyu Island) in 1935.

went to Taiwan about 1907, where he became a teacher of drawing and painting at Taihoku (Taipei) Normal School and later at a missionary middle school nearby in Tansui. He had a special interest in snakes and, besides field work, he wrote and illustrated two semi-popular books covering Taiwanese species, "Japanese Venomous Snakes" (1922) and "Terrestrial Snakes in Japan" (1930). Takahashi described several new snakes from Taiwan, one of which is currently recognized (*Trimeresurus monticola makazayazaya*), but he misidentified many of his species.



FIGURE 19. Seiichi Takahashi and Moichirô Maki.

Another Japanese specialist on snakes, Moichirô Maki (•1886–1959), became a staff member at the Taiwan Agricultural Experiment Station in 1911 and later was a teacher on the island until 1926, when he moved to Kyoto. Although he also published on lizards and salamanders, Maki's main interest was snakes. His major work was entitled "A Monograph of the Snakes of Japan" (1931–1933), which covers Imperial Japan and therefore also Taiwan. In it he described several new species from the island: *Achalinus niger, Amphiesma miyajimae,* and *Pareas komaii*, as well as the Formosan subspecies of *Vipera russellii.*

Japan's longstanding interest in acquiring Chinese territory on the adjacent mainland began in earnest in 1895 when Japan took over the Liaotung Peninsula (Liaodong Bandao) from China following its victory in the Sino-Japanese War; Japan further sealed its control in 1905 when it defeated Russia, which had established a naval base at Port Arthur (Lüshun) at the tip of the peninsula. In 1910 Korea was annexed, and in 1931 Japan invaded and captured the rest of Manchuria, which, together with the portion already under its control, was renamed Manchukuo. During 1933, Shigeyasu Tokunaga, a geologist at Waseda University, undertook an expedition to Manchukuo and his large collections of lower vertebrates were studied by Yaichirô Okada (•1892–1976). Previously, Okada had published his elaborate and well-illustrated book on the frogs of the Japanese Empire (Japanese edition 1930, English 1931), including Taiwan and Korea. In 1935, based on the Tokunaga collections, Okada published monographs on the amphibians and reptiles of Jehol, a then-

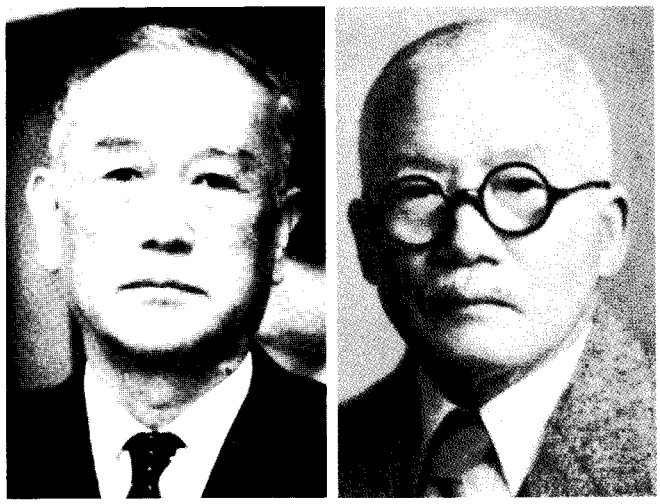


FIGURE 20. Yaichirô Okada and Tamezô Mori.

existing Chinese province just northeast of Peking in southwest Manchuria that was annexed by the Japanese in 1933. A later expedition to Manchuko was led by the Japanese biologist Tetsuo Inukai, of Hokkaido Imperial University in Sapporo, who published several papers on the herpetofauna.

Another Japanese naturalist who worked in Manchuria during this period was Tamezô Mori (1884–1962), professor at Keijô Imperial University in what is now Seoul, South Korea, who described two new hynobiid salamanders. Mori, in fact, had been a member of the first Manchukuo expedition and earlier had written a book on the vertebrates of Manchuria and eastern Mongolia (1928).

Modern Studies by Chinese Scholars Before 1949

China underwent major social changes in the decades prior to the establishment of the Republic in 1911, changes that led to a re-awakened interest in the natural sciences. After the Opium War, the influence and interference of foreign powers was increasingly resented by the Chinese and resulted in a violent response, the Boxer uprising of 1899–1900, which was suppressed through further foreign intervention. The Manchu emperor, Kuang-hsü (Guang-xü), had recognized that reforms were necessary in order to re-establish Chinese sovereignty, but his efforts ultimately were thwarted by his aunt, the empress dowager, Tz'u-hsi (Ci-xi), and her allies, and, in 1908, the emperor died. Nevertheless, these seeds of reform eventually led to sweeping changes: an army trained by Western methods, new examination procedures for civil service appointments, the translation and distribution of Western books, and many other educational reforms. Previously, for appointment to government positions, students had to pass examinations based solely upon study of the ancient classics, particularly the Confucian canon, to achieve status as scholar-officials, the so-called mandarins. But with the new reforms beginning in 1905, students now studied mathematics, physical sciences, biology, and other contemporary disciplines.

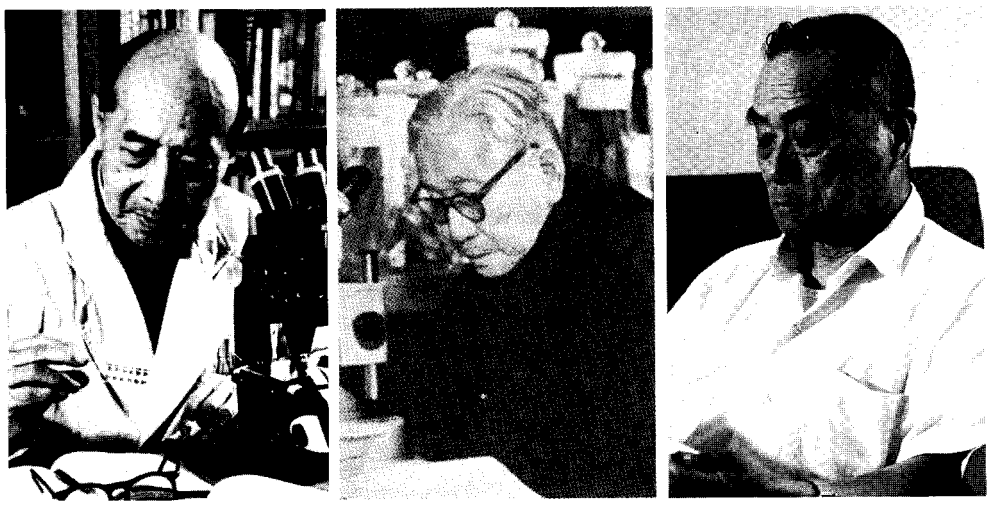


FIGURE 21. Chih Ping, Hsien-wen Wu, and Mang-ven Chang.

A key element in these reforms was the development of modern schools and universities. Thousands of students were sent overseas to study academic and practical subjects. One was Chih Ping (now spelled Zhi Bing; 1886–1965), who studied in the United States for 12 years and earned a doctorate at Cornell University. He returned to China in 1920, and through his wide-ranging research and other activities he became recognized as the founder of modern zoological studies in China. In 1922, he became the first Chinese to establish an academic department of biology at a Chinese university—Southeastern University in Nanking (now Nanjing University). Ping began the Fan Memorial Institute in Peiping and was a co-founder of the Science Society of China, established in America in 1914 by Chinese students and brought to Nanjing by him. Both groups published biology journals that stimulated biological and, especially, herpetological research in China. Ping was also a founder of the Chinese Society of Zoologists, and in 1934 he became its first president. Among other research topics, Ping studied fossil turtles, sea snakes, and gecko anatomy. He and his many students and associates undertook numerous expeditions in eastern and southern China and as far west as Sichuan, where they conducted important surveys and discovered many new species. Ping's students* included some of the most active herpetologists then working in China: Mang-ven Chang, Tsong-han Chang, Ping-wen Fang, Hsi-fan Hsü, Tchong-peng Sun, and Hsien-wen Wu. Fang was a zoologist at the Metropolitan Museum of Natural History in Nanjing, which published the journal *Sinensia*, an important outlet for herpetological research.

* In the following pages, lists of herpetologists are, for convenience, given in alphabetical order. The order of names has no other implications.

Herpetologically, the most prominent of Ping's students is Mang-ven Ling-yu Chang (now spelled Meng-wen Zhang), who later studied at the University of Paris, where he received his doctorate in 1935. In Paris he came under the influence of Fernand Angel (•1881–1950), the leading French herpetological systematist of the day and the describer of many Indochinese species of amphibians and reptiles found also in southern China; some were described jointly with his protégé, René Bourret (•1884–1957), who was a long-time resident of Hanoi. Chang's doctoral thesis, "Contribution à l'Étude Morphologique, Biologique et Systématique des Amphibiens Urodèles de la Chine," the first comprehensive review of Chinese salamanders, was published in book form in 1936. Chang returned to Nanjing, but then was transferred to Fudan University, later to Harbin Normal University in Heilongjiang Province, and finally to East China Normal University in Shanghai. Chang and his students—Bu-qing Hu, Zheng-yi Huang, Zhi-xun Li, Ken-tang Zhao, and Yu Zong, to mention those of present interest—continued a herpetological research program.

A second and quite separate center for Chinese herpetological studies developed in Peiping under the tutelage of Alice M. Boring (•1883–1955), an American biologist who came to China in 1918 and spent most of her career teaching at Yenching University, now a part of Beijing University. Boring's own research was primarily on amphibians, including their distribution, systematics, life histories, and embryonic development, subjects that in the decades to come continued to interest her students: Tso-kan Chang, Shu-ch'un Chou, Cheng-chao Liu, and Han-po Ting (today spelled Han-bo Ding). Another of Boring's collaborators was Nathaniel Gist Gee (1876–1937), an American biologist and educator, who worked in Peiping from 1927 to 1935. Beginning in 1933, Boring



FIGURE 22. Alice M. Boring, Cheng-chao Liu, and Shu-qin Hu.

also served as editor of the *Peking Natural History Bulletin*, which became a major outlet for research on amphibians and reptiles. Her most elaborate herpetological work, "Chinese Amphibians: Living and Fossil Forms" (1945), was completed while she and other instructors from Yenching University were detained by the Japanese in a concentration camp from 1941 through 1943. The book consists of a cross-indexed and annotated bibliography as well as distribution maps for each species.

In 1928, the biology department of Sun Yat-sen University (also called Zhongshan University) in Canton organized the first of several expeditions to Mt. Yao (Dayao Shan) in eastern Kwangsi Province (Guangxi Zhuang Autonomous Region). Many of the new species discovered were described in 1930 by Rudolf Mell, a former resident of Canton, and several of his German colleagues. These novelties included a spectacular new lizard, *Shinisaurus crocodilurus*, named by Ernst Ahl in honor of the expedition leader, Shu-szi Sin, whose surname the Germans spelled "Shin." In all, three expeditions were made and a report on the reptiles was published in book form in 1931 by Tsang-how Fan of Sun Yat-sen University. Eight new taxa of Chinese reptiles were named by Fan, of which one is recognized today: *Pseudoxenodon karlschmidti sinii*.

After teaching briefly at Northeastern University in Mukden (Shenyang), Cheng-chao Liu (•1900–1976) earned a doctorate in 1934 at Cornell University in the United States and returned to China to teach at Soochow (Suzhou) University in Jiangsu Province. There he developed both a research center and a commercial biological supply service that provided specimens to other universities in China. Liu's research centered on amphibians, including some joint projects with his former teacher, Alice Boring. He conducted extensive herpetological surveys in the vicinity of Soochow, and also at Hangchow (Hangzhou) and on Chusan (Zhoushan) Island. Among his herpetological students were Shu-qin Hu, Shu-min Shen, and Ting-zhen Wang. Shu-qin Hu (formerly spelled Shu-chin Hu; 1914–1992) later became Liu's wife and life-long collaborator. In 1937, however, the group's work came to an abrupt halt when advancing Japanese troops and bombing raids threatened the region, and Liu, together with two dozen students and colleagues from the biology department at Soochow, moved to Chengdu, far to the west in Sichuan Province, and to West China Union University (after 1949 called West China University, later Sichuan Medical College, and now West China University of Medical Sciences).

During these hostilities that led up to World War II, the missionary universities of eastern China, supported by the united missionary groups of America, Canada, and Great Britain, took refuge in Chengdu at West China Union University. Indeed, a large number of Chinese institutions, including the central government itself, moved to the country's interior, effectively beyond reach of the Japanese.

In Chengdu, Liu developed a major herpetological research center that gave rise ultimately to the herpetological program and collections now at the Chengdu Institute of Biology. During the period 1938–1949, and despite wartime condition, Liu undertook extensive field work in Gansu, Sichuan, and Sikang provinces. He was assisted by You-wen Guo, Shu-qin Hu, Nai-zhong Huang, Zhi-xun Li, Da-jun Wu, Xi-chang Zhang, Er-mi Zhao, Cheng-guan Zhu, and others, and they published numerous papers on life histories of amphibians and descriptions of new species. Liu continued work on his major treatise, "Amphibians of Western China," completed during a second visit to America in 1946–1947 and published in 1950. This monograph, the culmination of nearly half a century of studies by Chinese herpetologists, is the single most prominent book of that period.

Herpetological Studies in China Beginning in 1949

Following civil war and the ensuing political and social transformations leading up to a change in government in October 1949, numerous changes took place that affected the scientific community. On the mainland, advanced academic degrees were abolished, missionary universities were transformed into state-run teaching enterprises, and research was transferred to government institutes administered by Academia Sinica, the Chinese Academy of Sciences, which continues to exist also in Taiwan. After 1949, biological research in China—on the mainland, in Taiwan, and in Hong Kong—underwent rapid expansion, including that on amphibians and reptiles. In the following sections we have attempted to give a detailed summary of recent herpetological activities in China, primarily so that non-Chinese colleagues can better comprehend the scope and extent of this work.



FIGURE 23. Chengdu Institute of Biology, in Chengdu, Sichuan Province. Left: entrance to the main building; right: part of the herpetological reference collection.

Faunal Studies

One major area of investigation has been to survey the herpetofauna of the country, since earlier collections were, for the most part, restricted in numbers of specimens and geographical extent. The most extensive surveys were undertaken by the group at Chengdu, under the direction of Cheng-chao Liu, and later, after his death in 1976, under that of his widow, Shu-qin Hu, and subsequently under another of Liu's former students, Er-mi Zhao (formerly spelled Er-mie Djao). Unlike most other such programs in China, which were restricted to a single province, the Chengdu effort was national in scope and expeditions were sent to all parts of the country: to Anhui, Fujian, Hubei, and Hunan provinces in the east, Liaoning in the northeast, Shaanxi in the north, Xinjiang and Xizang (Tibet) in the west, and Guizhou, Guangxi, Hainan, and Yunnan in the south and southwest, as well as in Sichuan itself. Much of Liu's field work was done in Sikang (sometimes spelled Hsikang), a province that in 1955 was abolished and incorporated into Sichuan and Xizang (Tibet). Large herpetological collections were established at West China Union University, which, when the university was transformed into a medical school (Sichuan Medical College), were transferred to the Southwest Institute of Biology in Chengdu (later re-named Sichuan Biological Research Institute and now, Chengdu Institute of Biology, a unit of Academia Sinica).

In this work, Liu and his successors had the cooperation of many students and other staff at West China Union University, and later at the institute in Chengdu, including Shu-rong Chen, Liang Fei, Qi-xiong Hu, Qing-yun Huang, Yao-ming Jiang, Sheng-quan Li, Yang Shen, Wan-shu Tian, Guan-fu Wu, Fu-hua Yang, and Chang-yuan Ye. In addition, this group specialized on particular taxonomic groups, including Pelobatidae (Liu, Fei, Shu-qin Hu, Tian, and Ye), Hynobiidae (Liu, Fei, Shu-qin Hu, and Ye), *Scincella* (Yue-zhao Wang), Shinisauridae (Qi-xiong Hu and Jiang), Rhacophoridae (Shu-qin Hu and Su-ping Jiang) and various reptilian genera, especially of snakes (Er-mi Zhao).

Extensive herpetofaunal surveys have also been undertaken in Taiwan, especially beginning in 1984 with the establishment of several national parks (Kenting, Shei-Pa, Taroko, Yangmingshan, and Yushan). Yushan park, in the center of Taiwan, contains East Asia's highest mountain, Mt. Yu (3952 m), sometimes called Mt. Morrison or, during Japanese occupation, Mt. Niitaka. There are also some 35 smaller preserves, nature reserves, and wildlife sanctuaries. Kuang-yang Lue and his colleagues at National Taiwan Normal University in Taipei have developed a database for amphibians and reptiles from their field work over the past decade and data for amphibians (Lue and Lin, 1989; revised edition by Lue, Lin, and Chung, 1990) and lizards (Lue and Lai, 1991) have been published, including detailed distribution maps and altitudinal data for each species. Several new species of frogs and lizards were discovered as a result.



FIGURE 24. Yao-ming Jiang, Kuang-yang Lue, and Lü Wu.

The people who have been most active in conducting and publishing herpetofaunal surveys are listed below by province, autonomous region, and municipality. Addresses are those current as of the time of publication of the surveys.

Anhui: Bi-hui Chen and Bing-hua Li (Anhui Normal University, Wuhu, Anhui), Mei-hua Huang and her colleagues (Zhejiang Medical University, Hangzhou, Zhejiang), and Shou-chang Zou (Xuzhou Teachers College, Xuzhou, Jiangsu).

Beijing (municipality): Yu-ru Cao and Jing-gui Kang (Institute of Zoology, Academia Sinica, Beijing).

Fujian: Han-bo Ding and his associates, Ming-zhang Cai and Ji Zheng (Fujian Teachers University, Fuzhou, Fujian) and Long-fu Jiang, Ling-bing Liu, and Pu Shi (Fujian Medical College, Fuzhou, Fujian).

Gansu: Lin-ding Chang and his colleagues, Nai-fa Liu, Zhi-ming Song, Ruo-li Yang, and Fu-yun Zhang (Lanzhou University, Lanzhou, Gansu), Xiao-yi Feng (Lanzhou Medical College, Lanzhou, Gansu), Pei-xian Wang (Qingyang Teachers College, Xifeng, Gansu), and Chong-yong Yao (Northwest Normal University, Lanzhou, Gansu).

Guangdong: Jiong-hua Pan and his associate, Zhi-gao Wang (South China Normal University, Guangzhou, Guangdong), Yu-huan Zhou (Sun Yat-sen University, Guangzhou, Guangdong), Yao-liang Qin and Long-hui Xü (Guangdong Institute of Entomology, Guangzhou, Guangdong), and Yi-guang Qiu (Sun Yat-sen Medical College, Guangzhou, Guangdong).

Guangxi: Ye-tang Wen (Guangxi Medical College, Nanning, Guangxi), Zhen-jie Tang and Yu-xia Zhang (Guangxi Normal University, Guilin, Guangxi) and Lu-he Lin (Guangxi College of Chinese Traditional Medicine, Nanning, Guangxi).

Guizhou: Lü Wu and his associates, De-jun Li, Ji-shen Liu, and Run-hua Xü (Zunyi Medical College, Zunyi, Guizhou; Xü is now at Dalien Medical College, Dalien, Liaoning), Zhi-kang Wu (Guizhou Museum, Guiyang, Guizhou), and Dao-hong Li (Guizhou Normal University, Guiyang, Guizhou).

Hainan: Zhi-xun Li (Fudan University, Shanghai) and Zhu-jian Huang (Institute of Zoology, Academia Sinica, Beijing).

Hebei: Dian-jun Liu and Suo-an Wang (Hebei University, Baoding, Hebei).

Heilongjiang: Mang-ven L.-Y. Chang, who resided there in the 1960s, and Jun-jiu Fang (both Harbin Normal University, Harbin, Heilongjiang).

Henan: Wen-yuan Qü, Yuan-xun Shan, Shu-hui Wu, and Jia-xing Zhou (Xinxiang Normal College, Xinxiang, Henan).

Hubei: Xiao-dong Zhang (First Middle School, Baokang Xian, Hubei).

Hunan: Qi-xin Liang and You-hui Shen (Hunan Normal University, Changsha, Hunan) and Xiu-bi Zhao (Shaoyang Branch of Hunan University, Shaoyang, Hunan).

Jiangsu: Yi Chen (Nanjing University, Nanjing, Jiangsu), Kai-ya Zhou (Nanjing Normal University, Nanjing, Jiangsu), and Jian-dong Jiang (Dongfeng Hospital, Changzhou, Jiangsu).

Jiangxi: Feng-tan Peng, Feng-wang Zhang, and Chang-fu Zhong (Jiangxi Medical College, Nanchang, Jiangxi).

Jilin: Zheng-jie Zhao (Changbai Shan Conservancy, Antu, Jilin) and Yi-qing Ma (Heilongjiang Institute of Natural Resources, Harbin, Heilongjiang).

Liaoning: Yao-ting Qin and his associates, Da-ming Ji and Ming-yu Liu (Liaoning

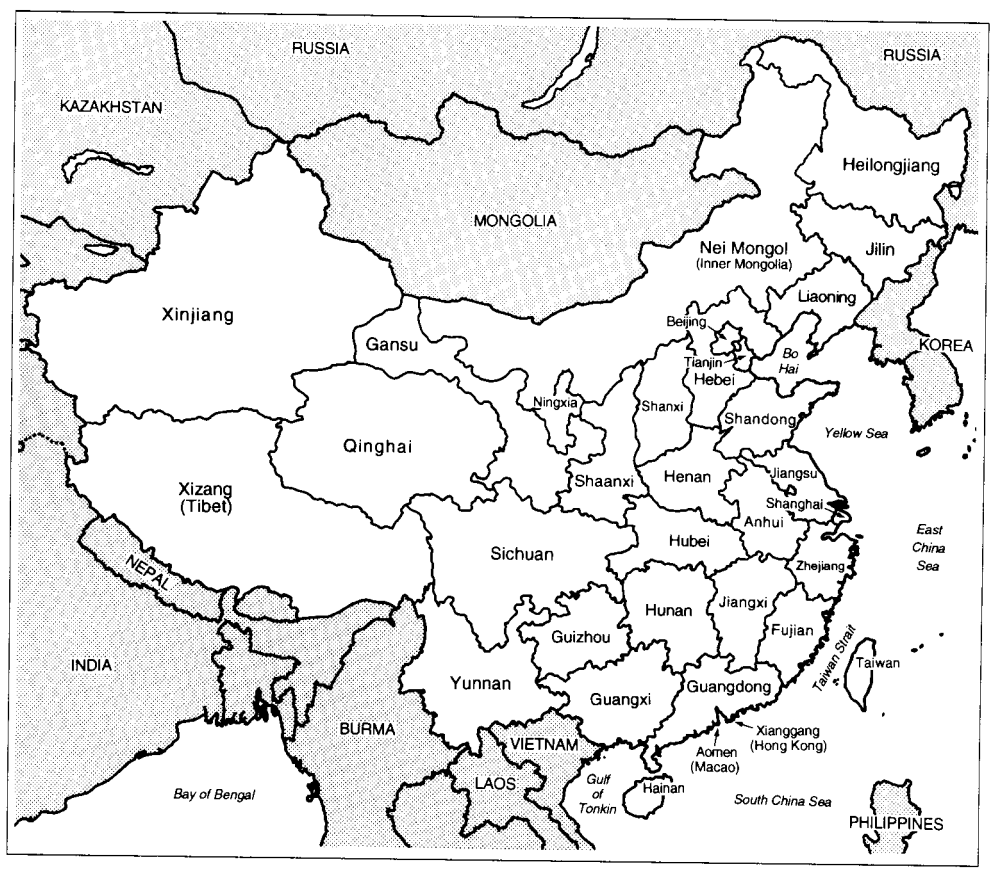


FIGURE 25. Provincial map of China. Each province is named, as are the five autonomous regions (Guangxi, Nei Mongol, Ningxia, Xinjiang, and Xizang) and the three municipalities (Beijing, Shanghai, and Tianjin).

University, Shenyang, Liaoning) and Kang-cai Huang (Dalian Museum of Natural History, Dalian, Liaoning).

Nei Mongol (Inner Mongolia): Ken-tang Zhao (formerly Nei Mongol University, Hohhot, Nei Mongol, now at Suzhou Railway Teachers College, Suzhou, Jiangsu).

Ningxia: You-zhi Yu (Ningxia Agricultural College, Yinchuan, Ningxia).

Qinghai: Yong-zhao Huang (formerly Qinghai Insititue of Biology, Xining, Qinghai, now at Chongqing Museum of Natural History, Chongqing, Sichuan).

Shaanxi: Rong-sheng Fang (Shaanxi Normal University, Xi'an, Shaanxi), Ming-tao Song (Shaanxi Insititute of Zoology, Xi'an, Shaanxi), and Hong Yuan (Shaanxi Agricultural College, Wugong, Shaanxi, now at Xinjiang Bureau of Forestry, Urumqi, Xinjiang).

Shandong: Zhe-mao Wang (Qingdao Aquarium, Qingdao, Shandong).

Shanghai (municipality): Yu Zong and her colleagues Jian-qiang Cen and Ji-fan Ma (Shanghai Museum of Natural History, Shanghai) and Zheng-yi Huang (Fudan University, Shanghai).

Shanxi: Lian-xin Xing (Qinshui Middle School, Qinshui Xian, Shanxi).

Sichuan: Hong-xi Chen, Qi-xiang Deng, Jin-zhu Hu, and Zhi-wei Yu (Nanchong Teachers College, Nanchong, Sichuan), Zheng-fa Gao (Middle School of Sichuan Chemical Plant, Qingbaijiang, Chengdu, Sichuan), and Guang-guo Zheng (Chongqing Museum of Natural History, Chongqing, Sichuan).

Tianjin (municipality): Hai-feng Li (Tianjin Normal University, Tianjin).

Taiwan: Kuang-yang Lue (National Taiwan Normal University, Taipei, Taiwan) and Shou-hsian Mao (National Defense Medical Center, Taipei, Taiwan).

Xinjiang: Ken-tang Zhao (Suzhou Railway Teachers College, Suzhou, Jiangsu).

Xisha Qundao (Paracel Islands, South China Sea): Kang-cai Huang (Dalian Museum of Natural History, Dalian, Liaoning).

Xizang (Tibet): Yong-zhao Huang (Qinghai Institute of Biology, Xining, Qinghai) and Hong Yuan (Xinjiang Bureau of Forestry, Urumqi, Xinjiang).

Yunnan: Da-tong Yang and his colleagues, Si-min Li and Cheng-ye Su (Kunming Institute of Zoology, Kunming, Yunnan), and Xiao-rui He and Zhi-tong Kou (Yunnan University, Kunming, Yunnan).

Zhejiang: Jie-rong Mao (Hangzhou University, Hangzhou, Zhejiang), Han-shen Guo, Bu-qing Hu, Mei-hua Huang, Ji-xiu Zhang, and Feng-xue Zhu (Zhejiang Medical University, Hangzhou, Zhejiang), Hui-qing Gu (Hangzhou Teachers College, Hangzhou, Zhejiang), Chun-mo Cai (Zhejiang Museum of Natural History, Hangzhou, Zhejiang), Shi-xin He (Jinhua Medical School, Jinhua, Zhejiang) and Chuan-fu Yuan (Nanjing University, Nanjing, Jiangsu).

Biochemistry

Several Chinese laboratories specialize in biochemical studies of amphibians and reptiles, including histochemistry. The well-known experimental biologist, Ying-xian Shi (Institute of Developmental Biology, Academia Sinica, Beijing), a former student of Cheng-chao Liu, has studied seasonal changes in the blood of several reptilian species, including that of *Alligator*. Yu-hua Yang (Sichuan University, Chengdu, Sichuan), a former student of Shu-qin Hu, has investigated *Bufo* isozymes, and Zhao-jun Feng (Xuzhou Teachers College, Xuzhou, Jiangsu) has studied those of *Eremias*.

Yu-ping Cao and Suo-an Wang (Hebei University, Baoding, Hebei) have made biochemical studies of the oviducts of *Rana*. At the Chengdu Institute in Sichuan, a group headed by Wei-yuan E and Yi-wen Meng, including Shu-wen Chen, Sheng-quan Li, Wei-ping Mo, and Yang Shen, has performed a wide range of biochemical studies of isozymes and conducts snake venom protein electrophoresis. Histochemical work on frogs has been done by Min-tin Mao and his students (Northwest Normal University, Lanzhou, Gansu) and by Yun-xu Tong and her students (Lanzhou University, Lanzhou, Gansu), while at Chengdu Institute, Ji-zhi He has performed histochemical studies on *Shinisaurus* and *Deinagkistrodon*. Yuan-chong Chen and Xiang-fu Wu (Shanghai Institute of Biochemistry, Academia Sinica, Shanghai) specialize in the biochemistry of snake venoms and venomous snake systematics, as does Jen-yuan Lee (Medical School, National Taiwan University, Taipei).

Embryology

Many laboratories emphasize embryology, especially of amphibians that are routinely used in China for teaching purposes. The normal developmental stages of several species have been studied, for example those of *Bufo* by Chang Wang (Heibei Normal University, Shijiazhuang, Hebei) and Rui-qiong Ye (Fujian Teachers University, Fuzhou, Fujian), of *Rana* by Ying-tian Wang (Beijing University, Beijing), Xue-ping Tang and Rong Zhang (Shanghai Institute of Cell Biology, Shanghai) and Zhi-ping Zhu (Beijing Research Group, Shanghai Institute of Experimental Biology, Academia Sinica, Beijing), of *Kaloula* by Ru-qi Li (Beijing University, Beijing) and Chao-fang Wang (Chengdu Institute, Chengdu, Sichuan), and of *Scutiger* by Zhi-ming Song (Lanzhou University, Lanzhou, Gansu, now at Sichuan University, Chengdu). Tsu-yun Hsue (National Defense Medical Center, Taipei) specializes in tadpole metamorphosis.

Work on salamander embryology includes that on *Hynobius* by Ming-zhang Cai (Fujian Normal University, Fuzhou, Fujian) and *Cynops* by Liang Fei (Chengdu Institute, Chengdu, Sichuan). At Zhejiang Medical University, Hangzhou, Zhejiang, the late Bao Cai published an extensive atlas of the embryonic development of *Cynops orientalis* and Mei-hua Huang and her colleagues have studied in detail the embryology of *Agkistrodon blomhoffii brevicaudus*.

A leader in experimental studies is Han-po Ting (now spelled Han-bo Ding), a former student of Alice Boring, who received his Ph.D. at Ohio State University in the United States in 1949. Along with his colleagues, including Zhai-kuan Xu, at Fujian Normal University in Fuzhou, Ding has developed a broad-based program emphasizing hybridization studies, mechanisms of fertilization, and nuclear transplants, especially of *Bufo*. Yun-xu Tong and her students (Lanzhou University, Lanzhou, Gansu) have focused on experimental studies with frogs.



FIGURE 26. Bao Cai, Mei-hua Huang, and Han-bo Ding.

Osteology and Anatomy

Much research has been done on osteology and soft anatomy. At the Chengdu Institute in Sichuan, for example, Wan-shu Tian has done anatomical studies of several frogs; Liang Fei and Chang-yuan Ye have emphasized *Scutiger*; Fu-ji Zhang has studied squamate hemipenes, lizard skulls, and salamander skeletons; and Qing-yun Huang has researched lizard myology.

Laboratories elsewhere in China specialize in particular taxa: *Ichthyophis* (Ye-tang Wen, Guangxi Medical College, Nanning, Guangxi), *Andrias* (Cui-heng Wu, Beijing Normal University, Beijing), *Pachytriton* (Duan-wen Shen and You-hui Shen, Hunan Normal University, Changsha, Hunan), *Hyla* and *Bufo* (Xiao-yi Feng of Lanzhou Medical College, Lanzhou, Gansu, who has produced an illustrated guide to the anatomy of *B. gargarizans*), *Rana* (Ben-xiang Zhou of East China Normal University, Shanghai, who wrote a book on the anatomy of *R. nigromaculata*), *Phrynocephalus* and *Gekko* (Ke-qin Ma and Liao-shu Xia, Northeast Normal University, Changchun, Jilin), *Alligator* skull variation (Lin-yu Cong, Lanzhou University, Lanzhou, Gansu), *Eryx* (Chong-yong Yao, Northwest Normal University, Lanzhou, Gansu), *Deinagkistrodon* (Qun-li Dai and Qi-shan Wang, Anhui University, Hefei, Anhui) and *Naja* (Rui-min Wu of Fujian Medical College, Fuzhou, Fujian, who has written a book on cobra anatomy). Yun-fang Qu (Zhejiang Medical University, Hangzhou, Zhejiang) has studied the morphology of snake blood and a group at South China Normal University in Guangzhou, Guangdong (Jiong-hua Pan and his associates, Cheng-han Liu and Zhi-gao Wang) has made anatomical studies of several venomous snake species.

Ultrastructural Studies

Several laboratories have emphasized cell morphology at the ultrastructural level, using the electron microscope (transmission and scanning EM) and freeze-etching techniques. Yi-sha Hong (Fujian Medical College, Fuzhou, Fujian) has studied the retina of *Vipera,* and Rong-sheng Fang and Pi-peng Li (Shaanxi Normal University, Xian, Shaanxi) the internal organs of *Andrias*. The ultrastructure of the poison gland of *Deinagkistrodon* has been investigated by Ping Liang and Shan-min Yang (Fujian Medical University, Fuzhou, Fujian), whereas Ji-kang Pu and his colleagues (Lanzhou Medical College, Lanzhou, Gansu) have studied *Bufo* parotoid glands.

Scanning EM studies of body scales, or "microdermatoglyphics," have been performed with *Gekko* (Ke-qin Ma, Northeast Normal University, Changchun, Jilin) and *Agkistrodon* and *Trimeresurus* (Shu-min Gu, Zhejiang Medical University, Hanzhou, Zhejiang). Another person using scanning EM techniques is Shou-hsian Mao, presently a professor of zoology at the National Defense Medical Center in Taipei, who has also made extensive taxonomic and distributional studies of the island's reptiles. His medically related research has been devoted to the phylogeny and molecular evolution of snakes, especially elapids, but since 1985 he has focused on the ultrastructure of snake tongues. Mao has also published comprehensive monographs of Taiwanese turtles (1971) and sea snakes (1980), the latter co-authored by Been-yuan Chen.

Kui-yuan Yue and Zhong-hua Zheng (Analyzing and Testing Center, Chengdu Branch, Academia Sinica, Chengdu, Sichuan) have studied cell morphology in *Rana*, *Bufo*, and *Japalura* using freeze-etching techniques.



FIGURE 27. Xiao-yi Feng, Rui-min Wu, and Jiong-hua Pan.

Karyology

Many investigations have been done on the chromosomes of Chinese amphibians and reptiles, most of them as an adjunct to systematic studies. Zheng-an Wu, a pioneer in karyological studies at the Institute of Developmental Biology, Academia Sinica, Beijing, has been instrumental in the development of new methods and has also studied frog chromosomes. At Sichuan University in Chengdu, Sichuan, there are several noted specialists, including Wen-yuan Chen, a well-known cell biologist and former student of Cheng-chao Liu, and his students, Xi-zhong Wang and Zi-shu Wang, as well as Yu-hua Yang, a former student of Shu-qin Hu. These laboratories have broad-based interests in chromosomes of many amphibian and reptilian groups.

Other programs are more specialized and concentrate on particular taxonomic groups. A large number emphasize frog karyology, including Guan-fu Wu and his colleagues An-ming Tan, Wen-ming Yang, and Xiao-mao Zeng (Chengdu Institute of Biology, Chengdu, Sichuan), Yong-wen Dong and Chao-wen Guo (Anhui Normal University, Wuhu, Anhui), Hai-yan He (Guangzhou Teachers College, Guangzhou, Guangdong), Shu-ting Jiang, Yin Meng, and Chu-ren Shen (Benbu Medical College, Benbu, Anhui), Shu-shen Li (Yunnan University, Kunming, Yunnan), Xue-ya Luo (Northwest Normal University, Lanzhou, Gansu), and Gang Wei and Ning Xu (Zunyi Medical College, Zunyi, Guizhou). Jun-jiu Fang, Xiu-rong Tang, and Xiu-bin Wang (Harbin Normal University, Harbin, Heilongjiang) have made a special study of the chromosomes of *Hyla arborea* (=*Hyla japonica*) and *Salamandrella keyserlingii*.

Among those who specialize on reptilian chromosomes, several study snakes: Tao Ma (Shanxi University, Taiyuan, Shanxi) and Mei-hua Huang, Yun-fang Qu, Xing-fu Xie, and You-jin Yang (Zhejiang Medical University, Hangzhou, Zhejiang). Mei-xi Wu (Fujian Normal University, Fuzhou, Fujian) has published on the chromosomes of *Enhydris* and *Eumeces*, and her university colleague, Jian-min Gao, on those of turtles, whereas Jun-cai Chen, Xian-bu Peng, and Duo-wei Yu (Nanjing Normal University,



FIGURE 28. Shou-hsian Mao and Bu-qing Hu.

Nanjing, Jiangsu) focus on geckos. Ying-xian Shi and her colleagues (Institute of Developmental Biology, Academia Sinica, Beijing) have emphasized the chromosomes of *Alligator*.

Autecology

Detailed ecological studies of *Agkistrodon* are being done in three separate laboratories in Hangzhou, Zhejiang, by Xiao-zhong Dai (Longjuwu Medicinal Herb Plantation); Hui-qing Gu (Hangzhou Teachers College); and Bu-qing Hu, Mei-hua Huang, and their colleagues (Zhejiang Medical College), who have also studied the ecology of other venomous snakes.

Other specialists are studying the autecology of particular lizard species: Nai-fa Liu (Lanzhou University, Lanzhou, Gansu) and Bing-hui Wang (Beijing Normal University, Beijing) both study *Eremias* species, whereas Zhi-ming Song (Lanzhou University, Lanzhou, Gansu) focuses on *Phrynocephalus*. Two other lizard ecologists have studied a wider array of species: Pei-chao Wang (East China Normal University, Shanghai) and Yue-zhao Wang (Chengdu Institute, Chengdu, Sichuan). Shou-chang Zou (Xuzhou Teachers College, Xuzhou, Jiangsu) is studying the autecology of gecko species. Zou is also researching the ecology of several *Bufo* species, as is Dao-hong Li (Guizhou Normal University, Guiyang, Guizhou).

In Taiwan, Kuang-yang Lue (National Taiwan Normal University, Taipei, Taiwan) has specialized on the ecology and behavior of the island's *Hynobius* salamanders and rhacophorid frogs. Lue and several colleagues have also collaborated to produce several semi-popular and well-illustrated guide books to the Taiwanese herpetofauna (see page 336). Ming-chang Tu, of the same university, has studied the population dynamics of *Laticauda* on Lanyu Island. Jun-sheng Liang, Yao-sung Lin, Chin-shiang Wang, Yi-ju Yang, and Hon-tsen Yu (National Taiwan University, Taipei) have conducted ecological and behavioral studies on several species of Taiwanese frogs. Paul Alexander (Tunghai University, Taichung), a long-term visiting teacher from the United States, has conducted studies on the breeding biology of *Rana limnocharis*.

Other Ecological Studies

A number of Chinese herpetologists have studied particular aspects of the ecology of groups of species. Prominent among these is the work of Bing-zhi Su (South China Normal University, Guangzhou, Guangdong) on the food habits of frogs. The food habits of sea snakes have been emphasized by Ling-bing Liu (Fujian Medical College, Fuzhou, Fujian). Studies on biomass, population growth, and community ecology of amphibians have been performed by Fang-lin Li and his

associate, Huo-jie Chen (Laboratory of Ecology, Kunming Branch, Academia Sinica, Kunming, Yunnan), and also by He-lin Sheng (East China Normal University, Shanghai).

Other laboratories have focused on physiological ecology, in particular that of Pei-chao Wang and his colleagues (East China Normal University, Shanghai), who have studied lizards and snakes. Two other groups have emphasized the physiology of hibernation in *Naja* (Rui-min Wu, Fujian Medical College, Fuzhou, Fujian) and in *Bufo* and *Gekko* (Shou-chang Zou, Xuzhou Teachers College, Xuzhou, Jiangsu).

Reproductive aspects have been studied in several species of amphibians and reptiles. The breeding cycles of species of *Rana* are being examined by Guang-hua Lin (Jiangxi University, Nanchang, Jiangxi), Chang-fu Ma (Jilin Provincial Institute of Biology, Changchun, Jilin), and Jian Zhang (Fujian Normal University, Fuzhou, Fujian). Yong Mu (Chengdu Institute, Chengdu, Sichuan) has focused on frog acoustical communication during breeding, and Xin-lian Geng (Lanzhou University, Lanzhou, Gansu) is a specialist on seasonal changes in the testes of *Bufo*. The late Bao Cai, a well-known embryologist, and Yun-fang Qu (Zhejiang Medical University, Hangzhou, Zhejiang) studied the reproductive ecology of *Cynops orientalis*, whereas Ming-xian Yang (Liaoning University, Shenyang, Liaoning) has investigated the sexual cycle of *Agkistrodon shedaoensis*.

In Taiwan, Jun-yi Lin (Tunghai University, Taichung) has studied the reproductive biology and energetics of *Japalura* in collaboration with Hsien-yu Cheng (Chinese Culture University, Taipei). At the new National Museum of Natural Science in Taichung, Wen-hao Chou is making a detailed study of frog life histories and his associate, Wun-san Huang, is studying the reproductive biology of several lizards (*Sphenomorphus* and *Japalura*).

Parasitology

The internal parasites of amphibians and reptiles, particularly trematodes, have been the subject of numerous studies in China. The late Chang-dong Gu (Nankai University, Tianjin) conducted many parasitological studies, especially of amphibians. The prominent parasitologist Chung-chang Tang and his daughter, Chong-ti Tang (both at Xiamen University, Xiamen, Fujian), have studied the cestodes and trematodes of reptiles, especially those of sea turtles. Other specialists on trematodes include Pu-qin Wang (Fujian Normal University, Fuzhou, Fujian) and Jian-ying Zhang (South China Normal University, Guangzhou, Guangdong). Pu-zhu Jiang and Xi-da Sun (Hangzhou Teachers College, Hangzhou, Zhejiang) have focused on the trematodes of salamanders.



FIGURE 29. Chung-chang Tang, Chung-chien Young, and Hsiang-k'uei Yeh.

Paleontology

Several Chinese paleontologists study reptiles. The largest group of specialists has been that at the Institute of Vertebrate Paleontology and Paleoanthropology, Academia Sinica, in Beijing, which included the late Chung-chien Young (now spelled Zhong-jian Yang), once China's leading paleontologist, who was an expert on dinosaurs and who published the monograph "Fossil Reptiles in China" (1935). After receiving his doctorate at the University of Munich in 1927, Young returned to China to found the study of vertebrate paleontology in his country and establish the institute in Beijing, which he directed until his death in 1979. His successors at the institute are Hsiang-k'uei Yeh (now spelled Xiang-kui Ye), author of the major monograph on the fossil turtles of China (1963), who has more recently specialized in Jurassic turtles, and Ming-zheng Zhou. At the Chongqing Museum of Natural History in Chongqing, Sichuan, Qi-ren Fang is also studying fossil turtles.

Herpetological Studies in Hong Kong and Macao

Despite its small size, the British territory of Hong Kong has a relatively large herpetofauna (105 species are known from the territory). The first comprehensive studies of Hong Kong amphibians and reptiles were made in the 1930s by Geoffrey A. C. Herklots (1902–1986), a British biologist teaching at the University of Hong Kong. His publications, including a four-part series on the land snakes, appeared in *The Hong Kong Naturalist*, the journal for which Herklots served as editor. His amphibian collections were sent for study to Alice Boring in Peiping, who published her results in the same journal (1934–1936). Herklots later wrote

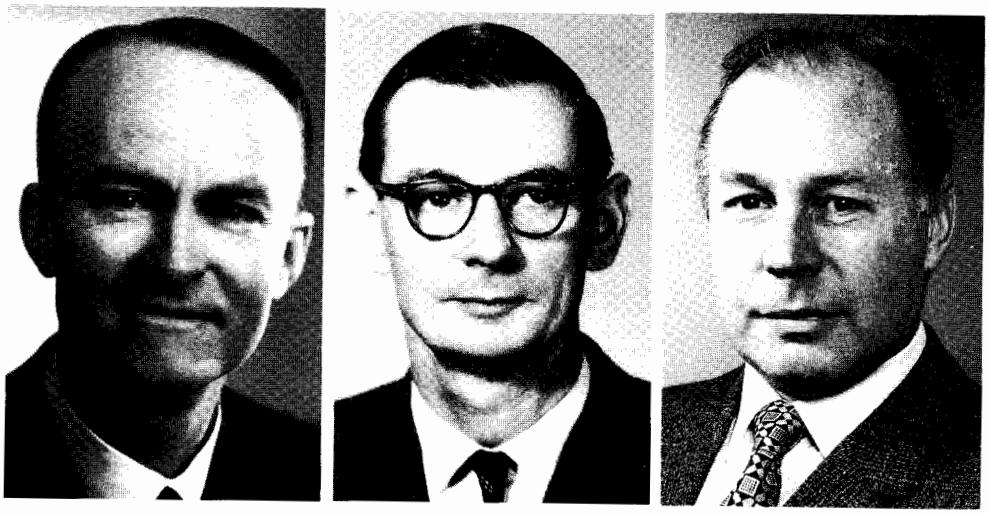


FIGURE 30. Geoffrey A. C. Herklots, John D. Romer, and Brian Lofts.

a popular book covering the territory's fauna, entitled "The Hong Kong Countryside" (1951).

In 1947, following service in the British Army during World War II, John D. Romer (1920–1982) became the officer in charge of pest control for the Hong Kong Government. Natural history, and herpetology in particular, was his avocation. Until he retired to England in 1980, Romer made large collections of amphibians and reptiles in Hong Kong, and in so doing added many species—some of them new to science—to the known Hong Kong fauna. He published on the subject extensively, and his publications and inspiration resulted in a book, "Hong Kong Amphibians and Reptiles" (1986), published by his former colleagues and students in Hong Kong, Stephen J. Karsen, Michael Wai-neng Lau, and Anthony Bogadek. Father Bogadek, a Catholic priest and teacher at St. Louis School in Hong Kong, continues Romer's tradition of faunal survey and also studies frog development. Michael Lau, now at the University of Hong Kong, is researching the ecology and reproductive biology of Hong Kong amphibians, especially of an endangered rhacophorid frog, *Philautus romeri*.

Another British national, Brian Lofts, spent the period 1967–1989 at Hong Kong University, where he chaired the zoology department. He published extensively on the physiology and comparative endocrinology of Hong Kong amphibians and reptiles, in particular a series of studies on reproductive cycles in *Hydrophis* and *Naja*. He was the editor of two volumes in the well-known series, "Physiology of the Amphibia" (1974, 1976).

At the Chinese University of Hong Kong, Yun-cheung Kong and his former student, Tat-ming Tong, have conducted studies on the embryology of *Parameisotriton hongkongensis*. Kam-wai Chiu, also at Chinese University, is working

on the physiology of frogs, lizards, and snakes, specializing on the hormonal basis of skin shedding.

In contrast to that of Hong Kong, the herpetofauna of the Portuguese-administered colony of Macao has received little scientific attention. Leonel Barros, a naturalist employed at the Maritime Museum, has made a special study of the venomous snakes. A survey of Macao animals was carried out by Portuguese zoologists from the Centro de Zoologia, Instituto de Investigação Científica Tropical in Lisbon, including Luis F. Mendes, Margarida Pinheiro, and Clara Ruas. An American biologist, Emmett R. Easton (University of Macau, formerly called University of East Asia), is currently surveying the herpetofauna of Macao and has made studies of lizard ecology and the ectoparasites of reptiles.

Cooperative Research Programs with Foreign Scientists

In recent years, a number of long-term research programs have been established involving Chinese herpetologists and foreign colleagues. Among these are studies of *Alligator* ecology and behavior by Bi-hui Chen (Anhui Normal University, Wuhu, Anhui), Zhu-jian Huang (Zoological Institute, Academia Sinica, Beijing) and Myrna E. Watanabe (New York Zoological Society, New York, USA) and another concerning the systematics of Chinese salamanders involving Da-tong Yang (Kunming Institute of Zoology, Kunming, Yunnan) and Ronald A. Nussbaum (University of Michigan Museum of Zoology, Ann Arbor, Michigan, USA). Wei-ping Liao (Guangdong Institute of Entomology, Guangzhou, Guangdong) and James D. Lazell, Jr. (The Conservation Agency, Jamestown, Rhode Island, USA) are conducting faunal surveys of the herpetofauna of Guangdong and Hainan provinces; Lazell is also surveying Hong Kong. Han-bo Ding and Ji Zheng, faculty members at Fujian Normal University in Fuzhou, Fujian, are collaborating with John G. Frazier (Centro de Investigación y de Estudios Avanzados, Mérida, Yucatán, México) to survey sea turtle species along the mainland coast and on Hainan Island.

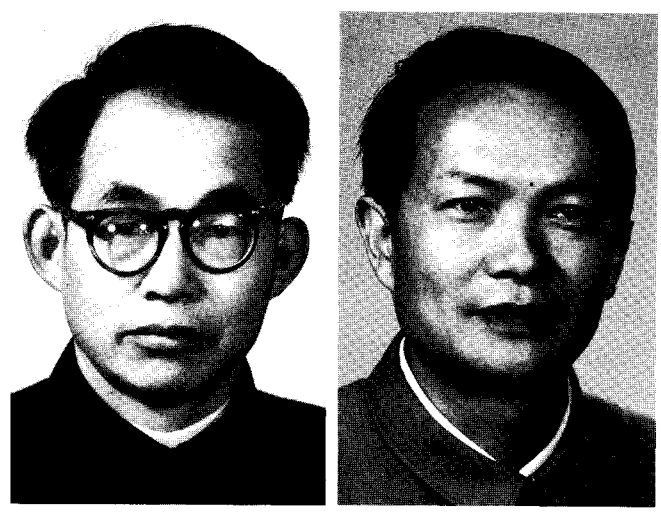


FIGURE 31. Bi-hui Chen and Da-tong Yang.

At the Chengdu Institute of Biology in Chengdu, Sichuan, Er-mi Zhao and his colleagues and students are involved in a number of collaborations with foreign scientists. These include studies on the systematics and ecology of north subtropical regions, with Robert F. Inger (Field Museum of Natural History, Chicago, Illinois, USA) and H. Bradley Shaffer (University of California, Davis, USA); similar studies on the northwestern deserts of China with Theodore J. Papenfuss (Museum of Vertebrate Zoology, University of California, Berkeley, California, USA) and J. Robert Macey (Washington University, St. Louis, Missouri, USA); and the molecular genetics of crotaline vipers with David J. Morafka (California State University, Dominguez Hills, California, USA) and Robert W. Murphy (Royal Ontario Museum, Toronto, Canada).

In Taiwan, Yao-sung Lin (National Taiwan University, Taipei, Taiwan), who specializes on frog ecology, and two American colleagues, Warren Burggren (University of Nevada, Las Vegas, USA) and Daniel S. Townsend (University of Scranton, Pennsylvania, USA), together with Burggren's former student, Ping-chun Hou (now at National Cheng Kung University, Tainan, Taiwan), are collaborating on a study of the altitudinal variation in metabolic physiology of *Rana sauteri*. Several Taiwan herpetologists, including Kuang-yang Lue (National Taiwan Normal University, Taipei, Taiwan), are collaborating with Hidetoshi Ota (University of the Ryukyus, Okinawa, Japan) and Masafumi Matsui (Kyoto University, Kyoto, Japan) on systematic, evolutionary, and biogeographic studies of gekkonid and agamid lizards, as well as of frogs and snakes. Chin-shiang Wang (National Taiwan University, Taipei) and Mitsuru Kuramoto (Fukuoka University of Education, Munakata, Japan) are engaged in systematic studies of Taiwanese frogs, using karyotypic and acoustic techniques.

Endangered and Economically Important Species

The Chinese have long been interested in the conservation and practical uses of animals. For example, they were the first to use vertebrates for biological control of insect pests. There are no historical records to indicate that frogs were raised specifically for this purpose, but their role in protecting plants from insects was well known in ancient times (Needham, 1984). During the late Sung dynasty, about 1250 A.D., edicts were promulgated in Zhejiang Province that prohibited the capture or killing of frogs. Since the 1960s, the rearing and release of frogs in rice paddy fields has been practiced in Zhejiang and in some other provinces.

Today, 20 species of reptiles and amphibians are legally protected under Chinese law (1987, Guo Huan [=National Environmental Protection Committee] number 014, entitled "List of Important Protected Wild Animals"; reptiles and amphibians on pages 11–12; amended in 1989, pages 27–28). There are two

levels of protection, with level I being the most restrictive: (level I) *Testudo horsfieldii*, *Pelochelys bibroni*, *Shinisaurus crocodilurus*, *Varanus salvator*, *Python molurus*, and *Alligator sinensis*; (level II) *Andrias davidianus*, all mainland species of *Tylototriton* and *Echinotriton*, *Rana "tigrina"* (=*Rana rugulosa*), *Geoemyda spengleri*, *Cuora trifasciata*, *C. yunnanensis*, *Manouria impressa*, all five species of sea turtles, "*Trionyx*" (=*Palea*) *steindachneri*, and *Gekko gecko*. "*Pelochelys taihuensis*" (=*Rafetus swinhoei*), which was included in the 1987 legislation, was omitted by the 1989 amendment.

Macao, a region of China currently administered by Portugal, has no laws specifically addressing the conservation of amphibians and reptiles. Animals in general are protected, including imports, under the "Basic Law of the Environment" (see *Boletim Oficial de Macau*, 10: 974–976, 1991). In Taiwan, the "Wildlife Protection Act" of 1989 established laws to protect 13 amphibian and 35 reptilian species, including all sea turtles. In Hong Kong, the "Protection of Endangered Species" ordinance (chapter 187, ordinance number 63, 1976, revised 1978 and 1992) affords total protection for *Paramesotriton hongkongensis*, *Amolops hongkongensis*, *Philautus romeri*, all local turtles (including sea turtles), *Varanus salvator*, and *Python molurus*.

In addition to basic research, scientists at several Chinese organizations that focus on amphibians and reptiles are conducting applied studies. These studies concern the conservation and captive breeding of threatened and endangered species, and are supplemented by research programs on the basic biology of species used for Chinese traditional medicine and facilities to produce snake venoms for medical purposes.

The Anhui Research Center of Alligator Reproduction, located in Xuanzhou, Anhui Province, was established in 1979 to propagate the rapidly dwindling natural populations of *Alligator sinensis*. Using techniques of artificial incubation developed in part by Bi-hui Chen (Anhui Normal University, Wuhu, Anhui), the center has successfully bred alligators, and today, under the direction of Zheng-dong Zhang, it produces about 800 hatchlings annually. No re-introductions into the wild have yet taken place. Other groups have also focused on alligators, for example, that of the late Cheng-guan Zhu (Institute of Zoology, Academia Sinica, Beijing), who conducted numerous studies of alligator ecology.

Two other protected species are also receiving special study. *Shinisaurus crocodilurus* is the focus for two groups in Guangxi Zhuang Autonomous Region, where the lizard is an endemic. Yu-xia Zhang and her colleagues Han-hua Li and Zhen-jie Tang (Guangxi Normal University, Guilin) as well as Lan-tian Shen (Guilin Zoo, Guilin) have conducted studies on the basic biology of this species, including a breeding program. Despite the fact that this species is protected by Chinese law, large numbers of specimens were exported illegally to pet shops in

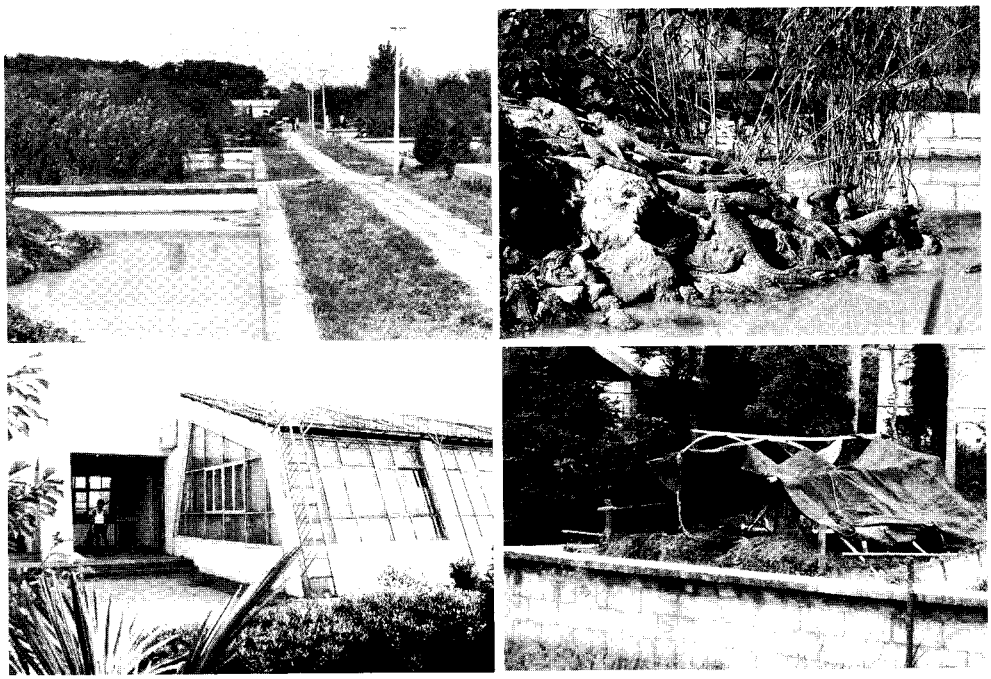


FIGURE 32. Anhui Research Center of Alligator Reproduction. Top: outdoor holding enclosures. Bottom: (left) laboratory and greenhouse facilities for egg incubation and rearing juveniles and for winter protection; (right) canvas tent erected to provide privacy for nesting females.

Europe and North America during the 1980s, but since the listing of *Shinisaurus* by CITES in 1988, illegal exports have decreased significantly. The Giant Salamander Institute at Wuling University, Dayong, Hunan, under the direction of Guo-jun Liu, studies the basic biology of *Andrias davidianus* and includes a breeding program. There is also a successful breeding program in Zhuxi County of Hubei Province, supervised by a young farmer, Zhi-chun Yuan, but these salamanders are mostly raised for market.

Amphibians and reptiles have figured in Chinese traditional medicine practices from the beginning of recorded history, and their use for this purpose continues today. Several species receive attention by researchers for this reason. Females of the frog, *Rana chensinensis*, after hibernation, produce proteinaceous substances in the oviducts that are believed to cure nervous exhaustion. The biology of this species is being studied by Chang-fu Ma (Jilin Provincial Institute of Biology, Changchun, Jilin). The gecko, *Gekko gecko*, also figures prominently in traditional medicine. Their bodies, after being eviscerated and then stretched out and pinned for drying, can be seen for sale throughout the country. The whole body is used in medicine, but it is extracts from the tail that are believed to be most effective in the treatment of tuberculosis. Two laboratories have studied the basic

biology of this species: those of Qi-xin Liang and Da-you Tang (Jinan University, Guangzhou, Guangdong) and the late Lu-he Lin (Guangxi College of Chinese Traditional Medicine, Nanning, Guangxi).

Several groups focus on venomous snakes. Jie-tang Huang, director of the Qimen Institute of Snake Bites, in Qimen, Anhui, and his colleagues study *Deinagkistrodon acutus*; their work includes a breeding program and the biochemical study of venom. This species is also used in traditional medicine, in particular for treatment of leprosy; the snake's entire body is eviscerated, dried, and used. The Wuyi Snake Farm, located in Jianyang County, Fujian Province, is also involved in the collection and breeding of snakes for medical or research use. It is under the direction of Zheng Zhang. Jia-jun Sun and Xiu-rong Wu (Sun Yat-sen Medical University, Guangzhou, Guangdong) and Guang-feng Liu and Qing-chuan Wang (Fujian Medical College, Fuzhou, Fujian) are among the leading Chinese researchers on snake venoms, including pharmacological studies.



FIGURE 33. Uses of reptiles in Chinese traditional medicine. Top: medicine peddler at Emei Shan, Sichuan Province: (left) displaying various plant and animal parts for medicinal use; (right) sections of antlers, feet and skull of monkeys, snake head, and glass lizards (*Ophisaurus*), the latter for medicinal use in the treatment of bone fractures. Bottom: snake shop in Taipei, Taiwan Province: (left) clerk removing the skin from one of a group of recently killed and eviscerated snakes hanging at left; (right) clerk pointing to the snake's gall bladder, which is highly valued for medicinal purposes and is swallowed fresh with a glass of rice wine.



FIGURE 34. Yu-xia Zhang and Da-ming Ji.

The well-known neurophysiologist, Ke Xü (Shanghai Institute of Physiology, Academia Sinica, Shanghai), and his colleagues, Ming-shi Jiang and Jing-kang Zhang, in 1980 discovered a new kind of presynaptic neurotoxin present in the venom of *Agkistrodon blomhoffii brevicaudus*, which they named "Agkistrodotoxin."

In Liaoning Province, several groups emphasize the biology of *Agkistrodon shedaoensis*, an arboreal pitviper endemic to the famous Snake Island (Shedao), located about 45 km offshore from Lüshun. This island's snake fauna is under the protection of the Shedao and Laotieshan Nature Conservation of Lüshun, Dalien, Liaoning Province, where Mu-peng Huang served as director for many years. This organization, including its subdivisions (the Snake Institute of Dalien and the Shedao Natural History Museum in Lüshun), conducts a breeding program and also extracts venom for medical uses. This snake is used in traditional medicine, in which entire snakes are killed and preserved in wine and the decanted wine is later consumed to treat rheumatism. Another group studying *shedaoensis* is headed by Da-ming Ji at Liaoning University in Shenyang. Ji and her colleagues have conducted ecological studies of this snake on Shedao Island, where the species occurs in extremely high densities. Wen-xue Hao (China Medical University, Shenyang, Liaoning) has developed preparations for the use of the venom of *shedaoensis* in clinical therapy.

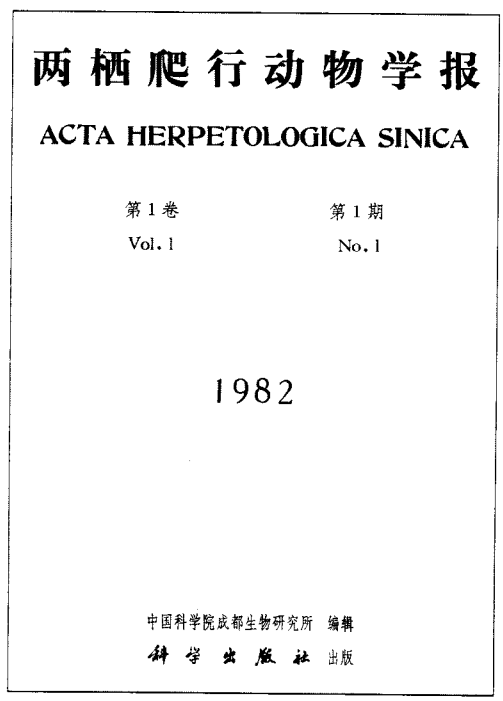
In Taiwan, several herpetologists are active in conservation. Kuang-yang Lue specializes in endangered amphibian species and Shyh-hwang Chen focuses on salamanders. Both are at National Taiwan Normal University in Taipei.

Chinese Herpetological Journals

Several scientific periodicals devoted to Chinese amphibians and reptiles have been published since 1972, although only one of them continues today. The first of these, *Materials for Herpetological Research* (Liang Qi Pa Xing Dong Wu Yan Jiu Zi Liao), was issued by the Sichuan Biological Research Institute, forerunner of today's Chengdu Institute of Biology, and was edited by Er-mi Zhao. Four

issues were produced during the period 1972–1978. Articles in the first three issues, in keeping with the restrictions of the Cultural Revolution, which lasted until the middle 1970s, list no individual authors and are attributed instead to work units. New taxa are credited to specific authors, however, as required under the "International Code of Zoological Nomenclature" (the current edition is dated 1985). Although *Materials* was intended for internal use in China only and, therefore, was not regarded by the Chinese authorities as published, it meets all of the criteria for publication of new taxa under the *Code*.

Materials was succeeded by *Acta Herpetologica Sinica*, also published by Chengdu Institute of Biology and edited by Zhao. An important innovation was the addition of titles and abstracts in English, which made Chinese herpetological research more accessible to the international scientific community. The *Acta* was published in two series that we, in this book, have chosen to term the "old series" (volumes 1–6, 1979–1982) and the "new series" (volumes 1–6, 1982–1987, plus two further issues in 1988). The two series have the same Latin title, but in Chinese the names are slightly different (old series: Liang Qi Pa Xing Dong Wu Yan Jiu; new series: Liang Qi Pa Xing Dong Wu Xue Bao). Beginning with volume 4 of the new series, editorship was transferred to the Herpetological Society of China, but was still headquarted at the Chengdu Institute. Unfortunately, this periodical, which provided a major stimulus to herpetological research in China, was terminated in July 1988.


两栖爬行动物学报

ACTA HERPETOLOGICA SINICA

第 1 卷 Vol. 1

第 1 期 No. 1

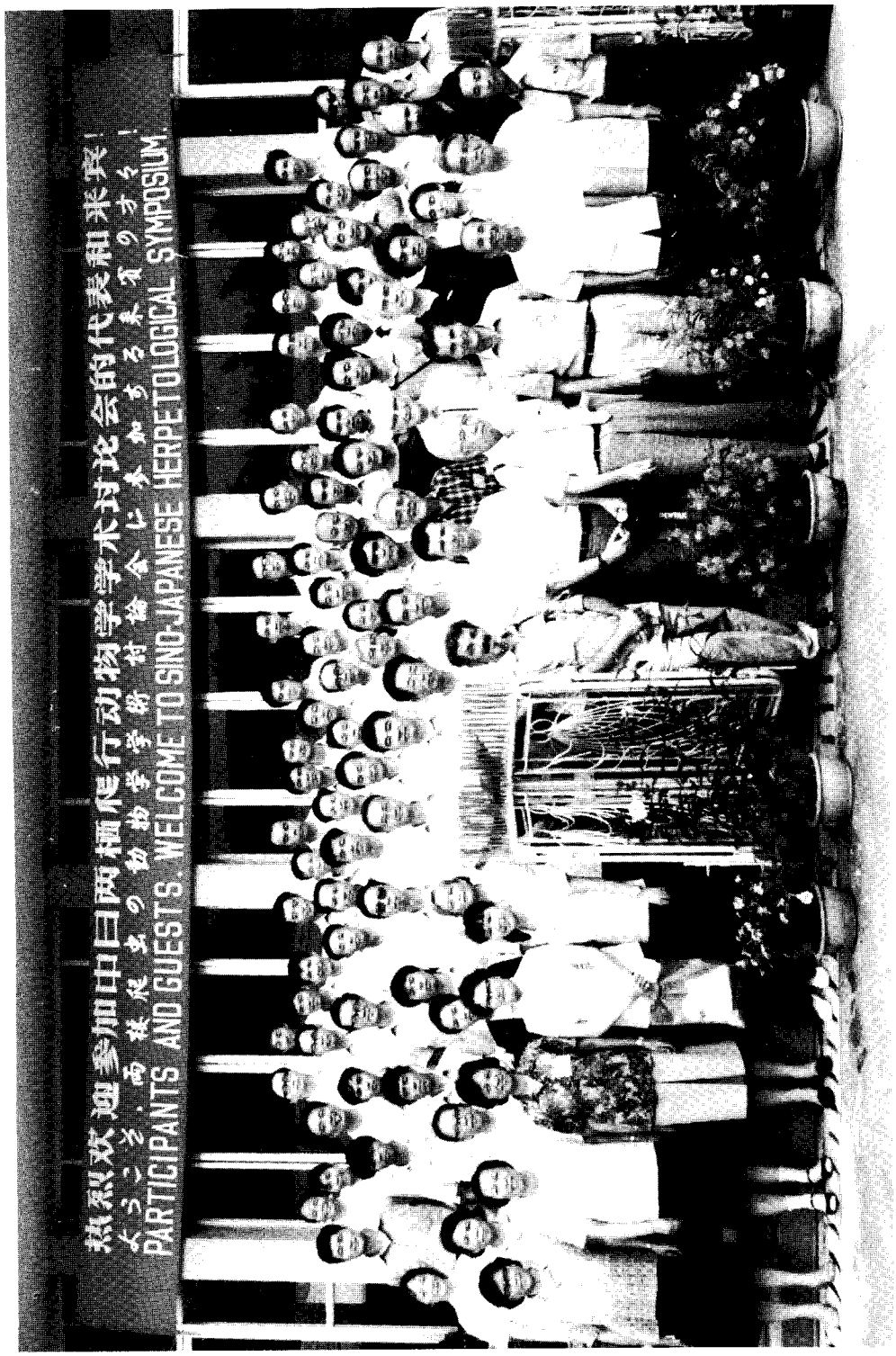
1982

中国科学院成都生物研究所 编辑

科学出版社 出版

FIGURE 35. *Acta Herpetologica Sinica*, a journal published by the Chengdu Institute of Biology from 1979 to 1988. This is the cover of the first issue of the new series (see Appendix 3, page 467, for a complete bibliographic description).

In place of the *Acta*, a new serial entitled *Chinese Herpetological Research* (Zhong Guo She Wa Yan Jiu) began in 1987, and was published in Chongqing for the Chinese Society for the Study of Amphibians and Reptiles and edited by Er-mi Zhao. Beginning with volume 2 in 1988, printing was transferred to Berkeley, California. With volume 3 in 1990, the serial was re-named *Asiatic Herpetological Research* and it is now published cooperatively by the Chinese SSAR and the Asiatic Herpetological Research


熱烈欢迎参加中日两栖爬行动物学学术讨论会的代表和来宾！
ようこそ、両棲爬虫の動物学学術討論会に参加する来ゴのオラ！
PARTICIPANTS AND GUEST'S WELCOME TO SINO-JAPANESE HERPETOLOGICAL SYMPOSIUM

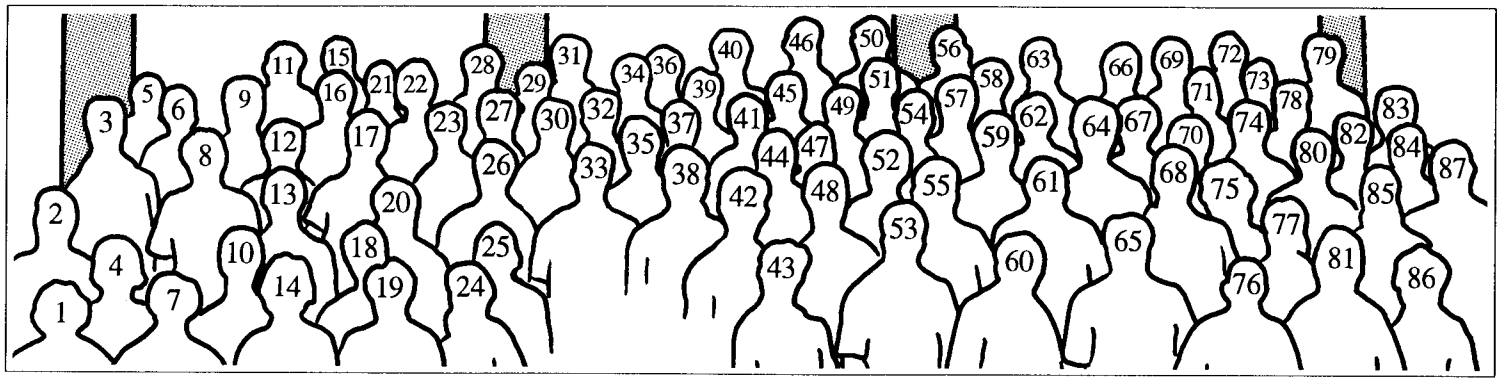


FIGURE 36 (opposite page). Joint meeting of the Herpetological Society of China and the Herpetological Society of Japan, in Guangzhou, Guangdong Province, China, 25–31 August 1985. This was the first meeting to which foreign herpetologists were invited; the participants are identified below.

1 Mei-hua Huang
2 Yu Zong
3 Guang-xing Zeng
4 Yu-xia Zhang
5 Rui-min Wu
6 Jun-cai Chen
7 Yu-min Cao
8 Wen Chen
9 Rong-sheng Fang
10 Shu-mei Chen
11 Fu-ji Zhang
12 Yue-zhao Wang
13 Zhi-tong Kou
14 Guang-feng Liu
15 Ou Li
16 Bi-hui Chen
17 Cheng-han Liu
18 Jiang Zeng
19 Kathryn J. Gloyd
20 Zhi-ming Liu
21 Wen-biao Zheng
22 Pei-chao Wang
23 Jie-tang Huang
24 (translator)
25 Bing-zhi Su
26 Kai-ya Zhou
27 Jian-ying Zhang
28 (unknown)
29 Xiao-yi Feng
30 You-jin Yang
31 Ming-yu Liu
32 Zheng-yi Huang
33 Jia-jun Sun
34 Guo-jun Liu
35 Hui-qing Gu
36 (unknown)
37 Yao-ming Jiang
38 Chokei Yoshida
39 Shou-chang Zou
40 Qi-xiong Hu
41 Pu Shi
42 Mitsuru Kuramoto
43 Jean Garzoni
44 Zhu-jian Huang
45 Jian Zhang
46 Yu-liang Liu
47 Mai-lin Wang
48 Qi-xin Liang
49 Ken-tang Zhao
50 Hong Yuan
51 Jian-min Gao
52 Masanao Toyama
53 Kraig Adler
54 Chong-yong Yao
55 Oliver W. Johnson
56 Ming-tao Song
57 Akira Moriya
58 Ji Zheng
59 Tsutomu Hikida
60 Yoshio Sawai
61 Roger Conant
62 Michihisa Toriba
63 Qing-chuan Wang
64 Hidetoshi Ota
65 Kenneth V. Kardong
66 Ji-fan Ma
67 Shoji Tokunaga
68 Richard C. Goris
69 Yu-feng Zhou
70 Tamotsu Kusano
71 Chang-fu Zhong
72 (translator)
73 Yuan-chong Chen
74 Sadaaki Mitsui
75 Masafumi Matsui
76 Jiong-hua Pan
77 Susana Salas (formerly Frazier)
78 De-jun Li
79 (driver)
80 Kiyoshi Isokawa
81 Han-bo Ding
82 Ye-tang Wen
83 (unknown)
84 Guan-fu Wu
85 John G. Frazier
86 Takeshi Seto
87 Er-mi Zhao

For further details, see next page.

Society. In a further internationalization of this sequence of journals, all articles are now in English and the geographic coverage was expanded to encompass all of Asia, although most articles continue to focus on China.

Full bibliographic details about these four series may be found in Appendix 3 (page 467).

Chinese Herpetological Societies and Meetings

The importance of a national association of scientists devoted to herpetology that meets on a regular basis was at last realized in December 1982 when Chinese herpetologists met in Chengdu to found the Herpetological Society of China as a subdivision of the Chinese Society of Zoologists. The first officers were elected at that time, with Shu-qin Hu as president, Han-bo Ding and Er-mi Zhao as vice-presidents, and the latter serving also as secretary.

In August 1985, the Herpetological Society of China, meeting jointly with the Herpetological Society of Japan, co-sponsored a symposium in Guangzhou. This was a key event for the development of herpetology in China, for it was the first meeting to which foreign scientists were invited; Japanese, American, and European herpetologists attended. Following a week-long meeting at South China Normal University, under the chairmanship of the vertebrate biologist Jiong-hua Pan, then president of the university, the delegates traveled to Hainan Island for a week's herpetological reconnaissance (Zhao, 1987). The meeting proceedings were published in *Acta Herpetologica Sinica*, volume 4, numbers 3–4, 1985.

In July 1988, the Guangzhou meeting was reciprocated by Japanese herpetologists, when the second joint herpetological symposium was held in Kyoto. A delegation of 19 Chinese herpetologists attended, the first time that a group of Chinese herpetologists attended a meeting outside China. The meeting proceedings were published in book form (Matsui, Hikida, and Goris, 1989). Further recognition of Chinese herpetological research activities occurred at the First World Congress of Herpetology, held in Canterbury, United Kingdom, in September 1989. A total of 12 Chinese herpetologists participated (Juterbock, 1990). Other meetings of the Herpetological Society of China were held in Nanjing (1986), Fuzhou (1990), and Dalian (1992).

An additional herpetological society, the Chinese Society for the Study of Amphibians and Reptiles, was founded by Er-mi Zhao in Chengdu in 1986. This is an independent organization with an international outlook and is a co-sponsor of the serial *Asiatic Herpetological Research*. This society held its first international meeting in Huangshan City (Tunxi), Anhui Province, in July 1992.

NOTE: The sources and credits for the photographs in this chapter are listed on page 522.

ILLUSTRATED KEYS TO THE GENERA OF CHINESE AMPHIBIANS AND REPTILES



THE KEYS THAT FOLLOW PROVIDE FOR THE IDENTIFICATION OF ALL 164 genera of Chinese amphibians and reptiles. Please note that whereas the characters mentioned in the key will fit all known Chinese species, they will not always fit non-Chinese species. Each generic entry is referenced to the checklist of species and is also referenced to a color photograph of one or more species for partial confirmation of identification. The figures used to illustrate these keys are new or have been modified from drawings in Dennis and Adler (1988), Liu (1950), Liu and Hu (1961), Pope (1935), M. Smith (1935, 1943), and Stejneger (1907).

No key covering all species of Chinese amphibians and reptiles exists in English. An English-language key to the species of snakes and lizards (only) was published in 1986, translated from an original version in Chinese (Sichuan Biological Research Institute, 1977). The most recent key in Chinese to all species (and subspecies) was that published by Tian, Jiang, and their colleagues (1986). Fei, Ye, and Huang ("1990" [1991]) provided a more recent Chinese-language key to amphibians, including their eggs and larvae.

KEY TO THE MAJOR GROUPS OF AMPHIBIANS AND REPTILES

1A Skin moist and naked, not covered with cornified scales, scutes, or dermal plates (AMPHIBIANS) 2

B Skin dry, cornified and divided into scales or scutes, or formed into dermal plates (REPTILES) 4

2A Eel-like; without legs ..... **Caecilians**
[One Chinese species, *Ichthyophis bannanicus*, page 105; plate 2A]

B Not eel-like; with four legs as adult 3

3A Adult with a tail ..... **Salamanders and newts** (key on page 68)

B Adult without a tail ..... **Frogs and toads** (key on page 70)

4A Body enclosed in a bony or a soft, fleshy shell ..... **Turtles and tortoises** (key on page 75)

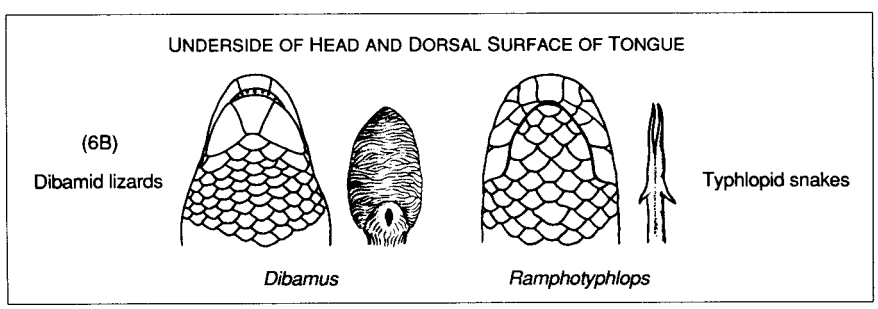
B Body without a shell 5

5A Body covered with large dermal plates; tail compressed with two dorsal ridges formed by dermal plates ..... **Crocodilians**
[One Chinese species, *Alligator sinensis*, page 279; plate 44G]

B Body covered with cornified scales; tail cylindrical, flattened, or compressed, but without two dorsal ridges formed by dermal plates 6

6A Body long and slender; without legs or with only vestiges of hind legs (represented by pair of spur-like structures next to vent); no eyelids or ear openings; tail shorter than body (see Note) .... **Snakes** (key on page 84)

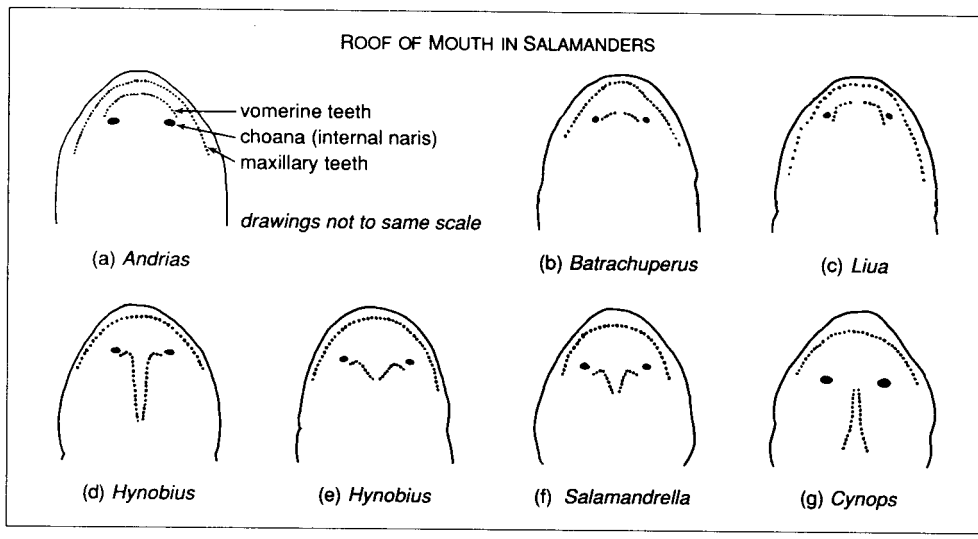
B Body short and stout or long and slender; with four legs or reduced to two or none (if none, then eyelids and ear openings present; body with deep, flexible groove on sides); tail equal to or longer than snout-vent length (unless regenerated) ..... **Lizards** (key on page 78)
[NOTE: The burrowing lizards of the genus *Dibamus* will key out to snakes. The species of *Dibamus* are limbless, except that males have vestigial, flap-like hind limbs (see Plate 27G). Females, however, may be confused with typhlopid snakes. Species of *Dibamus* have teeth in both jaws (in typhlopids the lower jaw is toothless), the tongue is broad and covered with transverse lamellae (that of typhlopids is slender, deeply forked, and smooth), the chin is covered with three or more enlarged shields (that of typhlopids has small, cycloid scales like those on the body), and the tail is blunt and represents about 25% of body length (pointed and less than 5% of body length in typhlopids). See figures in box below.]



KEY TO THE GENERA OF SALAMANDERS AND NEWTS

1A Size large, adults reaching one meter or more in total length; a longitudinal skin fold along side of body; vomerine teeth series arranged in a long curve just inside and parallel to the maxillary teeth (see box on opposite page, figure *a*) ..... ***Andrias*** (page 110; plate 3F)

B Size moderate or small, less than 30 cm in total length; no longitudinal skin fold along side of body; vomerine teeth in two series or a single, continuous series and not parallel to maxillary teeth (figures *b–g*) 2



2A Vomerine teeth in two short series (figure *b*) 3
B Vomerine teeth in two long series or a single, continuous series, often bent in a curve (figures *c–g*) 6

3A Toes on rear feet four ..... ***Batrachuperus*** (page 105; plate 2B–D)
B Toes on rear feet five 4

4A Labial fold prominent ..... ***Pachyhynobius*** (page 108; plate 3B)
B No labial fold, or labial fold not prominent 5

5A Black, cornified claws on tips of fingers and toes ..... ***Onychodactylus*** (page 108; plate 3A)
B Tips of fingers and toes without black, cornified claws ..... ***Ranodon*** (page 108; plate 3C–D)

6A Vomerine teeth series bent in right angle, with apex of angle close to the choana; most teeth anterior to choana (figure *c*) ..... ***Liua*** (page 107; plate 2-I)
B Vomerine teeth series bent in a right angle with apex of angle nearest midline, or an inverted V-shaped series with apex anteriorly; most teeth posterior to choana (figures *d–g*) 7

7A Vomerine teeth series bent in a V-shape, with apex of angle pointed posteriorly (figures *d–f*) 8
B Vomerine teeth series bent in inverted V-shape, with apex of angle pointed anteriorly (figure *g*) 9

8A Toes on rear feet four ..... ***Salamandrella*** (page 109; plate 3E)
B Toes on rear feet five (in Chinese species) ..... ***Hynobius*** (page 106; plate 2E–H)

9A Lateral borders of top of head raised into ridges 10
B No ridges on top of head 12

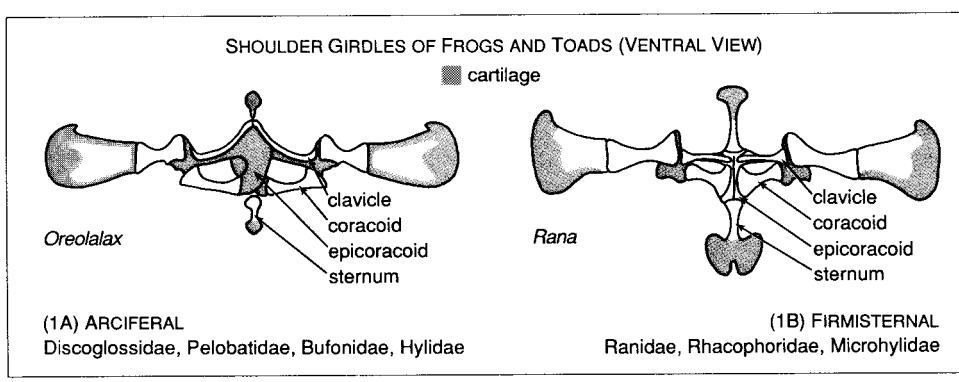
10A Ridges on top of head formed by glands of skin; ventral surface of body and tail with orange-red or orange-yellow pattern ..... ***Paramesotriton*** (page 113; plate 4D–E)
B Ridges on top of head formed of bony structures; ventral surfaces blackish brown 11

11A Dorsum of body black or brownish black; one lateral row of large primary warts on body supported by sharp tips of ribs ..... ***Echinotriton*** (page 111; plates 3H, 4A)
B Dorsum of body black with reddish brown pattern; warts on body not supported by tips of ribs ..... ***Tylototriton*** (page 114; plate 4F–H)

12A Skin of dorsum with small tubercles; midline of dorsum ridged ..... ***Cynops*** (page 110; plate 3G)
B Skin of dorsum smooth; midline of dorsum not ridged ..... ***Pachytriton*** (page 112; plate 4B–C)

KEY TO THE GENERA OF FROGS AND TOADS

1A Pectoral girdle arciferal (see Note at the top of the opposite page) 2
B Pectoral girdle firmisternal 15



[NOTE: The epicoracoid bones or cartilages of the two sides of the shoulder (pectoral) girdle either overlap midventrally (arciferal condition) or are fused (firmisternal). The condition can be determined through dissection or, in an intact frog, by moving the two arms toward the center and noticing whether the sides of the girdle slide past each other (arciferal) or not (firmisternal). In the latter case, the fusion point between the two halves of the girdle buckles outward from the frog's chest. See figures in box on opposite page.]

2A Tongue shape disc-like, fixed on the bottom of mouth ..... ***Bombina*** (page 114; plate 5A–B)

B Tongue in various shapes, fixed to bottom of mouth at anterior edge only, its posterior edge free 3

3A Parotoid gland behind each eye 4

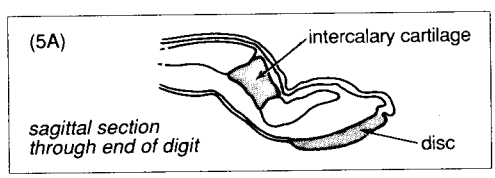
B Parotoid glands absent 5

4A Maxillary teeth present ..... ***Pelophryne*** (page 130; plate 8D)

B Maxillary teeth absent ..... ***Bufo*** (page 126; plates 7F–H, 8A–C)

5A Mainly green in color; an intercalary cartilage between the last two segments of fingers and toes (see figure below); ends of digits enlarged into discs ..... ***Hyla*** (page 130; plate 8E–H)

B Not green in color; no intercalary cartilage; no discs 6



6A Pupil of eye horizontal ..... ***Ophryophryne*** (page 120; plate 6C)

B Pupil of eye vertical 7

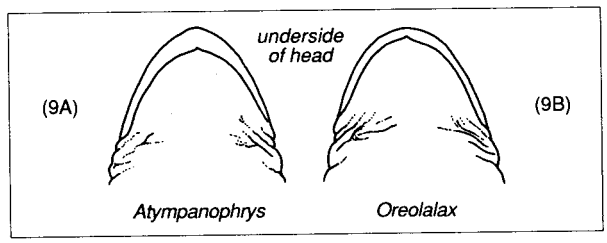
7A Vomerine teeth present 8

B Vomerine teeth absent 9

8A Head distinctly wider than long (its length 3/4ths of its width); one or two conical processes on upper eyelid ..... ***Brachytarsophrys*** (page 116; plate 5D)

B Head as long as or longer than wide, or slightly wider than long; no conical process on upper eyelid ..***Megophrys***, part (page 118; plates 5H, 6A–B)

9A Snout protrudes greatly beyond the lower jaw (see figure below) 10
B Snout protrudes moderately beyond the lower jaw (see figure) 11



10A Tympanum present ..... ***Megophrys***, part (page 118; plates 5H, 6A–B)
B Tympanum absent ..... ***Atympanophrys*** (page 115; plate 5C)

11A Iris of eye uniform in color 12
B Upper and lower parts of iris different in color 14

12A Inner metacarpal tubercle well developed (about half the size of palm), at the base of the first and second fingers .....
..... ***Leptolalax*** (page 116; plate 5G)
B Inner metacarpal tubercle small 13

13A Post-femoral gland present; tympanum hidden or only slightly prominent; maxillary teeth developed; one pair of black, cornified spiny patches on chest of male during breeding season .....
..... ***Oreolalax*** (page 121; plate 6D–H)
B Post-femoral gland absent; without tympanum; no maxillary teeth or few short maxillary teeth under mucous membrane (developed in *Scutiger chintingensis*); two pairs of black, cornified spiny patches on chest of male during breeding season ..... ***Scutiger*** (page 123; plate 7A–C)

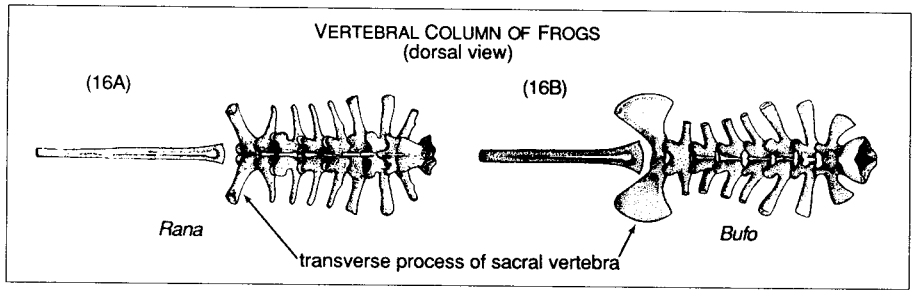
14A Tympanum not distinct; black, cornified spines on margin of upper lip of male during breeding season .... ***Vibrissaphora*** (page 125; plate 7D–E)
B Tympanum prominent; no black, cornified spines on the margin of upper lip of male during breeding season .....
..... ***Leptobrachium*** (page 116; plate 5E–F)

15A Tips of fingers and toes without discs; if disc-like, no intercalary cartilage between the last two phalanges 16
B Tips of fingers and toes enlarged into discs; an intercalary cartilage between last two phalanges of each digit (see figure on page 71) 22

16A Transverse processes of the sacral vertebra rod-like (see Note) 17

B Transverse processes of the sacral vertebra widely enlarged 28

[NOTE: The width of the transverse process can be determined by dissection or, in an intact frog, by enclosing the process under the skin within the tips of a pair of forceps. See figures in box directly below.]



17A Tongue shape narrow, no notch at posterior edge .... ***Occidozyga*** (page 137; plate 10B–C)

B Tongue shape oval, a notch at posterior edge 18

18A Vomerine teeth present; tympanum prominent or not 19

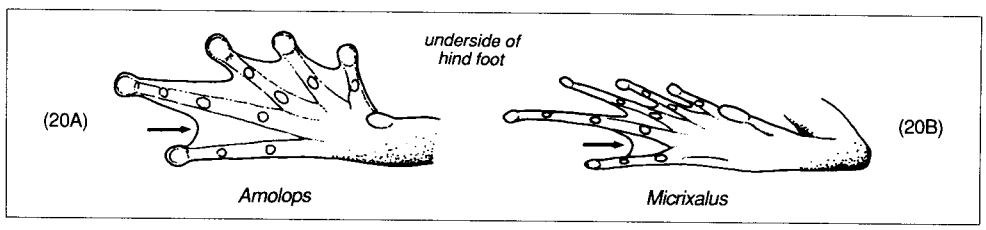
B Vomerine teeth absent or poorly developed; tympanum not prominent .. 21

19A Tips of fingers and toes rounded, or slightly enlarged into a disc .... ***Rana*** (page 138; plates 10D–H, 11–13)

B Tips of fingers and toes enlarged into discs; the last phalangeal bone of each digit T-shaped 20

20A Full web between outer metatarsals, reaching base of metatarsus; tips of toes enlarged (see figure below) ..... ***Amolops*** (page 132; plate 9B–G)

B No web or only slight webbing between outer metatarsals; tips of toes not enlarged (see figure below) ..... ***Micrixalus*** (page 136; plate 9H–I)



21A Fingers short and flattened; subarticular tubercles not prominent .... ***Nanorana*** (page 137; plate 10A)

B Fingers not short and flattened; subarticular tubercles prominent .... ***Altirana*** (page 132; plate 9A)

22A Fingers entirely or fully webbed; flaps on forearm, tarsus, metatarsus or heel present in most species .....***Rhacophorus*** (page 157; plate 15D–F)

B Fingers webbed to various degrees (not more than 3/4ths webbed); no flaps on forearm, tarsus, metatarsus or heel 23

23A Skin on top of head co-ossified to skull 24

B Skin on top of head not co-ossified to skull 25

24A Body and limbs with numerous large or small, sometimes calcified warts .....***Theloderma*** (page 159; plate 15G–H)

B Skin smooth .....***Polypedates***, part (page 155; plates 14G–H, 15A–C)

25A Size very small, adults 2–3 cm in snout-vent length; skin very rough ... .***Philautus*** (page 153; plate 14F)

B Size small to very large, adults 3–10 cm in snout-vent length; skin smooth or slightly rough 26

26A Two inner fingers not webbed, two outer fingers 2/3rds to 3/4ths webbed; two outer fingers appear to be opposable to the two inner ones .....***Chirixalus*** (page 152; plate 14C–E)

B Not as above (26A) 27

27A Discs of digits well developed; live on vegetation; eggs deposited in foam nests .....***Polypedates***, part (page 155; plates 14G–H, 15A-C)

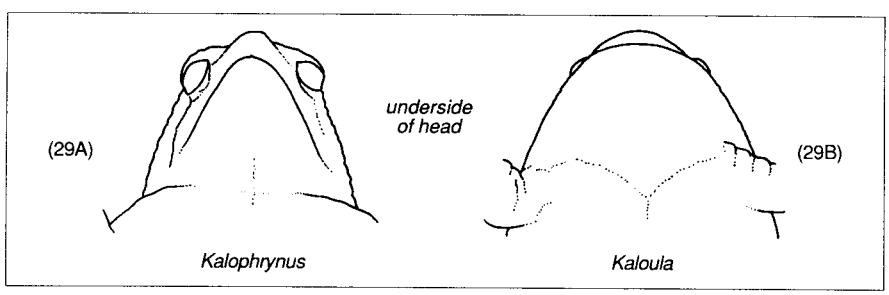
B Discs of digits poorly developed; live in water beneath falls of mountainous stream; eggs deposited in quiet water, no foam nest formation .... ***Buergeria*** (page 151; plate 14A–B)

28A Maxillary teeth and vomerine teeth present ....***Calluella*** (page 160; plate 16A)

B Maxillary teeth and vomerine teeth absent 29

29A Head small and deep; snout protrudes well beyond lower jaw (see figure below) .....***Kalophrynus*** (page 160; plate 16B)

B Head small and not deep; snout protrudes just beyond lower jaw 30



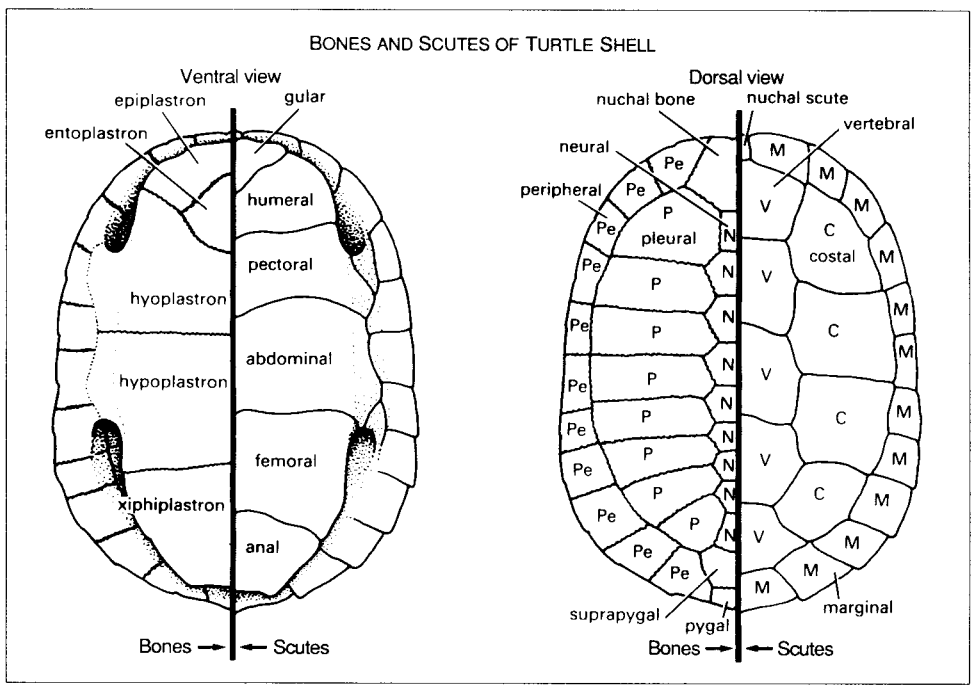
30A Snout-vent length of adults 2–3 cm (females of *Microhyla berdmorei* up to 3.5 cm); skin thin; male without thickened skin glands on ventral surface ..... ***Microhyla*** (page 162; plate 16E–H)

B Snout-vent length of adults exceed 4 cm; skin thick; male with thickened skin glands on ventral surface ..... ***Kaloula*** (page 161; plate 16C–D)

KEY TO THE GENERA OF TURTLES AND TORTOISES

1A Carapace (upper shell) and plastron (lower shell) covered with a continuous layer of undivided skin 2

B Carapace and plastron covered with clearly demarcated horny scutes (see figures below) 6



2A Carapace raised into seven prominent longitudinal ridges; upper jaw strongly cusped; limbs clawless .... ***Dermochelys*** (page 173; plate 20C)

B Carapace not ridged, hind part flexible; upper jaw not strongly cusped; claws present 3

3A Rostral process (proboscis or flexible extension of snout) very short, less than half the diameter of eye ..... ***Pelochelys*** (page 174; plate 20E)

B Rostral process longer, about equal to diameter of eye 4

4A Seven callosities (areas of thickened, hardened skin) on plastron .... ***Pelodiscus*** (page 175; plate 20F–G)

B Two or four callosities on plastron 5

5A Two plastral callosities ..... ***Rafetus*** (page 176; plate 20H–I)

B Four plastral callosities ..... ***Palea*** (page 174; plate 20D)

6A Forelimbs in form of elongate flippers, without separate digits; each forelimb with one or two claws 7

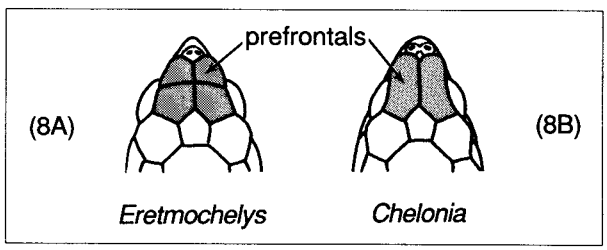
B Forelimbs with distinct digits; each forelimb with four or five claws .. 10

7A Four costal scutes on each side of carapace 8

B Five or more costal scutes on each side of carapace 9

8A Two pairs of prefrontal plates on top of head (see figure below); scutes of carapace overlapping (except in hatchlings and old adults) .... ***Eretmochelys*** (page 173; plate 20A)

B One pair of prefrontal plates on top of head (see figure); scutes of carapace juxtaposed, not overlapping ..... ***Chelonia*** (page 172; plate 19H)



9A Three enlarged inframarginal scutes in each bridge (between carapace and plastron); no pore in inframarginal scutes .... ***Caretta*** (page 172; plate 19G)

B Four enlarged inframarginal scutes in each bridge, each scute with a pore near posterior edge ..... ***Lepidochelys*** (page 173; plate 20B)

10A Plastral scutes separated from marginal scutes by inframarginals (in bridge); shell much depressed; long tail; large head, which cannot be drawn completely into shell ..... ***Platysternon*** (page 164; plate 17A)

B Inframarginal scutes absent, plastral scutes in contact with marginal scutes; shell not, or not so depressed; tail and head can be drawn completely into or under the shell 11

11A Limbs more or less flattened; digits webbed; top of head covered anteriorly with smooth, scaleless skin 12

B Limbs more or less cylindrical; digits not webbed; top of head covered anteriorly with scales 20

12A Hinge present on plastron (between pectoral and abdominal scutes); plastron connected to carapace with ligament 13

B Hinge on plastron absent; plastron with bony connection to carapace 16

13A Posterior margin of carapace serrated; plastral lobes narrow; not capable of closing shell completely 14

B Posterior margin of carapace not serrated; plastral lobes wide; capable of closing shell completely 15

14A Carapace strongly tricarinate, very flattened between the lateral keels; seam between gular scutes shorter than that between humeral scutes ... . ***Pyxidea*** (page 170; plate 18H)

B Carapace slightly flattened between the lateral keels; seam between gular scutes longer than that between humerals .... ***Cyclemys*** (page 167; plate 18B)

15A Plastron rounded anteriorly and posteriorly; no notches .... ***Cistoclemmys*** (page 165; plate 17D–E)

B Plastron nearly rounded or protrudes slightly (emarginate) anteriorly with a very small medial notch posteriorly .... ***Cuora*** (page 166; plates 17F–H, 18A)

16A Carapace strongly serrated, with anterior and posterior marginal scutes pointed at corner of scute ..... ***Geoemyda*** (page 168; plate 18C)

B Carapace not serrated, with anterior and posterior edges smooth and rounded 17

17A Alveolar surface of upper jaw with longitudinal median ridge; top of head posteriorly without scales; sides of head and neck with numerous narrow, longitudinal, yellow stripes ..... ***Ocadia*** (page 169; plate 18F–G)

B Alveolar surface of upper jaw without a longitudinal median ridge; top of head posteriorly with scales or not; sides of head and neck without numerous narrow, longitudinal, yellow stripes 18

18A Top of head covered posteriorly with small scales or granular skin; alveolar surface of jaw broad ..... ***Chinemys*** (page 164; plate 17B–C)

B Top of head covered posteriorly with smooth, scaleless skin; alveolar surface of jaw narrow *19*

19A Top of head with one or two pairs of eye spots (ocelli) .... ***Sacalia*** (page 170; plate 19A–C)

B Top of head without eye spots ..... ***Mauremys*** (page 168; plate 18D–E)

20A Forelimb with four claws (in Chinese species) .... ***Testudo*** (page 172; plate 19F)

B Forelimb with five claws 21

21A Two marginal scutes (5th and 6th) touch the 2nd costal scute; pectoral scute nearly triangular ..... ***Manouria*** (page 171; plate 19E)

B Three marginal scutes (5th, 6th and 7th) touch the 2nd costal scute; pectoral scute not triangular ..... ***Indotestudo*** (page 171; plate 19D)

KEY TO THE GENERA OF LIZARDS

1A Top of head without large, symmetrical shields 2

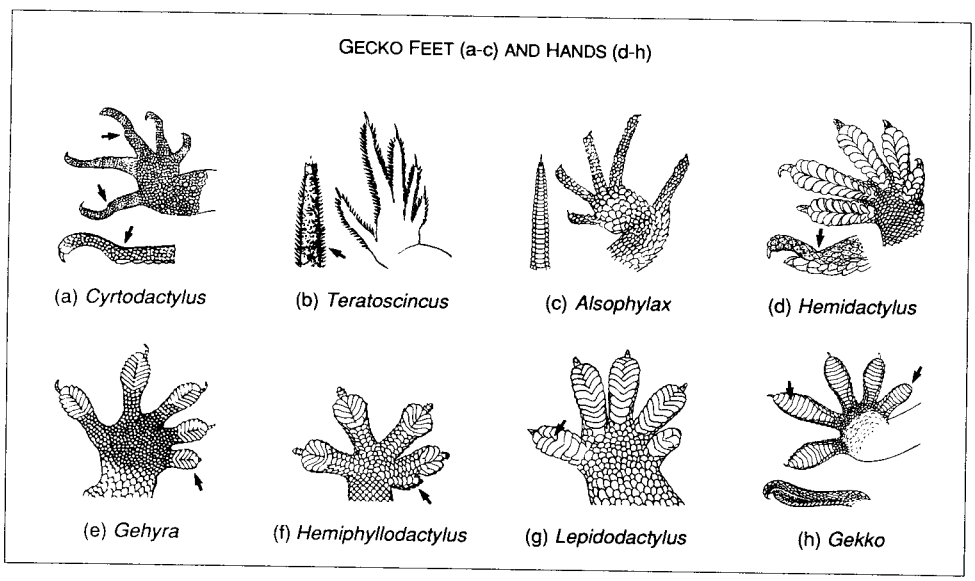
B Top of head with large, symmetrical shields 23

2A Eyelids not moveable (spectacle, or brille, present) 3

B Eyelids present and moveable 11

3A Digits not expanded (see figures *a–c* below) 4

B Digits greatly expanded along entire length or at some point (see figures *d–h* below) 6



4A Digits bent angularly or kinked at the articulations of the phalanges, thus composed of a basal and a terminal portion (see figure *a* on page 78) .. .. ***Cyrtodactylus*** (page 178; plate 21C–E)

B Digits straight, not bent angularly or kinked at any of the articulations (see figures *b–h* on page 78) 5

5A Digits with a lateral fringe of pointed scales (see figure *b* on page 78).. ..... ***Teratoscincus*** (page 185; plate 23A-B)

B Digits without lateral fringe of pointed scales (see figure *c* on page 78) ..... ***Alsophylax*** (page 177; plate 21A)

6A Fringe of skin present along side of body .... ***Cosymbotus*** (page 178; plate 21B)

B No fringe of skin along side of body 7

7A Terminal phalanges of outer four digits of hand free, rising angularly from the expanded portion (see figure *d* on page 78) 8

B Terminal phalanges of outer four digits of hand united with the expanded portion; inner digit clawless (see figure *h* on page 78) 10

8A All digits of hand essentially alike in structure (see figure *d* on page 78) ..... ***Hemidactylus*** (page 182; plate 22D–E)

B Inner digit of hand differing markedly from others in structure (see figures *e–f* on page 78) 9

9A Inner digit of hand well developed and expanded, without a joint rising from expansion (see figure *e*, page 78) ... ***Gehyra*** (page 180; plate 21F)

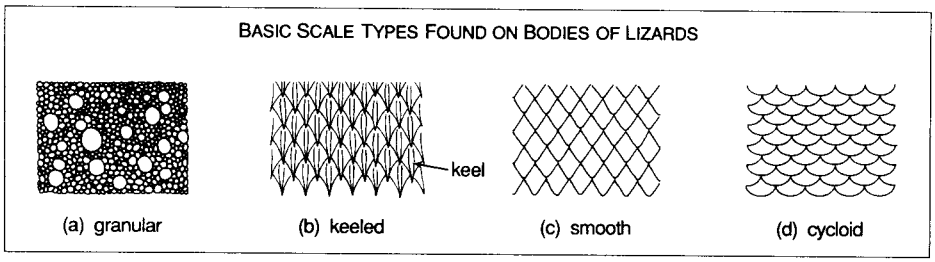
B Inner digit of hand vestigial, not expanded (see figure *f* on page 78) .... ***Hemiphyllodactylus*** (page 184; plate 22F)

10A Some subdigital lamellae divided (see figure *g* on page 78) .... ***Lepidodactylus*** (page 185; plate 22G–H)

B Subdigital lamellae undivided (see figure *h* on page 78) .... ***Gekko*** (page 180; plates 21G–H, 22A–B)

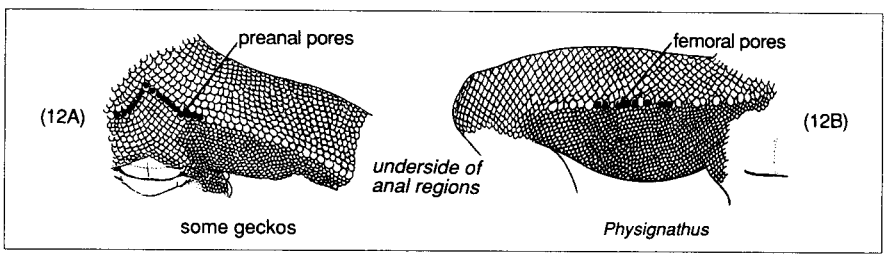
11A Total length of adult more than 1 meter; tongue long and slender, deeply forked ..... ***Varanus*** (page 200; plate 27C–D)

B Total length of adult less than 1 meter; tongue short, not slender or forked 12



12A Dorsum of body with granular scales (see figure *a* above); males with preanal pores on body anterior to the vent (see figure below) ....***Goniurosaurus*** (page 182; plate 22C)

B Dorsum of body with keeled or smooth scales (see box above, figures *b–c*); no preanal pores (*Physignathus* and *Leiolepis* with femoral pores on underside of thigh; see figures below) 13



13A Tail with two dorsal longitudinal ridges composed of large, keeled scales .....***Shinisaurus*** (page 200; plate 27A–B)

B Tail without ridges or with only one median dorsal crest..... 14

14A A wing-like lateral expansion along side of body supported by prolongations of ribs .....***Draco*** (page 189; frontispiece and plate 24B–C)

B No wing-like lateral expansion 15

15A No femoral pores 16

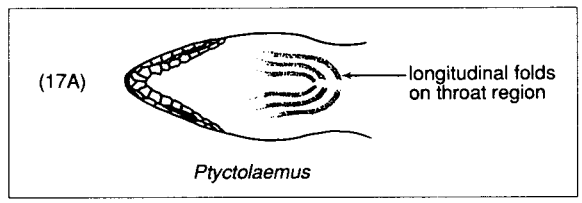
B Femoral pores present on underside of thigh 22

16A Body not depressed 17

B Body more or less depressed (flattened horizontally) 21

17A Three parallel longitudinal folds on each side of the middle of the throat that curve and converge posteriorly into a U-shaped pattern (see figure at the top of opposite page) .....***Ptyctolaemus*** (page 199; plate 26D–E)

B Not as above (17A) 18

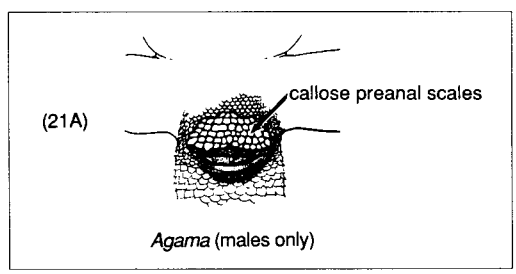


18A Dorsal scales equal in size (except in *Calotes fruhstorferi* and *C. kakhienensis*), regularly arranged.....***Calotes*** (page 188; plates 23G, 24A)
B Dorsal scales unequal in size 19

19A No spine behind eye .....***Japalura*** (page 190; plates 24D–G, 25A)
B A spine behind eye.....20

20A Tail rounded, the scales on the ventral surface as broad as or broader than long .....***Oriocalotes*** (page 193; plate 25C)
B Tail compressed, the scales on the ventral surface longer than broad.... .....***Acanthosaura*** (page 186; plate 23C)

21A Tympanum exposed; males with callose (thickened) preanal scales (see figure below) .....***Agama*** (page 187; plate 23D–F)
B Tympanum concealed or absent; without callose preanal scales ....***Phrynocephalus*** (page 193; plates 25D–H, 26A-C)

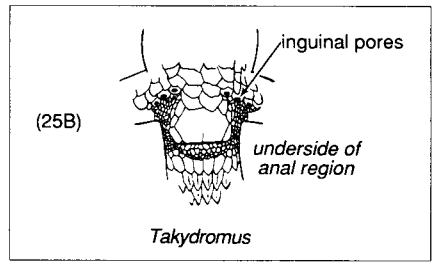


22A Tail rounded or depressed (horizontally flattened); 13 to 20 femoral pores on underside of each thigh .....***Leiolepis*** (page 192; plate 25B)
B Tail strongly compressed (vertically flattened); 4 to 8 femoral pores on underside of each thigh (see lower figure on opposite page)..... .....***Physignathus*** (page 198; plate 26F)

23A Four limbs 24
B Limbs absent, or males with short, flap-like hind limbs.....36

24A Ventral scales squarish, sharply differentiated from those of sides; femoral or inguinal pores present 25

B Ventral scales cycloid (see figure *d* on page 80), resembling those of sides and back; femoral and inguinal pores absent (see figure below) 28



25A Dorsal scales granular (see figure *a* at the top of page 80); with femoral pores on thigh 26

B Dorsal scales strongly keeled (see figure *b* at the top of page 80), not granular; with inguinal pores in groin (see figure above) 27

26A Ventral scales arranged obliquely; subdigital lamellae keeled ..... ***Eremias*** (page 201; plates 27H–I, 28A–B)

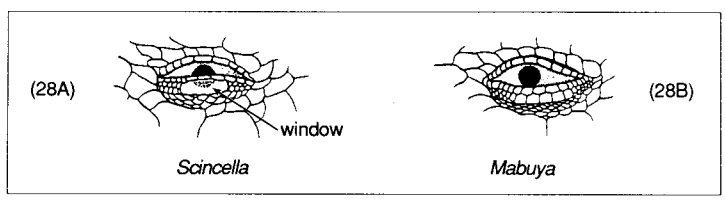
B Ventral scales arranged in straight rows; subdigital lamellae smooth .... ***Lacerta*** (page 204; plate 28C–D)

27A Distal joint of digits bent at an angle to preceding ones and slightly compressed proximally ..... ***Platyplacopus*** (page 205; plate 28E)

B Distal joint of digits not bent at an angle to preceding ones or compressed proximally ..... ***Takydromus*** (page 206; plates 28F–H, 29A–B)

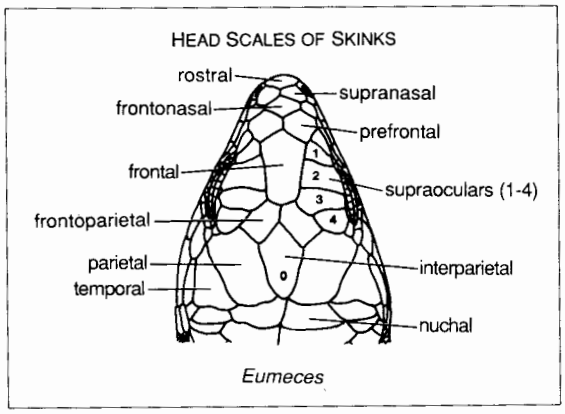
28A Lower eyelid with an undivided transparent window (see figure) 29

B Lower eyelid scaly, without transparent window (see figure) 31



29A A single frontoparietal scale ..... ***Emoia*** (page 209; plate 29E)

B A pair of frontoparietal scales (see figure on opposite page) 30



30A Lower eyelid well developed, moveable, with a more-or-less transparent window (see lower figure on the opposite page) ..... ***Scincella*** (page 212; plate 30C–E)

B Lower eyelid with a very large transparent window, immovable and united with the upper eyelid; a small palpebral fissure persists, but is hidden under the vestige of the upper eyelid ..... ***Asymblepharus*** (page 208; plate 29C)

31A A pair of supranasal scales 32

B Supranasal scales absent.....34

32A Limbs short or vestigial .....***Riopa*** (page 212; plate 30B)

B Limbs well developed 33

33A Dorsal scales smooth (see figure at the top of page 80) ....***Eumeces*** (page 209; plate 29F–H)

B Each dorsal scale with two to five keels..... .....***Mabuya*** (page 211; plate 30A)

34A Tympanum superficial (on surface) ....***Tropidophorus*** (page 217; plate 30G)

B Tympanum sunk (below surface) 35

35A Frontoparietal scales not in contact with each other, frontal very long; no well-defined parietal scales ..***Ateuchosaurus*** (page 208; plate 29D)

B Frontoparietal scales in contact with each other; parietal scales present .....***Sphenomorphus*** (page 216; plate 30F)

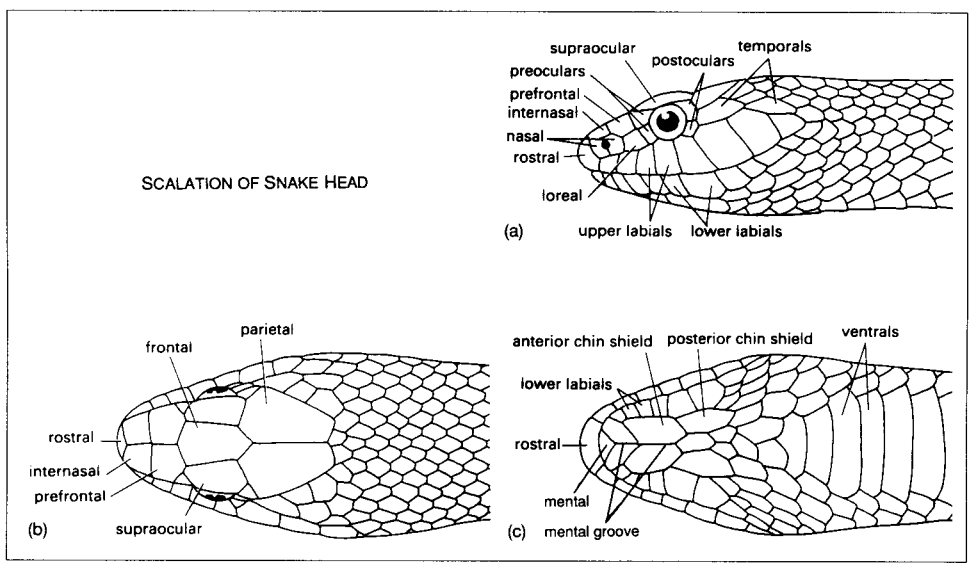
36A Snake-like; limbs absent; eyes with moveable lids; external ear openings present; a longitudinal, flexible groove on each side of body; tail longer than snout-vent length (unless regenerated) ..... ***Ophisaurus*** (page 199; plate 26G–H)

B Worm-like; limbs of female absent, male with a pair of short flap-like hind limbs; eyes hidden beneath head scales; no external ear openings; no longitudinal lateral grooves on body; tail shorter than half the snout-vent length (see also figure, page 68) ..... ***Dibamus*** (page 201; plate 27E–G)

KEY TO THE GENERA OF SNAKES

1A Size small, worm-like; scales around body about the same size; eyes obscured under scales (see also figure on page 68) 2

B Size moderate to large; ventral scales usually larger than dorsals; eyes not obscured 3



2A Scales in 20 rows throughout length of body; nasal scale completely divided into two parts ..... ***Ramphotyphlops*** (page 218; plate 31A–B)

B Scales in 22–28 rows throughout length of body; nasal scale partially divided ..... ***Typhlops*** (page 219; plate 31C–D)

3A Tail compressed (oar-like) 4

B Tail cylindrical 13

4A Body covered with granular scales, without enlarged ventrals; top of head with granular scales ..... ***Acrochordus*** (page 220; plate 31E)

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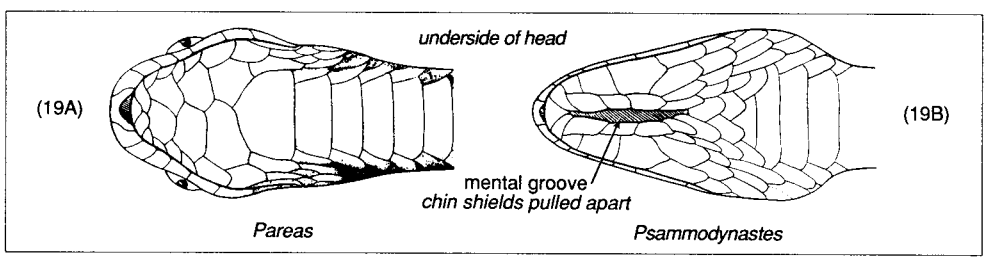

20A Subcaudal scales in single row (or with a very few in two rows; see figure directly below) ..... ***Achalinus*** (page 223; plate 32A)

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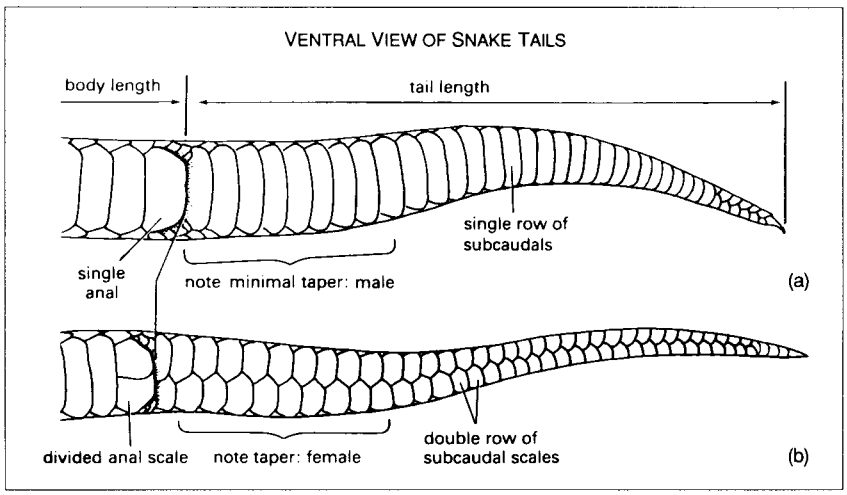

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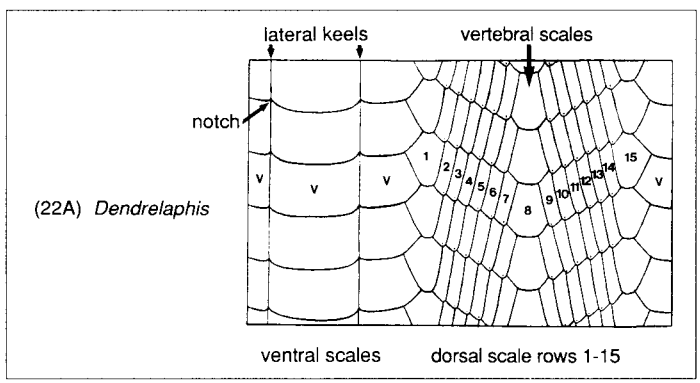

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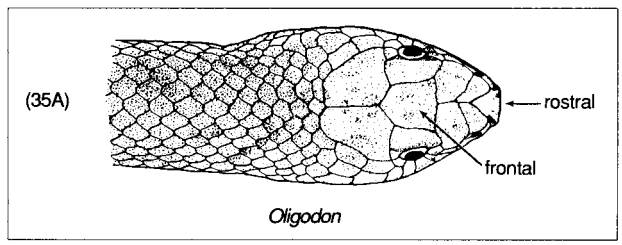

36A Temporal scales smaller, in three rows or irregular ..... ***Coluber*** (page 232; plate 33D–E)

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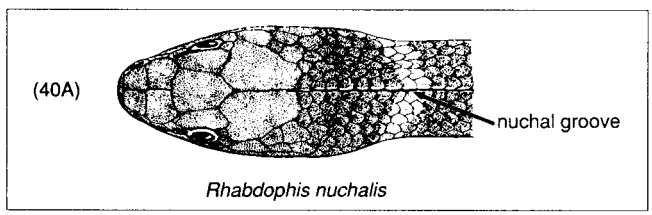

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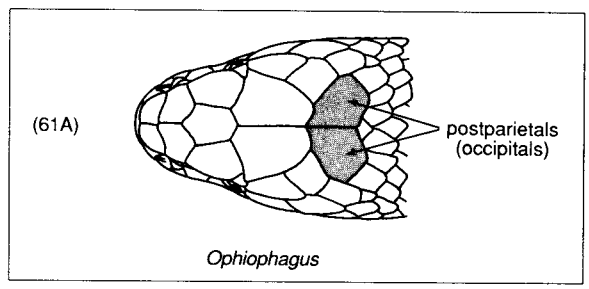

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The approximate locations of the habitat photographs on Plates 45–48 can be determined from the positions of the circled letters (A to Z) on the outline map below.

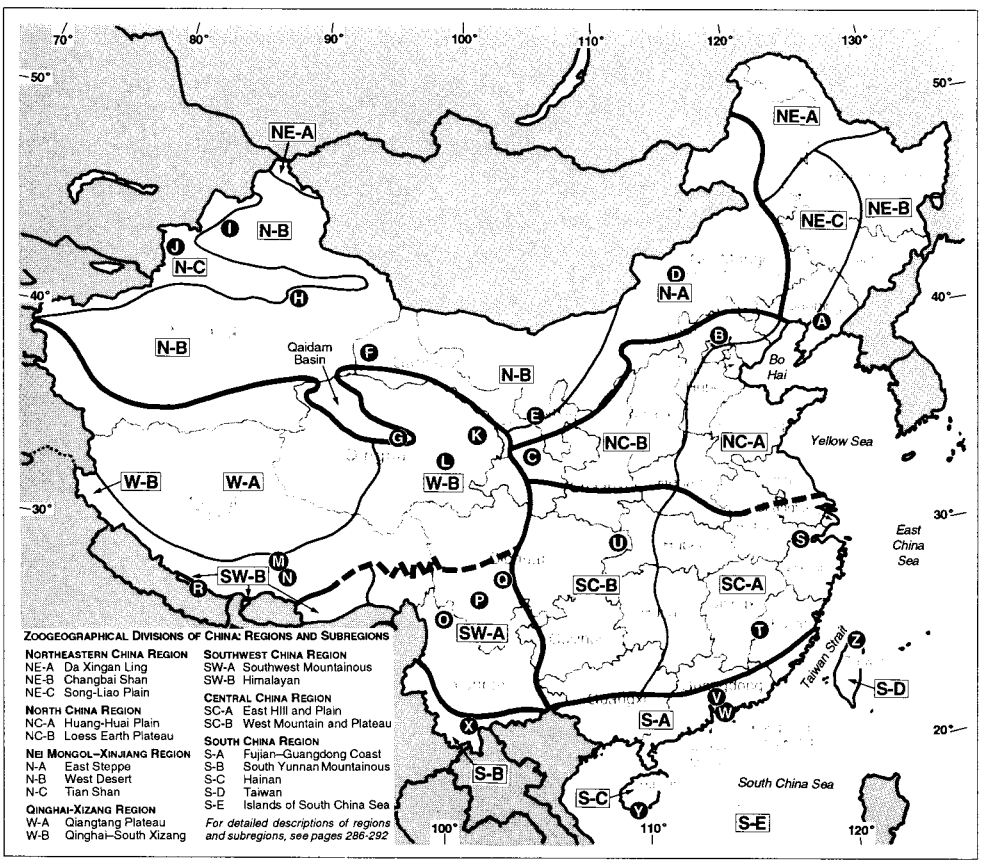

PLATE 1

SATELLITE PHOTOGRAPH OF CHINA AND ADJACENT AREAS

This false-color image of China and adjacent areas was acquired by the United States National Oceanic and Atmospheric Administration's (NOAA) TIRO-series Polar Orbiting Weather Satellite, using its Advanced Very High Resolution Radiometer (AVHRR). The photograph is a composite mosaic of images taken between 1982 and 1990 from a nominal altitude of 833 km. The geographic limits and primary physical features in this photograph can be interpreted from the outline map at the right. Abbreviated names of countries are: AF Afghanistan, BA Bangladesh, BH Bhutan, KR Kirgizstan, TJ Tajikistan, and UZ Uzbekistan. The dashed line encloses the area of the South China Sea claimed by China.

Water surfaces in this photograph generally appear as black, although thin cloud cover makes some water surfaces appear blue. White areas are either clouds or snow, or they are areas of higher reflectance than the surrounding terrain. Tan, blue-gray, and gray areas represent desert or dry regions. Rust and red tones represent areas that are vegetated to varying degrees.

Photograph courtesy of Max E. Miller
and Earth Satellite Corporation.
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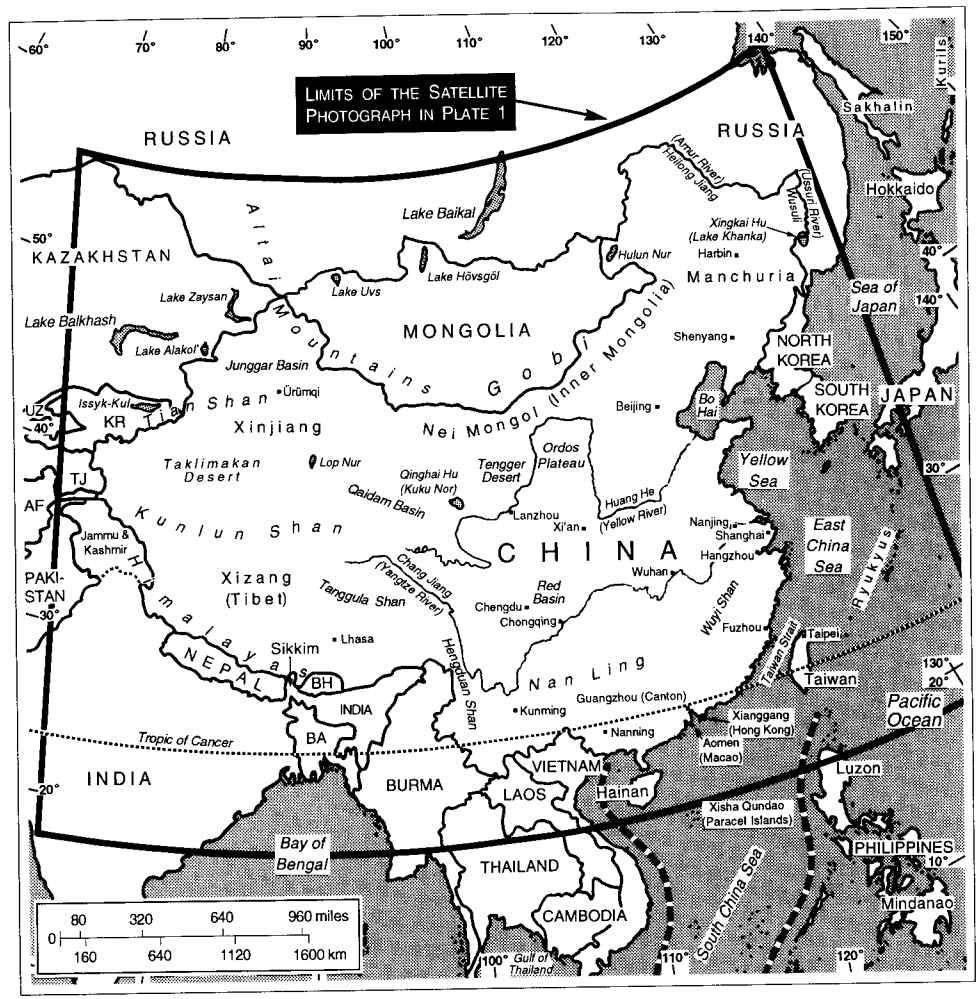

ANNOTATED CHECKLIST OF GENERA, SPECIES, AND SUBSPECIES

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Introduction



THE FOLLOWING PAGES PROVIDE A LIST OF ALL GENERA, SPECIES, and subspecies of amphibians and reptiles currently recognized as occurring in China, including Hong Kong and Taiwan. This list includes, in synonymy, only those synonymized taxa that have Chinese type localities. A few comments are in order concerning the procedures that we have used in compiling this list.

In compiling this list we have sought to apply the articles and recommendations of the International Commission on Zoological Nomenclature, as published

in the "International Code of Zoological Nomenclature" (third edition, the latest version, published in 1985). Specific information on application of the "Code" is given in the sections that follow and sometimes in detail, since copies of the "Code" are not widely available in China.

In cases in which exact spellings are reproduced from the original literature that might appear to be typographical errors, we have used "[*sic*]" to show the author's original spelling.

Order of Entries

Within families, all taxa—genera, species, and subspecies—are arranged alphabetically. Subspecies are numbered to avoid confusion with species entries. Although we were tempted to use biologically meaningful groupings throughout, it was not possible to do so uniformly across all taxa.

Within each species or subspecies entry, the original scientific name, author, date, citation, and type locality are given. The next entry gives the citation for the transfer to the genus in which the taxon is currently recognized. This is followed, in order of date of publication, by all primary synonyms for the species or subspecies that have Chinese type localities. The name is preceded by a question mark "?" if assignment to a particular synonymy is uncertain. Names applied originally to extinct species are included only if they have been shown to be synonyms of living taxa.

Generic Entries and Type Species

Each genus has a type species (formerly also called "genotype," a term that is no longer used because of its confusion with a different concept in genetics) that provides an objective standard by which the name is applied. The type species is fixed by the original author ("type by original designation" or by some indication) or it can by designated by some subsequent author (Code, Article 66b). If only one species is included in the genus by the original author, it becomes type "by monotypy" (Code, Article 68d). If any species-group name is identical with that of the genus (as for *Natrix natrix*), this species becomes type "by absolute tautonomy" (Code, Article 68e). In instances in which the type species was not fixed by the original author in some way, the first author subsequently designating the type species thereby does so ("type by subsequent designation"; Code, Article 69); however, the type species must be one of those included in the genus by the original author, otherwise this subsequent designation is invalid.

The modern equivalent of the type species's name (and its abbreviated range, if not a Chinese species) is given in parentheses, for ease of reference.

Scientific Names

All main entries for species are given in binomial form. If subspecies are recognized in China, these follow in alphabetical order. Our failure to recognize subspecies in some instances (for example, within the species *Varanus salvator*) does not imply that these taxa are invalid, but simply that there is insufficient information about Chinese populations on which to make a judgment.

We have avoided making new combinations wherever possible and have confined ourselves to combinations justified by published evidence. In a few instances, however, new combinations were unavoidable, usually in order to insure uniformity of treatment or to adhere to the provisions of the "Code."

At the end of the checklist (page 280), we list those taxa with type localities in China that we cannot properly allocate to currently recognized species. In most instances, these names have never been synonymized, to our knowledge.

Authorship

Authorship of a scientific name is attributed to the author or authors of the article or book in which the name appeared, unless it is clear from that publication that some other person was responsible or that some but not all of the authors of that publication were responsible. In these instances, the author of the scientific name and of the article or book are both given—for example, "C.-C. Liu and S.-Q. Hu, 1966, *in* S.-Q. Hu, E.-M. Zhao, and C.-C. Liu"—according to the "Code" (Article 50a and Recommendation 51B). For citations in the book "Amphibian Species of the World," we credit all to the editor (Frost, 1985), despite the arguments of Dubois ("1986" [1987]: 100); it is not clear to us whether the reviewers listed by Frost are, in fact, authors in the nomenclatorial sense.

Spelling of an author's name is given in its current or most widely accepted form, followed by the spelling used in the original publication enclosed in parentheses—for example, "H.-B. Ding (as H.-P. Ting)."

Initials are given for all authors in the synonymies for ease of bibliographic reference, since there is much duplication of family names (last name or surname) among herpetological authors, especially in Chinese (for example, there are six persons with the family name "Huang" who have described new taxa of amphibians and reptiles). In Chinese, an individual's given names are sometimes written separately (for example, Ch'eng Chao Liu), or are hyphenated (Cheng-chao Liu), or are given in contracted form (Chengchao Liu); in this checklist we give both initials separated by a hyphen (C.-C. Liu), since otherwise ambiguity would exist in a few instances. Because this book is entirely in English, we have put the family name (or surname) last for all authors for the sake of uniformity. The full names of authors, if known, are given in the index (page 471).

Anonymous publications have been treated according to the "Code" (Article 14) and new scientific names or nomenclatorial acts are not valid if they were published anonymously after 1950. In China, during the period from approximately 1972 to 1977, it was routine for articles or books to be credited to an institution or work unit (for example, Sichuan Biological Research Institute, now Chengdu Institute of Biology), although actual authorship of new taxonomic names was usually indicated. Authors of nomenclatorial acts (such as the transfer of a species to a different genus), however, were not so indicated. Thus, in our checklist we have credited the earliest reference in which authorship is given in the publication, as required by the "Code."

Parentheses are put around the author's name and date only when the species-group name is placed in a genus other than the original one in which it was first described (Code, Article 51c), even if the spelling differs only by a single letter.

Date and Validity of Publication

Because of the importance of date of publication in taxonomic works, every effort was made to establish the actual date of public distribution. In instances in which these dates differ by a year or more from the nominal date, the nominal date is given first in quotes, followed by the correct date in parentheses, such as "1986" (1987). Occasionally, the last issue of the year of a periodical was actually published early in the next year. In some instances, journals or books were issued several years later than the date printed on the title page. In rare cases, there is evidence that a work was published in the year prior to the year printed on the publication. In other instances, an author's privately published preprints were issued first, thus advancing the actual date of publication (Code, Article 21h). Publication details concerning many titles are given in the bibliography.

Priority of publication was followed strictly in deciding on the proper name for a taxon, as long as other criteria of availability were met. In a few instances this required a change in name. The most confusing situation, involving a series of five papers by two feuding researchers (John VanDenburgh and Joseph C. Thompson), is detailed in the account for *Scincella formosensis* (page 213); two of their papers apparently were published only two days apart.

Official publication in China means approval by an appropriate governmental authority, thus privately published articles normally have no official standing. However, insofar as they meet the minimum requirements of publication under the "Code" (Articles 7–8), we regard privately issued works as published. In one instance this necessitated a name change.

Meeting abstracts are not considered published works under the "Code" (Articles 7–9); indeed, most booklets of meeting abstracts contain a disclaimer that states that they are not to be considered as published. Such booklets are issued

in small editions only to persons attending the meeting and usually are not available to the public, thus they do not satisfy the requirements of the "Code." The names of several Chinese taxa were first announced in such abstracts. In these instances, we credit the first officially published description, but mention the meeting abstract in the *Notes* section following the entry.

Literature Citation

Copies of the original literature cited in this checklist were examined in every instance to ensure the correct spelling of scientific names and the correct citation of type localities and of the literature reference itself.

Citations are given in abbreviated form in the checklist for ease of reference, but the full references are provided in the bibliography. In cases in which a book was published as part of a series, the serial reference is given in preference to the title (for example, "Bull. U.S. Natl. Mus., Washington, volume 58," instead of "Herpetology of Japan and Adjacent Territory").

The city of publication, if not already a formal part of the literature citation itself, is added to each reference, since such information is often vital in searching for a publication. In cases in which city names have changed, the new name is provided in a table at the end of the bibliography (page 419).

Issue or part numbers within volumes are given only when the volume is not consecutively paginated in order to avoid ambiguity of citation. For example, the numbers of some, but not all, volumes of the serial *Acta Herpetologica Sinica* are individually paginated, with each issue beginning again with page 1; only in such instances are issue numbers provided in the checklist citations, in which case they are given in parentheses: for example, "Acta Herpetol. Sinica, Chengdu, 2(4): 80."

Type Localities

The type locality is the geographical place where the name-bearing type of a nominal species or subspecies was collected (Code, Article 72h). In most instances, this is the locality at which the unique holotype was collected, thus it is a single locality. Early authors did not designate holotypes, however, and in cases in which the type series contained more than one specimen ("cotypes" or, more properly, syntypes; Code, Article 73b), then all localities of all of the syntypes become the type locality, unless one of the syntypes later has been designated lectotype (Code, Article 74), in which case its origin becomes the type locality, regardless of any earlier published restriction of type locality. We have given the type localities, including elevations in meters or in feet as they appeared in the original descriptions, with modern equivalents of names in parentheses; a full list of current names for these localities is provided in Appendix 1 (page 426). If the

type locality has been restricted or if other data are available, these details are given in the *Notes* section following the entry.

Ranges

The known range in China is given in the first sentence of this section and its range outside China, if any, is noted in the second sentence. For most species, only a very general description of the range in China is given, since detailed information is provided in the geographical distribution charts. Hainan, Taiwan, and Hong Kong, however, because of their geographically separate status, are specifically mentioned in any range description that includes these localities. In all cases in which the range in a given country or province is qualified in parentheses, the taxon is known only from that more restricted place—for example, "Japan (Ryukyu Islands)." "Introduced" means that breeding populations have been established.

"Indochina" is used here in the more generally accepted sense to mean the entire region of the Asian continent east of India and south of China, not in the more restricted sense of "French Indochina," the former French colonial federation. The latter consisted of Cochinchina, Annam, and Tonkin (today, southern, central, and northern Vietnam, respectively), Cambodia, Laos, and the leased Chinese territory of Kwangchowan (a small peninsula just east of Zhanjiang, Guangdong Province). Since these political units sometimes represent the type localities for Chinese species of amphibians and reptiles, it is essential to note that two of these names referred to different regions prior to the arrival of the French. Beginning in the 16th century, the entire country of Vietnam was generally known in the West as Cochinchina, but in China was called Annam; during the first half of the 19th century Vietnam also became known as Annam in the West. After the French conquests of 1859–1883, the name Annam was gradually restricted to central Vietnam. Cochinchina became re-defined as southern Vietnam in 1867. Therefore, in the following checklist, we have taken these dates into account in deciding the proper modern equivalencies of Annam and Cochinchina.

Notes

Appropriate comments on some entries are made in a final section called *Notes* and these are referenced in the entries as "(see Note)." If literature is mentioned in *Notes* that was cited in the preceding entry, only the year and the page number are given; if the citation was not given in the entry, then an extended citation is provided.

GYMNOPHIONA

ICHTHYOPHIIDAE

ICHTHYOPHIS Fitzinger, 1826.

Ichthyophis L. J. Fitzinger, 1826, Neue Classif. Rept., Vienna: 36, 63. Type species: *Cæcilia glutinosa* C. Linnaeus, 1758, of Sri Lanka, by monotypy (see Note).

NOTE: Fitzinger (1826: 36) mentioned two species as comprising his new genus *Ichthyophis*: *Caecilia glutinosa* and a new species from Java, which he named *Ichthyophis Hasseltii* elsewhere in the same book (1826: 63). As Dubois ("1986" [1987], Alytes, Paris, 5: 135) has pointed out, *hasseltii* is a *nomen nudum*, which leaves *glutinosa* as the only available name associated with *Ichthyophis* in Fitzinger's original description.

Ichthyophis bannanicus Yang, 1984. (PLATE 2A)

Ichthyophis bannanica D.-T. Yang, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(2): 73. Type locality: Mengla Co., Yunnan Prov., China; 600 meters.

RANGE: Southern Yunnan, Guangxi, and Guangdong, China (see Note).

NOTE: Old records of *Ichthyophis glutinosus* (Linnaeus, 1758) from Guangdong and Yunnan are referable to *I. bannanicus* or to some other species, because *I. glutinosus* is restricted to Sri Lanka (D. R. Frost [ed.], 1985, Amphib. Spec. World, Lawrence: 633).

CAUDATA

HYNOBIIDAE

BATRACHUPERUS Boulenger, 1878.

Batrachuperus G. A. Boulenger, 1878, Bull. Soc. Zool. France, Paris, 3: 71. Type species: *Salamandrella sinensis* H.-É. Sauvage, 1876 (=*Dermodactylus Pinchonii* A. David, "1871" [1872]), by monotypy.

Batrachuperus karlschmidti Liu, 1950.

Batrachuperus karlschmidti C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 87. Type locality: Chiala (=Jiaona), Luhohsien (=Luhuo Co.), Sikang (now part of Sichuan) Prov., China; 11,000 feet.

RANGE: Western Sichuan, China.

Batrachuperus pinchonii (David, 1872). (PLATE 2B)

Dermodactylus Pinchonii A. David, "1871" (1872), Nouv. Arch. Mus. Hist. Nat. Paris, 7 (Bull.): 95. Type locality: Moupin (=Baoxing Co.), Sichuan Prov., China.

Batrachuperus pinchonii: L. Stejneger, 1925, Proc. U.S. Natl. Mus., Washington, 66: 5.

Salamandrella sinensis H.-É. Sauvage, 1876, L'Institut, Paris, new ser., 4: 275. Type locality: Moupin (=Baoxing Co.), Sichuan Prov., China.

Batrachuperus cochranae C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 101. Type locality: Lianghokou (=Lianghekou), Paohsinghsien (=Baoxing Co.), Sikang (now part of Sichuan) Prov., China; 12,500 feet.

Batrachuperus londongensis C.-C. Liu and W.-S. Tian, 1978, *in* C.-C. Liu, S.-Q. Hu, W.-S. Tian, and G.-F. Wu, Mater. Herpetol. Res., Chengdu, 4: 18 (see Note). Type locality: Longdong River, Mt. Emei, Sichuan Prov., China; 1,300 meters.

RANGE: Western Sichuan, northwestern Yunnan, and Guizhou, China.

NOTE: The original name *Batrachuperus londongensis* was emended to *B. longdongensis* by C.-C. Liu and W.-S. Tian (*in* L. Fei, C.-Y. Ye, and W.-S. Tian, 1983, Acta Zootaxon. Sinica, Beijing, 8: 210), an article that is often incorrectly cited as the original description.

Batrachuperus tibetanus Schmidt, 1925. (PLATE 2C)

Batrachuperus tibetanus K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 5. Type locality: Near the Tibetan border of Kansu (=Gansu Prov.), southwest of Titao (=Lintao), in Hwang Ho (=Huang He) drainage, China; 9,000 feet.

RANGE: Northwestern Sichuan, northeastern Xizang (Tibet), southeastern Gansu, and southern Shaanxi, China.

Batrachuperus yenyuanensis Liu, 1950. (PLATE 2D)

Batrachuperus yenyuanensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 99. Type locality: Peilinshan (=Bailing Shan), Yenyuanhsien (=Yanyuan Co.), Sikang (now part of Sichuan) Prov., China; 14,500 feet.

RANGE: Southwestern Sichuan.

HYNOBIUS Tschudi, 1838.

Hynobius J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 60, 94. Type species: *Salamandra nebulosa* C. J. Temminck and H. Schlegel, 1838, of Japan, by monotypy.

Hynobius amjiensis Gu, 1992. (PLATE 2E)

Hynobius amjiensis H.-Q. Gu, "1991" (1992), *in* Y.-W. Qian, E.-M. Zhao, and K.-T. Zhao (eds.), Animal Sci. Res.—Vol. Celebrate Prof. M. Chang, Beijing: 39. Type locality: Mount Longwang Nature Reserve, Anji Co., Zhejiang Prov., China; 1,300 meters.

RANGE: Known only from the type locality.

Hynobius chinensis Günther, 1889. (PLATE 2F)

Hynobius chinensis A. Günther, 1889, Ann. Mag. Nat. Hist., London, ser. 6, 4: 222. Type locality: Ichang (=Yichang Shi), Hubei Prov., China.

Hynobius yiwuensis C.-M. Cai, 1985, Acta Herpetol. Sinica, Chengdu, [new ser.], 4: 109. Type locality: Dachen, Yiwu Co., Zhejiang Prov., China; 140 meters.

RANGE: Fujian, Zhejiang, and Hubei, China.

Hynobius formosanus Maki, 1922. (PLATE 2H)

Hynobius formosanus M. Maki, 1922, Zool. Mag., Tokyo, 34: 637 (see Note). Type locality: Oiwake (=Tsuifeng), Musha (=Wushe, now Jenai), Taichu-shu (now part of Nantou Co.), Formosa (=Taiwan Prov.), China; 7,000 feet.

Hynobius arisanensis M. Maki, 1922, Zool. Mag., Tokyo, 34: 637 (see Note). Type locality: Mt. Ari (=Alishan or Mt. Ali), Taiwan Prov., China; 6,600 feet.

RANGE: Taiwan, China.

NOTE: M. Maki re-described *Hynobius formosanus* and *H. arisanensis* in 1927 (Annot. Zool. Japon., Tokyo, 11: 131–133).

Hynobius leechii Boulenger, 1887.

Hynobius Leechii G. A. Boulenger, 1887, Ann. Mag. Nat. Hist., London, ser. 5, 19: 67. Type locality: Gensan (=Wonsan), Korea (see Note).

Hynobius manchuricus S. Kurashige, 1932, Annot. Zool. Japon., Tokyo, 13: 327. Type locality: Mt. Heichyô (=Benxihu Shan), near Honkeiko (=Benxi Hu, Liaoning Prov.), south Manchuria, China.

Hynobius kurashigei A. de C. Sowerby, 1932, China Jour., Shanghai, 17: 237 (substitute name for *H. manchuricus* S. Kurashige, 1932; see Note).

RANGE: Northeastern China. Korea.

NOTE: An additional type locality for *Hynobius leechii*, "Liaohing [=Liaoning Province], China," was stated in error by D. R. Frost (1985, Amphib. Spec. World, Lawrence: 564).

A. de C. Sowerby (1932: 237) incorrectly believed that *H. manchuricus* S. Kurashige, 1932, was preoccupied by *H. mantchuricus* T. Mori, 1927. The "Code" (1985, Article 57[f]) permits one-letter differences in species-group names, although some variants are disallowed; variants of *mantchuricus* are not among them.

Hynobius mantchuricus Mori, 1927.

Hynobius mantchuricus T. Mori, 1927, China Jour., Shanghai, 6: 205. Type locality: Yugakujo (=Xiongyue Co.), Liaoning Prov., China.

RANGE: Known only from the type locality.

NOTE: M. L.-Y. Chang (1936, Amphib. Urod. Chine, Paris: 65) placed *Hynobius mantchuricus* in the synonymy of *H. leechii* without explanation.

Hynobius sonani (Maki, 1922). (PLATE 2G)

Salamandrella sonani M. Maki, 1922, Zool. Mag., Tokyo, 34: 636 (see Note). Type locality: Mt. Nengkao (=Nengkaoshan), Taichu-shu (now part of Nantou Co.), Formosa (=Taiwan Prov.), China; 10,000 feet.

Hynobius sonani: E. R. Dunn, 1923, Proc. Amer. Acad. Arts Sci., Boston, 58: 479.

RANGE: Taiwan, China.

NOTE: M. Maki re-described *Hynobius sonani* in 1927 (Annot. Zool. Japon., Tokyo, 11: 129–131).

LIUA Zhao and Hu, 1983.

Liua E.-M. Zhao and Q.-X. Hu, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 30. Type species: *Ranodon wushanensis* C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1960 (=*Hynobius shihi* C.-C. Liu, 1950), by original designation.

NOTE: The genus name was emended unjustifiably to "*Liuia*" (D. R. Frost [ed.], 1985, Amphib. Spec. World, Lawrence: 565).

Liua shihi (Liu, 1950). (PLATE 2-I)

Hynobius shihi C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 77. Type locality: Chihsinling, Tachangsze, eastern Szechwan (=Sichuan Prov.), China.

Liua shihi: E.-M. Zhao, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(1): 40.

Ranodon wushanensis C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1960, Acta Zool. Sinica, Peking, 12: 278. Type locality: San-he-ba, Guanyang, Wushan Co., Sichuan Prov., China.
RANGE: Eastern Sichuan, southern Shaanxi, and western Hubei and Hunan, China.

ONYCHODACTYLUS Tschudi, 1838.

Onychodactylus J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 57, 92. Type species: *Onychodactylus Schlegeli* J. J. von Tschudi, 1838 (=*Salamandra japonica* M. Houttuyn, 1782) of Japan, by monotypy.

Onychodactylus fischeri (Boulenger, 1886). (PLATE 3A)

Geomolge fischeri G. A. Boulenger, 1886, Proc. Zool. Soc. London, 1886: 416. Type locality: Chaborowska (=Khabarovsk), on the River Ussuri, "Manchuria" (now in Russia).
Onychodactylus fischeri: E. R. Dunn, 1918, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 62: 456.
RANGE: Jilin, China. Russia (Far East district) south through Korea.

PACHYHYNOBIUS Fei, Qu, and Wu, 1983.

Pachyhynobius L. Fei, W.-Y. Qu, and S.-H. Wu, 1983, Amphib. Res. [privately printed], Chengdu, 1: 1 (see Note). Type species: *Pachyhynobius shangchengensis* L. Fei, W.-Y. Qu, and S.-H. Wu, 1983, by original designation.
NOTE: The series entitled *Amphibian Research*, since it was issued privately by L. Fei, is not considered legally published in China, yet it meets the minimum requirements of the "Code" (1985) for publication of new names.

Pachyhynobius shangchengensis Fei, Qu, and Wu, 1983. (PLATE 3B)

Pachyhynobius shangchengensis L. Fei, W.-Y. Qu, and S.-H. Wu, 1983, Amphib. Res. [privately printed], Chengdu, 1: 1 (see Note). Type locality: Shangcheng Co., Henan Prov., China; 780 meters.
Xenobius melanonychus F.-J. Zhang and Q.-X. Hu, 1985, Acta Herpetol. Sinica, Chengdu, [new ser.], 4: 37. Type locality: Baima Forest Farm, Jinzhai Co., Anhui Prov., China; 950 meters.
RANGE: Southeastern Henan, eastern Hubei, and western Anhui, China.
NOTE: Concerning the nomenclatorial legality of the serial *Amphibian Research*, see *Pachyhynobius*, Note (above).

RANODON Kessler, 1866.

Ranodon K. Kessler, 1866, Bull. Soc. Impér. Nat. Moscou, 39(1): 130. Type species: *Ranodon sibiricus* K. Kessler, 1866, by original designation.

Ranodon sibiricus Kessler, 1866. (PLATE 3C)

Ranodon sibiricus K. Kessler, 1866, Bull. Soc. Impér. Nat. Moscou, 39(1): 130. Type locality: Vicinity of Semipalatinsk, Kazakhstan, in error? (see Note).

RANGE: Extreme western Xinjiang, China. Southeastern Kazakhstan.

NOTE: According to L. J. Borkin (*in* D. R. Frost [ed.], 1985, Amphib. Spec. World, Lawrence: 567), the type locality is probably in error since it lies outside the presently known range.

Ranodon tsinpaensis Liu and Hu, 1966. (PLATE 3D)

Ranodon tsinpaensis C.-C. Liu and S.-Q. Hu, 1966, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 18: 65. Type locality: Hou-tseng-tze (=Houzhenzi), Chou-chih (=Zhouzhi Co.), Shensi (=Shaanxi Prov.), China, in error (see Note); 1,830 meters.

Hynobius flavomaculatus S.-Q. Hu and L. Fei, 1978, *in* S.-Q. Hu, L. Fei, and C.-Y. Ye, Mater. Herpetol. Res., Chengdu, 4: 20. Type locality: Hanchi, Lichuan Co., Hubei Prov., China; 1,800–1,830 meters (see Note).

RANGE: Southern Shaanxi, eastern Sichuan, northern Guizhou, and western Hubei, China.

NOTE: The exact type locality of *Ranodon tsinpaensis* is Diao-yü-tai, Tsinling Mountains (=Qin Ling), Shaanxi Prov., China, according to the collector (E.-M. Zhao). *Hynobius flavomaculatus* was re-described by L. Fei and C.-Y. Ye (1982, Acta Zootaxon. Sinica, Beijing, 7: 225), an article that is often incorrectly cited as the original description; the specimen listed as holotype in the later article is from an elevation of 1,845 meters. *H. flavomaculatus* was subsequently transferred to the new genus *Pseudohynobius* (L. Fei and C.-Y. Ye, 1983, Amphib. Res. [privately printed], Chengdu, 2: 1) which is, therefore, a synonym of *Ranodon*.

SALAMANDRELLA Dybowski, 1870.

Salamandrella B. Dybowski, 1870, Verhandl. Zool.-Bot. Gesellsch. Wien, 20: 237. Type species: *Salamandrella Keyserlingii* B. Dybowski, 1870, by monotypy.

Salamandrella keyserlingii Dybowski, 1870. (PLATE 3E)

Salamandrella Keyserlingii B. Dybowski, 1870, Verhandl. Zool.-Bot. Gesellsch. Wien, 20: 237. Type locality: Meadows of the Kultushnaya and Pakhabikha river valleys, southwestern corner of Lake Baikal, southern Siberia, Russia.

Salamandrella keyserlingii scvorzovi P. Pavlov, 1932, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 11: 4. Type locality: Mao eull shan [*sic*], northern Manchuria, China.

Salamandrella keyserlingii var. *Kostini* P. Pavlov, 1934, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 32: 6. Type locality: Northern Manchuria, China.

Salamandrella keyserlingii var. *austeri* P. Pavlov, 1934, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 32: 6. Type locality: Northern Manchuria, China.

Salamandrella keyserlingii var. *dilutiores* P. Pavlov, 1934, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 32: 6. Type locality: Northern Manchuria, China.

Salamandrella keyserlingii var. *Sodei-Campi* A. A. Kostin, "1933" (1934), Annual Club Nat. Sci. Geogr. Y.M.C.A., Harbin, 1: 174, 176. Type locality: Soda Steppe (northwest of Harbin, Heilongjiang Prov.), northern Manchuria, China (see Note).

RANGE: Northeastern China. Japan (Hokkaido), Russia (Sakhalin Island and Kamchatka Peninsula west to eastern European Russia), Korea, and northern Mongolia.

NOTE: Later, A. Kostin (1942, Sci. Works Przevalsky [*sic*] Res. Assoc. Members, Harbin: 16) stated that the types of *Salamandrella keyserlingii* var. *sodei-campi* were collected at stations of the western branch of the Chinese Eastern Railway, at Mankou and Gorlos (province uncertain) and at Anda (Heilongjiang Province).

CRYPTOBRANCHIDAE

ANDRIAS Tschudi, 1837.

Andrias J. J. von Tschudi, 1837, Neues Jahrb. Mineral., Geol., Paläontol., Stuttgart, 5: 545. Type species: *Salamandra Scheuchzeri* F. Holl, 1829, an extinct species of Europe, by monotypy.

Andrias davidianus (Blanchard, 1871). (PLATE 3F)

Sieboldia Davidiana É. Blanchard, 1871, Comp. Rend. Hebd. Séanc. Acad. Sci., Paris, 73: 79. Type locality: Tchong Pa (=Zhongba, now Jiangyou Co., Sichuan Prov.), China.

Andrias davidianus: A. H. Brame, 1967, Herpeton (Jour. Southwest. Herpetol. Soc.), Pasadena, 2: 5.

Megalobatrachus sligoi E. G. Boulenger, 1924, Proc. Zool. Soc. London, 1924: 173. Type locality: Chinese mainland near Hong Kong?

RANGE: Guangxi and Guangdong, north to Qinghai and east to Jiangsu, China. Specimens of this species have been collected in Taiwan in recent years (L. L. Severinghaus and K.-Y. Lue, pers. comms.). Whether it is native to Taiwan cannot yet be determined since it is known that Taiwanese pet shops and restaurants import them from the mainland.

SALAMANDRIDAE

CYNOPS Tschudi, 1838.

Cynops J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 59, 94. Type species: *Salamandra subcristata* C. J. Temminck and H. Schlegel, 1838 (=*Molge pyrrhogaster* H. Boie, 1826) of Japan, by monotypy.

NOTE: *Cynops shataukokensis* G. E. Freytag and H.-J. Eberhardt, 1977 (Salamandra, Frankfurt am Main, 13: 151. Type locality: Sha Tau Kok [=Shatoujiao], Kwangtung [=Guangdong Prov.], China, in error) is a synonym of a Japanese species, *C. pyrrhogaster* H. Boie, 1826 (according to J.-P. Risch and J. D. Romer, 1980, Jour. Herpetol., Athens [Ohio], 14: 337–341; see D. R. Frost [ed.], 1985, Amphib. Spec. World, Lawrence: 607, for further discussion).

Cynops chenggongensis Kou and Xing, 1983.

Cynops chenggongensis Z.-T. Kou and Y.-L. Xing, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 51. Type locality: Shuitang, Chenggong Co., Yunnan Prov., China; 1,940 meters.

RANGE: Known only from the type locality..

Cynops cyanurus Liu, Hu, and Yang, 1962.

Cynops cyanurus C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1962, Acta Zool. Sinica, Peking, 14: 385. Type locality: De-wu, Shuicheng Co., Guizhou Prov., China; 1,790 meters.

RANGE: Western Guizhou and northeastern Yunnan, China.

1. ***Cynops cyanurus cyanurus*** Liu, Hu, and Yang, 1962.

Cynops cyanurus cyanurus: L. Fei and C.-Y. Ye, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 56.

RANGE: Western Guizhou, China.

2. ***Cynops cyanurus yunnanensis*** Yang, 1983.

Cynops cyanurus yunnaneusis [*sic*] D.-T. Yang, 1979, *in* L.-M. Shi, J.-H. Wang, and X.-R. Zhang, Hereditas, Beijing, 1(6): 34 (*nomen dubium*; see Note).

Cynops cyanurus yunnanensis D.-T. Yang, 1983, Zool. Res., Kunming, 4: 124. Type locality: Mt. Wuliang, Jingdong Co., Yunnan Prov., China; 2,600 meters.

Cynops cyanurus chuxiongensis L. Fei and C.-Y. Ye, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 55. Type locality: Chuxiong Co., Yunnan Prov., China; 2,400 meters.

RANGE: Northeastern Yunnan, China.

NOTE: The first use of Yang's name, misspelled "*Cynops cyanurus yunnaneusis*," was made in a 1979 paper that described the lampbrush chromosomes, but the article does not differentiate them from those of *C. cyanurus cyanurus*; therefore, this proposal of the name is invalid under the "Code" (1985, Article 13[a][i]). Yang's valid name, *C. cyanurus yunnanensis*, was published in May 1983 and Fei and Ye's name, *C. cyanurus chuxiongensis*, in December 1983.

Cynops orientalis (David, 1873). (PLATE 3G)

Triton (Cynops) Orientalis A. David, 1873, Jour. North-China Br. Royal Asiatic Soc., Shanghai, new ser., 7: 226. Type locality: Tchékiang (=Zhejiang) Prov., China.

Cynops orientalis: W. Wolterstorff and W. Herre, 1935, Arch. Naturgesch., Leipzig, new ser., 4: 224.

RANGE: East-central China.

Cynops orphicus Risch, 1983.

Cynops orphicus J.-P. Risch, 1983, Alytes, Paris, 2: 46. Type locality: Dayang (locally called Tai-yong, Jiexi Co.), Shantou Region, Guangdong Prov., China; 640 meters.

RANGE: Guangdong, China.

Cynops wolterstorffi (Boulenger, 1905).

Molge wolterstorffi G. A. Boulenger, 1905, Proc. Zool. Soc. London, 1905: 277. Type locality: Yunnan fu (=Kunming Shi), Yunnan Prov., China; 6,000 feet.

Cynops wolterstorffi: M. L.-Y. Chang, 1935, Bull. Soc. Zool. France, Paris, 60: 426.

RANGE: Yunnan, China.

ECHINOTRITON Nussbaum and Brodie, 1982.

Echinotriton R. A. Nussbaum and E. D. Brodie, Jr., 1982, Herpetologica, Lawrence, 38: 321. Type species: *Tylototriton Andersoni* G. A. Boulenger, 1892, by original designation.

Echinotriton andersoni (Boulenger, 1892). (PLATE 3H)

Tylototriton Andersoni G. A. Boulenger, 1892, Ann. Mag. Nat. Hist., London, ser. 6, 10: 304. Type locality: Okinawa or Great Loo Choo, Ryukyu Islands, Japan.

Echinotriton andersoni: R. A. Nussbaum and E. D. Brodie, Jr., 1982, Herpetologica, Lawrence, 38: 322.

RANGE: Northern Taiwan, China (see Note). Japan (Ryukyu Islands).

NOTE: We include this species in the Chinese fauna on the basis of three specimens (Museum of Comparative Zoology, Harvard University, numbers 22515–22517) collected at Mt. Kwannon (=Kuanyinshan), just north of Taipei, Taiwan Province.

Echinotriton asperrimus (Unterstein, 1930).

Tylototriton asperrimus W. Unterstein, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 314. Type locality: Yao shan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note); 1,500 meters.

Tylototriton (Echinotriton) asperrimus: E.-M. Zhao and Q.-X. Hu, 1984, Stud. Chin. Tailed Amphib., Chengdu: 9.

Echinotriton asperrimus: E.-M. Zhao, 1990, *in* E.-M. Zhao (ed.), From Water onto Land, Beijing: 219.

RANGE: Guangdong, Hainan, and Guangxi northward to Sichuan and southern Gansu, China. Northern Vietnam.

NOTE: For details about the type locality, see R. Mell ("1929" [1930], Sitzungsber. Gesellsch. Naturforsch. Freunde, Berlin, 1929: 310).

1. ***Echinotriton asperrimus asperrimus*** (Unterstein, 1930).

Tylototriton asperrimus asperrimus: L. Fei, C.-Y. Ye, and R.-S. Yang, 1984, Acta Zool. Sinica, Beijing, 30: 87.

Tylototriton hainanensis L. Fei, C.-Y. Ye, and R.-S. Yang, 1984, Acta Zool. Sinica, Beijing, 30: 85. Type locality: Nalong, Mt. Wuzhi, Hainan Island, Hainan Prov., China; 770 meters.

RANGE: Guangdong, Hainan, and Guangxi westward to Guizhou, China. Northern Vietnam.

2. ***Echinotriton asperrimus wenxianensis*** (Fei, Ye, and Yang, 1984).

Tylototriton asperrimus wenxianensis L. Fei, C.-Y. Ye, and R.-S. Yang, 1984, Acta Zool. Sinica, Beijing, 30: 89. Type locality: Wenxian (=Wen Co.), Gansu Prov., China; 946 meters.

Tylototriton asperrimus pingwuensis Q.-X. Deng and Z.-W. Yu, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(2): 75. Type locality: Duiwoliang, Pingwu Co., Sichuan Prov., China; 1,400 meters.

RANGE: Southern Gansu and northwestern Sichuan, China.

NOTE: Fei, Ye, and Yang's name, *Tylototriton asperrimus wenxianensis*, was published in March 1984 and Deng and Yu's name, *T. asperrimus pingwuensis*, in June 1984.

Echinotriton chinhaiensis (Chang, 1932). (PLATE 4A)

Tylototriton chinhaiensis M. L.-Y. Chang, 1932, Contrib. Biol. Lab. Sci. Soc. China, Nanking, ser. Zool., 8: 201. Type locality: Chenwuan (=Chengwan), Chinhai (=Zhenhai Co.), Chekiang (=Zhejiang) Prov., China (see Note).

Echinotriton chinhaiensis: R. A. Nussbaum and E. D. Brodie, Jr., 1982, Herpetologica, Lawrence, 38: 322.

RANGE: Known only from the general area of the type locality (see Note).

NOTE: C.-M. Cai and L. Fei (1984, Acta Herpetol. Sinica, Chengdu, [new ser.]; 3(10): 71) designated a neotype from Ruiyansi, near Chengwan, Zhejiang Province, which becomes the type locality under the provisions of the "Code" (1985, Art. 75[f]).

PACHYTRITON Boulenger, 1878.

Pachytriton G. A. Boulenger, 1878, Bull. Soc. Zool. France, Paris, 3: 72. Type species: *Triton brevipes* H.-É. Sauvage, 1876, by monotypy.

Pachytriton brevipes (Sauvage, 1876). (PLATE 4B)

Triton brevipes H.-É. Sauvage, 1876, L'Institut, Paris, new ser., 4: 275. Type locality: Southern Kiansi (=Jiangxi) Prov., China.

Pachytriton brevipes: G. A. Boulenger, 1878, Bull. Soc. Zool. France, Paris, 3: 72.
RANGE: Southeastern China.

Pachytriton labiatus (Unterstein, 1930). (PLATE 4C)
Molge labiatum W. Unterstein, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde, Berlin, 1929: 313. Type locality: Yao shan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note); 1,500 meters.
Pachytriton labiatum: E.-M. Zhao and Q.-X. Hu, 1984, Stud. Tailed Amphib. China, Chengdu: 10.
RANGE: Southern China.
NOTE: For details about the type locality, see R. Mell ("1929" [1930], Sitzungsber. Gesellsch. Naturforsch. Freunde, Berlin, 1929: 310).

PARAMESOTRITON Chang, 1935.

Paramesotriton M. L.-Y. Chang, 1935, Bull. Soc. Zool. France, Paris, 60: 425. Type species: *Mesotriton Deloustali* R. Bourret, 1934, of Vietnam, by monotypy.

Paramesotriton caudopunctatus (Liu and Hu, 1973). (PLATE 4D)
Trituroides caudopunctatus C.-C. Liu and S.-Q. Hu, 1973, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 19: 160. Type locality: Fang-xiang, Lei-shan Hsien (=Leishan Co.), Kweichow (=Guizhou) Prov., China; 1,158 meters.
Paramesotriton caudopunctatus: W. Bischoff and W. Böhme, 1980, Salamandra, Frankfurt am Main, 16: 137.
RANGE: Guangxi and Guizhou, China.

Paramesotriton chinensis (Gray, 1859). (PLATE 4E)
Cynops chinensis J. E. Gray, 1859, Proc. Zool. Soc. London, 1859: 229. Type locality: Inland from Ningpo (=Ningbo Shi), Zhejiang Prov., China.
Paramesotriton chinensis: G. E. Freytag, 1962, Mitt. Zool. Mus. Berlin, 38: 452.
Triton sinensis H.-É. Sauvage, 1876, L'Institut, Paris, new ser., 4: 274. Type locality: China.
Triturus sinensis boringi W. Herre, 1939, Abhandl. Ber. Mus. Naturk. Vorgesch. Nat. Verein Magdeburg, 7: 85. Type locality: Linghai (=Linhai Co.), Zhejiang Prov., China.
RANGE: Southern China.

Paramesotriton fuzhongensis Wen, 1989.
Paramesotriton fuzhongensis Y.-T. Wen, 1989, Chin. Herpetol. Res., Berkeley, 2: 15. Type locality: Gupo Hill, Wanggao, Zhongshan Co., Guangxi Zhuang Autonomous Region, China; 400 meters.
RANGE: Northeastern Guangxi, China.

Paramesotriton guangxiensis (Huang, Tang, and Tang, 1983).
Trituroides guangxiensis Z.-Y. Huang, Z.-Y. Tang, and Z.-M. Tang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 37. Type locality: Mt. Paiyang, Ningming Co., Guangxi Zhuang Autonomous Region, China; 478 meters.
Paramesotriton guangxiensis: E.-M. Zhao and Q.-X. Hu, 1984, Stud. Chin. Tailed Amphib., Chengdu: 10.
RANGE: Known only from the type locality.

Paramesotriton hongkongensis (Myers and Leviton, 1962).

Trituroides hongkongensis G. S. Myers and A. E. Leviton, 1962, Occas. Pap. Div. Syst. Biol. Stanford Univ., Stanford, 10: 1. Type locality: Mountain stream on The Peak (=Shan Teng), Hong Kong Island, China.

Paramesotriton hongkongensis: G. E. Freytag, 1962, Mitt. Zool. Mus. Berlin, 38: 453.

RANGE: Hong Kong Island and Kowloon region on adjacent continent, China.

TYLOTOTRITON Anderson, 1871.

Tylototriton J. Anderson, 1871, Proc. Zool. Soc. London, 1871: 423. Type species: *Tylototriton verrucosus* J. Anderson, 1871, by monotypy.

Tylototriton kweichowensis Fang and Chang, 1932. (PLATE 4F)

Tylototriton kweichowensis P.-W. Fang and M. L.-Y. Chang, 1932, Sinensia, Nanking (=Nanjing), 2: 112. Type locality: Kung-chi-shan, Dah-ting-hsien (=Dading Co.), western Kweichow (=Guizhou) Prov., China; 2,000 meters.

RANGE: Western Guizhou and northeastern Yunnan, China.

Tylototriton taliangensis Liu, 1950. (PLATE 4G)

Tylototriton taliangensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 106. Type locality: Pusakang, Fulin hsien (=Hanyuan Co.), Sikang (now part of Sichuan) Prov., China; 8,700 feet.

RANGE: Southwestern Sichuan, China.

Tylototriton verrucosus Anderson, 1871. (PLATE 4H)

Tylototriton verrucosus J. Anderson, 1871, Proc. Zool. Soc. London, 1871: 423. Type locality: Nantin, Momien (=Tengchong Co.), and Hotha (=Husa, Longchuan Co.) valleys, western Yunnan Prov., China; 5,000 feet (Hotha).

RANGE: Western Yunnan, China. India (Sikkim, Darjeeling) through northern Burma and Thailand to northern Vietnam.

SALIENTIA

DISCOGLOSSIDAE

BOMBINA Oken, 1816.

Bombina L. Oken, 1816, Lehrbuch Naturgesch., Jena and Leipzig, Zool., 3(2): 207, plate 25 (see Note). Type species: *Rana bombina* C. Linnaeus, 1761, of Europe, by subsequent designation (R. Mertens and L. Müller, 1928, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 41: 16; see Note).

NOTE: The International Commission (1956) has rejected Oken's "Lehrbuch" for nomenclatorial purposes, but *Bombina* was specifically conserved (International Commission, 1957). For a discussion of the availability of names in Oken, see comments in the

bibliography, page 389, under Oken (1816). In his "Lehrbuch," Oken did not mention the species name *bombina*, but one of the species he included in his genus *Bombina* was *Bufo igneus* J. N. Laurenti, 1768 (Synop. Rept., Vienna: 29, 129), which is a junior synonym of *Rana bombina*.

Bombina fortinuptialis Hu and Wu, 1978.

Bombina fortinuptialis S.-Q. Hu and G.-F. Wu, 1978, *in* C.-C. Liu, S.-Q. Hu, W.-S. Tian, and G.-F. Wu, Mater. Herpetol. Res., Chengdu, 4: 18 (see Note). Type locality: Yangliuchong of Mt. Yao (=Dayao Shan), Jinxiu Co., Guangxi Zhuang Autonomous Region, China; 1,350 meters.

RANGE: Northern Guangxi, China.

NOTE: This species was re-described in an article by S.-Q. Hu, W.-S. Tian, and G.-F. Wu (1981, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 111), in which authorship of the name was attributed to W.-S. Tian and G.-F. Wu; this article is often incorrectly cited as the original description.

Bombina maxima (Boulenger, 1905). (PLATE 5A)

Bombinator maximus G. A. Boulenger, 1905, Ann. Mag. Nat. Hist., London, ser. 7, 15: 188. Type locality: Tong Chuan Fu (=Dongchuan Shi), Yunnan Prov., China; 6,000 feet.

Bombina maxima: K. P. Schmidt 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 556.

RANGE: Northern Yunnan, southwestern Sichuan, and Guizhou, China. Northern Vietnam.

Bombina microdeladigitora Liu, Hu, and Yang, 1960.

Bombina microdeladigitora C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1960, Acta Zool. Sinica, Peking, 12: 157. Type locality: Huang-tsiao-ling (=Huangcaoling), Ching-tung (=Jingdong Co.), Yunnan Prov., China; 2,240 meters.

RANGE: Yunnan and Hubei, China.

Bombina orientalis (Boulenger, 1890). (PLATE 5B)

Bombinator orientalis G. A. Boulenger, 1890, Ann. Mag. Nat. Hist., London, ser. 6, 5: 143. Type locality: "Chefoo [=Yantai Shi] . . . N. China . . . S.E. Coast of Corea [=Korea] . . . Chabarowka [=Khabarovsk, Russia]" (see Note).

Bombina orientalis: C.-C. Liu and S.-Q. Hu, 1961, Tailless Amphib. China, Peking: 36.

RANGE: Northeastern China southward to northern Anhui. Southern part of Russian Far East (Primorskiy Territory [=Maritime District]) and Korea.

NOTE: The type locality was restricted to Chefoo (=Yantai Shi), Shandong Prov., China, by C. H. Pope (1931, Bull. Amer. Mus. Nat. Hist., New York, 61: 435).

PELOBATIDAE

ATYMPANOPHRYS Tian and Hu, 1983.

Atympanophrys W.-S. Tian and Q.-X. Hu, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 43. Type species: *Megophrys shapingensis* C.-C. Liu, 1950, by original designation.

Atympanophrys shapingensis (Liu, 1950). (PLATE 5C)

Megophrys shapingensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 194. Type locality: Shaping, Opienhsien (=Ebian Co.), Szechwan (=Sichuan) Prov., China.

Atympanophrys shapingensis: W.-S. Tian and Q.-X. Hu, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 43.
RANGE: Western Sichuan, China.

BRACHYTARSOPHRYS Tian and Hu, 1983.

Brachytarsophrys W.-S. Tian and Q.-X. Hu, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 42. Type species: *Leptobrachium carinense* G. A. Boulenger, 1889, by original designation.

Brachytarsophrys carinensis (Boulenger, 1889). (PLATE 5D)

Leptobrachium carinense G. A. Boulenger, 1889, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 7: 748. Type locality: Karens Mountains (western slope), east of Toungoo, Burma; 800 meters "and upwards" (see Note).
Brachytarsophrys carinensis: W.-S. Tian and Q.-X. Hu, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 42.
RANGE: Southern China. Burma and northern Thailand.
NOTE: The type locality was restricted to Karin Bia-po, 700–1,000 meters, by lectotype designation (L. Capocaccia, 1957, Ann Mus. Civ. Stor. Nat. Genova, 69: 211).

LEPTOBRACHIUM Tschudi, 1838.

Leptobrachium J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 81 (see Note). Type species: *Leptobrachium Hasseltii* J. J. von Tschudi, 1838, by monotypy.
NOTE: In the same work, Tschudi (1838: 43) also used the spelling "*Septobrachium*" in an apparent *lapsus*. Subsequent authors have used the spelling *Leptobrachium*, beginning with A.-M.-C. Duméril and G. Bibron (1841, Erpétol. Gén., Paris, 8: 322).

Leptobrachium chapaense (Bourret, 1937). (PLATE 5E)

Megophrys hasseltii chapaensis R. Bourret, 1937, Annexe Bull. Gén. Instr. Publique, Hanoi, 1937(4): 18. Type locality: Chapa, Tonkin, Vietnam.
Leptobrachium (*Leptobrachium*) *chapaense*: A. Dubois, 1980, Bull. Mens. Soc. Linnéenne Lyon, 49: 476.
RANGE: Southern Yunnan, China. Northern Vietnam.

Leptobrachium hasseltii Tschudi, 1838. (PLATE 5F)

Leptobrachium Hasseltii J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 81. Type locality: Java, Indonesia.
RANGE: Hainan, China. Eastern India (Meghalaya) and Burma south to Indonesia (Sumatra, Java), Borneo, and Philippines.

LEPTOLALAX Dubois, 1980.

Leptobrachium (Leptolalax) A. Dubois, 1980, Bull. Mens. Soc. Linnéenne Lyon, 49: 476. Type species: *Leptobrachium gracile* A. Günther, 1872, of Malaysia, by original designation.
Leptolalax: A. Dubois, 1983, Alytes, Paris, 2: 147.

Leptolalax alpinus Fei, Ye, and Li, 1991.

Leptolalax alpinus L. Fei, C.-Y. Ye, and S.-S. Li, "1990" (1991), *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Key Chin. Amphib., Chongqing: 96, 213, 274. Type locality: Mt. Wuliangshan, Jingdong Co., Yunnan Prov., China; 2,400 meters.

RANGE: Known only from the type locality.

Leptolalax liui Fei and Ye, 1991.

Leptolalax liui L. Fei and C.-Y. Ye, "1990" (1991), *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Key Chin. Amphib., Chongqing: 96, 275. Type locality: Chong'an, Fujian Prov., China; 800 meters.

RANGE: Zhejiang and Fujian west to Guizhou and Guangxi, China.

NOTE: This species was re-described by L. Fei and C.-Y. Ye (1992, Acta Zool. Sinica, Beijing, 38: 249–251), who provided more extensive morphological information.

Leptolalax pelodytoides (Boulenger, 1893). (PLATE 5G)

Leptobrachium pelodytoides G. A. Boulenger, 1893, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 13: 345. Type locality: Thao and Karin Bia-po, Burma (see Note).

Leptobrachium (*Leptolalax*) *pelodytoides*: A. Dubois, 1980, Bull. Mens. Soc. Linnéenne Lyon, 49: 476.

Leptolalax pelodytoides: W.-S. Tian and Y.-M. Jiang (eds.), 1986, Handb. Identif. Chin. Amphib. Rept., Beijing: 55.

RANGE: Yunnan and Sichuan in the west to Zhejiang and Fujian in the east and south to Hong Kong and Guangxi, China. Burma, Thailand, Malaya, and northern Vietnam.

NOTE: The type locality was restricted to Thao by lectotype designation (L. Capocaccia, 1957, Ann. Mus. Civ. Stor. Nat. Genova, 69: 212).

1. ***Leptolalax pelodytoides oshanensis*** (Liu, 1950).

Megophrys oshanensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 197. Type locality: Mt. Omei (=Emei), Szechwan (=Sichuan) Prov., China; 3,500 feet.

Leptobrachium (*Leptolalax*) *oshanense*: A. Dubois, 1980, Bull. Mens. Soc. Linnéenne Lyon, 49: 476.

Leptolalax oshanensis: W.-S. Tian and Y.-M. Jiang (eds.), 1986, Handb. Identif. Chin. Amphib. Rept., Beijing: 55.

Leptolalax pelodytoides oshanensis: A. Dubois, 1983, Alytes, Paris, 2: 149.

RANGE: Sichuan, China.

2. ***Leptolalax pelodytoides pelodytoides*** (Boulenger, 1893). (PLATE 5G)

Leptolalax pelodytoides pelodytoides: A. Dubois, 1983, Alytes, Paris, 2: 149.

RANGE: Yunnan east to Zhejiang and south to Hong Kong and Guangxi, China. Burma, Thailand, Malaya, and northern Vietnam.

Leptolalax ventripunctatus Fei, Ye, and Li, 1991.

Leptolalax ventripunctatus L. Fei, C.-Y. Ye, and S.-S. Li, "1990" (1991), *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Key Chin. Amphib., Chongqing: 95, 213, 274. Type locality: Zhushihe, Mengla Co., Yunnan Prov., China; 850 meters.

RANGE: Known only from the type locality.

MEGOPHRYS Kuhl and van Hasselt, 1822.

Megophrys H. Kuhl and J. C. van Hasselt, 1822, Algemeene Konst- en Letter-Bode, Haarlem, 7: 104. Type species: *Megophrys montana* H. Kuhl and J. C. van Hasselt, 1822, of southeastern Asia, Indonesia, and Borneo, by monotypy.

Megophrys boettgeri (Boulenger, 1899).

Leptobrachium boettgeri G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 171. Type locality: Kuatun (=Guadun), about 270 miles from Foochow (=Fuzhou), Chongan Co., Fujian Prov., China; 3,000 to 4,000 feet "or more."

Megophrys boettgeri: C.-C. Liu and S.-Q. Hu, 1961, Tailless Amphib. China, Peking: 58.

RANGE: Southern China. India (Assam).

Megophrys brachykolos Inger and Romer, 1961. (PLATE 5H)

Megophrys brachykolos R. F. Inger and J. D. Romer, 1961, Fieldiana: Zool., Chicago, 39: 533. Type locality: The Peak (=Shan Teng), Hong Kong Island, Hong Kong,China; 300–400 meters.

RANGE: Hong Kong and Lantau islands and adjacent peninsula on the mainland, China. A specimen from Fujian Province was reported in the original description, but the species has not been reported subsequently from Fujian.

Megophrys giganticus Liu, Hu, and Yang, 1960.

Megophrys giganticus C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1960, Acta Zool. Sinica, Peking, 12: 160. Type locality: Hsin-ming-hsiang (=Xinming Xiang), Chingtung (=Jingdong Co.), Yunnan Prov., China; 2,120 meters.

RANGE: Yunnan, China.

Megophrys glandulosa Fei, Ye, and Huang, 1991.

Megophrys glandulosa L. Fei, C.-Y. Ye, and Y.-Z. Huang, "1990" (1991), *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Key Chin. Amphib., Chongqing: 99, 273. Type locality: Mt. Wuliangshan, Jingdong Co., Yunnan Prov., China; 1,900 meters.

RANGE: Known only from the vicinity of the type locality.

NOTE: This species was re-described by L. Fei, C.-Y. Ye, and Y.-Z. Huang (1992, Zool. Res., Kunming, 13: 5–8), who provided more extensive morphological information.

Megophrys kempii (Annandale, 1912).

Megalophrys kempii N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 20. Type locality: Upper Rotung, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 2,000 feet.

Megophrys kempii: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 415.

RANGE: Known only from the type locality.

Megophrys kuatunensis (Pope, 1929).

Megalophrys kuatunensis C. H. Pope, 1929, Amer. Mus. Novit., New York, 352: 1. Type locality: Kuatun (=Guadun), Chungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China; 5,500–6,000 feet.

Megophrys kuatunensis: C.-C. Liu and S.-Q. Hu, 1961, Tailless Amphib. China, Peking: 65.

RANGE: Fujian, Hunan, and Zhejiang, China.

Megophrys lateralis (Anderson, 1871).

Ixalus lateralis J. Anderson, 1871, Jour. Asiat. Soc. Bengal, Calcutta, 40(2): 29. Type locality: Not given (see Note).

Megophrys lateralis: C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 180.

Megalophrys major G. A. Boulenger, 1908, Proc. Zool. Soc. London, 1908: 416 (substitute name).

RANGE: Yunnan and Guangdong, China. Northeastern India and Bangladesh through Burma to northern Vietnam.

NOTE: The type locality of *Megophrys lateralis* was stated as "western Yunnan" by D. R. Frost (1985, Amphib. Spec. World, Lawrence: 415), presumably on the basis that Anderson only visited this part of Yunnan Province; however, the same expedition passed through Burma, where this species is also known.

Megophrys mangshanensis Fei and Ye, 1991.

Megophrys mangshanensis L. Fei and C.-Y. Ye, "1990" (1991), *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Key Chin. Amphib., Chongqing: 99, 273. Type locality: Mt. Mangshan, Yizhang Co., Hunan Prov., China; 1,000 meters.

RANGE: Southern Hunan and northern Guangdong, China.

NOTE: This species was re-described by L. Fei and C.-Y. Ye (*in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, 1992, Zool. Res., Kunming, 13: 6, 9–10), who provided more extensive morphological information.

Megophrys minor Stejneger, 1926. (PLATE 6A)

Megophrys minor L. Stejneger, 1926, Proc. Biol. Soc. Washington, 39: 53. Type locality: Kwanhsien (=Guan Xian, now Dujiangyan Shi), 55 km northwest of Chengtu (=Chengdu), Szechwan (=Sichuan) Prov., China; 3,000 feet.

RANGE: Southwestern China including Xizang (Tibet), eastward to Hubei and Guangxi.

Megophrys nankiangensis Liu and Hu, 1966.

Megophrys nankiangensis C.-C. Liu and S.-Q. Hu, 1966, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 18: 72. Type locality: Mt. Kuangwu (=Guangwu Shan), Nankiang (=Nanjiang) Co., Szechwan (=Sichuan) Prov., China; 1,750 meters.

RANGE: Known only from the type locality.

Megophrys omeimontis Liu, 1950. (PLATE 6B)

Megophrys omeimontis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 191. Type locality: Mt. Omei (=Emei), Szechwan (=Sichuan) Prov., China; 3,600 feet.

RANGE: Southwestern China westward to southeastern Xizang (Tibet) and eastward to Hunan, China.

1. ***Megophrys omeimontis jingdongensis*** Fei and Ye, 1983.

Megophrys omeimontis jingdongensis L. Fei and C.-Y. Ye, 1983, *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 51. Type locality: Jingdong Co., Yunnan Prov., China; 2,060 meters.

RANGE: Yunnan, China.

2. ***Megophrys omeimontis medogensis*** Fei, Ye, and Huang, 1983.

Megophrys omeimontis medogensis L. Fei, C.-Y. Ye, and Y.-Z. Huang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 49 (see Note). Type locality: Medog Co., Xizang (Tibet) Autonomous Region, China; 1,000 meters.

RANGE: Southeastern Xizang (Tibet), China.

NOTE: In the English abstract of the original description the name is misspelled "*Megophrys omeimontis motuoensis*" and the type locality is given incorrectly as "Motuo."

3. ***Megophrys omeimontis omeimontis*** Liu, 1950. (PLATE 6B)

Megophrys omeimontis omeimontis L. Fei, C.-Y. Ye, and Y.-Z. Huang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 50.

RANGE: Sichuan and Hunan, China.

Megophrys pachyproctus Huang, 1981.

Megophrys pachyproctus Y.-Z. Huang, 1981, *in* Y.-Z. Huang and L. Fei, Acta Zootaxon. Sinica, Beijing, 6: 211. Type locality: Gelin, Medo Xian (=Medog Co.), Xizang (Tibet) Autonomous Region, China; 1,530 meters.

RANGE: Known only from the type locality.

Megophrys palpebralespinosa Bourret, 1937.

Megophrys palpebralespinosa R. Bourret, 1937, Annexe Bull. Gén. Instr. Publique, Hanoi, 1937(4): 16. Type locality: Chapa, Tonkin, Vietnam.

RANGE: Yunnan (Hekou), China. Northern Vietnam.

Megophrys parva (Boulenger, 1893).

Xenophrys monticola A. Günther, 1864, Rept. Brit. India, London: 414 (see Note). Type locality: Sikkim and Khasya, Burma.

Leptobrachium parvum G. A. Boulenger, 1893, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 13: 344 (see Note). Type locality: Karin Bia-po, Yado, Burma.

Megophrys parva: C.-C. Liu and S.-Q. Hu, 1959, Acta Zool. Sinica, Peking, 11: 514.

RANGE: Yunnan, China. India (Darjeeling, Sikkim, Assam) and Nepal through Bangladesh and Burma to Thailand.

NOTE: A. Dubois (1982, Bull. Mus. Natl. Hist. Nat., Paris, ser. 4, 4(A): 266) showed that the name *Xenophrys monticola* has priority over *Megophrys parva*, but in the interest of stability we continue to use *M. parva*, pending action by the International Commission on Zoological Nomenclature.

Megophrys spinatus Liu and Hu, 1973.

Megophrys spinatus C.-C. Liu and S.-Q. Hu, 1973, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 19: 163. Type locality: Fang-xiang, Lei-shan Co., Kweichow (=Guizhou) Prov., China; 1,100 meters.

RANGE: Sichuan, Guizhou, northeastern Yunnan, and northern Guangxi, China.

OPHRYOPHRYNE Boulenger, 1903.

Ophryophryne G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 186. Type species: *Ophryophryne microstoma* G. A. Boulenger, 1903, by original designation.

Ophryophryne microstoma Boulenger, 1903.

Ophryophryne microstoma G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 187. Type locality: Man-Son Mountains, Tonkin, Vietnam; 3,000–4,000 feet.

RANGE: Southern Guangxi and Yunnan, China. Northern Vietnam.

Ophryophryne pachyproctus Kou, 1985. (PLATE 6C)

Ophryophryne pachyproctus Z.-T. Kou, 1985, Acta Herpetol. Sinica, Chengdu, [new ser.], 4: 41. Type locality: Zhushihe, Mengla Co., Yunnan Prov., China; 1,000 meters.

RANGE: Known only from the type locality.

OREOLALAX Myers and Leviton, 1962.

Oreolalax G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 289. Type species: *Scutiger pingii* C.-C. Liu, 1943, by original designation.

Oreolalax chuanbeiensis Tian, 1983.

Oreolalax chuanbeiensis W.-S. Tian, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 59. Type locality: Pingwu Co., Sichuan Prov., China; 2,100 meters.

RANGE: Sichuan, China.

Oreolalax granulosus Fei, Ye, and Chen, 1991.

Oreolalax granulosus L. Fei, C.-Y. Ye, and H.-J. Chen, "1990" (1991), *in* L. Fei, C.-Y. Ye, and Y.-Z. Huang, Key Chin. Amphib., Chongqing: 79, 208, 275. Type locality: Xujiaba, Jingdong Co., Yunnan Prov., China; 2,400 meters.

RANGE: Known only from the type locality.

Oreolalax jingdongensis Ma, Yang, and Li, 1983.

Oreolalax jingdongensis D.-S. Ma, D.-T. Yang, and F.-L. Li, 1983, *in* D.-T. Yang, D.-S. Ma, H.-J. Chen, and F.-L. Li, Acta Zootaxon. Sinica, Beijing, 8: 323. Type locality: Mt. Ailao, Jingdong Co., Yunnan Prov., China; 2,400 meters.

RANGE: Yunnan, China.

Oreolalax lichuanensis Hu and Fei, 1979.

Oreolalax lichuanensis S.-Q. Hu and L. Fei, 1979, *in* C.-C. Liu, S.-Q. Hu, and L. Fei, Acta Zootaxon. Sinica, Beijing, 4: 86. Type locality: Han-chi, Lichuan Co., Hubei Prov., China; 1,790 meters.

RANGE: Hubei, Sichuan, and Guizhou, China.

Oreolalax major (Liu and Hu, 1960). (PLATE 6D)

Scutiger major C.-C. Liu and S.-Q. Hu, 1960, Scientia Sinica, Peking, 9: 764. Type locality: Mt. Omei (=Mt. Emei), Szechwan (=Sichuan Prov.), China; 2,000 meters.

Oreolalax major: W.-S. Tian and Y.-M. Jiang (eds.), 1986, Handb. Identif. Chin. Amphib. Rept., Beijing: 56.

Oreolalax liangbeiensis C.-C. Liu and L. Fei, 1979, *in* C.-C. Liu, S.-Q. Hu, and L. Fei, Acta Zootaxon. Sinica, Beijing, 4: 83. Type locality: Pu-xiong of Yuexi-Xian (=Yuexi Co.), Sichuan Prov., China; 2,950 meters.

RANGE: Sichuan, China.

Oreolalax omeimontis (Liu and Hu, 1960). (PLATE 6E)

Scutiger omeimontis C.-C. Liu and S.-Q. Hu, 1960, Scientia Sinica, Peking, 9: 767. Type locality: Changshingkao (=Changshenggou), Mt. Omei (=Mt. Emei), Szechwan (=Sichuan) Prov., China.

Oreolalax omeimontis: W.-S. Tian and Y.-M. Jiang (eds.), 1986, Handb. Identif. Chin. Amphib. Rept., Beijing: 55.

RANGE: Sichuan, China.

Oreolalax pingii (Liu, 1943).

Scutiger pingii C.-C. Liu, 1943, Jour. West China Border Res. Soc., Chengdu, ser. B, 14: 35. Type locality: Yen-wo-t'ang (=Yan-wo-tang), Chao-chiao (=Zhaojue Co.), Sikang (now part of Sichuan Prov.), China; 11,000 feet.

Oreolalax pingii: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 289.

RANGE: Sichuan, China.

Oreolalax popei (Liu, 1947). (PLATE 6F)

Scutiger popei C.-C. Liu, 1947, Copeia, Ann Arbor, 1947: 125. Type locality: Lungtung (=Longdong), Pao-hsing (=Baoxing) Co., Sikang (now part of Sichuan) Prov., China; 3,400 feet.

Oreolalax popei: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 289.

RANGE: Western Sichuan, northward to southeastern Gansu and possibly Shaanxi, China.

Oreolalax rhodostigmatus Hu and Fei, 1979. (PLATE 6G)

Oreolalax rhodostigmatus S.-Q. Hu and L. Fei, 1979, *in* C.-C. Liu, S.-Q. Hu, and L. Fei, Acta Zootaxon. Sinica, Beijing, 4: 87. Type locality: Zunyi Co., Guizhou Prov., China; 1,040 meters.

RANGE: Guizhou, Sichuan, and Hubei, China.

Oreolalax rugosus (Liu, 1943). (PLATE 6H)

Scutiger rugosa C.-C. Liu, 1943, Jour. West China Border Res. Soc., Chengdu, ser. B, 14: 37. Type locality: Yen-wo-t'ang (=Yan-wo-tang), Chao-chiao (=Zhaojue Co.), Sikang (now part of Sichuan Prov.), China; 11,000 feet.

Oreolalax rugosus: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 289.

RANGE: Sichuan and Yunnan, China.

Oreolalax schmidti (Liu, 1947).

Scutiger schmidti C.-C. Liu, 1947, Copeia, Ann Arbor, 1947: 123. Type locality: Mt. Omei (=Mt. Emei), Szechwan (=Sichuan) Prov., China; 7,800 feet.

Oreolalax schmidti: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 289.

Oreolalax puxiongensis C.-C. Liu and L. Fei, 1979, *in* C.-C. Liu, S.-Q. Hu, and L. Fei, Acta Zootaxon. Sinica, Beijing, 4: 84. Type locality: Pu-xiong of Yuexi-Xian (=Yuexi Co.), Sichuan Prov., China; 2,900 meters.

RANGE: Sichuan, China.

Oreolalax xiangchengensis Fei and Huang, 1983.

Oreolalax xiangchengensis L. Fei and Y.-Z. Huang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(1): 71. Type locality: Xiangcheng Co., Sichuan Prov., China; 2,880 meters.

RANGE: Western Sichuan and northwestern Yunnan, China.

1. ***Oreolalax xiangchengensis deqenicus*** (Yang, 1990).

Scutiger xiangchengensis deqenicus D.-T. Yang, 1990, *in* D.-T. Yang and Y.-H. He, *in* E.-M. Zhao (ed.), From Water onto Land, Beijing: 207. Type locality: Bengzilan, Dêqên Co., Yunnan Prov., China; 2,010 meters.

RANGE: Known only from the type locality.

2. ***Oreolalax xiangchengensis xiangchengensis*** Liang Fei and Y.-Z. Huang, 1983.

Scutiger (Oreolalax) xiangchengensis xiangchengensis: D.-T. Yang (ed.), 1991, Amphib.-Fauna Yunnan, Beijing: 79.

RANGE: Western Sichuan and northwestern Yunnan, China.

SCUTIGER Theobald, 1868.

Scutiger W. Theobald, 1868, Jour. Asiatic Soc. Bengal, Calcutta, 37(extra number 146): 83 (77 in author's reprint). Type species: *Bombinator sikimmensis* E. Blyth, 1854, by monotypy.

Scutiger alticola (Procter, 1922).

Cophophryne alticola J. B. Procter, 1922, Ann. Mag. Nat. Hist., London, ser. 9, 9: 583. Type locality: Kharta Valley, Tibet (=Xizang Autonomous Region), China; 16,500 feet.

Scutiger alticola: C. H. Pope and A. M. Boring, 1940, Peking Nat. Hist. Bull., 15: 27.

RANGE: Xizang (Tibet), China. Nepal.

Scutiger boulengeri (Bedriaga, 1898). (PLATE 7A)

Leptobrachium Boulengeri J. von Bedriaga, 1898, Wissensch. Result. Przewalski Centr.-Asien Reisen, St. Petersburg, Zool., 3(1): 63. Type locality: Flusse Dy-tschju (=Moron Us He and Tuotuo He?), Jan-tse-kiang super. (=Jinsha River), Qinghai Prov., China.

Scutiger boulengeri: W.-S. Tian and X.-Y. Feng, 1982, Acta Herpetol. Sinica, Chengdu, [new ser.], 1: 25.

Aelurophryne tainingensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 132. Type locality: Taining, Sikang (now part of Sichuan Prov.), China; 11,500 feet.

RANGE: Sichuan, Gansu, Qinghai, and Xizang (Tibet), China. Nepal.

Scutiger chintingensis Liu and Hu, 1960.

Scutiger chintingensis C.-C. Liu and S.-Q. Hu, 1960, Scientia Sinica, Peking, 9: 770. Type locality: Chinting (=Jinding), Mt. Omei (=Mt. Emei), Szechwan (=Sichuan Prov.), China; 3,050 meters.

RANGE: Sichuan, China.

Scutiger glandulatus (Liu, 1950).

Aelurophryne glandulata C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 137. Type locality: Hopachai (=Huobazhai), Lifanhsien (=Li Co.), Szechwan (=Sichuan Prov.), China; 8,500 feet.

Scutiger glandulatus: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 290.

Aelurophryne brevipes C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 125. Type locality: Taining, Sikang (now part of Sichuan Prov.), China; 11,500 feet.

RANGE: Western Sichuan and northwestern Yunnan, China.

Scutiger gongshanensis Yang and Su, 1979.

Scutiger gongshanensis D.-T. Yang and C.-Y. Su, 1979, *in* D.-T. Yang, C.-Y. Su, and S.-M. Li, Acta Zootaxon. Sinica, Beijing, 4: 185. Type locality: 12th Bridge, Gongshan Co., Yunnan Prov., China; 2,750 meters.

RANGE: Western Yunnan, China.

Scutiger liupanensis (Huang, 1985).

Scutiger liupanensis Y.-Z. Huang, 1985, Acta Biol. Plateau Sinica, Xining, 1985(4): 77. Type locality: Mt. Liupan, Ningxia Hui Autonomous Region, China; 2,100 meters.

RANGE: Known only from the type locality.

Scutiger maculatus (Liu, 1950).

Aelurophryne maculata C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 136. Type locality: Hasa, Kantze (=Garzê) Co., Sikang (now part of Sichuan) Prov., China; 11,000 feet.

Scutiger maculatus: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 290.

RANGE: Sichuan and Xizang (Tibet), China.

Scutiger mammatus (Günther, 1896). (PLATE 7B)

Bufo mammatus A. Günther, 1896, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 1: 208. Type locality: Tung-so-lo (=Dong-e-lo), Kham Plateau, Sikang (now part of Sichuan) Prov., China.

Scutiger mammatus: G. S. Myers and A. E. Leviton, 1962, Copeia, Lawrence, 1962: 290.

Aelurophryne gigas S. F. Zarevsky (as Carevskij), "1925" (1926), Annu. Mus. Zool. Acad. Sci. URSS, Leningrad, 26: 77. Type locality: Cham-chu River (=Tsachu Jiang?), Kham Plateau, "Tibet" (actually, Sichuan Prov.), China (see Note).

RANGE: Yunnan, Sichuan, Qinghai, and Xizang (Tibet), China.

NOTE: L. J. Borkin and M. Matsui ("1986" [1987], Proc. Zool. Inst. USSR Acad. Sci., Leningrad, 157: 52) gave further details on the type locality of *Aelurophryne gigas*, including elevation (3,660 meters).

Scutiger ningshanensis Fang, 1985.

Scutiger ningshanensis R.-S. Fang, 1985, Acta Herpetol. Sinica, Chengdu, [new ser.], 4: 305. Type locality: Xunyangba, Ningshaan Co., Shaanxi Prov., China; 2,550 meters.

RANGE: Southern Shaanxi, China.

Scutiger nyingchiensis Fei, 1977.

Scutiger nyingchiensis L. Fei, 1977, *in* Sichuan Biological Research Institute; Acta Zool. Sinica, Peking, 23: 54. Type locality: Nyingchi Co., Xizang (Tibet) Autonomous Region, China; 3,040 meters.

RANGE: Southeastern Xizang (Tibet), China. India (Kashmir) and Nepal.

Scutiger pingwuensis Liu and Tian, 1978.

Scutiger pingwuensis C.-C. Liu and W.-S. Tian, 1978, *in* C.-C. Liu, S.-Q. Hu, W.-S. Tian, and G.-F. Wu, Mater. Herpetol. Res., Chengdu, 4: 18 (see Note). Type locality: Wang-ba-chu, Pingwu Co., Sichuan Prov., China; 2,200 meters.

RANGE: Known only from the type locality.

NOTE: This species was re-described by Liu and Tian in 1981 (Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 5), an article that is often incorrectly cited as the original description.

Scutiger ruginosus Zhao and Jiang, 1982. (PLATE 7C)

Scutiger ruginosus E.-M. Zhao and Y.-M. Jiang, 1982, Acta Herpetol. Sinica, Chengdu, [new ser.], 1: 79. Type locality: Xinduqiao, Kangding Co., Sichuan Prov., China; 3,400 meters.

Scutiger muliensis L. Fei and C.-Y. Ye, 1986, Acta Zool. Sinica, Beijing, 32: 63. Type locality: Muli Co., Sichuan Prov., China; 3,200 meters.

RANGE: Western Sichuan, China.

Scutiger sikimmensis (Blyth, 1854).

Bombinator sikimmensis [*sic*] E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 300. Type locality: None given, but presumably Sikkim based on the species name given by Blyth (see Note).

Scutiger Sikkimmensis: W. Theobald, 1868, Jour. Asiatic Soc. Bengal, Calcutta, 37(extra number 146): 83 (77 in author's reprint).

RANGE: Xizang (Tibet), China. Nepal and India (Sikkim).

NOTE: W. Theobald (1868, Jour. Asiatic Soc. Bengal, Calcutta, 37: 83) gave the locality of Blyth's type specimens as "Sikkim."

Scutiger tuberculatus Liu and Fei, 1979.

Scutiger tuberculatus C.-C. Liu and L. Fei, 1979, *in* C.-C. Liu, S.-Q. Hu, and L. Fei, Acta Zootaxon. Sinica, Beijing, 4: 89. Type locality: Pu-xiong, Yuexi Co., Sichuan Prov., China; 3,000 meters.

RANGE: Sichuan and Yunnan, China.

Scutiger weigoldi (Vogt, 1924).

Megalophrys weigoldi T. Vogt, 1924, Zool. Anz., Leipzig, 60: 343. Type locality: Not given (see Note).

Scutiger (Aelurolalax) weigoldi: A. Dubois, "1986" (1987), Alytes, Paris, 5: 15.

RANGE: Sichuan, China.

NOTE: C. H. Pope (1931, Bull. Amer. Mus. Nat. Hist., New York, 61: 437) gave the type locality as "Washan, Szechwan [=Mt. Wa, Sichuan]," as is currently entered for the holotype in the catalogue of the zoological museum in Berlin. A. Ohler and A. Dubois (1992, Jour. Herpetol., Oxford [Ohio], 26: 245–249) provided a re-description of the holotype, which is still the only-known specimen of *Scutiger weigoldi*.

VIBRISSAPHORA Liu, 1945.

Vibrissaphora C.-C. Liu, 1945, Jour. West China Border Res. Soc., Chengdu, ser. B, 15: 28. Type species: *Vibrissaphora boringii* C.-C. Liu, 1945, by monotypy.

Vibrissaphora ailaonica Yang, Chen, and Ma, 1983. (PLATE 7D)

Vibrissaphora ailaonica D.-T. Yang, H.-J. Chen, and D.-S. Ma, 1983, *in* D.-T. Yang, D.-S. Ma, H.-J. Chen, and F.-L. Li, Acta Zootaxon. Sinica, Beijing, 8: 325. Type locality: Xujiaba, Mt. Ailao, Jingdong Co., Yunnan Prov., China; 2,400 meters.

RANGE: Yunnan, China.

Vibrissaphora boringii Liu, 1945. (PLATE 7E)

Vibrissaphora boringii C.-C. Liu, 1945, Jour. West China Border Res. Soc., Chengdu, ser. B, 15: 28. Type locality: Ta-nge-sze (=Da-e Si), Mt. Omei (=Mt. Emei), Sichuan Prov., China; 3,590 feet.

RANGE: Sichuan, northeastern Guizhou, and northwestern Hunan, China.

Vibrissaphora leishanensis Liu and Hu, 1973.

Vibrissaphora leishanensis C.-C. Liu and S.-Q. Hu, 1973, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 19: 165. Type locality: Ge-tou of Fang-xiang, Leishan Co., Kweichow (=Guizhou) Prov., China; 1,100 meters.

RANGE: Known only from the type locality.

Vibrissaphora liui Pope, 1947.

Vibrissaphora liui C. H. Pope, 1947, Copeia, Ann Arbor, 1947: 110. Type locality: San Chiang (=Sangang), Ch'ungan Hsien (=Chongan Co.), Fukien (=Fujian) Prov., China.

Vibrissaphora yaoshanensis C.-C. Liu and S.-Q. Hu, 1978, *in* C.-C. Liu, S.-Q. Hu, W.-S. Tian, and G.-F. Wu, Mater. Herpetol. Res., Chengdu, 4: 18. Type locality: Yang-liu-chong, Mt. Yao (=Dayao Shan), Guangxi Zhuang Autonomous Region, China; 1,200 meters (see Note).

Vibrissaphora jiulongshanensis J.-L. Wei and Z.-L. Zhao, 1981, Jour. Hangzhou Univ., Hangzhou, 8: 300. Type locality: Jiulongshan, Shuichang Co., Zhejiang Prov., China; 900 meters.

RANGE: Southeastern China (southern Zhejiang, Fujian, Guangxi, and Hunan).

NOTE: *Vibrissaphora yaoshanensis* was re-described by C.-C. Liu and S.-Q. Hu in 1981 (*in* S.-Q. Hu, W.-S. Tian, and G.-F. Wu, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 114), an article that is often incorrectly cited as the original description.

BUFONIDAE

BUFO Laurenti, 1768.

Bufo J. N. Laurenti, 1768, Synops. Rept., Vienna: 25. Type species: *Bufo vulgaris* J. N. Laurenti, 1768 (=*Rana Bufo* C. Linnaeus, 1758) of Eurasia, by subsequent designation (J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 50, 87) and also by absolute tautonomy (see L. Stejneger, 1936, Copeia, Ann Arbor, 1936: 134).

NOTE: We have construed Tschudi's statement (1838: 50) as a valid designation of *Bufo vulgaris* (=*B. bufo*) as the type species of *Bufo*. However, A. E. Leviton and S. C. Anderson (1970, Proc. California Acad. Sci., San Francisco, ser. 4, 38: 174) do not accept the synonymy of *B. vulgaris* and *B. bufo* and give contrary evidence that *B. viridis* J. N. Laurenti, 1768, may be the correct type species of *Bufo*, based on L. J. Fitzinger's (1843, Syst. Rept., Vienna: 32) designation of *B. viridis*.

Bufo ailaoanus Kou, 1984.

Bufo ailaoanus Z.-T. Kou, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(4): 39. Type locality: Ejia, Shuangbai Co., Yunnan Prov., China; 2,600 meters.

RANGE: Known only from the vicinity of the type locality.

Bufo andrewsi Schmidt, 1925. (PLATE 7F)

Bufo andrewsi K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 1. Type locality: Likiang (=Lijiang) Co., Yunnan Prov., China; 8,500 feet.

Bufo bufo wrighti K. P. Schmidt and C.-C. Liu, 1940, Zool. Ser. Field Mus. Nat. Hist., Chicago, 24: 151. Type locality: Ho Ni Pa, 30 miles southeast of Moupin (=Baoxing Co.), Hsikang (now part of Sichuan Prov.), China.

RANGE: Southwestern China northward to Shaanxi and Henan. Also reported from Zhejiang and Guangxi.

Bufo bankorensis Barbour, 1908. (PLATE 7G)

Bufo bankorensis T. Barbour, 1908, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 51: 323. Type locality: Bankoro (=Banko?, now Wan-hsing), central Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

Bufo burmanus Andersson, 1938.

Bufo burmanus L. G. Andersson, 1938, Ark. Zool., Stockholm, 30A(23): 6. Type locality: Kambaiti, northeastern Burma, near the border of China; 2,000 meters.

RANGE: Southern Yunnan, China. Northern Burma.

Bufo cryptotympanicus Liu and Hu, 1962.

Bufo cryptotympanicus C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 87. Type locality: San-men of Hua-ping, Lung-shen-hsien (=Longsheng Co.), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 870 meters.

RANGE: Known only from the type locality.

Bufo danatensis Pisanetz, 1978. (PLATE 7H)

Bufo danatensis E. M. Pisanetz, 1978, Dopovidi Acad. Nauk Ukrain. R.S.R., ser. B, Kiev, 1978: 277. Type locality: Neighborhood of Danata Village, Kyuren-Dagh mountain ridge, southwestern Turkmenistan.

RANGE: Western Xinjiang, China. Southern Turkmenistan eastward through Tajikistan, Kirgizstan, and Kazakhstan to western Mongolia.

NOTE: This tetraploid species ($4n = 44$) is included in the Chinese fauna since it is reported from several localities in Mongolia and the former Soviet Union along the border of Xinjiang Uygur Autonomous Region, China (L. J. Borkin, I. A. Caune, E. M. Pisanetz, and Y. M. Rozanov, "1986" [1987], *in* Z. Roček [ed.], Stud. Herpetol., Prague: 137–141). Tetraploid specimens of "*Bufo viridis*" ($4n = 44$) have been reported from Xinjiang (M. Wu and Y.-J. Zhao, 1987, Zool. Res., Kunming, 8: 339–342); these may be referable to *B. danatensis*. Since *B. viridis* Laurenti, 1768, and *B. latastii* Boulenger, 1882 (the latter a *viridis*-group species native to Ladakh and Kashmir) are both $2n = 22$, we have provisionally applied the name *B. danatensis* to the tetraploid taxon in Xinjiang.

Bufo galeatus Günther, 1864.

Bufo galeatus A. Günther, 1864, Rept. Brit. India, London: 421. Type locality: Gamboja (=Cambodia).

RANGE: Hainan, China. Indochina.

Bufo gargarizans Cantor, 1842. (PLATE 8A)

Bufo gargarizans T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 483. Type locality: Chusan (=Zhoushan) Island, Zhejiang Prov., China.

Bufo griseus E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 506. Type locality: Marshes of Whampoa (=Huangpu), "Hong-Kong" (actually, Guangdong Prov.), China.

Bufo vulgaris var. *Asiatica* F. Steindachner, 1867, Reise Österreich. Freg. Novara, Vienna, Zool., 1(Amphib.): 39. Type locality: Shanghai, China.

Bufo gargarizans popei M. Matsui, 1986, Copeia, Lawrence, 1986: 572. Type locality: San Chiang (=Sangang), Ch'ungan Hsien (=Chongan Co.), Fukien (=Fujian Prov.), China; 360–450 meters.

RANGE: Widely distributed in China, except for the extreme west and extreme south and Taiwan. Japan (Ryukyu Islands), Korea, and Russia (Amur River basin and Sakhalin Island). The populations of "*Bufo gargarizans*" from Taiwan are now referred to as *B. bankorensis* Barbour, 1908 (see M. Matsui, 1986: 561, 574, 577).

Bufo himalayanus Günther, 1864. (PLATE 8B)

Bufo melanostictus var. *himalayanus* A. Günther, 1864, Rept. Brit. India, London: 422. Type locality: Himalayas in Sikkim and Nepal.

Bufo himalayanus: G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 305.

Bufo cyphosus C.-Y. Ye, 1977, *in* Sichuan Biological Research Institute; Acta Zool. Sinica, Peking, 23: 55. Type locality: Chayü (=Zayü Co.), Xizang (Tibet) Autonomous Region, China; 1,540 meters.

RANGE: Southern slopes of the Himalayas in Xizang (Tibet) and northwestern Yunnan, China. India (Sikkim) and Nepal.

Bufo melanostictus Schneider, 1799.

Bufo Melanostictus J. G. Schneider, 1799, Hist. Amphib., Jena, 1: 216. Type locality: "India orientali."

RANGE: Southwestern and southern China including Taiwan; specimens tentatively referred to this species have been reported recently from Ningxia. Southern Asia to Sri Lanka, Indonesia, and Borneo.

Bufo minshanicus Stejneger, 1926.

Bufo minshanicus L. Stejneger, 1926, Jour. Washington Acad. Sci., 16: 446. Type locality: Choni (=Jonê), on Tao River, Kansu (=Gansu) Prov., China.

RANGE: Ningxia, southeastern Gansu, and western Sichuan, China.

Bufo raddei Strauch, 1876. (PLATE 8C)

Bufo Raddei A. Strauch, 1876, *in* N. Przhevalsky, Mongol. Strana Tangutov, St.-Petersburg, 2(3): 53. Type locality: Ordos and Alashan (=Tengger Desert, Nei Mongol), China.

Bufo Raddei var. *Przewalskii* J. von Bedriaga, 1898, Wissensch. Result. Przewalski Central-Asien Reisen, St.-Petersburg, Zool., 3(1): 43, 48. Type locality: Lac Kuku-nor (=Qinghai Lake), Qinghai Prov.; Dschan-Manzei, between Ssu-tschou (=Jiuquan Co., Gansu Prov.), and Ju-nan-tschan, Pinfun-Tscha, Babo-cho River (Nan-schan), province uncertain, China.

Bufo Raddei var. *Pleskei* J. von Bedriaga, 1898, Wissensch. Result. Przewalski Central-Asien Reisen, St.-Petersburg, Zool., 3(1): 48. Type locality: China implied (see Note).

Bufo Nouettei F. Mocquard, 1910, Bull. Mus. Nat. Hist., Paris, 16: 153. Type locality: Cha-Tcheou (=Dunhuang Co.) and Sou-Tcheou (=Jiuquan Co.), Kan-Sou (=Gansu Prov.), and Kachgar (=Kashi Shi), Xinjiang Uygur Autonomous Region, China.

Bufo koslovi S. F. Zarevsky (as Zarevskij), "1924" (1925), Annu. Mus. Zool. Acad. Sci. Russie, Leningrad, 25: 152. Type locality: Near Edsin-gol (=Ruo) River, Nei Mongol (Inner Mongolia), China.

Bufo brevipes S. F. Zarevsky (as Carevskij), "1925" (1926), Annu. Mus. Zool. Acad. Sci. URSS, Leningrad, 26: 79. Type locality: Ji-us-shan mountains, Lake Kuku-nor (=Qinghai Hu), "Tibet," China (see Note).

?*Bufo viridis asiatica* P. A. Pavlov, 1932, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 11: 8. Type locality: Siao K'iao pan, Ordos S. (province uncertain); Tchang kia tchoang, Tcheuly S.-E. (Tianjin Shi); and Tien tsin (=Tianjin Shi), Tcheuly (Tianjin Shi), China (*nomen nudum*; name preoccupied by *Bufo vulgaris* var. *Asiatica* F. Steindachner, 1867).

RANGE: Northern China southward to Jiangsu and Anhui. Korea, Mongolia, and Russia (to Lake Baikal and Amur River).

NOTE: C.-C. Liu (1950, Fieldiana: Zool. Mem., Chicago, 2: 203) gave the type locality for *Bufo raddei pleskei* as "Tola River near Urga [=Tuul River, Ulan Bator], Mongolia," on what basis we cannot determine. L. J. Borkin and M. Matsui ("1986" [1987], Proc. Zool. Inst. USSR Acad. Sci., Leningrad, 157: 52) gave further details on the type locality of *B. brevipes*, a locality that is now in Qinghai Province.

Bufo stejnegeri Schmidt, 1931.

Bufo stejnegeri K. P. Schmidt, 1931, Copeia, Ann Arbor, 1931: 94. Type locality: Songdo, Korea.

Bufo cycloparotidos E.-M. Zhao and K.-C. Huang, 1982, Acta Herpetol. Sinica, Chengdu, [new ser.], 1: 2. Type locality: Five-Dragon Back, Dandong, Liaoning Prov., China; 350 meters.

RANGE: Eastern Liaoning, China. Korea.

Bufo tibetanus Zarevsky, 1926.

Bufo tibetanus S. F. Zarevsky (as Carevskij), "1925" (1926), Annu. Mus. Zool. Acad. Sci. URSS, Leningrad, 26: 74. Type locality: Jeni-tan (=Ju'nyunggoin) and Dsa-tshu River (=Tsachu Jiang?), Kham Plateau, "Tibet" (both actually in Sichuan Prov.), China (see Note).

RANGE: Northern Hengduan Mountains of southwestern China.

NOTE: L. J. Borkin and M. Matsui ("1986" [1987], Proc. Zool. Inst. USSR Acad. Sci., Leningrad, 157: 48), through lectotype designation, restricted the type locality of *Bufo tibetanus* to Yushu, Qinghai Prov., China; 3,700 meters.

Bufo tuberculatus Zarevsky, 1926.

Bufo tuberculatus S. F. Zarevsky (as Carevskij), "1925" (1926), Annu. Mus. Zool. Acad. Sci. URSS, Leningrad, 26: 75. Type locality: Ji-us-shan mountains and Lake Kuku-nor (=Qinghai Lake), Kham Plateau, "Tibet," China.

RANGE: Northern Hengduan Mountains of southwestern China and Qinghai Lake (Qinghai Province), China.

Bufo viridis Laurenti, 1768.

Bufo viridis J. N. Laurenti, 1768, Synops. Rept., Vienna: 27. Type locality: Vienna, Austria.

Bufo viridis var. *Pewzowi* J. von Bedriaga, 1898, Wissensch. Result. Przewalski Central-Asien Reisen, St. Petersburg, Zool., 3(1): 56. Type locality: Oasis Tscharchalyk (=Ruoqiang Co.) near Lob-Nor (=Lop Nur) Lake, Karassai (=Karasay) in northern Kuen-lun (=Kunlun Mountains), Dshungarei (=Junggar Basin), and Kok-Far (=Kokyar), east Turkestan, Xinjiang Uygur Autonomous Region, China.

Bufo viridis var. *Strauchi* J. von Bedriaga, 1898, Wissensch. Result. Przewalski Central-Asien Reisen, St. Petersburg, Zool., 3(1): 56. Type locality: River Tumandy near Kobdo (=Hovd), western Mongolia; Chami (=Hami Shi), Turfan (=Turpan), Balgantai-Gol (=Balguntay He) in Tjan-Schan (=Tianshan Mountains), Juldus (Tianshan), Chorgos (=Korgas He) (Tianshan), River Tauschkan-Darja (southern Tianshan), Sawa-Kurgan near Chotan (=Hotan Shi), Oasis Chotan, Oases Dal (=Dole) and Sampula near Chotan, Oasis Tscharchalyk (=Ruoqiang Co.) at Lob-Nor (=Lop Nur), between Tschertschen (=Qiemo Co.) and Oasis Nija (=Minfeng) in eastern Turkestan, lower parts of Tarim (river), and Jarkand (=Shache), all in Xinjiang Uygur Autonomous Region, China; Faschil-kul (lake), Pamir (mountains), country uncertain.

Bufo viridis var. *Grum-Grzmailoi* J. von Bedriaga, 1898, Wissensch. Result. Przewalski Central-Asien Reisen, St. Petersburg, Zool., 3(1): 57. Type locality: Tschik-Tym (=Qiktim), Turfan (=Turpan), Xinjiang Uygur Autonomous Region, China.

RANGE: Western Xinjiang, China. Europe and northern coast of Africa east to Kazakhstan and Altai mountains in Russia.

NOTE: Some records of *Bufo viridis* from China may be referable to a newly distinguished sibling species, *B. danatensis* (see page 127).

PELOPHRYNE Barbour, 1938.

Pelophryne T. Barbour, 1938, Proc. Biol. Soc. Washington, 51: 192. Type species: *Pelophryne albotaeniata* T. Barbour, 1938, of the Philippines, by original designation.

Pelophryne scalpta (Liu and Hu, 1973). (PLATE 8D)

Nectophryne scalptus C.-C. Liu and S.-Q. Hu, 1973, *in* C.-C. Liu, S.-Q. Hu, L. Fei, and Z.-J. Huang, Acta Zool. Sinica, Peking, 19: 389. Type locality: Xin-min Ziang (=Xin-min Xiang), Mt. Wuzhi, Hainan Island, Guangdong (now part of Hainan) Prov., China; 750 meters.

Pelophryne scalpta: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 73.

RANGE: Hainan, China.

HYLIDAE

HYLA Laurenti, 1768.

Hyla J. N. Laurenti, 1768, Synops. Rept., Vienna: 32. Type species: *Hyla viridis* J. N. Laurenti, 1768 (=*Rana arborea* C. Linnaeus, 1758) of Europe, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 75).

NOTE: L. J. Fitzinger's (1843, Syst. Rept., Vienna, 1: 30) designation of *Hyla boans* as type species is invalid since this speies was not included by Laurenti among the nine species comprising his new genus *Hyla* (see the "Code," 1985, Article 69[a]).

Hyla annectans (Jerdon, 1870).

Polypedates annectans T. C. Jerdon, 1870, Proc. Asiatic Soc. Bengal, Calcutta, 1870: 84. Type locality: Khasi Hills, India.

Hyla annectans: A. Günther, "1875" (1876), Proc. Zool. Soc. London, 1875: 576.

Hyla annectans gongshanensis D.-T. Yang, C.-Y. Su, and S.-M. Li, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(3): 40. Type locality: Gongshan, Bijiang, and Dêqên counties, Yunnan Prov., China; 1,185–3,000 meters (*nomen nudum*).

Hyla annectans gongshanensis S.-M. Li and D.-T. Yang, 1985, Zool. Res., Kunming, 6(1): 23. Type locality: Outskirts of Gongshan Xian, Yunnan Prov., China; 1,500 meters.

RANGE: Southwestern China eastward to Hunan and Guangxi. India (Assam and Meghalaya) through northern Burma to Thailand and Vietnam.

Hyla chinensis Günther, 1859. (PLATE 8E)

Hyla arborea var. *chinensis* A. Günther, "1858" (1859), Catal. Batrach. Salient. Coll. Brit. Mus., London: 108. Type locality: China (see Note).

Hyla chinensis: A. Günther, 1864, Rept. Brit. India, London: 436.

Hyla arborea var. *sinensis* N. G. Gee, 1919, Jour. North-China Br. Royal Asiatic Soc., Shanghai, 50: 184 (emended name).

RANGE: Central and southern China including Taiwan, northward to Henan. Northern Vietnam.

NOTE: G. A. Boulenger (1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 382) gave the localities for the types of *Hyla chinensis* as "China," "Formosa," and "Chusan?" W. E. Duellman (1977, Das Tierreich, Berlin, 95: 45) selected a specimen as lectotype which, according to J. M. Condit (1964, Jour. Ohio Herpetol. Soc., Columbus, 4: 89), is from "China." See also comments concerning *H. japonica* (below).

Hyla japonica Günther, 1859. (PLATE 8F)

Hyla arborea var. *japonica* A. Günther, "1858" (1859), Catal. Batrach. Salient. Coll. Brit. Mus., London: 109. Type locality: Japan (see Note).

Hyla japonica: L. Camerano, 1879, Atti Accad. Sci. Torino, 14: 895.

Hyla Chinensis var. *immaculata* O. Boettger, 1888, Ber. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 1888: 189. Type locality: Sŭanghai, China.

Hyla sodei-campi A. A. Kostin, 1935, Annot. Zool. Japon., Tokyo, 15: 30. Type locality: Mankou (station), western line of North Manchurian Railway, Soda Steppe, northern Manchuria (northwest of Harbin, Heilongjiang Prov.), China.

RANGE: Northern China southward to Fujian and Guizhou, China. Russia (east of Lake Baikal), Korea, northern Mongolia, and Japan.

NOTE: A. Günther ("1858" [1859]: 81) also used the combinations *Hyla viridis* var. *japonica* and *H. viridis japonica* in his book, but these refer to a different species. Previously, most researchers have called the Chinese populations of this taxon *H. arborea immaculata*. In view of the demonstrated reproductive incompatibility between European *H. arborea* and so-called "*arborea*" from Japan and Korea (T. Kawamura, M. Nishioka, and H. Ueda, 1990, Sci. Rep. Lab. Amphib. Biol. Hiroshima Univ., 10: 255–293), we have dissociated the Chinese frogs from *H. arborea*. Whether the Chinese form is distinct from those in Korea and Japan must yet be determined, but for now we propose using the name *H. japonica* for these Chinese frogs. If Chinese and Japanese populations prove to be different at the species level, then the name *H. immaculata* would apply to Chinese populations. Frogs from populations identified as *H. chinensis* must also be taken into account.

Hyla sanchiangensis Pope, 1929. (PLATE 8G)

Hyla sanchiangensis C. H. Pope, 1929, Amer. Mus. Novit., New York, 352: 2. Type locality: San Chiang (=Sangang), Chungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China; 3,000–3,500 feet.

RANGE: Southeastern China, westward to Guizhou.

Hyla simplex Boettger, 1901. (PLATE 8H)

Hyla chinensis var. *simplex* O. Boettger, 1901, Ber. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 1901(2): 53. Type locality: Phuc-son, Annam, Vietnam.

Hyla simplex: G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 186.

RANGE: Guangdong, Hainan, Guangxi, Guizhou, and Zhejiang, China. Vietnam.

Hyla tsinlingensis Liu and Hu, 1966.

Hyla tsinlingensis C.-C. Liu and S.-Q. Hu, 1966, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 18: 74. Type locality: Hou-tseng-tze (=Houzhenzi), Chouchih Hsien (=Zhouzhi Co.), Shensi (=Shaanxi Prov.), China; 1,341 meters.

RANGE: Southern Shaanxi, eastern Sichuan, and western Hubei, China.

Hyla zhaopingensis Tang and Zhang, 1984.

Hyla zhaopingensis Z.-J. Tang and Y.-X. Zhang, 1984, Acta Zootaxon. Sinica, Beijing, 9: 441. Type locality: Majiang, Zhaoping Co., Guangxi Zhuang Autonomous Region, China; 140 meters.

RANGE: Known only from the type locality.

RANIDAE*

ALTIRANA Stejneger, 1927.

Altirana L. Stejneger, 1927, Jour. Washington Acad. Sci., 17: 318. Type species: *Altirana parkeri* L. Stejneger, 1927, by monotypy.

Altirana parkeri Stejneger, 1927. (PLATE 9A)

Altirana parkeri L. Stejneger, 1927, Jour. Washington Acad. Sci., 17: 318. Type locality: Tingri (=Tingri Co.), Tibet (=Xizang Autonomous Region), China; 15,000 feet.

RANGE: Xizang (Tibet) Plateau, China. Nepal.

AMOLOPS Cope, 1865.

Amolops E. D. Cope, 1865, Nat. Hist. Rev., London, new ser., 5: 117. Type species: *Polypedates afghana* A. Günther, "1858" (1859), by monotypy.

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* A. Dubois (1992, Bull. Mens. Soc. Linnéenne Lyon, 61: 305–352) has proposed a new classification of the family Ranidae that is markedly different from the one we have used in this book. Unfortunately, Dubois's paper was published too late for us to take his conclusions into account. On page 341, Dubois named *Rana nigrotympanica* based on the specimen of *R. varians* illustrated in figure 4-1 of plate 2 in C.-C. Liu and S.-Q. Hu (1959, Acta Zool. Sinica, Peking, 11: 509–533). We regard *R. varians* as a synonym of *R. sanguinea* (see page 148). The status of *R. nigrotympanica* is uncertain and it is not included in our checklist.

Amolops afghanus (Günther, 1859).

Polypedates afghana A. Günther, "1858" (1859), Catal. Batrach. Salient. Coll. Brit. Mus., London: 81. Type locality: "Afghanistan," in error (see Note).

Amolops afghanus: E. D. Cope, 1865, Nat. Hist. Rev., London, new ser., 5: 117 (combination implied).

Ixalus argus N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 16. Type locality: Upper Renging, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 2,150 feet.

RANGE: Western Yunnan and southern Xizang (Tibet), China. Eastern Himalayan region of India (Sikkim) and Nepal to Thailand.

NOTE: The type locality of *Amolops afghanus* is probably in error since the species is not known from Afghanistan; see D. R. Frost (1985, Amphib. Spec. World, Lawrence: 453) for further comments.

Amolops chunganensis (Pope, 1929). (PLATE 9B)

Rana chunganensis C. H. Pope, 1929, Amer. Mus. Novit., New York, 352: 3. Type locality: Kuatun (=Guadun), northwest Chungan Hsien (=Chongan Co.), Fukien (=Fujian) Prov., China; 4,500–5,000 feet.

Amolops chunganensis: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 453.

RANGE: Southern China, westward to Sichuan, Yunnan, and Guizhou, and northward to Gansu and Shaanxi.

Amolops daiyunensis (Liu and Hu, 1975).

Staurois daiyunensis C.-C. Liu and S.-Q. Hu, 1975, *in* Sichuan Biological Research Institute and Sichuan Medical College; Acta Zool. Sinica, Peking, 21: 268. Type locality: Mt. Daiyun, Dehua Co., Fujian Prov., China; 1,100 meters.

Amolops daiyunensis: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 453.

RANGE: Fujian, China.

Amolops granulosus (Liu and Hu, 1961).

Staurois granulosus C.-C. Liu and S.-Q. Hu, 1961, Tailless Amphib. China, Peking: 233. Type locality: Weiziping, Maoxian (=Mao Co.), Sichuan Prov., China; 1,500 meters.

Amolops granulosus: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 454.

RANGE: Sichuan and Hubei, China.

Amolops hainanensis (Boulenger, 1900).

Staurois hainanensis G. A. Boulenger, "1899" (1900), Proc. Zool. Soc. London, 1899: 958. Type locality: Five-finger Mountains (=Mt. Wuzhi), Hainan Island, Hainan Prov., China.

Amolops hainanensis: D. R. Frost (ed.), 1986, Amphib. Spec. World, Lawrence: 454.

RANGE: Hainan, China.

Amolops hongkongensis (Pope and Romer, 1951).

Staurois hongkongensis C. H. Pope and J. D. Romer, 1951, Fieldiana: Zool., Chicago, 31: 609. Type locality: Tai Mo Shan, New Territories, Hong Kong, China; 1,000 feet.

Amolops hongkongensis: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 454.

RANGE: Hong Kong Island and the adjacent New Territories, China.

Amolops kangtingensis (Liu, 1950). (PLATE 9C)

Staurois kangtingensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 349. Type locality: Kangting (=Kangding) Co., Sikang (now part of Sichuan) Prov., China; 8,000 feet.

RANGE: Western Sichuan, China.

Amolops liangshanensis (Wu and Zhao, 1984). (PLATE 9D)

Staurois mantzorum jinjiangensis D.-T. Yang, C.-Y. Su, and S.-M. Li, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(3): 41 (*nomen nudum*; see Note).

Staurois liangshanensis G.-F. Wu and E.-M. Zhao, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(4): 5. Type locality: Qiliba, Zhaojue Co., Sichuan Prov., China; 3,000 meters.

Amolops jinjiangensis: C.-Y. Su, D.-T. Yang, and S.-M. Li, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 204. Type locality: Benzilan, Dêqên Co., Yunnan Prov., China; 2,010 meters.

RANGE: Western Sichuan and northwestern Yunnan, China.

NOTE: This taxon was first identified and named in 1983 by D.-T. Yang, C.-Y. Su, and S.-M. Li; ecological information was provided, but no description was given. G.-F. Wu and E.-M. Zhao described the chromosomes in 1984, distinguishing them from those of *Amolops mantzorum*, gave a type locality, and provided a different name. The latter description has precedence over the formal description of *A. jinjiangensis* published in 1986, since it satisfies the requirements of the "Code" (1985, Article 23[f]). The Principle of Priority applies "even if any part of an animal is named before the whole animal."

Amolops lifanensis (Liu, 1945).

Staurois lifanensis C.-C. Liu, 1945, Jour. West China Border Res. Soc., Chengdu, ser. B, 15: 33. Type locality: Nan-kou, Li-fan-city (=Li Co.), Szechwan (=Sichuan Prov.), China; 5,100 feet.

Amolops lifanensis: W.-S. Tian and Y.-M. Jiang (eds.), 1986, Handb. Identif. Chin. Amphib. Rept., Beijing: 62.

RANGE: Sichuan, China.

NOTE: We do not follow A. Dubois (1974, Bull. Mus. Natl. Hist. Nat., Paris, ser. 3, Zool., 143: 361), later accepted by D. R. Frost (1985, Amphib. Spec. World, Lawrence: 454), in synonymizing *Amolops lifanensis* with *Rana kaulbacki* M. A. Smith, 1940 (Rec. Indian Mus., Calcutta, 42: 472; type locality: Pangnamdim, Burma). No one has made a direct comparison of Sichuan and Burmese specimens and we prefer this conservative course of action for now.

Amolops loloensis (Liu, 1950).

Staurois loloensis C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 353. Type locality: Lolokou (=Jiafanggou), Chaochiaohsien (=Zhaojue Co.), Sikang (now part of Sichuan Prov.), China; 10,000 feet.

Amolops loloensis: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 455.

RANGE: Sichuan, China.

Amolops macrorhynchus Yang, 1987.

Amolops macrorhynchus D.-T. Yang, 1987, Herpetologica, Elmhurst (Illinois), 43: 96. Type locality: Dawei Mountain, Hekou Co., Yunnan Prov., China; 1,700 meters.

RANGE: Known only from the type locality.

Amolops mantzorum (David, 1872). (PLATE 9E)

Polypedates Mantzorum A. David, "1871" (1872), Nouv. Arch. Mus. Hist. Nat., Paris, 7(Bull.): 95. Type locality: Mouping (=Baoxing Co.), Szechwan (=Sichuan Prov.), China.

Amolops mantzorum: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 455.

Rana jugans L. Stejneger, 1926, Proc. Biol. Soc. Washington, 39: 53. Type locality: Near Wenchwan (=Wenchuan Co.), 100 km northwest of Chengtu (=Chengdu), Szechwan (=Sichuan Prov.), China.

RANGE: Southeastern Gansu, western Sichuan, and northwestern Yunnan, China.

Amolops monticola (Anderson, 1871).

Hylorana monticola J. Anderson, 1871, Jour. Asiatic Soc. Bengal, Calcutta, 40(2): 25. Type locality: Darjeeling, West Bengal, India; 3,500 feet.

Amolops monticola: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 455.

RANGE: Xizang (Tibet), China. India (Darjeeling) and Nepal.

Amolops nasicus (Boulenger, 1903).

Rana nasica G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 187. Type locality: Man-Son Mountains, Tonkin, Vietnam; 3,000–4,000 feet.

Amolops nasicus: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 455.

RANGE: Hunan and Hainan, China. Northern Vietnam and Thailand.

Amolops ricketti (Boulenger, 1899). (PLATE 9F)

Rana ricketti G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 168. Type locality: Kuatun (=Guadun), about 270 miles from Foochow (=Fuzhou Shi), Chongan Co., Fokien (=Fujian) Prov., China; 3,000–4,000 feet or more.

Amolops ricketti: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 455.

Staurois ricketti minor C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 356. Type locality: Mapien (=Mabian Co.), Szechwan (=Sichuan Prov.), China; about 3,000 feet.

RANGE: Southern China westward to Sichuan and Guizhou.

Amolops torrentis (Smith, 1923).

Micrixalus torrentis M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 209. Type locality: Five Finger mountain (=Mt. Wuzhi), Hainan Island, Hainan Prov., China; 1,000 meters.

Amolops torrentis: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 456.

RANGE: Hainan, China.

Amolops viridimaculatus (Jiang, 1983). (PLATE 9G)

Staurois viridimaculatus Y.-M. Jiang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(3): 71. Type locality: Dahaoping, Tengchong Co., Yunnan Prov., China; 1,980 meters.

Amolops viridimaculatus: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 456.

RANGE: Western Yunnan, China.

Amolops wuyiensis (Liu and Hu, 1975).

Staurois wuyiensis C.-C. Liu and S.-Q. Hu, 1975, *in* Sichuan Biological Research Institute and Sichuan Medical College; Acta Zool. Sinica, Peking, 21: 266. Type locality: Sanchiang (=Sangang), Chungan (=Chongan) Co., Fujian Prov., China; 600 meters.

Amolops wuyiensis: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 456.

RANGE: Fujian and Anhui, China.

MICRIXALUS Boulenger, 1888.

Micrixalus G. A. Boulenger, 1888, Proc. Zool. Soc. London, 1888: 205. Type species: *Ixalus fuscus* G. A. Boulenger, 1882, of India, by subsequent designation (G. S. Myers, 1942, Proc. Biol. Soc. Washington, 55: 74).

NOTE: Several Chinese species here referred to *Micrixalus* were previously included in the genus *Platymantis* A. Günther, "1858" (1859) (Catal. Batrach. Salient. Coll. Brit. Mus., London: 93); type species: *P. plicifera* A. Günther, "1858" (1859) (=*Hylodes corrugatus* A.-H.-A. Duméril, 1853) of the Philippines, by subsequent designation (R. G. Zweifel, 1967, Copeia, Lawrence, 1967: 120). As presently defined, the genus *Platymantis* is not known from the Asiatic mainland; see D. R. Frost (1985, Amphib. Spec. World, Lawrence: 468) for further details.

A. Dubois ("1986" [1987], Alytes, Paris, 5: 64–66) has placed several of the mainland species in his new genus *Ingerana* (A. Dubois, "1986" [1987]: 64; type species: *Rana tenasserimensis* W. L. Sclater, 1892 [=*Micrixalus tenasserimensis*] of Indochina, by original designation), but since the Chinese species have not yet been studied comprehensively, we take a conservative position here and retain *Micrixalus*.

Micrixalus borealis Annandale, 1912.

Micrixalus borealis N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 10. Type locality: Rotung and about 3 miles south of Yembung, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 1,300 feet (Rotung).

RANGE: Southern slopes of Himalayas in Xizang (Tibet), China. Northeastern India.

NOTE: A. Dubois ("1986" [1987], Alytes, Paris, 5: 52, 59) has placed this species in the genus *Phrynoglossus* W. Peters, 1867 (Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1867: 30; type species: *P. Martensii* W. Peters, 1867 [=*Occidozyga martensii*] of southern China and Indochina, by subsequent designation [M. Smith, 1931, Bull. Raffles Mus., Singapore, 5: 16]), but in view of the conservative position we take concerning the genus (see *Micrixalus* [Note], above), we leave it in *Micrixalus*.

Micrixalus liui (Yang, 1983).

Platymantis liui D.-T. Yang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 53. Type locality: Menglun, Mengla Co., Yunnan Prov., China; 550 meters.

RANGE: Yunnan, China.

Micrixalus reticulatus (Zhao and Li, 1984).

Platymantis reticulatus E.-M. Zhao and S.-Q. Li, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(3): 55. Type locality: Xirang, Medog Co., Xizang (Tibet) Autonomous Region, China; 890 meters.

RANGE: Southeastern Xizang, China.

Micrixalus xizangensis (Hu, 1977). (PLATE 9H–I)

Cornufer xizangensis S.-Q. Hu, 1977, *in* Sichuan Biological Research Institute; Acta Zool. Sinica, Peking, 23: 58. Type locality: Yi'ong, Bomi Co., Xizang (Tibet) Autonomous Region, China; 2,300 meters.

RANGE: Known only from the general area of the type locality.

NANORANA Günther, 1896.

Nanorana A. Günther, 1896, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 1: 206. Type species: *Nanorana pleskei* A. Günther, 1896, by monotypy.

Nanorana pleskei Günther, 1896. (PLATE 10A)

Nanorana pleskei A. Günther, 1896, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 1: 207. Type locality: Sung-pan (=Songpan Co.) and In-chuan (=Yinchuan, probably Xiaojin Chuan river; see Note), Kham mountains, both in Sichuan Prov., China.

Montorana ahli T. Vogt, 1924, Zool. Anz., Leipzig, 60: 340. Type locality: Dschiësongla, Moortümpel, Sichuan Prov., China; 3,900 meters (see Note).

RANGE: Northwestern Yunnan, western Sichuan, and southeastern Gansu, China.

NOTE: Günther's specimen from In-chuan was collected by G. Potanin who did not venture up the larger of two rivers, both named Yinchuan (E. Bretschneider, 1898, Europ. Bot. Disc. China, London, 2: 1020–1021); the town of Yinchuan is located along the larger river. Thus, based on Potanin's route, the specimen must have been collected along the smaller river, today called Xiaojin Chuan. According to C.-C. Liu (1950, Fieldiana: Zool. Mem., Chicago, 2: 323), the type locality of Vogt's *Montorana ahli*—Dschiësongla—is southwest of Tatsienlu (=Kangding County), Sikang (now part of Sichuan Province).

Nanorana ventripunctata Fei and Huang, 1985.

Nanorana ventripunctata L. Fei and Y.-Z. Huang, 1985, Acta Biol. Plateau Sinica, Xining, 1985(4): 71. Type locality: Zhongdian Co., Yunnan Prov., China; 3,150 meters.

RANGE: Known only from the type locality.

OCCIDOZYGA Kuhl and van Hasselt, 1822.

Occidozyga H. Kuhl and J. C. van Hasselt, 1822, Algemeene Konst- en Letter-Bode, Haarlem, 7: 103. Type species: *Rana lima* J. L. C. Gravenhorst, 1829, by subsequent designation (L. Stejneger, 1925, Proc. U.S. Natl. Mus., Washington, 66: 33).

NOTE: The alternate spelling *Ooeidozyga* H. Kuhl and J. C. van Hasselt (1822, Isis von Oken, Jena, 10: col. 475) was published in April, two months later than *Occidozyga*.

Occidozyga lima (Gravenhorst, 1829). (PLATE 10B)

Rana lima J. L. C. Gravenhorst, 1829, Delic. Mus. Zool. Vratislav., Leipzig, 1: 41. Type locality: Java, Indonesia.

Occidozyga lima: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 465.

Houlema obscura J. E. Gray, 1831, Zool. Misc., London, 1: 38. Type locality: China (see Note).

Osteosternum amoyense H.-W. Wu, 1929, Contr. Biol. Lab. Sci. Soc. China, Nanking, 5: 3. Type locality: University of Amoy campus, Amoy (=Xiamen Shi), Fujian Prov., China.

Oxyglossa lima chinensis "Hallowell" *in* C.-C. Liu and S.-Q. Hu, 1961, Chin. Tailless Amphib., Peking: 222 (see Note).

RANGE: Southern Yunnan east to Fujian, including Hainan and Hong Kong, China. India (lower Bengal) to Malaya, Vietnam, and Indonesia (Java).

NOTE: Gray's name, *Houlema obscura,* is based on material collected by John Reeves, who lived in Macao and worked in Canton (=Guangzhou Shi); thus, it is likely that the origin

of the type specimen was somewhere in this part of southern China. C.-C. Liu and S.-Q. Hu (1961: 222) cited E. Hallowell ("1860" [1861], Proc. Acad. Nat. Sci. Philadelphia, 12: 506) as author of *chinensis*, but we cannot find that name in Hallowell's paper.

Occidozyga martensii (Peters, 1867). (PLATE 10C)

Phrynoglossus Martensii W. Peters, 1867, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1867: 29. Type locality: Bangkok, Siam (=Thailand).

Occidozyga martensii: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 465.

RANGE: Hainan, Guangxi, and southern Yunnan, China. Thailand and Vietnam.

RANA Linnaeus, 1758.

Rana C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 210. Type species: *Rana temporaria* C. Linnaeus, 1758, of Europe, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 31).

NOTE: *Rana noblei* K. P. Schmidt, 1925 (Amer. Mus. Novit., New York, 175: 1; type locality: Yunnanfu [=Kunming Shi], Yunnan Prov., China) is a synonym of *R. pipiens* J. C. D. von Schreber, 1782, of North America; the locality is in error. Three other species referred to the genus *Rana*, all with Hong Kong type localities, have been described, but cannot be allocated to species; see page 280, "Names of Uncertain Status."

Rana adenopleura Boulenger, 1909. (PLATE 10D)

Rana adenopleura G. A. Boulenger, 1909, Ann. Mag. Nat. Hist., London, ser. 8, 4: 492. Type locality: Fuhacho village (=Maobu or Wucheng, Nantou Co.), Formosa (=Taiwan Prov.), China; 4,000 feet.

Rana caldwelli K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 2. Type locality: Probably near Yenping (=Nanping Shi), Fukien (=Fujian) Prov., China.

RANGE: Southern China, including Hainan and Taiwan.

Rana altaica Kashchenko, 1899.

Rana arvalis altaica N. F. Kashchenko, 1899, Results Altai Zool. Expedit. 1898, Vertebr., Tomsk: 122. Type locality: Lower Ujmon', Ongudaj, Cherga, and Altajskoe, Altai region, southwest Siberia, Russia (see Note).

Rana altaica: C.-Y. Ye, L. Fei, and L.-G. Xiang, 1981, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 121 (not equivalent to *Rana altaica* N. F. Kashchenko, 1909; see Note).

RANGE: Extreme northern Xinjiang, China. Russia (southern Siberia).

NOTE: Kashchenko (1899) mentions four localities in the original description, all in the Altai region just south of Biysk, Russia. Later, Kashchenko (1909, Annu. Mus. Zool. Acad. Imper. Sci., St. Petersburg, 14: 129) used the combination "*Rana altaica*" for a population at Issyk-kul Lake (Kirgizstan), which is sometimes cited as the type locality, but this is a population of *R. amurensis* and is not referable to *R. altaica* Kashchenko, 1899 (according to L. J. Borkin, pers. comm.). Thus, Ye, Fei, and Xiang (1981) were the first authors to use the combination *R. altaica* in the original sense of Kashchenko, 1899.

Rana amurensis Boulenger, 1886.

Rana amurensis G. A. Boulenger, 1886, Bull. Soc. Zool. France, Paris, 11: 598. Type locality: Kissakewitsch (=Kasakevichevo, near Khabarovsk), Amour (=Amur), Russia.

RANGE: Northeastern China. Eastern Kirgizstan and Kazakhstan, Russia (western Siberia eastward to Sakhalin Island, north to 71° North Latitude), northern Mongolia, and Korea.

Rana andersonii Boulenger, 1882.

Polypedates yunnanensis J. Anderson, "1878" (1879), Anat. Zool. Res. Zool. Result. Exped. West. Yunnan, London, 1: 843. Type locality: Valley of Hotha (=Husa), Yunnan Prov., China, 4,500 feet (name preoccupied by *Rana yunnanensis* J. Anderson, "1878" [1879]).

Rana andersonii G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 55. Type locality: Hotha (=Husa) Valley, southwestern Yunnan Prov., China (replacement name).

RANGE: Yunnan and Guizhou, southeastward to Guangxi and Hainan, China. Northern Burma and Vietnam.

Rana anlungensis Liu and Hu, 1973.

Rana anlungensis C.-C. Liu and S.-Q. Hu, 1973, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 19: 167. Type locality: Mt. Lungtou (=Longtou), Anlung (=Anlong) Co., Kweichow (=Guizhou Prov.), China; 1,550 meters.

RANGE: Guizhou, China.

Rana arnoldi Dubois, 1975.

Rana (Paa) arnoldi A. Dubois, 1975, Bull. Mus. Natl. Hist. Nat., Paris, ser. 3, Zool., 231: 1101. Type locality: Pangnamdim, Nam Tamai Valley, Triangle, northern Burma; 910 meters.

Rana maculosa chayuensis C.-Y. Ye, 1977, *in* Sichuan Biological Research Institute; Acta Zool. Sinica, Peking, 23: 58. Type locality: Chayü (=Zayü Co.), Xizang (Tibet), China; 1,540 meters.

RANGE: Southeastern Xizang (Tibet) and western Yunnan, China. Northern Burma.

Rana asiatica Bedriaga, 1898.

Rana temporaria var. *asiatica* J. von Bedriaga, 1898, Wissensch. Result. Przewalski Cent.-Asien Reisen, St. Petersburg, Zool., 3(1): 17, 23. Type locality: Upper Ili River (Tjan-schan) and Kungess River (=Künes He, Tian Shan), both Xinjiang Uygur Autonomous Region; Baga-gorgi River, tributary of upper Chuan-che River (=Bailong Jiang?, Gansu Prov.); Ordos (desert), Nei Mongol (=Inner Mongolia), China (see Note).

Rana asiatica: A. M. Nikolsky, "1912" (1914), Trudy Troitsko-Savsko-Kiakhta Otd. Geogr. Obshtch., St. Petersburg, 15: 33.

RANGE: Extreme western Xinjiang, China. Southern Kazakhstan and Kirgizstan.

NOTE: Bedriaga's subspecies concept was morphological and not geographical. Thus, he often listed the typical form of a species as well as one or more varieties of it from the same locality. His 1898 description of *Rana temporaria* in the Przhevalsky Expedition report is an example, for he sometimes listed both "*forma typica*" and "var. *asiatica*" from the same Chinese localities. Which of these localities correspond to *asiatica*, and thus collectively represent its type locality, can be inferred by a comparison of the specimens referred to as *asiatica* on pages 26–27 and plate 1 of Bedriaga (1898) to the specific localities listed on page 17 in the same book.

Bedriaga's records for Gansu and Nei Mongol have not been confirmed.

Rana blanfordii Boulenger, 1882.

Rana blanfordii G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London:

23. Type locality: Muscat? (corrected to Darjeeling, India, by G. A. Boulenger, 1905, Ann. Mag. Nat. Hist., London, ser. 7, 16: 640).

Rana yadongensis G.-F. Wu, 1977, *in* Sichuan Biological Research Institute; Acta Zool. Sinica, Peking, 23: 56. Type locality: Yadong, Xizang (Tibet) Autonomous Region, China; 2,900 meters.

RANGE: Xizang (Tibet), China. India (Darjeeling) and Nepal.

Rana boulengeri Günther, 1889. (PLATE 10E)

Rana Boulengeri A. Günther, 1889, Ann. Mag. Nat. Hist., London, ser. 6, 4: 222. Type locality: Ichang (=Yichang Shi), Hubei Prov., China.

Rana tibetana G. A. Boulenger, 1917, Ann. Mag. Nat. Hist., London, ser. 8, 20: 414. Type locality: Yin tsin wau [*sic*] (=Yintsinwan), Wassu State (=Yin Xiu Wan), "Tibet" (now part of western Sichuan Prov.), China.

RANGE: Southern and southwestern China, northward to Shanxi, Shaanxi, and Gansu.

Rana cancrivora Gravenhorst, 1829. (PLATE 10F)

Rana cancrivora J. L. C. Gravenhorst, 1829, Delic. Mus. Zool. Vratislav., Leipzig, 1: 41. Type locality: Java, Indonesia.

RANGE: Guangxi and northeastern coast of Hainan, China. Vietnam and Malay Peninsula to the Philippines and Indonesia (Lesser Sundas as far east as Flores Island).

Rana catesbeiana Shaw, 1802 [introduced].

Rana Catesbeiana G. Shaw, 1802, Gen. Zool., London, 3: 106. Type locality: Virginia (USA) (see Note).

Rana nantaiwuensis H.-F. Hsü, 1930, Contr. Biol. Lab. Sci. Soc. China, Nanking, ser. Zool., 6: 19. Type locality: Nantaiwu, Amoy (=Xiamen Shi), Fujian Prov., China (see Note).

RANGE: Native to eastern North America, from central Florida north to Canada (Nova Scotia), west to the Great Plains and south to Mexico (Veracruz). Introduced in western North America (California to British Columbia, Canada), West Indies (Cuba, Jamaica, Hispaniola, Puerto Rico), and in many other parts of the world. In the Far East, this species has been introduced in China (Taiwan Province and vicinity of Kunming, Yunnan Province) and in Japan.

NOTE: K. P. Schmidt (1953, Check List North Amer. Amphib. Reptiles, Chicago: 79) restricted the type locality of *Rana catesbeiana* to Charleston, South Carolina, USA.

Rana nantaiwuensis is founded on a single female specimen and, based on published descriptions, appears to be a synonym of *R. catesbeiana.*

Rana chaochiaoensis Liu, 1946. (PLATE 10G)

Rana chaochiaoensis C.-C. Liu, 1946, Jour. West China Border Res. Soc., Chengdu, ser. B, 16: 7. Type locality: Chao-chiao City (=Zhaojue Co.), Ningshu, Sikang (now part of Sichuan Prov.), China; 1,200 feet.

RANGE: Southwestern China.

Rana chensinensis David, 1875. (PLATE 10H)

Rana chensinensis A. David, 1875, Jour. Trois. Voy. Explor. Empire Chinois, Paris, 1: 159. Type locality: Inkiapo (=Yinjiapo), Lao-yu River, Tsinling Mountains (=Qin Ling), Shensi (=Shaanxi Prov.), China; above 1,000 meters.

Rana amurensis kukunoris A. M. Nikolsky, 1918, Faune Russ. Pays Limit., Petrograd, Amphib.: 82. Type locality: Lake Kukunor (=Qinghai Lake), Qinghai Prov., China.

Rana weigoldi T. Vogt, 1924, Zool. Ang., Leipzig, 60: 339. Type locality: Ngo-la (=Ngolo) Pass, southeastern "Tibet" (actually Sichuan Prov.) near Kansego, China; 4,000 meters.

Rana chensinensis hongyuanensis Q.-X. Hu, Y.-M. Jiang, and E.-M. Zhao, 1985, Acta Herpetol. Sinica, Chengdu, [new ser.], 4: 228. Type locality: Mt. Hengduan, Sichuan Prov., China; 3,000–3,800 meters (*nomen nudum*).

Rana chensinensis lanzhouensis G. Wei and F.-G. Chen, 1991, *in* G. Wei, F.-G. Chen, N. Xu, and D.-J. Li, Acta Zootaxon. Sinica, Beijing, 16: 377. Type locality: Yuzhong, Gansu Prov., China; 1,500 meters.

Rana chensinensis kangdingensis G. Wei and F.-G. Chen, 1991, *in* G. Wei, F.-G. Chen, N. Xu, and D.-J. Li, Acta Zootaxon. Sinica, Beijing, 16: 378. Type locality: Kangding, Sichuan Prov., China; 3,300 meters.

Rana chensinensis changbaishanensis G. Wei and F.-G. Chen, 1991, *in* G. Wei, F.-G. Chen, N. Xu, and D.-J. Li, Acta Zootaxon. Sinica, Beijing, 16: 378. Type locality: Baihe, Jilin Prov., China; 970 meters.

RANGE: Northern China southward to Jiangsu in the east and Sichuan in the west. Russia (Far East district to 63° North Latitude), Korea, and eastern Mongolia (see Note).

NOTE: We have chosen not to recognize subspecies, since geographic variation and the proper allocation of older available names need to be worked out in more detail. The *Rana* on Hokkaido Island, Japan, previously referred to *R. chensinensis*, has been described as a separate species, *R. pirica* (M. Matsui, 1991, Japan. Jour. Herpetol., Kyoto, 14: 63–78).

Rana chevronta Hu and Ye, 1978.

Rana chevronta S.-Q. Hu and C.-Y. Ye, 1978, *in* S.-Q. Hu, L. Fei, and C.-Y. Ye, Mater. Herpetol. Res., Chengdu, 4: 20. Type locality: Toudaohe, Mt. Emei, Sichuan Prov., China; 1,850 meters (see Note).

RANGE: Known only from the type locality.

NOTE: This species was re-described by C.-Y. Ye in 1981 (Acta Zootaxon. Sinica, Beijing, 6: 334), an article that is often incorrectly cited as the original description.

Rana conaensis Fei and Huang, 1981.

Rana conaensis L. Fei and Y.-Z. Huang, 1981, *in* Y.-Z. Huang and L. Fei, Acta Zootaxon. Sinica, Beijing, 6: 212. Type locality: Mama, Cona Co., Xizang (Tibet) Autonomous Region, China; 2,900 meters.

RANGE: Known only from the type locality.

Rana daunchina Chang, 1933. (PLATE 11A)

Rana musica M. L.-Y. Chang and H.-F. Hsü, 1932, Contrib. Biol. Lab. Sci. Soc. China, Nanking, ser. Zool., 8: 157. Type locality: Hountsinping (=Hongchunping temple), Mt. Omei (=Emei), Sichuan Prov., China; 1,300 meters (name preoccupied by *Rana Musica* Linnaeus, 1766).

Rana daunchina M. L.-Y. Chang, 1933, China Jour., Shanghai, 18: 209 (substitute name, often incorrectly spelled "*dauchina*").

RANGE: Southwestern Sichuan, China.

Rana exilispinosa Liu and Hu, 1975. (PLATE 11B)

Rana exilispinosa C.-C. Liu and S.-Q. Hu, 1975, *in* Sichuan Biological Research Institute and

Sichuan Medical College; Acta Zool. Sinica, Peking, 21: 265. Type locality: Mt. Daiyun, Dehua Co., Fujian Prov., China; 1,100 meters.

Rana (Paa) paraspinosa A. Dubois, 1975, Bull. Mus. Natl. Hist. Nat., ser. 3, 231: 1102. Type locality: The Peak, Hong Kong, China.

RANGE: Fujian, Hunan, Guangdong, and Hong Kong, China.

Rana feae Boulenger, 1887.

Rana feae G. A. Boulenger, 1887, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 5: 418. Type locality: Kakhien (=Kakhyen) Hills, Burma.

RANGE: Yunnan, China. Burma (see Note).

NOTE: Data with the holotype (L. Capocaccia, 1957, Ann. Mus. Civ. Stor. Nat. Genova, 69: 215) state that it was collected in the mountains east of Bhamò, Kakhyen Hills.

Rana fragilis Liu and Hu, 1973.

Rana fragilis C.-C. Liu and S.-Q. Hu, 1973, *in* C.-C. Liu, S.-Q. Hu, L. Fei, and Z.-J. Huang, Acta Zool. Sinica, Peking, 19: 390. Type locality: Jingko Ling (=Yingge Ling), Baisha Co., Hainan Island, Guangdong (now part of Hainan) Prov., China; 780 meters.

RANGE: Hainan, China.

Rana gerbillus Annandale, 1912.

Rana gerbillus N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 10. Type locality: Yembung, Abor foothills, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 1,100 feet.

RANGE: Southern slope of Himalayas in Xizang (Tibet), China. Northeastern India and Burma.

Rana grahami Boulenger, 1917.

Rana grahami G. A. Boulenger, 1917, Ann. Mag. Nat. Hist., London, ser. 8, 20: 415. Type locality: Yunnan fu (=Kunming Shi), Yunnan Prov., China.

RANGE: Southwestern China.

Rana guentheri Boulenger, 1882. (PLATE 11C)

Rana guentheri G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 48. Type locality: Amoy (=Xiamen Shi, Fujian Prov., China) and China.

Rana elegans G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 59. Type locality: "West Africa," in error (see Note).

RANGE: Widely distributed in southern China, including Taiwan and Hainan. Vietnam.

NOTE: The name is sometimes misspelled *Rana "güntheri,"* but the "Code" (1985, Article 27) does not permit diacritical marks in scientific names. G. A. Boulenger (1907, Proc. Zool. Soc. London, 1907: 481) later regarded *R. elegans* as identical with *R. guentheri*; thus the type locality of *R. elegans* must be in error. Whether the types of *R. elegans* actually originated in China is not known, but it seems likely.

Rana hejiangensis Deng and Yu, 1992.

Rana hejiangensis Q.-X. Deng and Z.-W. Yu, 1992, Jour. Sichuan Teachers Coll. (Nat. Sci.), Nanchong, 13: 323 (see Note). Type locality: Shunyangxi, Zhihuai of Hejiang Co., Sichuan Prov., China; 900 meters.

RANGE: Sichuan (Hejiang County), China.

NOTE: The specific name is misspelled *Rana "hejiang* sis" [*sic*] in the English abstract.

Rana huanrenensis Fei, Ye, and Huang, 1991.

Rana huanrensis L. Fei, C.-Y. Ye, and Y.-Z. Huang, "1990" (1991), Key Chin. Amphib., Chongqing: 131, 298 (see Note). Type locality: Huanren Co., Liaoning Prov., China.

RANGE: Known only from the type locality.

NOTE: This species was first recognized by Ming-yu Liu and his colleagues, who have not yet published a formal description. Inadvertently, this species was named in the book "Key to Chinese Amphibians" by L. Fei, C.-Y. Ye, and Y.-Z. Huang ("1990" [1991]); in this publication it was defined in a key that differentiated it from other species and a locality is given. This minimal information is sufficient under the "Code" (1985) to qualify it as an available name. In some copies of the book, the name has been corrected by hand to *Rana "huanrenensis,"* but handwritten emendations are not considered validly published under the "Code" (Article 8[a][3]). Under Articles 32(c)(ii) and Appendix D(IV)(22)(a) of the "Code," however, we hereby emend the name to its proper form.

Rana japonica Günther, 1859.

Rana temporaria var. *japonica* A. Günther, "1858" (1859), Catal. Batrach. Salient. Coll. Brit. Mus., London: 17. Type locality: Ningpo (=Ningbo Shi), Chusan (=Zhoushan Is.), Zhejiang Prov., China, and Japan (see Note).

Rana japonica: G. A. Boulenger, "1879" (1880), Bull. Soc. Zool. France, Paris, 4: 190.

RANGE: Southern China northward to Henan. Japan.

NOTE: Günther credited the name *Rana temporaria* var. *japonica* to Schlegel (*in* C. J. Temminck and H. Schlegel, 1838, Fauna Japonica, Leiden, Reptilia: 109–110, based on specimens from Japan), but in that work this taxon was referred to as *R. temporaria*. G. A. Boulenger (1920, Rec. Indian Mus., Calcutta, 20: 95) designated two specimens from Japan as types of *R. japonica*, thus restricting the type locality.

Rana jiulongensis Huang and Liu, 1985.

Rana jiulongensis Z.-Y. Huang and B.-H. Liu, 1985, Jour. Fudan Univ. (Nat. Sci.), Shanghai, 24: 235. Type locality: Shang Che Pen, Mt. Jiulong, Suichang Co., Zhejiang Prov., China; 1,060 meters.

RANGE: Zhejiang, China.

Rana kuangwuensis Liu and Hu, 1966.

Rana Kuangwuensis C.-C. Liu and S.-Q. Hu, 1966, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 18: 77. Type locality: Mt. Kuang-wu (=Guangwu Shan), Nankiang (=Nanjiang) Co., Szechwan (=Sichuan Prov.), China; 1,650 meters.

RANGE: Sichuan, China.

Rana kuhlii Tschudi, 1838. (PLATE 11D)

Rana Kuhlii J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 40. Type locality: Java, Indonesia.

RANGE: Southern China including Taiwan westward to Yunnan. India (Assam) through Indochina and Indonesia as far east as the Celebes Islands.

Rana latouchii Boulenger, 1899.

Rana latouchii G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 167. Type locality:

Kuatun (=Guadun), about 270 miles from Foochow (=Fuzhou Shi), Chongan Co., Fujian Prov., China; 3,000 to 4,000 feet or more.

RANGE: Southern China including Hong Kong and Taiwan.

Rana liebigii Günther, 1860.

Rana liebigii A. Günther, 1860, Proc. Zool. Soc. London, 1860: 157. Type locality: Sikkim and Nepal (see Note).

RANGE: Southern Xizang (Tibet), China. Himalayan region of eastern India; Nepal.

NOTE: A. Dubois (1976, Cah. Népal., Doc., Paris, 6: 46) restricted the type locality to "Nepal," by lectotype designation.

Rana limnocharis Boie, 1834. (PLATE 11E)

?*Ranae limnocharis* J. L. C. Gravenhorst, 1829, Delic. Mus. Zool. Vratislav., Leipzig, 1: 42. Type locality: Java (*nomen dubium*; see Note).

Rana limnocharis H. Boie, 1834, *in* A. F. A. Wiegmann, Nova Acta Acad. Caesar. Leopold. Carol., Halle, 17(1): 255. Type locality: None given (see Note).

Rana gracilis A. F. A. Wiegmann, 1834, Nova Acta Acad. Caesar. Leopold. Carol., Halle, 17(1): 257. Type locality: Cape Syng-more (=Kap Shui Mun, Lantau Island), Hong Kong, China (name preoccupied by *Rana gracilis* J. L. C. Gravenhorst, 1829).

RANGE: Southern China including Hainan, Hong Kong, and Taiwan, northward to Shandong in the east and Gansu in the west. Pakistan, India, Sri Lanka, and Nepal; Japan; Malaysia and Singapore; Indonesia (Greater Sunda Islands and Lesser Sundas as far east as Flores). Afghanistan?

NOTE: The name *Rana limnocharis* is variously attributed to Gravenhorst, 1829 and Boie, 1834. A. Dubois ("1986" [1987], Alytes, Paris, 5: 131) argued that Gravenhorst is the correct author. The name was introduced in Gravenhorst's synonymy of *R. cancrivora*, not as a proper species name, but as a description of frogs living in small pools (hence his use of the word "*Ranae*" rather than *Rana*). Furthermore, we regard Gravenhorst's short description as unidentifiable. Boie's name, accompanied by a full description and a figure, is the first clear association of the name *R. limnocharis* with this taxon.

Rana liui Dubois, 1987.

Rana muta C.-Y. Su and S.-M. Li, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 152. Type locality: Ninglang Co., Yunnan Prov., China; 2,650 meters (name preoccupied by *Rana muta* J. N. Laurenti, 1768).

Rana (Paa) liui A. Dubois, "1986" (1987), Alytes, Paris, 5: 150 (replacement name for *R. muta*).

RANGE: Known only from the type locality.

Rana livida (Blyth, 1856). (PLATE 11F)

Polypedates lividus E. Blyth, "1855" (1856), Jour. Asiatic Soc. Bengal, Calcutta, 24: 718. Type locality: Tenasserim Valley, Burma.

Rana livida: G. A. Boulenger, 1887, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 5: 484.

Rana graminea G. A. Boulenger, "1899" (1900), Proc. Zool. Soc. London, 1899: 958. Type locality: Five-finger Mountains (=Mt. Wuzhi), Hainan Island, Hainan Prov., China.

Rana (Hylorana) sinica E. Ahl, "1925" (1927), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1925: 45. Type locality: China.

Rana leporipes F. Werner, 1930, Lingnan Sci. Jour., Canton, 9: 45. Type locality: Lung Tao Shan (=Mt. Longtou), north Kwangtung (=Guangdong) Prov., China; 700 meters.
RANGE: Southern China including Hainan, westward to Sichuan and Yunnan. India (Darjeeling, Assam) through Burma to Vietnam.

Rana longicrus Stejneger, 1898. (PLATE 11G)
Rana longicrus L. Stejneger, 1898, Jour. Coll. Sci. Imper. Univ. Tokyo, 12: 216. Type locality: Taipa (=Taipei), Formosa (=Taiwan Prov.), China.
RANGE: Taiwan and Fujian, China.

Rana lungshengensis Liu and Hu, 1962.
Rana lungshengensis C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 91. Type locality: San-men of Hua-ping, Lungsheng (=Longsheng) Co., Guangxi Zhuang Autonomous Region, China; 900 meters.
RANGE: Guangxi, Hunan, and Guizhou, China.

Rana macrodactyla (Günther, 1859). (PLATE 11H)
Hylarana macrodactyla A. Günther, "1858" (1859), Catal. Batrach. Salient. Coll. Brit. Mus., London: 72. Type locality: Hong Kong and China (see Note).
Rana macrodactyla: G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 54.
RANGE: Guangdong, Hong Kong, Hainan, and Guangxi, China. Southeastern Asia to Burma.
NOTE: The type locality has been restricted to Hong Kong by E. H. Taylor (1962, Univ. Kansas Sci. Bull., Lawrence, 43: 421).

Rana maculosa Liu, Hu, and Yang, 1960.
Rana maculosa C.-C. Liu, S.-Q. Hu and F.-H. Yang, 1960, Acta Zool. Sinica, Peking, 12: 161. Type locality: Hsin-ming-hsiang (=Xinmin Xiang), Ching-tung (=Jingdong Co.), Yunnan Prov., China; 2,100 meters.
RANGE: Yunnan, China.

Rana margaretae Liu, 1950. (PLATE 12A)
Rana margaretae C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 303. Type locality: Panlungshan (=Mt. Panlong), Kwanhsien (=Guan Co., now Dujiangyan Shi), Szechwan (=Sichuan) Prov., China; 3,500 feet.
RANGE: Gansu, Sichuan, Guizhou, Hunan, and Hubei, China.

Rana minima Ding and Cai, 1979.
Rana minimus H.-B. Ding (as H.-P. Ting) and M.-Z. Cai (as M.-C. Ts'ai), 1979, Acta Zootaxon. Sinica, Beijing, 4: 297. Type locality: Vicinity of Lingshi Monastery (=Lingshi Si), Dongzhang, Fuqing Co., Fujian Prov., China; 300 meters.
RANGE: Fujian, China.

Rana nigrolineata Liu and Hu, 1959. (PLATE 12B)
Rana nigrolineata C.-C. Liu and S.-Q. Hu, 1959, Acta Zool. Sinica, Peking, 11: 516. Type locality: Meng-yang, Yunnan Prov., China; 680 meters.
RANGE: Yunnan, China.

Rana nigromaculata Hallowell, 1861. (PLATE 12C)

Rana nigromaculata E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 500. Type locality: Simoda (=Shimoda), Niphon (=Honshû) Island, Japan.

Hoplobatrachus Reinhardtii W. Peters, 1867, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1867: 711. Type locality: Malacca or China.

Rana nigromaculata schybanovi P. V. Terentjev, 1923, Proc. First Congress Russ. Zool., Anat. Histol., Petrograd, 1922: 35 (*nomen nudum*).

Rana nigromaculata mongolia K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 1. Type locality: Mai Tai Chao (=Tumd Zuoqi), "northern Shansi" (now part of Nei Mongol Autonomous Region), China.

Rana nigromaculata schybanovi P. V. Terentjev, 1927, Zool. Anz., Leipzig, 74: 83, 88. Type locality: China.

RANGE: Widely distributed over China except Xinjiang, Xizang (Tibet), Guangxi, and Taiwan. Russia (Far East District), Japan, and Korea.

Rana nigrovittata (Blyth, 1856).

Limnodytes nigrovittatus E. Blyth, "1855" (1856), Jour. Asiatic Soc. Bengal, Calcutta, 24: 718. Type locality: None given (see Note).

Rana nigrovittata: W. L. Sclater, 1892, List Batrach. Indian Mus., London: 9.

RANGE: Southern Yunnan, China. India (Assam), Nepal, Vietnam, and Malaya.

NOTE: No type locality was given by E. Blyth in the description itself ("1855" [1856]: 718–719), but on page 711 in the same article he noted that all specimens collected by William Theobald and described in his paper were from Mergui and the Tenasserim Valley, Burma.

Rana plancyi Lataste, 1880. (PLATE 12D–E)

Rana plancyi F. Lataste, 1880, Le Naturaliste, Paris, année 2, 1: 210 (see Note). Type locality: Neighborhood of Peking (=Beijing), China, and Kiu-Kiang (=Jiujiang Shi), Jiangxi (Prov.), China (see Note).

RANGE: Eastern China including Taiwan. Korea.

NOTE: The original description of *Rana plancyi* is usually cited as *Bulletin de la Société Zoologique de France* (volume 5: 64, 1880), but this article is a slightly modified republication of the original article, in three parts, issued earlier in *Le Naturaliste* (see citations in the bibliography, page 381). The description of *R. plancyi* in *Le Naturaliste* was issued on 1 May 1880; that in the *Bulletin* was published sometime after May 1880 (the date of the paper on page 49 of the *Bulletin*, preceding the article by Lataste, is dated 25 May). Lataste's description in *Le Naturaliste* was based on specimens collected in the vicinity of Beijing by Victor Collin de Plancy and other specimens that had been collected earlier by Armand David at Kiu-Kiang (see Lataste, 1880: 221); hence both localities must be regarded as the type locality until explicitly restricted.

1. ***Rana plancyi fukienensis*** Pope, 1929. (PLATE 12D)

Rana fukienensis C. H. Pope, 1929, Amer. Mus. Novit., New York, 352: 4. Type locality: Futsing Hsien (=Fuqing Co.), northeastern Fukien (=Fujian) Prov., China.

Rana plancyi fukienensis: A. M. Boring, "1938–1939" (1938), Peking Nat. Hist. Bull., 13: 102.

Rana lighti E. H. Taylor, 1934, Lingnan Sci. Jour., Canton, 13: 306. Type locality: Amoy (=Xiamen Shi), Fukien (=Fujian Prov.), China.

RANGE: Jiangxi, Fujian, and Taiwan, China.

NOTE: M. Kuramoto (1983, Sci. Rep. Lab. Amphib. Biol., Hiroshima Univ., 6: 264–266) indicated that the subspecies *Rana plancyi fukienensis* should be regarded as a full species, based on hybridization studies with Taiwanese frogs. Until mainland Chinese populations are studied comprehensively, we have decided to take a more conservative position.

2. ***Rana plancyi plancyi*** Lataste, 1880. (PLATE 12E)

Rana plancyi plancyi: M. Kuramoto, 1983, Sci. Rep. Lab. Amphib. Biol., Hiroshima Univ., 6: 253.

Rana hubeiensis L. Fei and C.-Y. Ye, 1982, Acta Zool. Sinica, Beijing, 28: 293. Type locality: Lichuan Co., Hubei Prov., China; 1,070 meters (see Plate 12E).

RANGE: Northeastern and central China.

Rana pleuraden Boulenger, 1904.

Rana pleuraden G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 131. Type locality: Yunnan Fu (=Kunming Shi), Yunnan Prov., China; about 6,000 feet.

RANGE: Yunnan-Guizhou Plateau, China.

Rana polunini Smith, 1951.

Rana polunini M. A. Smith, 1951, Ann. Mag. Nat. Hist., London, ser. 12, 4: 727. Type locality: Langtang Village, Nepal; 11,000 feet.

RANGE: Border area of Nepal and China (Xizang [Tibet]).

Rana quadranus Liu, Hu, and Yang, 1960. (PLATE 12F)

Rana quadranus C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1960, Acta Zool. Sinica, Peking, 12: 286. Type locality: Kwan-yang (=Guanyang), Wushan Co., Szechwan (=Sichuan) Prov., China; 1,463 meters.

RANGE: Sichuan, Hubei, Anhui, Shaanxi, and Gansu, China.

Rana ridibunda Pallas, 1771.

Rana ridibunda P. S. Pallas, 1771, Reise Provinz. Russ. Reichs, St. Petersburg, 1: 458. Type locality: Caspian Sea, Volga, and Jaico, Russia (see Note).

RANGE: Western Xinjiang. Central Europe to Asiatic Russia, south to the Arabian Peninsula.

NOTE: The type locality has been restricted to Gurjef (=Guryev, Kazakhstan), north coast of Caspian Sea, by R. Mertens and L. Müller (1928, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 41: 20). Guryev was the only specific locality mentioned by Pallas for *Rana ridibunda* elsewhere in the volume (1771, 1: 428).

Rana rugosa Temminck and Schlegel, 1838.

Rana rugosa C. J. Temminck and H. Schlegel, 1838, Fauna Japon., Leiden, Reptilia: 110. Type locality: Japan, probably Nagasaki, according to L. Stejneger (1907, Bull. U.S. Natl. Mus., Washington, 58: 123).

Rana emeljanovi A. M. Nikolsky, 1913, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 18: 148. Type locality: "Ilyalapo" or Imienpo Station, Chinese Eastern Railway, Manchuria (=Yimianpo, Shangzhi Co., Heilongjiang Prov., China).

RANGE: Northeastern China. Japan, Korea, and Russia (Ussuri region).

NOTE: A. G. Bannikov, I. S. Darevsky, V. G. Ischenko, A. K. Rustamov, and N. N. Szczerbak (1977, Key Reptiles Amphib. USSR, Moscow: 57) referred to the Russian populations, and by implication also those from northeastern China, as *Rana rugosa emeljanowi* [*sic*]

and L. Fei, C.-Y. Ye, and Y.-Z. Huang ("1990" [1991], Key Chin. Amphib., Chongqing: 146) used the binomial *R. emeljanowi* [*sic*]. We prefer to retain the name *rugosa* for Chinese populations until the relationship between the mainland and Japanese populations is properly clarified.

Rana rugulosa Wiegmann, 1835. (PLATE 12G)

?*Rana (chinensis)* P. Osbeck, 1765, Reise Ostind. China, Rostock: 244. Type locality: Canton (=Guangzhou Shi, Guangdong Prov.), China (*nomen dubium*; see Note).

Rana rugulosa A. F. A. Wiegmann, 1834, Nova Acta Acad. Caesar. Leopold. Carol., Halle, 17(1): 258. Type locality: Cape Syng-more (=Kap Shui Mun, Lantau Island), Hong Kong, China (see Note).

RANGE: Southern China, including Taiwan. Burma and Thailand. Introduced in Borneo.

NOTE: Osbeck's "*Rana chinensis*" was first described in 1757 (Dagbok Ostind. Resa, Stockholm: 187); since the name is pre-Linnaean, it is unavailable. Osbeck's 1765 German edition used the name "*chinensis*" in a vernacular sense and not as a Latin binomial. For further discussion of "*Rana chinensis*," see S. Bolkay (1911, Jour. Washington Acad. Sci., 13: 67–84). "Cap Syng-more" is a port (near the water passage of the same name) at the north point of Lantau Island, Hong Kong; the attribution to Macao by several authors apparently results from a misreading of Wiegmann's original description. The frogs seen in the Macao markets were *R. vittigera* A. F. A. Wiegmann, 1834; type locality: Philippines (=*R. limnocharis* H. Boie, 1834).

Previously, the Chinese populations of *rugulosa* were known as *R. tigerina rugulosa*. Y. Okada (1931, Tailless Batr. Japan Emp., Tokyo: 147–151) and D. R. Frost (1985, Amphib. Spec. World, Lawrence: 512, 518) recognized both *R. rugulosa* and *R. tigerina* F.-M. Daudin, 1802, as occuring in China, but only the first species is native to China; *R. tigerina* (often misspelled "*tigrina*") is native to the Indian subcontinent.

Rana sanguinea Boettger, 1893.

Rana sanguinea O. Boettger, 1893, Zool. Anz., Leipzig, 16: 364. Type locality: Culion Island, Calamian Group, Philippines.

RANGE: Yunnan, Guangxi, and possibly Guangdong and Hainan, China. Philippines and Indonesia.

NOTE: Previously, Chinese populations of this species were called *Rana varians* G. A. Boulenger, 1894 (Ann. Mag. Nat. Hist., London, ser. 6, 14: 86; type locality: Palawan, Philippines), but R. F. Inger (1954, Fieldiana: Zool., Chicago, 33: 328, 330) examined Boulenger's types and regarded them as identical to *R. sanguinea*. See also footnote, page 132.

Rana sangzhiensis Shen, 1986.

Rana sangzhiensis Y.-H. Shen, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 290. Type locality: Mt. Tianping, Sangzhi Co., Hunan Prov., China; 1,350 meters.

RANGE: Known only from the type locality.

Rana sauteri Boulenger, 1909. (PLATE 12H)

Rana sauteri G. A. Boulenger, 1909, Ann. Mag. Nat. Hist., London, ser. 8, 4: 493. Type locality: Kanshirei (=Kuantzuling) village, Formosa (=Taiwan Prov.), China; about 2,000 feet.

RANGE: Taiwan and Guangxi, China. Vietnam.

NOTE: The populations of *Rana sauteri* from Vietnam and Guangxi, China, are sometimes referred to as *R. sauteri johnsi* M. A. Smith, 1921 (Proc. Zool. Soc. London, 1921: 434;

type locality: Sui Kat, Langbian Plateau, southern Annam [=south-central Vietnam]; 1,000 meters [page 424]). Given the major differences in morphology and the disjunct distribution, these populations may be specifically distinct from *R. sauteri* of Taiwan, but we retain the current nomenclature pending further study.

Rana schmackeri Boettger, 1892. (PLATE 13A)

Rana schmackeri O. Boettger, 1892, Katal. Batrach.-Samml. Mus. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main: 11. Type locality: Kao-cha-hien (=Gaojiayan), near Ichang (=Yichang Shi), Hubei Prov., China.

Rana melli T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 144. Type locality: None given (see Note).

RANGE: Central and southern China, northward to Henan and Gansu.

NOTE: R. Mell (1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 133) gave the type locality of *Rana melli* as Lien ping (=Lianping Co.), Guangdong Prov., China; 500–900 meters.

Rana shini Ahl, 1930. (PLATE 13B)

Rana shini E. Ahl, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 315. Type locality: Yao-schan (=Dayao Shan), north part of Kwangsi (=Guangxi Zhuang Autonomous Region), China; 1,500 meters (see Note).

RANGE: Guangxi, Guizhou, Hunan, and southern Sichuan, China.

NOTE: For the elevation, see R. Mell ("1929" [1930], Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 310).

Rana shuchinae Liu, 1950.

Rana shuchinae C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 313. Type locality: Lolokou (=Jiafanggou), Chaochiao (=Zhaojue) Co., Sikang (now part of Sichuan) Prov., China; 10,000 feet.

RANGE: Western Sichuan and Yunnan, China.

Rana spinosa David, 1875.

Rana latrans A. David, "1871" (1872), Nouv. Arch. Mus. Hist. Nat. Paris, 7(Bull.): 76. Type locality: "Torrents des montagnes" (=mountain cascades, Jiangxi Prov., China) (name preoccupied by *Rana latrans* G. A. Steffen, 1815).

Rana spinosa A. David, 1875, Jour. Trois. Voy. Explor. Empire Chinois, Paris, 2: 253. Type locality: Ouang-mao-tsaé (=Wangmaozhai), a mountain village in Jiangxi near the Fujian boundary, China.

Nyctibatrachus sinensis W. Peters, 1882, Sitzungs-Ber. Gesellsch. Naturforsch. Freunde Berlin, 1882: 146. Type locality: Mons Lofau (=Mt. Luofu), "Provincia Canton" (actually Guangdong Prov.), China.

Rana duboisreymondi T. Vogt, 1921, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1921: 75. Type locality: Kuling (=Guling, Lu Shan), right bank of Yangtze (River), Kin Kiang (=Jin Jiang, Jiangxi Prov.), China.

Rana (Rana) Courtoisi F. Angel, "1922" (1923), Bull. Mus. Natl. Hist. Nat., Paris, [ser.1], 28: 401. Type locality: Che-Ki, near The-Kiang, Ngan-Hoei (=Anhui) Prov., China.

Rana chekiensis F. Angel and J. Guibé, "1946" (1947), *in* F. Angel, L. Bertin, and J. Guibé, Bull. Mus. Hist. Nat., Paris, ser. 2, 18: 473. Type locality: Not given (see Note).

RANGE: Southwestern and southern China including Hainan. Northern Vietnam.

NOTE: The specimens on which the name *Rana chekiensis* was eventually founded were

originally described under the name *R. courtoisi* by F. Angel and J. Guibé (1945, Bull. Mus. Hist. Nat., Paris, ser. 2, 17: 380–381); the specimens were sent to Paris from the French missionary museum at Zi-Ka-Wei (=Xujiahui), near Shanghai.

Rana spinulosa Smith, 1923.

Rana (Hylarana) spinulosa M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 207. Type locality: Tun-fao, Kachek River (=Jiaji He), Hainan Island, Hainan Prov., China; 200 meters.

RANGE: Hainan, China.

Rana swinhoana Boulenger, 1903. (PLATE 13C)

Rana Swinhoana G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 556. Type locality: Bangkimtsing (=Chihshan or Wanluan), Formosa (=Taiwan), China.

Rana kosempensis F. Werner, 1913, Mitt. Naturhist. Mus., Hamburg, 30: 48. Type locality: Kosempo (=Chiahsien), Taiwan Prov., China.

RANGE: Southeastern China including Taiwan.

NOTE: C.-S. Wang and S.-K. Chan (1977 [1978?], Quart. Jour. Taiwan Mus., Taipei, 30: 329) consider *Rana swinhoana* as a subspecies of *R. narina* L. Stejneger, 1901 (Proc. Biol. Soc. Washington, 14: 189; type locality: Okinawa Shima, Ryukyu Archipelago, Japan). However, we regard the two as distinctly different, based mainly on the structure of the snout and feet.

Rana taipehensis VanDenburgh, 1909. (PLATE 13D)

Rana taipehensis J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 56. Type locality: Taipeh (=Taipei), Formosa (=Taiwan Prov.), China.

RANGE: South China including Taiwan and Hainan; specimens referred to this species have also been reported from Yunnan. Eastern India, Nepal, and Vietnam.

Rana taiwaniana Ôtsu, 1973.

Rana taiwaniana T. Ôtsu, 1973, Quart. Jour. Taiwan Mus., Taipei, 26: 114. Type locality: Shanlin Chiti of Taiwan (=Shanlin-chi), north side of Mt. Ali, Taiwan Prov., China; 1,600 meters.

RANGE: Known only from the type locality.

Rana tenggerensis Zhao, Macey, and Papenfuss, 1988. (PLATE 13E)

Rana tenggerensis E.-M. Zhao, J. R. Macey, and T. J. Papenfuss, 1988, Chin. Herpetol. Res., Chengdu, 2: 1. Type locality: North shore of Yellow River (=Huang He), at Shapotou Desert Research Station, Shapotou, Zhongwei Co., Yinnan Prefecture, Ningxia Hui Autonomous Region, China.

RANGE: Ningxia, China.

Rana tiannanensis Yang and Li, 1980. (PLATE 13F)

Rana tiannanensis D.-T. Yang and S.-M. Li, 1980, Zool. Res., Kunming, 1: 261. Type locality: Mt. Dawei, Hekou Co., Yunnan Prov., China; 1,200 meters.

RANGE: Southern Yunnan and Hainan, China.

Rana tientaiensis Chang, 1933. (PLATE 13G)

Rana tientaiensis T.-K. Chang, "1933–34" (1933), Peking Nat. Hist. Bull., 8: 78. Type locality: Tientai (=Tiantai Co.), east central Chekiang (=Zhejiang Prov.), China; 3,000 feet.

RANGE: Zhejiang and Anhui, China.

Rana tormotus Wu, 1977.

Rana tormotus G.-F. Wu, 1977, *in* Herpetological Department, Sichuan Biological Research Institute; Acta Zool. Sinica, Peking, 23: 113. Type locality: Tau-hua-qu (=Taohuaxi), Mt. Huangshan, Anhui Prov., China; 650 meters.

RANGE: Known only from the type locality.

Rana unculuanus Liu, Hu, and Yang, 1960.

Rana unculuanus C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1960, Acta Zool. Sinica, Peking, 12: 164. Type locality: Hsin-ming-hsiang (=Xinmin Xiang), Ching-tung (=Jingdong Co.), Yunnan Prov., China; 2,030 meters.

RANGE: Known only from the type locality.

Rana versabilis Liu and Hu, 1962.

Rana versabilis C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 89. Type locality: San-men of Hua-ping, Lungsheng (=Longsheng) Co., Guangxi Zhuang Autonomous Region, China; 870 meters.

RANGE: Southern China, eastward to Fujian and westward to Sichuan and Guizhou.

Rana weiningensis Liu, Hu, and Yang, 1962.

Rana weiningensis C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1962, Acta Zool. Sinica, Peking, 14: 387. Type locality: Tuo-luo-he of Long-chu (=Tuo-luo-he of Long-jie), Weining Co., Kweichow (=Guizhou Prov.), China; 1,700 meters.

RANGE: Western Guizhou, China.

Rana wuchuanensis Xu, 1983.

Rana wuchuanensis R.-H. Xu, 1983, *in* L. Wu, R.-H. Xu, Q. Dong, D.-J. Li, and J.-S. Liu, Acta Zool. Sinica, Beijing, 29: 66. Type locality: Baicun, Wuchuan Co., Guizhou Prov., China; 720 meters.

RANGE: Known only from the type locality.

Rana yunnanensis Anderson, 1879. (PLATE 13H)

Rana yunnanensis J. Anderson, "1878" (1879), Anat. Zool. Res. Zool. Result. Exped. West. Yunnan, London, 1: 839. Type locality: Hotha (=Husa), Yunnan Prov., China; 5,000 feet, revised to Tongchuan Fu (=Dongchuan Shi), Yunnan Prov., by neotype designation (A. Dubois, "1986" [1987], Alytes, Paris, 5: 45).

Rana phrynoides G. A. Boulenger, 1917, Ann. Mag. Nat. Hist., London, ser. 8, 20: 413. Type locality: Tongchuan fu (=Dongchuan Shi), Yunnan Prov., China.

Rana (Paa) sichuanensis A. Dubois, "1986" (1987), Alytes, Paris, 5: 47. Type locality: Ning Yuan Fu (mountains near Xichang Shi, 27°58'N, 102°13'E), Sichuan Prov., China.

RANGE: Southwestern China. Northern Vietnam and Burma.

RHACOPHORIDAE

BUERGERIA Tschudi, 1838.

Bürgeria J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 34, 75. Type species: *Hyla Bürgeri* C. J. Temminck and H. Schlegel, 1838, of Japan, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 143).

Buergeria japonica (Hallowell, 1861). (PLATE 14A)

Ixalus Japonicus E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 501. Type locality: Japan (see Note).

Buergeria japonica: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 90.

RANGE: Taiwan, China. Japan (Ryukyu Islands).

NOTE: Hallowell ("1860" [1861]: 501) gave "Japan" as the type locality, but R. F. Inger (1947, Fieldiana: Zool., Chicago, 32: 346) gave it as Amami, northern Ryukyu Islands, Japan.

Buergeria oxycephala (Boulenger, 1900).

Rhacophorus oxycephalus G. A. Boulenger, "1899" (1900), Proc. Zool. Soc. London, 1899: 959. Type locality: Five-finger Mountains (=Mt. Wuzhi), Hainan Island, Hainan Prov., China.

Buergeria oxycephalus: S.-P. Jiang, S.-Q. Hu, and E.-M. Zhao, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 34.

RANGE: Hainan, China.

Buergeria robusta (Boulenger, 1909). (PLATE 14B)

Rhacophorus robustus G. A. Boulenger, 1909, Ann. Mag. Nat. Hist., London, ser. 8, 4: 494. Type locality: Kankau (=Kankou; sea level), Alikang (=Aliguan; about 3,000 feet), and Kosempo (=Chiahsien; about 5,000 feet), Taiwan Prov., China.

Buergeria robustus: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 90.

RANGE: Taiwan, China.

CHIRIXALUS Boulenger, 1893.

Chirixalus G. A. Boulenger, 1893, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 13(whole ser., 33): 340. Type species: *Chirixalus doriae* G. A. Boulenger, 1893, by monotypy.

Chirixalus doriae Boulenger, 1893. (PLATE 14C)

Chirixalus doriae G. A. Boulenger, 1893, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 13 (whole ser., 33): 341. Type locality: Karin Bia-po and Thao, Burma (see Note).

RANGE: Yunnan and Hainan, China. Northern Burma and Thailand.

NOTE: By lectotype designation (L. Capocaccia, 1957, Ann. Mus. Civ. Stor. Nat. Genova, 69: 217), the type locality has been restricted to the district of Karin Bia-po.

Chirixalus eiffingeri (Boettger, 1895). (PLATE 14D)

Rana eiffingeri O. Boettger, 1895, Ber. Thätig. Offenbacher Ver. Naturk., Offenbach am Main, 33–36: 104 (see Note). Type locality: Ohoshima or more probably Okinawa, Liukiu Islands (=Ryukyu Islands), Japan.

Chirixalus eiffingeri: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 95.

Rhacophorus pollicaris F. Werner, 1913, Mitt. Naturhist. Mus., Hamburg, 30: 50. Type locality: Kanshirei (=Kuantzuling) and Fuhosho (=Maobu or Wucheng), Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China. Japan (Yaeyama group, Ryukyu Islands).

NOTE: The original description of *Chirixalus eiffingeri* was probably published in late May or June 1895 (see pages xi and xxxi in that volume). The descriptions of new species (only) in this paper were later (8 July 1895) re-published by Boettger (Zool. Anz., Leipzig, 18: 266–270), with "*Rana Eiffingeri*" [*sic*] appearing on page 267, an article that is often cited as the original description.

Chirixalus idiootocus Kuramoto and Wang, 1987. (PLATE 14E)

Chirixalus idiootocus M. Kuramoto and C.-S. Wang, 1987, Copeia, Gainesville, 1987: 932. Type locality: Near Sanshengkong Temple, southern slope of Mt. Mientien (=Mientianshan), Taipei Co., Taiwan Prov., China; about 500 meters.

RANGE: Taiwan, China.

Chirixalus vittatus (Boulenger, 1887).

Ixalus vittatus G. A. Boulenger, 1887, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 5: 421. Type locality: Bhamò, Burma.

Chirixalus vittatus: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 95.

RANGE: Guangdong, Hainan, Guangxi, Yunnan, and southeastern Xizang (Tibet), China. Burma, Thailand, and Vietnam.

PHILAUTUS Gistel, 1848.

Philautus J. Gistel, 1848, Naturgesch. Thierr. Höhe. Schul., Stuttgart: X (not page 10). Type species: *Hyla aurifasciatus* H. Schlegel, 1837, of southeast Asia, Indonesia, and Borneo, by monotypy (see Note).

NOTE: *Philautus* is a substitute name for *Orchestes* J. J. von Tschudi (1838, Classif. Batrach., Neuchâtel: 35, 76), a name preoccupied by *Orchestes* J. C. W. Illiger, 1798, a genus of beetles.

Philautus albopunctatus Liu and Hu, 1962.

Philautus albopunctatus C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 99. Type locality: Yang-liu-chong, Mt. Yao (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 1,350 meters.

RANGE: Known only from the type locality.

Philautus andersoni (Ahl, 1927).

Ixalus tuberculatus J. Anderson, "1878" (1879), Anat. Zool. Res. Exped. West. Yunnan, London, 1: 845 (see Note). Type locality: Marshy flats of the Nampoung, center of Kakhyen Hills, Burma.

Rhacophorus andersoni E. Ahl, 1927, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1927: 36 (substitute name for *Ixalus tuberculatus* J. Anderson, "1878" [1879]; see Note).

Philautus andersoni: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 526.

RANGE: Southern Xizang (Tibet) and Yunnan, China. India (Assam) and northern Burma.

NOTE: See D. R. Frost (1985, Amphib. Spec. World, Lawrence: 526, under *Philautus*) for an explanation of the retention of Ahl's name *Philautus andersoni*. This taxon is often cited in the literature, incorrectly, as "*Philautus tuberculatus*."

Philautus cavirostris (Günther, 1869).

Polypedates cavirostris A. Günther, "1868" (1869), Proc. Zool. Soc. London, 1868: 486. Type locality: Ceylon (=Sri Lanka).

Philautus cavirostris: S.-P. Jiang, S.-Q. Hand E.-M. Zhao, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 34.

RANGE: Southern Xizang (Tibet) southeast to Guangdong and Hainan, China. Sri Lanka.

Philautus gracilipes Bourret, 1937.

Philautus gracilipes R. Bourret, 1937, Annexe Bull. Gén. Instr. Publique, Hanoi, 1937(4): 52. Type locality: Chapa, Tonkin, Vietnam.

RANGE: Yunnan, China. Northern Vietnam.

Philautus jinxiuensis Hu, 1978.

Philautus jinxiuensis S.-Q. Hu, 1978, *in* S.-Q. Hu, L. Fei, and C.-Y. Ye, Mater. Herpetol. Res., Chengdu, 4: 20. Type locality: Mt. Yao (=Dayao Shan), Jinxiu Co., Guangxi Zhuang Autonomous Region, China (see Note).

RANGE: Hunan and northern Guangxi, China.

NOTE: This species was re-described by S.-Q. Hu and W.-S. Tian in 1981 (*in* S.-Q. Hu, W.-S. Tian, and G.-F. Wu, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 116), an article that is often incorrectly cited as the original description.

Philautus longchuanensis Yang and Li, 1979.

Philautus longchuanensis D.-T. Yang and S.-M. Li, 1979, *in* D.-T. Yang, C.-Y. Su, and S.-M. Li, Acta Zootaxon. Sinica, Beijing, 4: 186. Type locality: Gongdong, Longchuan Co., Yunnan Prov., China; 1,600 meters.

RANGE: Southwestern Yunnan, China.

Philautus medogensis Ye and Hu, 1984.

Philautus medogensis C.-Y. Ye and S.-Q. Hu, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(4): 67. Type locality: Medog Co., Xizang (Tibet) Autonomous Region, China; 1,500 meters.

RANGE: Known only from the type locality.

Philautus menglaensis Kou, 1990.

Philautus menglaensis Z.-T. Kou, 1990, *in* E.-M. Zhao (ed.), From Water onto Land, Beijing: 210. Type locality: Zhushihe, Mengla Co., Yunnan Prov., China; 900 meters.

RANGE: Known only from the type locality.

Philautus ocellatus Liu and Hu, 1973.

Philautus ocellatus C.-C. Liu and S.-Q. Hu, 1973, *in* C.-C. Liu, S.-Q. Hu, L. Fei, and Z.-J. Huang, Acta Zool. Sinica, Peking, 19: 393. Type locality: Mt. Wuzhi, Guangdong (now part of Hainan) Prov., China; 700 meters.

RANGE: Hainan, China.

Philautus palpebralis Smith, 1924.

Philautus palpebralis M. A. Smith, 1924, Proc. Zool. Soc. London, 1924: 233. Type locality: Langbian Peaks, South Annam, Vietnam; 2,000 meters.

RANGE: Yunnan, China. Vietnam.

Philautus rhododiscus Liu and Hu, 1962.

Philautus rhododiscus C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 98. Type locality: Yang-liu-chong, Mt. Yao (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 1,350 meters.

RANGE: Guangxi and Fujian, China.

Philautus romeri Smith, 1953. (PLATE 14F)

Philautus romeri M. A. Smith, 1953, Ann. Mag. Nat. Hist., London, ser. 12, 6: 477. Type locality: Lamma Island, Hong Kong, China; sea level.

RANGE: Chek Lap Kok, Lamma, Lantau, and Po Toi islands, Hong Kong, China.

POLYPEDATES Tschudi, 1838.

Polypedates J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 34, 75. Type species: *Hyla leucomystax* J. L. C. Gravenhorst, 1829, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 31), of eastern India through southeast Asia, Borneo, and the Philippines.

Polypedates chenfui (Liu, 1945). (PLATE 14G)

Rhacophorus chenfui C.-C. Liu, 1945, Jour. West China Border Res. Soc., Chengdu, ser. B, 15: 35. Type locality: Hui-ting-sze (=Huideng Si), Mt. Omei (=Mt. Emei), Szechwan (=Sichuan Prov.), China: 3,850 feet.

Polypedates chenfui: S.-P. Jiang, S.-Q. Hu, and E.-M. Zhao, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 34.

RANGE: Sichuan, Guizhou, Hubei, and Fujian, China.

Polypedates dennysi (Blanford, 1881).

Rhacophorus dennysi W. T. Blanford, 1881, Proc. Zool. Soc. London, 1881: 224. Type locality: "China" (see Note).

Polypedates dennysi: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 98.

Rhacophorus exiguus O. Boettger, 1894, Ber. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 1894: 148. Type locality: Chinhai (=Zhenhai Co.), near Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Hyla albotaeniata T. Vogt, 1927, Zool. Anz., Leipzig, 69: 287. Type locality: South China (probably Yunnan Prov., see Vogt, 1927: 281).

Polypedate [sic] *feyi* L.-S. Chen, 1929, China Jour., Shanghai, 10: 198. Type locality: Mt. Yao (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China.

Rhacophorus leucofasciatus C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 95. Type locality: Lo-dan (=Luodan), Yaoshan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 800 meters.

RANGE: Southern China westward to Sichuan and Guizhou; Yunnan? Burma.

NOTE: C.-C. Liu and S.-Q. Hu (1961, Tailless Amphib. China, Peking: 258) gave "Singapore" as the type locality for *Polypedates dennysi*, in error, possibly based on a misinterpretation of the title of Blanford's article.

Polypedates dugritei David, 1872. (PLATE 14H)

Polypedates Dugritei A. David, "1871" (1872), Nouv. Arch. Mus. Hist. Nat., Paris, 7 (Bull.): 95. Type locality: Mouping (=Baoxing Co.), Sichuan Prov., China.

Polypedates Davidi H.-É. Sauvage, 1877, Bull. Soc. Philomath. Paris, ser. 7, 1: 117. Type locality: Moupin (=Baoxing Co.), Sichuan Prov., China; below 1,000 meters.

Hyla monticola T. Barbour, 1912, *in* S. Henshaw, Mem. Mus. Comp. Zool. Harvard Coll., Cambridge, 40: 127. Type locality: Washan (=Mt. Wa), western Szechwan (=Sichuan Prov.), China; 10,500 feet.

Hyla bambusicola T. Barbour, 1920, Copeia, New York, 88: 98 (substitute name for *Hyla monticola*, preoccupied by *Hyla punctariola monticola* E. D. Cope, "1875" [1876]).

Rhacophorus pleurostictus batangensis T. Vogt, 1924, Zool. Anz., Leipzig, 60: 341. Type locality: Batang (Co.), Sichuan Prov., China.

Rhacophorus hui C.-C. Liu, 1945, Jour. West China Border Res. Soc., Chengdu, ser. B, 15: 37. Type locality: Yen-wo-tung (=Yan-wo-tang), Chaochiao (=Zhaojue Co.), Sikang (now part of Sichuan Prov.), China; 1,100 feet.

RANGE: Southwestern China.

Polypedates feae (Boulenger, 1893).

Rhacophorus feae G. A. Boulenger, 1893, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 13: 338. Type locality: Thao, Burma.

Polypedates feae: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 98.

RANGE: Yunnan, China. Burma to northern Thailand and Vietnam.

Polypedates hungfuensis (Liu and Hu, 1961).

Rhacophorus hungfuensis C.-C. Liu and S.-Q. Hu, 1961, Tailless Amphib. China, Peking: 269. Type locality: Mt. Hongfu (=Hongfoshan), Guan Co. (now Dujiangyan Shi), Sichuan Prov., China.

Polypedates hungfuensis: S.-P. Jiang, S.-Q. Hu, and E.-M. Zhao, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 34.

RANGE: Sichuan and Guangxi, China.

Polypedates megacephalus Hallowell, 1861. (PLATE 15A)

Polypedates megacephalus E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 507. Type locality: Hong Kong, China.

Polypedates maculatus var. *unicolor* F. Müller, 1878, Verhandl. Naturforsch. Gesellsch. Basel, 6: 585. Type locality: China (*nomen nudum*).

Rhacophorus braueri T. Vogt, 1911, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1911: 180. Type locality: Formosa (=Taiwan Prov.), China.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, westward to Xizang (Tibet) and northward to Gansu. India (Assam and Sikkim).

NOTE: Until recently, Chinese populations of this species were referred to *Rhacophorus leucomystax* or *Polypedates leucomystax* J. L. C. Gravenhorst, 1829 (Delic. Mus. Zool. Vratislav., Leipzig: 26; type locality: Java, Indonesia), but are now regarded as specifically distinct based on comparisons of Taiwanese and Bornean specimens (M. Matsui, T. Seto, and T. Utsunomiya, 1986, Jour. Herpetol., Athens [Ohio], 20: 483–489).

Polypedates mutus (Smith, 1940). (PLATE 15B)

Rhacophorus mutus M. A. Smith, 1940, Rec. Indian Mus., Calcutta, 42: 473. Type locality: N'Chang Yang, northern Burma.

Polypedates mutus: D. R. Frost (ed.), 1985, Amphib. Spec. World, Lawrence: 541.

RANGE: Yunnan, Guizhou, Guangxi, and Hainan, China. Northern Burma.

Polypedates nigropunctatus (Liu, Hu, and Yang, 1962).

Rhacophorus nigropunctatus C.-C. Liu, S.-Q. Hu, and F.-H. Yang, 1962, Acta Zool. Sinica, Peking, 14: 388. Type locality: Long-chu (=Long-jie), Weining Co., Guizhou Prov., China; 2,134 meters.

Polypedates nigropunctatus: S.-P. Jiang, S.-Q. Hu, and E.-M. Zhao, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 34.
RANGE: Western Guizhou and western Yunnan, China.

Polypedates omeimontis Stejneger, 1924. (PLATE 15C)
Polypedates omeimontis L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 120. Type locality: Shin-kai-si (=Xin-kai Si), Mt. Omei (=Mt. Emei), Szechwan (=Sichuan Prov.), China.
RANGE: Southwestern China eastward to Hubei and Guangxi.

RHACOPHORUS Kuhl and van Hasselt, 1822.

Rhacophorus H. Kuhl and J. C. van Hasselt, 1822, Algemeene Konst- en Letter-Bode, Haarlem, 7: 104. Type species: *Rhacophorus moschata* H. Kuhl and J. C. van Hasselt, 1822 (=*Hyla Reinwardtii* H. Schlegel, 1840), by monotypy.

Rhacophorus bipunctatus Ahl, 1928.
Rhacophorus bimaculatus G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 90. Type locality: Khassya (=Khasi Hills) and Assam, India.
Rhacophorus bipunctatus E. Ahl, 1927, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1927: 46 (substitute name for *Rhacophorus bimaculatus* G. A. Boulenger, 1882; see Note).
RANGE: Southern Xizang (Tibet), China. Eastern Himalayan region of India; Burma (Karin Hills); peninsular Thailand and Malaya (Perak).
NOTE: See D. R. Frost (1985, Amphib. Spec. World, Lawrence: 526 [under *Philautus*] and 543) for an explanation of the retention of Ahl's name *Rhacophorus bipunctatus*.

Rhacophorus gongshanensis Yang and Su, 1984.
Rhacophorus gongshanensis D.-T. Yang and C.-Y. Su, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(3): 51. Type locality: Pumansao (=Pumanshao), Baoshan Co., Yunnan Prov., China; 1,880 meters.
RANGE: Western Yunnan, China.

Rhacophorus maximus Günther, 1859.
Rhacophorus maximus A. Günther, "1858" (1859), Catal. Batrach. Salient. Coll. Brit. Mus., London: 83. Type locality: Nepal and Afghanistan, the latter in error (see Note).
RANGE: Yunnan and southern Xizang (Tibet), China. Nepal, northeastern India, and northern Thailand.
NOTE: According to D. R. Frost (1985, Amphib. Spec. World, Lawrence: 545), the type locality "Afghanistan" is in error; Afghanistan lies outside the presently known range of this species.

Rhacophorus moltrechti Boulenger, 1908.
Rhacophorus moltrechti G. A. Boulenger, 1908, Ann. Mag. Nat. Hist., London, ser. 8, 2: 221. Type locality: Lake Candidje (=Jihyuehtan), Nanto (=Nantou) district, Taiwan Prov., China.
RANGE: Taiwan, China.

Rhacophorus naso Annandale, 1912.

Rhacophorus naso N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 12. Type locality: Egar stream between Renging and Rotung, Xizang (Tibet) Autonomous Region, China (in territory occupied by India).

RANGE: Known only from the type locality.

Rhacophorus prasinatus Mou, Risch, and Lue, 1983.

Rhacophorus prasinatus Y.-P. Mou, J.-P. Risch, and K.-Y. Lue, 1983, Alytes, Paris, 2: 155 (see Note). Type locality: Hou-keng-tzu, Shih-ting area, Taipei Co., Taiwan Prov., China; 220 meters.

Rhacophorus smaragdinus K.-Y. Lue and Y.-P. Mou, "1983" (1984), Jour. Taiwan Mus., Taipei, 36(2): 15 (see Note). Type locality: Hou-K'eng-tzu, near Feitsui Valley (=Feichui-ku, or Emerald Valley), Taipei Co., Taiwan Prov., China; about 220 meters.

RANGE: Known only from the type locality (see Note).

NOTE: *Rhacophorus prasinatus* and *R. smaragdinus* share the same holotype. The name *prasinatus* was published on 30 December 1983 (for date, see Alytes, Paris, 2: 178, 187) and *smaragdinus* on 10 January 1984, according to the librarian of the Taiwan Museum (Huang-lie Chang, pers. comm. to K. Adler, 12 September 1992).

The type locality of this species no longer exists, as Lue and Mou (1984: 16) report that it lies within the boundary of Feitsui Reservoir, which was completed in 1986.

Rhacophorus reinwardtii (Schlegel, 1840). (PLATE 15D)

Rhacophorus moschata H. Kuhl and J. C. van Hasselt, 1822, Algemeene Konst- en Letter-Bode, Haarlem, 7: 104. Type locality: Mt. Pangerango, Java, Indonesia (see Note).

Hyla Reinwardtii H. Schlegel, 1840, Abbild. Amphib., Düsseldorf: 105. Type locality: Java and Sumatra, Indonesia; Asia.

Rhacophorus Reinwardtii: A.-M.-C. Duméril and G. Bibron, 1841, Erpétol. Gén., Paris, 8: 532.

RANGE: Southern Yunnan and Guangxi, China. Malay Peninsula and Indonesia (Sumatra and Java).

NOTE: *Rhacophorus moschata* is a senior subjective synonym of *R. reinwardtii*, but A. Dubois (1982, Bull. Mus. Natl. Hist. Nat., Paris, ser. 4, 4: 271–276) argued for retention of the latter on the grounds of nomenclatorial stability.

Rhacophorus rhodopus Liu and Hu, 1959. (PLATE 15E)

Rhacophorus rhodopus C.-C. Liu and S.-Q. Hu, 1959, Acta Zool. Sinica, Peking, 11: 525. Type locality: Meng-yang, Yunnan Prov., China; 680 meters.

RANGE: Yunnan, Guangxi, Hunan, and Hainan, China.

Rhacophorus taipeianus Liang and Wang, 1978. (PLATE 15F)

Rhacophorus taipeianus Y.-S. Liang and C.-S. Wang, 1978, Quart. Jour. Taiwan Mus., Taipei, 31: 186. Type locality: Shu-lin, Taipei Hsien (=Taipei Co.), Taiwan Prov., China; 50 meters.

RANGE: Northern Taiwan, China.

Rhacophorus translineatus Wu, 1977.

Rhacophorus translineatus G.-F. Wu, 1977, *in* Sichuan Biological Research Institute; Acta

Zool. Sinica, Peking, 23: 59. Type locality: Medo (=Mêdog Co.), Xizang (Tibet) Autonomous Region, China; 1,500 meters.
RANGE: Xizang (Tibet), China.

Rhacophorus tuberculatus (Anderson, 1871).
Polypedates tuberculatus J. Anderson, 1871, Jour. Asiatic Soc. Bengal, Calcutta, 40(2): 26. Type locality: Seebsaugor (=Sibsagar), Assam, India.
Rhacophorus tuberculatus: G. A. Boulenger, 1890, Fauna Brit. India, Ceylon Burma, Rept. Batrach., London: 474.
RANGE: Southern Xizang (Tibet), China. India (Assam).

Rhacophorus verrucopus Huang, 1983.
Rhacophorus verrucopus Y.-Z. Huang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 63. Type locality: Beibeng, Medo Xian (=Mêdog Co.), Xizang (Tibet) Autonomous Region, China; 850 meters.
RANGE: Known only from the type locality.

Rhacophorus yaoshanensis Liu and Hu, 1962.
Rhacophorus yaoshanensis C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica, Peking, 14(suppl.): 96. Type locality: Ling-ban, Yaoshan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China.
RANGE: Known only from the type locality.

THELODERMA Tschudi, 1838.

Theloderma J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 32, 73. Type species: *Theloderma leporosa* J. J. von Tschudi, 1838, by monotypy.

Theloderma asperum (Boulenger, 1886). (PLATE 15G)
Ixalus asper G. A. Boulenger, 1886, Proc. Zool. Soc. London, 1886: 415. Type locality: Hill Garden, Larut, Perak, Malaysia; 3,300 feet.
Theloderma asperum: S. S. Liem, 1970, Fieldiana: Zool., Chicago, 57: 94.
Rhacophorus asperrimus E. Ahl, 1927, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1927: 37 (replacement name for *Ixalus asper* G. A. Boulenger, 1886, in error).
RANGE: Southern Xizang (Tibet), China. India (Assam) and Burma to Vietnam and Malay Peninsula.

Theloderma leporosa Tschudi, 1838. (PLATE 15H)
Theloderma leporosa J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 73. Type locality: Sumatra, Indonesia (see Note).
RANGE: Guangxi, China. Malay Peninsula and Indonesia (Sumatra).
NOTE: D. R. Frost (1985, Amphib. Spec. World, Lawrence: 550) gave the type locality as "Padang, Sumatra."

1. ***Theloderma leporosa kwangsiensis*** (Liu and Hu), 1962. (PLATE 15H)
Rhacophorus leprosus [sic] *kwangsiensis* C.-C. Liu and S.-Q. Hu, 1962, Acta Zool. Sinica,

Peking, 14(suppl.): 92. Type locality: Yang-liu-chong, Yaoshan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 1,350 meters.
RANGE: Known only from the type locality.

Theloderma moloch (Annandale, 1912).
Phrynoderma moloch N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 18, 25. Type locality: Upper Renging, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 2,150 feet.
Theloderma moloch: D. R. Frost (ed.), 1985, Amphib. Spec. World: 550.
RANGE: Known only from the type locality.

MICROHYLIDAE

CALLUELLA Stoliczka, 1872.

Calluella F. Stoliczka, 1872, Proc. Asiatic Soc. Bengal, Calcutta, 1872: 146. Type species: *Megalophrys guttulata* E. Blyth, 1855, of southeast Asia, by original designation.

Calluella yunnanensis (Boulenger, 1919). (PLATE 16A)
Calluella yunnanensis G. A. Boulenger, 1919, Ann. Mag. Nat. Hist., London, ser. 9, 3: 548. Type locality: Yunnan Fou (=Kunming Shi), Yunnan Prov., China.
Calluella ocellata C.-C. Liu, 1950, Fieldiana: Zool. Mem., Chicago, 2: 232. Type locality: Szekuaipa (=Sikuaiba), Chaochiaohsien (=Zhaojue Co.), Sikang (now part of Sichuan Prov.), China; 7,800 feet.
RANGE: Southwestern China.

KALOPHRYNUS Tschudi, 1838.

Kalophrynus J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 48, 86. Type species: *Kalophrynus pleurostigma* J. J. von Tschudi, 1838, by monotypy.

Kalophrynus menglienicus Yang and Su, 1980.
Kalophrynus menglienicus D.-T. Yang and C.-Y. Su, 1980, Zool. Res., Kunming, 1: 257. Type locality: Menglien (=Menglian) Co., Yunnan Prov., China; 1,040 meters.
RANGE: Southern Yunnan, China.

Kalophrynus pleurostigma Tschudi, 1838. (PLATE 16B)
Kalophrynus pleurostigma J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 86. Type locality: Sumatra, Indonesia.
RANGE: South China including Hainan. Burma to Indochina, south to Indonesia (Sumatra, Java, Borneo) and to the Philippines.

1. ***Kalophrynus pleurostigma interlineatus*** (Blyth, 1854). (PLATE 16B)
Engystoma (?) *interlineatum* E. Blyth, 1854 (1855?), Jour. Asiatic Soc. Bengal, Calcutta, 23: 732. Type locality: Pegu, Burma.
Kalophrynus pleurostigma interlineatus: H. W. Parker, 1934, Monogr. Frogs Fam. Microhylidae, London: 99.

Calophrynus pleurostigma var. *Sinensis* W. Peters, 1867, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1867: 33. Type locality: Hong Kong, China.

RANGE: South China including Hainan. Burma, Thailand, Cambodia, and northern Vietnam.

KALOULA Gray, 1831.

Kaloula J. E. Gray, 1831, Zool. Misc., London, 1: 38. Type species: *Kaloula pulchra* J. E. Gray, 1831, by monotypy.

Kaloula borealis (Barbour, 1908).

Cacopoides borealis T. Barbour, 1908, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 51: 321. Type locality: Antung, Manchuria (=Dandong Shi, Liaoning Prov.), China (see Note).

Kaloula borealis: G. K. Noble, 1925, Amer. Mus. Novit., New York, 165: 6.

Kaloula wolterstorffi L. Stejneger, 1925, Jour. Washington Acad. Sci., 15: 151. Type locality: Nanking (=Nanjing Shi), province of Kiangsu (=Jiangsu), China.

Kaloula manchuriensis A. M. Boring and C.-C. Liu, "1931–1932" (1932), Peking Nat. Hist. Bull., 6: 21. Type locality: Eastern Tomb, outside of Mukden (=Shenyang Shi), Liaoning Prov., China.

RANGE: Northeastern, northern, and central China. Korea.

NOTE: T. Barbour (1908: 321) noted that L. Stejneger believed the type locality of *Kaloula borealis* might be "Autung, Kiang hsi [=Jiangxi Prov.]," but this is probably in error since the species has not been reported from Jiangxi.

Kaloula pulchra Gray, 1831. (PLATE 16C)

Kaloula pulchra J. E. Gray, 1831, Zool. Misc., London, 1: 38. Type locality: China.

RANGE: South China, including Hainan. South India and Sri Lanka; Nepal and Burma to Indochina; Malaysia and Singapore. Apparently introduced into Indonesia (Borneo and Celebes).

1. ***Kaloula pulchra hainana*** Gressitt, 1938.

Kaloula pulchra hainana J. L. Gressitt, 1938, Proc. Biol. Soc. Washington, 51: 127. Type locality: Kachek (=Qionghai Co.), east-central Hainan Island, Guangdong (now part of Hainan) Prov., China; 25 meters.

RANGE: Hainan, China.

2. ***Kaloula pulchra pulchra*** Gray, 1831. (PLATE 16C)

Kaloula pulchra pulchra: H. W. Parker, 1934, Monogr. Frogs Fam. Microhylidae, London: 84.

RANGE: South China mainland.

Kaloula rugifera Stejneger, 1924. (PLATE 16D)

Kaloula rugifera L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 119. Type locality: Kiating (=Leshan Shi), Province of Szechwan (=Sichuan), China.

RANGE: Chengdu Plain and mountains to the west, Sichuan, China.

Kaloula verrucosa (Boulenger, 1904).

Callula verrucosa G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 131. Type locality: Garden of the Mission station, Yunnan Fu (=Kunming Shi), Yunnan Prov., China; 6,000 feet.

Kaloula verrucosa: K. P. Schmidt, 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 562.
Kaloula macroptica C.-C. Liu, 1945, Jour. West China Border Res. Soc., Chengdu, ser. B, 15: 31. Type locality: Ho-hsi (=Hexi), Sichang (=Xichang Shi), Sikang (now part of Sichuan) Prov., China; 6,500 feet.
RANGE: Southwestern China.

MICROHYLA Tschudi, 1838.

Microhyla J. J. von Tschudi, 1838, Classif. Batrach., Neuchâtel: 28, 71. Type species: *Hylaplesia achatina* H. Boie *in* H. Schlegel, 1827, a *nomen nudum* (=*Microhyla achatina* J. J. von Tschudi, 1838), by monotypy.

Microhyla berdmorei (Blyth, 1856).

Engystoma (?) *Berdmorei* E. Blyth, "1855" (1856), Jour. Asiatic Soc. Bengal, Calcutta, 24: 720. Type locality: Pegu, Burma (see Note).
Microhyla berdmorii: G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 166.
RANGE: Yunnan, China. India (Meghalaya); Burma and northern Thailand through Laos and Cambodia to Malaya, Indonesia (Sumatra), and Borneo.
NOTE: Previously, this species was known in China as *Microhyla fowleri* E. H. Taylor, 1934 (Proc. Acad. Nat. Sci. Philadelphia, 86: 284; type locality: Chieng Mai, Thailand), which is regarded by some authorities as a synonym of *M. berdmorei* (see E. H. Taylor, 1962, Univ. Kansas Sci. Bull., Lawrence, 43: 560).

Blyth ("1855" [1856]: 711) stated that all of Captain T. M. Berdmore's specimens were collected at Schwe Gyen on the Sitang River, Pegu, presumably also including the type specimens of *Microhyla berdmorei*.

Microhyla butleri Boulenger, 1900. (PLATE 16E)

Microhyla Butleri G. A. Boulenger, 1900, Ann. Mag. Nat. Hist., London, ser. 7, 6: 188. Type locality: Larut Hills, Perak, Malaya (=Malaysia); 4,000 feet.
Microhyla boulengeri T. Vogt, 1913, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1913: 222. Type locality: Hainan Island, Hainan Prov., China.
Microhyla grahami L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 119. Type locality: Sui-fu (=Yibin Shi), Szechwan (=Sichuan Prov.), China.
Microhyla sowerbyi L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 119. Type locality: Near Yen-ping-fu (=Nanping Shi), Fukien (=Fujian Prov.), China.
Microhyla contonensis [*sic*] L.-S. Chen, 1929, China Jour., Shanghai, 10: 338. Type locality: About 1 mile north of Canton (=Guangzhou Shi), Kwangtung (=Guangdong Prov.), China.
RANGE: Southern China including Hainan and Taiwan. Burma to Thailand and Vietnam; Malay Peninsula.

Microhyla heymonsi Vogt, 1911.

Microhyla heymonsi T. Vogt, 1911, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1911: 181. Type locality: Formosa (=Taiwan Prov.), China (see Note).
RANGE: Widely distributed over southern China including Taiwan and Hainan, westward to Yunnan and Sichuan. Malay Peninsula and Indonesia (Sumatra).

NOTE: The type locality was reported as "Kosempo [=Chiahsien], Taiwan" (by D. R. Frost [editor], 1985, Amphib. Spec. World, Lawrence: 386), but this locality was not given by Vogt (1911).

Microhyla inornata Boulenger, 1890. (PLATE 16F)

Microhyla inornata G. A. Boulenger, 1890, Proc. Zool. Soc. London, 1890: 37. Type locality: Deli and Langkat, Sumatra, Indonesia.

Microhyla steinegeri [*sic*] G. A. Boulenger, 1909, Ann. Mag. Nat. Hist., London, ser. 8, 4: 494. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China; about 2,000 feet.

Rana gracilipes J. L. Gressitt, 1938, Proc. Biol. Soc. Washington, 51: 161. Type locality: Kuraru (=Kueitzuchiao), Koshun (=Hengchun), near South Cape, Taiwan Prov., China; 150 meters.

RANGE: Southern Yunnan and Taiwan, China. Burma to Malaya and Indonesia (Sumatra).

Microhyla mixtura Liu and Hu, 1966.

Microhyla mixtura C.-C. Liu and S.-Q. Hu, 1966, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 18: 79. Type locality: Hua-ngo Shan (=Mt. Hua-e), Wanyuan Co., Sichuan Prov., China; 1,280 meters.

RANGE: Eastern Sichuan to Anhui, southern Shaanxi to Guizhou, China.

Microhyla ornata (Duméril and Bibron, 1841). (PLATE 16G)

Engystoma ornatum A.-M.-C. Duméril and G. Bibron, 1841, Erpétol. Gén., Paris, 8: 745. Type locality: Malabar, India.

Microhyla ornata: G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 165.

Microhyla fissipes G. A. Boulenger, 1884, Ann. Mag. Nat. Hist., London, ser. 5, 13: 397. Type locality: Taiwan foo (=Tainan), S. Formosa (=Taiwan Prov.), China.

Microhyla eremita T. Barbour, 1920, Occas. Pap. Mus. Zool. Univ. Michigan, Ann Arbor, 76: 3. Type locality: Nanking (=Nanjing Shi), Jiangsu Prov., China.

RANGE: Southern China including Taiwan and Hainan, northward to Shanxi and Shaanxi. Japan (Ryukyu Islands); southeast Asia and South Asia.

Microhyla pulchra (Hallowell, 1861). (PLATE 16H)

Engystoma pulchrum E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 506. Type locality: Between Hong Kong and Whampoa (=Huangpu), Guangdong Prov., China.

Microhyla pulchra: G. A. Boulenger, 1882, Catal. Batrach. Salient. Ecaud. Coll. Brit. Mus., London: 165.

Scaptophryne labyrinthica L. J. Fitzinger, 1861, Sitzungsber. Kaiserl. Akad. Wissensch. Wien, Vienna, 42: 416. Type locality: Hongkong, China (*nomen nudum*).

Ranina symetrica A. David, "1871" (1872), Nouv. Arch. Mus. Hist. Nat., Paris, 7 (Bull.): 76. Type locality: Hills near the Yangtzékiang (=Chang Jiang), and toward Setchuan (=Sichuan Prov.), China.

Microhyla hainanensis T. Barbour, 1908, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 51: 322. Type locality: Mt. Wuchi (=Wuzhi), central Hainan Island, Hainan Prov., China.

Microhyla melli T. Vogt, 1914, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1914: 101. Type locality: Environs of the city of Canton (=Guangzhou Shi), Guangdong Prov., China.

Microhyla major E. Ahl, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 317. Type locality: Yaoshan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note); 1,500 meters.

RANGE: Southern China including Hainan, west to Yunnan. Thailand.

NOTE: For details about the type locality of *Microhyla major*, see R. Mell ("1929" [1930], Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 310).

TESTUDINES

PLATYSTERNIDAE

PLATYSTERNON Gray, 1831.

Platysternon J. E. Gray, 1831, Proc. Zool. Soc. London, 1831: 106. Type species: *Platysternon megacephalum* J. E. Gray, 1831, by monotypy.

NOTE: Some authorities place *Platysternon* in the family Chelydridae, which is otherwise restricted to North, Central, and South America (see E. S. Gaffney, 1975, Fieldiana: Geol., Chicago, 33: 157–178), although one extinct genus is known from the Pliocene of Asia.

Platysternon megacephalum Gray, 1831. (PLATE 17A)

Platysternon megacephalum J. E. Gray, 1831, Proc. Zool. Soc. London, 1831: 107. Type locality: China.

Platysternon megacephalum tristernalis H.-H. Schleich and U. Gruber, 1984, Spixiana, Munich, 7: 68. Type locality: Between Mung Lun (=Menglun) and Simao, east shore of Mekong River (=Lancang Jiang), southern Yunnan Prov., China.

RANGE: Southern and eastern China including Hainan and Hong Kong, westward to Yunnan. Northern Vietnam through Thailand to southern Burma.

EMYDIDAE

CHINEMYS Smith, 1931.

Chinemys M. A. Smith, 1931, Fauna Brit. India, Rept. Amphib., London, 1: 116. Type species: *Emys Reevesii* J. E.Gray, 1831, by monotypy.

Chinemys megalocephala Fang, 1934.

Chinemys megalocephala P.-W. Fang, 1934, Sinensia, Nanking, 4: 158. Type locality: Hillsides near Nanking City (=Nanjing Shi), Jiangsu Prov., China.

RANGE: Jiangsu, Hubei, and Guangxi, China.

NOTE: J. B. Iverson, C. H. Ernst, S. Gotte, and J. E. Lovich (1989, Copeia, Gainesville, 1989: 494–498) regard *Chinemys megalocephala* as a large-headed, mollusk-feeding morph of *C. reevesii*, but their sample size was small and mostly from unknown localities. Thus, we prefer to retain *C. megalocephala* until further study.

Chinemys nigricans (Gray, 1834) (PLATE 17B)

Emys nigricans J. E. Gray, 1834, Proc. Zool. Soc. London, 1834: 53. Type locality: Canton (=Guangzhou Shi) region, Guangdong Prov., China.

Chinemys nigricans: P. W. Fang, 1934, Sinensia, Nanking, 4: 151.

Geoclemys kwangtungensis C. H. Pope, 1934, Amer. Mus. Novit., New York, 691: 1. Type locality: Lofaoshan (=Mt. Luofu), Kwangtung (=Guangdong) Prov., China: 300–400 meters.

RANGE: Guangdong and Guangxi, China. Northern Vietnam?

NOTE: In much of the literature, *Chinemys nigricans* and *Mauremys mutica* (page 169) have been confused. See J. B. Iverson and W. P. McCord (1989, Amphibia-Reptilia, Leiden, 10: 23–33) for a thorough discussion, re-descriptions of the two taxa, and comments on the allocation of the name *Geoclemys kwangtungensis.*

Chinemys reevesii (Gray, 1831). (PLATE 17C)

Emys Reevesii J. E. Gray, 1831, Synops. Rept., London, 1: 73. Type locality: China (see Note).

Chinemys reevesi: M. A. Smith, 1931, Fauna Brit. India, Rept. Amphib., London: 1: 117.

Damonia unicolor J. E. Gray, 1873, Ann. Mag. Nat. Hist., London, ser. 4, 12: 78. Type locality: Shanghai, China.

Geoclemys grangeri K. P. Schmidt, 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 471. Type locality: Yenchingkao (=Yanjinggou), Wanshien (=Wan Co.), Szechwan (=Sichuan) Prov., China; 1,500 feet.

Geoclemys paracaretta T.-H. Chang, 1929, Contr. Biol. Lab. Sci. Soc. China, Nanking, ser. Zool., 5: 1. Type locality: Fuchow (=Fuzhou Shi), Fujian Prov., China.

RANGE: Throughout China except the western regions and the northeast, but including Hong Kong and Taiwan. Korea and Japan.

NOTE: Gray based his description of *Chinemys reevesii* on a drawing of a specimen sent to him by John R. Reeves, who lived in Macao and worked in Canton (=Guangzhou Shi); thus, the specimen probably originated somewhere in this part of southern China.

H.-J. Tao (1985, Jour. Taiwan Mus., Taipei, 38: 45) described *Chinemys pani* based on specimens thought to be of Pleistocene age from Tsochen, Tsai-liao-chi, Tainan County, Taiwan Province, China. Based on the description, this taxon may be synonymous with *C. reevesii.*

CISTOCLEMMYS Gray, 1863.

Cistoclemmys J. E. Gray, 1863, Proc. Zool. Soc. London, 1863: 175. Type species: *Cistoclemmys flavomarginata* J. E. Gray, 1863, by monotypy.

Cistoclemmys flavomarginata Gray, 1863. (PLATE 17D)

Cistoclemmys flavomarginata J. E. Gray, 1863, Proc. Zool. Soc. London, 1863: 175. Type locality: China and Formosa (=Taiwan Prov.) (see Note).

Cyclemys flavomarginata sinensis H.-F. Hsü, 1930, Contr. Biol. Lab. Sci. Soc. China, Nanking, ser. Zool., 6: 3. Type locality: Künshan Island (=Junshan Dao), Tungting (=Dongting) Lake, Hunan Prov., China.

RANGE: Widely separated localities in eastern, southern, and central parts of China including Hong Kong and Taiwan, northward to Henan. Japan (Ryukyu Islands).

NOTE: G. A. Boulenger (1889, Catal. Chelon. Rhynchoceph. Crocod. Brit. Mus., London: 135) noted that Gray's Formosan type was collected at Tamsuy (=Tanshui) in northwestern Taiwan. The type locality of *Cistoclemmys flavomarginata* was restricted to Tamsuy, Taiwan Province, China, by R. Mertens and H. Wermuth (1955, Zool. Jahrb., Syst., Ökol., Geogr. Tiere, Jena, 83: 347).

Cistoclemmys galbinifrons (Bourret, 1939). (PLATE 17E)

Cuora galbinifrons R. Bourret, 1939, Annexe Bull. Gén. Instruct. Publ., Hanoi, 1939(4): 6, 11. Type locality: Tam-Dao (Tonkin), Bach-Ma (Annam) and Linh-Cam (Ha-Tinh, Annam), Vietnam.

Cistoclemmys galbinifrons: R. Bour, 1980, Amphibia-Reptilia, Wiesbaden, 1: 158.

Cyclemus [sic] *flavomarginata hainanensis* Z.-X. Li, 1958, Chinese Jour. Zool., Peking, 2: 234. Type locality: Small stream of Dali (village) of Mt. Diaoluo, Lingshui Co., Hainan Island, Hainan Prov., China; 200 meters.

Cuora galbinifrons serrata J. B. Iverson and W. P. McCord, 1992, Proc. Biol. Soc. Washington, 105: 434 (see Plate 17E). Type locality: Tainhfien, 100 km east of Tungfang (=Dongfang), central Hainan Island, Hainan Prov., China (see Note).

RANGE: Hainan and Guangxi, China. Vietnam.

NOTE: We have chosen not to recognize subspecies on Hainan Island until a detailed and direct comparison of types and specimens with known localities from throughout the island can be made. Li's *hainanensis* is based on material from southeastern Hainan, but Iverson and McCord (1992: 437) state that similar animals also exist in western Hainan. The distribution of *hainanensis* is complicated by the fact that the type series of *C. galbinifrons serrata* was reportedly from central Hainan; however, the exact provenance of Iverson and McCord's specimens is unknown, since they were purchased from local people.

CUORA Gray, 1855.

Cuora J. E. Gray, 1855, Catal. Shield Rept. Coll. Brit. Mus., London, 1: 41. Type species: *Testudo amboinensis* F.-M. Daudin, "X" (1801), by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 503).

Cuora aurocapitata Luo and Zong, 1988. (PLATE 17F)

Cuora aurocapitata B.-T. Luo and Y. Zong, 1988, Acta Herpetol. Sinica, Chengdu, [new ser.], 1988(1): 13. Type locality: Nanling Co., Anhui Prov., China.

RANGE: Southern Anhui, China.

Cuora mccordi Ernst, 1988. (PLATE 17G)

Cuora mccordi C. H. Ernst, 1988, Proc. Biol. Soc. Washington, 101: 466. Type locality: Highland near Paise (=Bose Co.), Guangxi "Prov." (=Guangxi Zhuang Autonomous Region), China (see Note).

RANGE: Known only from the type locality.

NOTE: The holotype was obtained from local people in Bose, thus its exact provenance is unknown; W. P. McCord and J. B. Iverson (1991, Herpetologica, Austin, 47: 414) stated that it was collected nearby "in Yunnan Province, west of Paise, Guangxi Province [=Guangxi Zhuang Autonomous Region]."

Cuora pani Song, 1984. (PLATE 17H)

Cuora pani M.-T. Song, 1984, Acta Zootaxon. Sinica, Beijing, 9: 330. Type locality: Xü Jia Ba, Pingli Co., Shaanxi Prov., China; 420 meters.

Cuora chriskarannarum C. H. Ernst and W. P. McCord, 1987, Proc. Biol. Soc. Washington, 100: 624. Type locality: Ta Lau Shan, Yunnan Prov., China (see Plate 17H).

RANGE: Southern Shaanxi and Yunnan, China.

Cuora trifasciata (Bell, 1825). (PLATE 18A)

Sternothærus trifasciatus T. Bell, 1825, Zool. Jour., London, 2: 305. Type locality: Not given.

Cuora trifasciata: J. E. Gray, 1855, Catal. Shield Rept. Coll. Brit. Mus., London, 1: 42.

RANGE: Fujian, Guangdong, Hong Kong, Hainan, and Guangxi, China. Northern Vietnam.

Cuora yunnanensis (Boulenger, 1906).

Cyclemys yunnanensis G. A. Boulenger, 1906, Ann. Mag. Nat. Hist., London, ser. 7, 17: 567. Type locality: Yunnan fu (=Kunming Shi) and Tongchuan fu (=Dongchuan Shi), Yunnan Prov., China.

Cuora yunnanensis: M. A. Smith, 1931, Fauna Brit. India, Rept. Amphib., London, 1: 88.

RANGE: Yunnan, China.

Cuora zhoui Zhao, 1990.

Cuora zhoui E.-M. Zhao, 1990, *in* E.-M. Zhao, T. Zhou, and P. Ye, *in* E.-M. Zhao (ed.), From Water onto Land, Beijing: 213. Type locality: Vicinity of Nanning, Guangxi Zhuang Autonomous Region, China (see Note).

Cuora pallidicephala W. P. McCord and J. B. Iverson, 1991, Herpetologica, Austin, 47: 414. Type locality: Near Wuting (=Wuding Xian) or Yuanmow (=Yuanmou Co.), Yunnan Prov., China (see Note).

RANGE: Southern Guangxi and Yunnan, China.

NOTE: The holotype of *Cuora zhoui* was obtained at the food market in Nanning, thus its exact provenance is unknown. Likewise, the type locality of *C. pallidicephala* is in doubt since the type was purchased from local people.

CYCLEMYS Bell, 1834.

Cyclemys T. Bell, 1834, Proc. Zool. Soc. London, 1834: 17. Type species: *Cyclemys orbiculata* T. Bell, 1834 (=*Emys dentata* J. E. Gray, 1831), by monotypy.

Cyclemys dentata Gray, 1831. (PLATE 18B)

Emys dentata J. E. Gray, 1831, Synops. Rept. I(Cataphracta), London: 20 and unnumbered errata page preceding page 79 (see Note). Type locality: Bengal and Java.

Cyclemys dentata: J. E. Gray, 1855, Catal. Shield Rept. Coll. Brit. Mus., I(Testudinata), London: 42.

Cyclemys tiannanensis Z.-T. Kou, 1989, *in* M. Matsui, T. Hikida, and R. C. Goris (eds.), Current Herpetol. East Asia, Kyoto: 193. Type locality: Nanliang, Mengla Co., Xishuangbanna of Yunnan Prov., China; 620 meters (see Note).

RANGE: Yunnan and Guangxi, China. Eastern India to Indochina, south through Malay Peninsula and Indonesia to Bali; Borneo and Philippines.

NOTE: J. E. Gray (1831) described this species on page 20 of his book as "*Emys Dhor,*" but the name was corrected by him to *E. dentata* on the errata page in the same book.

Kou's new species, *Cyclemys tiannanensis,* is based on a single individual with an abnormal number of marginal scutes, which is a common developmental anomaly in turtles; for discussion, see I. Das (1991, Colour Guide Turt. Tort. Indian Subcont., Portishead: 80).

Recently, some authors have recognized *Geoemyda tcheponensis* R. Bourret, 1939 (Annexe Bull. Gén. Instr. Publique, Hanoi, 1939(6): 7; type locality: Sé-Bang-Hien, central Annam mountain chain [Laos]) as a second species of *Cyclemys*, with a range extending from Thailand to Vietnam (J. B. Iverson, 1992, Revised Checklist Distrib. Maps Turt. World, Richmond: 120). One of the key characteristics of *C. tcheponensis*—stripes that extend from the neck forward to the orbit and sometimes to the snout—is occasionally present on Chinese specimens, but we take a conservative position in recognizing a single Chinese species of *Cyclemys*, pending further study.

GEOEMYDA Gray, 1834.

Geoemyda J. E. Gray, 1834, Proc. Zool. Soc. London, 1834: 100. Type species: *Testudo Spengleri* J. F. Gmelin, 1789, by subsequent designation (W. A. Lindholm, 1929, Zool. Anz., Leipzig, 81: 282).

Geoemyda spengleri (Gmelin, 1789). (PLATE 18C)

Testudo Spengleri J. F. Gmelin, 1789, Carol. Linné Syst. Nat., ed. 13, Leipzig, 1(3): 1043. Type locality: Not given (see Note).

Geoemyda Spengleri: J. E. Gray, 1834, Proc. Zool. Soc. London, 1834: 100.

Geoemyda spengleri sinensis T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 146. Type locality: Loshiang (=Luoxiang) and Kutchen (=Guchen), Yaoshan (=Dayao Shan), Guangxi Zhuang Autonomous Region, China.

RANGE: Guangdong, Hainan, Guangxi, and Hunan, China. Vietnam. Reports for Indonesia (Sumatra, Borneo) and the Philippines are in error; Japan is now excluded (see Note).

NOTE: Gmelin based his name, *Testudo spengleri*, on J. J. Walbaum's (1785, Schrift. Berliner Gesellsch. Naturforsch. Freunde, Berlin, 6: 122–131) detailed description which, although no binomial Latin name was proposed, gave the type locality as "vermuthlich . . . Öst-indien" (1785: 129).

Y. Yasukawa, H. Ota, and T. Hikida (1992, Japan. Jour. Herpetol., Kyoto, 14: 143–159) have recently demonstrated that the Japanese populations (Ryukyu Islands) previously referred to as *Geoemyda spengleri* are more properly treated as a separate species (*G. japonica* T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 148; type locality: Japan and other Pacific islands).

MAUREMYS Gray, 1870.

Mauremys J. E. Gray, "1869" (1870), Proc. Zool. Soc. London, 1869: 500. Type species: *Emys fuliginosus* J. E. Gray, 1860, and *Mauremys laniaria* J. E. Gray "1869" (1870) (both names =*Emys leprosa* A. F. Schweigger, 1812) of the Mediterranean region, by monotypy.

Mauremys iversoni Pritchard and McCord, 1991. (PLATE 18D)

Mauremys iversoni P. C. H. Pritchard and W. P. McCord, 1991, Herpetologica, Austin, 47: 140. Type locality: Vicinity of Nanping, Fujian Province, China; about 500 meters.

Clemmys guangxiensis J.-Q. Cen (as "Qin"), "1991" (1992), *in* Y.-W. Qian, E.-M. Zhao, and K.-T. Zhao (eds.), Animal Sci. Res.—Vol. Celebrate Prof. M. Chang, Beijing: 60 (see Note). Type locality: Vicinity of Nanning, Guangxi Zhuang Autonomous Region, China (see Note).

RANGE: Fujian and possibly Guizhou, China (see Note).

NOTE: Oscar Shiu is stated to be the collector of the types of *Mauremys iversoni*, but it is generally known that he purchases specimens from local people, which may account for the lack of a specific type locality. Indeed, Pritchard and McCord (1991: 145) raise doubt about the locality data for the Shiu specimens from Guizhou reported in the same paper.

The synonymy of *Clemmys guangxiensis* with *M. iversoni* is on the advice of J. B. Iverson (pers. comm. to Kraig Adler, 2 February 1993). The types of *C. guangxiensis* were purchased from local people, so the exact type locality is not known.

Mauremys mutica (Cantor, 1842). (PLATE 18E)

Emys muticus T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 482. Type locality: Chusan (=Zhoushan) Island, Zhejiang Prov., China.

Mauremys mutica: S. B. McDowell, 1964, Proc. Zool. Soc. London, 143: 269.

Clemmys schmackeri O. Boettger, 1894, Ber. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 1894: 129. Type locality: China (probably Hainan Island).

RANGE: Eastern and southern China including Hainan and Taiwan, westward to Yunnan. Northern Vietnam and Japan (Ryukyu Islands; introduced in Kyoto Prefecture).

NOTE: In much of the literature, *Mauremys mutica* and *Chinemys nigricans* (page 165) have been confused. See J. B. Iverson and W. P. McCord (1989, Amphibia-Reptilia, Leiden, 10: 23–33) for a thorough discussion and re-descriptions of these two taxa.

OCADIA Gray, 1870.

Ocadia J. E. Gray, 1870, Suppl. Catal. Shield Rept. Coll. Brit. Mus., London, 1: 35. Type species: *Emys Sinensis* J. E. Gray, 1834, by monotypy.

Ocadia philippeni McCord and Iverson, 1992. (PLATE 18F)

Ocadia philippeni W. P. McCord and J. B. Iverson, 1992, Proc. Biol. Soc. Washington, 105: 13. Type locality: Near Kancheng (=Gancheng) (18°51'N, 108°37'E), "48 km from Tungfang" (=Dongfang), western Hainan Island, Hainan Prov., China (see Note).

RANGE: Known only from the type locality.

NOTE: The type series was purchased from local people, so the exact type locality is not known. Gancheng is 48 km south of Dongfang.

Ocadia sinensis (Gray, 1834). (PLATE 18G)

Emys Sinensis J. E. Gray, 1834, Proc. Zool. Soc. London, 1834: 53. Type locality: China.

Ocadia sinensis: J. E. Gray, 1870, Suppl. Catal. Shield Rept. Coll. Brit. Mus., London, 1: 35.

Emys Bennettii J. E. Gray, 1844, Catal. Tort. Crocod. Amphisb. Coll. Brit. Mus., London: 21. Type locality: "North America?" (in error; see Note).

Testudo anyangensis C. Ping, 1930, Bull. Fan Mem. Inst. Biol., Peiping, 1: 217. Type locality: Annyang (=Anyang Shi) Hsien archeological ruins, Honan (=Henan) Prov., China (Subrecent material from Ying Dynasty).

RANGE: Southeastern China including Hainan, Hong Kong, and Taiwan. Vietnam.

NOTE: G. A. Boulenger (1889, Catal. Chelon. Rhynchoceph. Crocod. Brit. Mus., London: 87) stated that Gray's type of *Ocadia sinensis* was collected by John R. Reeves in "S. China"; it is known that Reeves lived in Macao and worked there and in Canton (=Guangzhou Shi), so the type was probably from this part of southern China. The types of *Emys bennettii* likely originated in China, given the known range of this species.

H.-J. Tao (1988, Acta Zool. Taiwanica, Taipei, 2: 233) described *Ocadia sinensis changwui* based on specimens dredged from a depth of about 150–200 meters in the Penghu (Pescadores) Channel, Taiwan Strait, Taiwan Province, China; the material is thought to be of late Pleistocene age. Based on the description, this taxon may be synonymous with typical *O. sinensis*.

PYXIDEA Gray, 1863.

Pyxidea J. E. Gray, 1863, Proc. Zool. Soc., London, 1863: 175. Type species: *Cyclemys Mouhotii* J. E. Gray, 1862, by monotypy.

Pyxidea mouhotii (Gray, 1862). (PLATE 18H)

Cyclemys Mouhotii J. E. Gray, 1862, Ann. Mag. Nat. Hist., London, ser. 3, 10: 157. Type locality: Lao Mountains, in Siam (see Note).

Pyxidea mouhotii: J. E. Gray, 1863, Proc. Zool. Soc. London, 1863: 175.

RANGE: South China including Hainan. Northern Indochina through Thailand to northern Burma; India (Assam).

NOTE: The type locality is sometimes given as "Laos," but Gray specifically wrote Siam. Henri Mouhot, the collector, is known to have traveled in Siam, Cambodia, and Laos during 1858–60. A. Günther (1864, Rept. Brit. India, London: 16), who had worked up most of Mouhot's Indochinese materials, claimed that the type locality is "Lao Mountains in Cochinchina" (=Vietnam). F. W. King and R. L. Burke (1989, Crocod. Tuatara Turt. Spec. World, Washington: 46) gave the type locality as "presumably the Luang Prabang mountain range on the border between Thailand and Laos," on what basis we do not know.

SACALIA Gray, 1870.

Sacalia J. E. Gray, 1870, Suppl. Catal. Shield Rept. Coll. Brit. Mus., London, 1: 35. Type species: *Cistuda Bealei* J. E. Gray, 1831, by monotypy.

Sacalia bealei (Gray, 1831). (PLATE 19A)

Cistuda Bealei J. E. Gray, 1831, Synops. Rept., London, 1: 71. Type locality: China.

Sacalia Bealeii: J. E. Gray, 1870, Suppl. Catal. Shield Rept. Coll. Brit. Mus., London, 1: 35.

RANGE: Southeastern China including Hong Kong and Hainan, westward to Guizhou.

Sacalia pseudocellata Iverson and McCord, 1992. (PLATE 19B)

Sacalia pseudocellata J. B. Iverson and W. P. McCord, 1992, Proc. Biol. Soc. Washington, 105:

426. Type locality: Between Tungfang (=Dongfang) and Kancheng (=Gancheng), western Hainan Island, Hainan Prov., China (see Note).

RANGE: Known only from the type locality.

NOTE: The type series was purchased from local people, so the exact localities are not known.

Sacalia quadriocellata (Siebenrock, 1903). (PLATE 19C)

Clemmys bealii var. *quadriocellata* F. Siebenrock, 1903, Sitzungsber. Kaiserl. Akad. Wissensch. Wien, Vienna, 112: 336. Type locality: Annam (=central Vietnam) (see Note).

Clemmys quadriocellata: C. H. Pope, 1935, Rept. China, New York: 41.

Sacalia quadriocellata: P. C. H. Pritchard, 1979, Encycloped. Turtles, Neptune, New Jersey: 190.

Clemmys bealii quadriocellata Z.-X. Li, 1958, Chinese Jour. Zool., Peking, 2: 235. Type locality: Small stream of Dali (village) of Mt. Diaoluo, Lingshui Co., Hainan Island, Hainan Prov., China (name preoccupied by *Clemmys bealii* var. *quadriocellata* F. Siebenrock, 1903).

Clemmys beali insulensis K. Adler, 1962, Nat. Hist. Bull. Siam Soc., Bangkok, 20: 135 (substitute name for *Clemmys bealii quadriocellata* Z.-X. Li, 1958, preoccupied).

RANGE: Southeastern China, including Hainan. Vietnam.

NOTE: F. Siebenrock (1909, Zool. Jahrb., Jena, suppl. 10(3): 482) gave the locality for the type of *Sacalia quadriocellata* as "Annam, Phuc-Son."

TESTUDINIDAE

INDOTESTUDO Lindholm, 1929.

Indotestudo W. A. Lindholm, 1929, Zool. Anz., Leipzig, 81: 285. Type species: *Testudo elongata* E. Blyth, 1853, by monotypy.

Indotestudo elongata (Blyth, 1853). (PLATE 19D)

Testudo elongata E. Blyth, 1853, Jour. Asiatic Soc. Bengal, Calcutta, 22: 639. Type locality: Arakan, Burma.

Indotestudo elongata: R. Bour, 1980, Bull. Mus. Natl. Hist. Nat., Paris, ser. 4, 2: 545.

RANGE: Guangxi, China. North-central India and Nepal through Bangladesh and Burma to Indochina and peninsular Malaysia.

MANOURIA Gray, 1854.

Manouria J. E. Gray, "1852" (1854), Proc. Zool. Soc. London, 1852: 133. Type species: *Manouria fusca* J. E. Gray, "1852" (1854) (=*Testudo emys* H. Schlegel and S. Müller, 1840) of southeast Asia and Indonesia, by monotypy (see Note).

NOTE: For the correct date of publication of *Testudo emys*, see the bibliography, page 398, under Schlegel and Müller.

Manouria impressa (Günther, 1882). (PLATE 19E)

Geoemyda impressa A. Günther, 1882, Proc. Zool. Soc. London, 1882: 343. Type locality: Siam (=Thailand).

Manouria impressa: R. Bour, 1980, Bull. Mus. Natl. Hist. Nat., Paris, ser. 4, 2: 545.

RANGE: Hainan, Guangxi, Yunnan, and Hunan, China. Burma through Vietnam, south to peninsular Malaysia.

TESTUDO Linnaeus, 1758.

Testudo C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 197. Type species: *Testudo graeca* C. Linnaeus, 1758, of the Mediterranean region, by subsequent designation (T. Bell, 1828, Zool. Jour., London, 3: 514).

Testudo horsfieldii Gray, 1844. (PLATE 19F)

Testudo Horsfieldii J. E. Gray, 1844, Catal. Tort. Crocod. Amphisb. Coll. Brit. Mus., London: 7. Type locality: "India, Affghanistan [*sic*]" (see Note).

RANGE: Western Xinjiang, China. Southwestern Asia (Caspian Sea region) eastward through Kazakhstan (to vicinity of Lake Zaysan), southward to northern Iran, Afghanistan, and Pakistan (Baluchistan).

NOTE: J. E. Gray (1844: vi) further stated that the type of *Testudo horsfieldii* was from Cabul (=Kabul, Afghanistan).

CHELONIIDAE

CARETTA Rafinesque, 1814.

Caretta C. S. Rafinesque, 1814, Specchio Sci. Giorn. Encicloped. Sicilia, Palermo, 2: 66. Type species: *Caretta nasuta* C. S. Rafinesque, 1814 (=*Testudo Caretta* C. Linnaeus, 1758), by monotypy.

Caretta caretta (Linnaeus, 1758). (PLATE 19G)

Testudo Caretta C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 197. Type locality: "Insulas Americanas" (see Note).

Caretta caretta: L. Stejneger, 1904, Ann. Rep. U.S. Natl. Mus., Washington, 1902: 715.

RANGE: Coastal regions of South China Sea, East China Sea, and Yellow Sea, including the shores of Taiwan and Hainan. Temperate and tropical seas of the world, with occasional specimens as far north as the coast of Siberian Russia (Vladivostok region).

NOTE: The type locality was restricted by H. M. Smith and E. H. Taylor (1950, Bull. U.S. Natl. Mus., Washington, 199: 16) to "Bermuda Islands" and by K. P. Schmidt (1953, Check List North Amer. Amphib. Rept., Chicago: 107) to "Bimini, British Bahamas." L. Wallin (1985, Zool. Jour. Linnean Soc., London, 85: 121–130) has shown that Linnaeus's description of *Chelonia mydas* is based mostly on specimens of *Caretta caretta* and that no type specimen of *C. caretta* exists. Pending further study of this problem, we continue to employ the traditional concepts of these two species.

CHELONIA Brongniart, 1800.

Chelonia A. Brongniart, "8" (1800), Bull. Sci., Soc. Philomath., Paris, [ser. 1], 2: 89. Type species: *Testudo Mydas* C. Linnaeus, 1758, by subsequent designation (T. Bell, 1828, Zool. Jour., London, 3: 516).

Chelonia mydas (Linnaeus, 1758). (PLATE 19H)

Testudo Mydas C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 197. Type locality: "Insulam Pelagi; insulam Adscensionis" (=Ascension Island, South Atlantic Ocean) (see Note under *Caretta caretta* and below).

Chelonia Mydas: A. F. Schweigger, 1812, Königsberg. Arch. Naturwissensch. Mathemat., Königsberg (=Kaliningrad), 1: 291.

RANGE: Coastal regions of South China Sea and East China Sea, including the shores of Taiwan, Hainan, and Xisha Islands (Paracels). All temperate and tropical seas of the world.

NOTE: R. Mertens and L. Müller (1928, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 41: 23) restricted the type locality to Ascension Island.

ERETMOCHELYS Fitzinger, 1843.

Eretmochelys L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 30. Type species: *Testudo imbricata* C. Linnaeus, 1766, by original designation.

Eretmochelys imbricata (Linnaeus, 1766). (PLATE 20A)

Testudo imbricata C. Linnaeus, 1766, Syst. Nat., ed. 12, Stockholm, 1: 350. Type locality: "Mari Americano, Asiatico" (see Note).

Eretmochelys imbricata: L. Agassiz, 1857, Contrib. Nat. Hist. U.S.A., Boston, 1: 381.

RANGE: Coastal regions of South China Sea and East China Sea, including the shores of Taiwan, Hainan, and Xisha Islands (Paracels). Tropical and occasionally subtropical seas of the world.

NOTE: The type locality was restricted by H. M. Smith and E. H. Taylor (1950, Bull. U.S. Natl. Mus., Washington, 199: 17) to "Bermuda Islands" and by K. P. Schmidt (1953, Check List North Amer. Amphib. Rept., Chicago: 106) to "Belize, British Honduras."

LEPIDOCHELYS Fitzinger, 1843.

Lepidochelys L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 30. Type species: *Chelonia olivacea* J. F. Eschscholtz, 1829, by original designation.

Lepidochelys olivacea (Eschscholtz, 1829). (PLATE 20B)

Chelonia olivacea J. F. Eschscholtz, 1829, Zool. Atlas, Berlin, 1: 3. Type locality: "Bai von Manilla" (=Manila Bay, Philippines).

Lepidochelys olivacea: C. Girard, 1858, U.S. Explor. Exped. Wilkes, Philadelphia, 20: 435.

RANGE: Coastal regions of South China Sea and East China Sea, including the shores of Hainan and Taiwan. Pacific and Indian Oceans; also Atlantic Ocean of West Africa and South America.

DERMOCHELYIDAE

DERMOCHELYS Blainville, 1816.

Dermochelys H.-M. D. de Blainville, 1816, Bull. Sci., Soc. Philomath., Paris, ser. 3, 3: 111 (footnote 2). Type species: *Testudo coriacea* D. Vandelli, 1761, by monotypy.

Dermochelys coriacea (Vandelli, 1761). (PLATE 20C)

Testudo coriacea D. Vandelli, 1761, Epist. Holoth. Testud. Coriac. Carol. Linn., Padua: 4, 7. Type locality: "Maris Tyrrheni oram in agro Laurentiano," Italy (see Note).

Dermochelys coriacea: G. A. Boulenger, 1889, Catal. Chelon. Rhynchoceph. Crocod. Brit. Mus., London: 10.

RANGE: Coastal regions of South China Sea, East China Sea, and Yellow Sea, including the shores of Hainan and Taiwan. All tropical to temperate oceans of the world, with occasional specimens as far north as the coast of Siberian Russia (Primorskiy Territory and Sakhalin Island).

NOTE: Authorship of the name *Dermochelys coriacea* traditionally has been accorded to C. Linnaeus (1766, Syst. Nat., ed. 12, Stockholm, 1: 350) who, in fact, credited D. Vandelli with the name. R. Bour and A. Dubois (1983, Jour. Herpetol., Athens [Ohio], 17: 356) showed that Vandelli is the correct author (see also H. M. Smith and A. G. J. Rhodin, 1986, Jour. Herpetol., Athens [Ohio], 20: 450–451 for comments). For correct interpretation of the type locality, see Bour and Dubois (1983: 358–359), who state that it is Laurentum, between Lido di Ostia and Tor Paterno, shore of the Tyrrhenian Sea, Italy.

TRIONYCHIDAE

PALEA Meylan, 1987.

Palea P. A. Meylan, 1987, Bull. Amer. Mus. Nat. Hist., New York, 186: 77, 94. Type species: *Trionyx steindachneri* F. Siebenrock, 1906, by original designation.

Palea steindachneri (Siebenrock, 1906). (PLATE 20D)

Trionyx steindachneri F. Siebenrock, 1906, Zool. Anz., Leipzig, 30: 579. Type locality: Kau-Kong (=Gaugong) River, Hainan Island, Hainan Prov., China.

Palea steindachneri: P. A. Meylan, 1987, Bull. Amer. Mus. Nat. Hist., New York, 186: 94.

RANGE: Guangdong, Hong Kong, Hainan, and Guangxi westward to Yunnan and Guizhou, China (see Note). Vietnam; introduced into USA (Hawaiian Islands) and Mauritius (Mascarene Islands, Indian Ocean).

NOTE: M.-T. Song (1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(4): 69) recorded a specimen, supposedly of this species, from Shaanxi Province.

PELOCHELYS Gray, 1864.

Pelochelys J. E. Gray, 1864, Proc. Zool. Soc. London, 1864: 89. Type species: *Pelochelys cantorii* J. E. Gray, 1864 (=*Trionyx* (*Gymnopus*) *Bibroni* R. Owen, 1853), by subsequent designation (A. Günther, "1864" [1865], Rec. Zool. Lit. [=Zool. Rec.], London, 1: 108).

Pelochelys bibroni (Owen, 1853). (PLATE 20E)

Trionyx (*Gymnopus*) *Bibroni* R. Owen, 1853, Descr. Catal. Osteol. Ser. Mus. Royal Coll. Surg. Engl., London, 1: 185, 207. Type locality: "Australia," probably in error (see Note).

Pelochelys bibroni: M. A. Smith, 1930, Bull. Raffles Mus., Singapore, 3: 3.

Pelochelys Poljakowii A. Strauch, 1890, Mém. Acad. Impér. Sci. St. Pétersbourg, ser. 7, 38: 118. Type locality: Fu-tschau (=Fuzhou Shi), Fujian Prov., China.

RANGE: Southern China including Zhejiang and Fujian in the east to Yunnan in the west, south to Hainan. Southern and eastern India through Burma to Indochina, south to peninsular Malaysia; Indonesia (Sumatra, Java, Borneo), the Philippines, and New Guinea.

NOTE: R. Owen (1853: 207) gave the name as "*Trionyx Bibronii*" [*sic*], but his earlier description in the same book was more detailed and also gave a geographical provenance; thus we utilize the form of the name on page 185 that ends in one "i."

PELODISCUS Fitzinger, 1835.

Trionyx (Pelodiscus) L. J. Fitzinger, "1836" (1835), Ann. Wien. Naturgesch. Mus., Vienna, 1: 120, 127. Type species: *Trionyx (Aspidonectes) sinensis* A. F. A. Wiegmann, 1834, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna: 30).

Pelodiscus: H. Wermuth and R. Mertens, 1977, Das Tierreich, Berlin, 100: 105.

Pelodiscus sinensis (Wiegmann, 1834). (PLATE 20F–G)

Testudo rostrata C. P. Thunberg, 1787, Mus. Nat. Acad. Upsal., Uppsala, 2: 21. Type locality: Probably China (see Note).

Trionyx (Aspidonectes) sinensis A. F. A. Wiegmann, 1834, Nova Acta Acad. Leopold. Carol., Halle, 17: 189. Type locality: Rice field on a small island, Tiger River (=Xi Jiang?), near Macao (=Aomen), China (see Note).

Pelodiscus sinensis: H. Wermuth and R. Mertens, 1977, Das Tierreich, Berlin, 100: 105.

Trionyx tuberculatus T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 482. Type locality: Chusan (=Zhoushan Island, Zhejiang Prov., China).

Tyrse perocellata J. E. Gray, 1844, Catal. Tort. Croc. Amphisb. Coll. Brit. Mus., London: 48. Type locality: Canton (=Guangzhou Shi), Guangdong Prov., China.

Trionyx Maackii J. F. Brandt, "1858" (1857), Bull. Acad. Impér. Sci., St. Pétersbourg, classe Phys.-Mathemat., 16: col. 110. Type locality: Upper Amur (=Heilong Jiang), Sungari (=Songhua Jiang), and Ussuri (=Wusuli Jiang) rivers, Heilongjiang Prov., China (see Note).

Trionyx Schlegelii J. F. Brandt, "1858" (1857), Bull. Acad. Impér. Sci., St. Pétersbourg, classe Phys.-Mathemat., 16: col. 111. Type locality: "Pekingo" (=Beijing, China) (see Note).

Landemania irrorata J. E. Gray, 1869, Proc. Zool. Soc. London, 1869: 216. Type locality: Shanghai, China.

Gymnopus simonii A.-H.-A. Duméril *in* A. David, 1875, Jour. Trois. Voy. Emp. Chinois, Paris, 2: 214. Type locality: Tsitou (=Xitou), Kiangsi (=Jiangxi Prov.), China (*nomen nudum*).

Psilognathus lævis P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 24. Type locality: Mountain stream south of Ning-kouo-fou (=Ningguo Co.), Anhui Prov., China.

Temnognathus mordax P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 26. Type locality: Vicinity of Chang-hai (=Shanghai), China.

Gomphopelta officinæ P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 27. Type locality: Houai (=Huai River), Ho-nan (=Henan Prov.), and Lac Mé-k'eng, Anhui or Jiangsu Prov., China.

Coelognathus novem-costatus P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 29. Type locality: Eastern extremity of Tch'ao (=Lake Chao), Anhui Prov., China.

Tortisternum novem-costatum P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 31. Type locality: Tch'ao (=Lake Chao), Anhui Prov., China.

Ceramopelta latirostris P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 33. Type locality: Vicinity of Ngan-k'ing (=Anqing Shi), Anhui Prov., China.

Coptopelta septem-costata P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 35. Type locality: Lacs de Tong-lieou (=Dongliu), Anhui Prov., China.

Cinctisternum bicinctum P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 37. Type locality: Irrigation channel of Ngan-K'ing (=Anqing Shi), Anhui Prov., China.

Amyda schlegelii haseri P. Pavlov (as Pavlow), 1932, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 13: 27. Type locality: Tzu ya ho River (=Ziya He) near Sienhien [*sic*] (=Xian Co.), central Chili (=Hebei Prov.), China (see Pavlov, 1932: 34).

Amyda schlegelii licenti P. Pavlov (as Pavlow), 1932, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 13: 28. Type locality: Tientsin (=Tianjin), China.

Amyda Schlegelii var. *Laoshanica* P. Pavlov, 1933, Publ. Mus. Hoang ho Pai ho Tien Tsin, Tianjin, 23: 3. Type locality: Chantong, Laoshan, near Tsingtao (=Qingdao Shi), Shandong Prov., China.

RANGE: Widely distributed over China including Taiwan, Hong Kong, and Hainan, absent only from Xinjiang, Qinghai, Ningxia, and Xizang (Tibet). Russia (Amur and Ussuri river basins), Korea, Japan, and northern Vietnam; introduced into Mariana Islands (Guam) and the USA (Hawaiian Islands).

NOTE: Thunberg's *Testudo rostrata* is an older name for this species (for discussion, see R. G. Webb, 1985, Herpetologica, Lawrence, 41: 84–88); however, the International Commission (1991, Bull. Zool. Nomen., London, 48: 276) has conserved the name *Trionyx sinensis*. Wiegmann's type of *Pelodiscus sinensis* was probably collected in Guangdong Province, on an island in one of the mouths of the Xi Jiang near Macao. Brandt's descriptions of *T. maackii* and *T. Schlegelii* were reprinted in *Mélanges Biologiques de l'Académie des Sciences de St.-Pétersbourg* (volume 2: 609–610, 1857), a reference that is often cited as the original description; a note at the bottom of page 610 indicates that the *Bulletin* version appeared first.

C. H. Pope (1935, Rept. China, New York: 60) and other authors have erroneously used the trinomen, "*Trionyx sinensis cyphus*" T. Vogt (1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 136), which was based on abnormal specimens of *P. sinensis* from between Samsöi (=Sanshui Co.) and Siu-hing (=Zhaoqing), and Canton (=Guangzhou), Guangdong Province, China (according to R. Mell, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 110). The form of the name used by Vogt ("*Trionyx sinensis* Wiegm. *n. monstr. cyphus*" [=abnormal humpback]) shows that he did not intend for it to have nomenclatorial standing; all of Vogt's newly described varieties in the same paper are indicated as "var. nov."

It is still unclear how many species of trionychid turtles exist in northeastern China. V. M. Chkhikvadze (1987, Bull. Acad. Sci. Georgian SSR, Tbilisi, 128: 609–611) resurrected the name "*Trionyx maaki*" [sic] (=*maackii*) for the populations in northeastern China and adjacent Korea and Russia (see Plate 20G), but since no comprehensive study of variation in this region has yet been undertaken, we take a conservative position.

RAFETUS Gray, 1864.

Rafetus J. E. Gray, 1864, Proc. Zool. Soc. London, 1864: 81. Type species: *Testudo euphratica* F.-M. Daudin, "X" (1801) of the Middle East, by monotypy.

Rafetus swinhoei (Gray, 1873). (PLATE 20H–I)

Oscaria Swinhoei J. E. Gray, 1873, Ann. Mag. Nat. Hist., London, ser. 4, 12: 157. Type locality: Neighborhood of Shanghai, China.

Rafetus swinhoei: P. A. Meylan, 1987, Bull. Amer. Mus. Nat. Hist., New York, 186: 91.

Yuen leprosus P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 20. Type locality: Houang-p'ou (=Huangpu Jiang), near Shanghai, China.

Yuen maculatus P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 22. Type locality: Houang-p'ou (=Huangpu Jiang), near Shanghai, China.

Yuen elegans P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 23. Type locality: Houang-p'ou (=Huangpu Jiang), near Shanghai, China.

Yuen viridis P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 23. Type locality: Grand Lac (=Tai Hu), near Sou-tcheou (=Suzhou Shi), Jiangsu Prov., China.

Yuen pallens P.-M. Heude, 1880, Mém. Hist. Nat. Emp. Chin., Shanghai, [1]: 23. Type locality: Grand Lac (=Tai Hu), near Sou-tcheou (=Suzhou Shi), Jiangsu Prov., China.

Trionyx swinhonis G. A. Boulenger, 1889, Catal. Chelon. Rhynchoceph. Croc. Brit. Mus., London: 257 (unjustified emendation for *Oscaria Swinhoei* Gray).

Pelochelys taihuensis M.-H. Zhang, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(4): 71. Type locality: Luojiajiao Relics, Tongxiang Co., Zhejiang Prov., China (see Note).

?*Trionyx liupani* H.-J. Tao, 1986, Jour. Taiwan Mus., Taipei, 39: 28. Type locality: Penghu (Pescadores) Channel, Taiwan Strait, Taiwan Prov., China; depth 150–200 meters (see Note).

RANGE: Southeastern Yunnan, Shanghai, northern Zhejiang, and southern Jiangsu, China; fossil record from Taiwan. Northern Vietnam.

NOTE: Zhang's species, *Pelochelys taihuensis*, was described from subfossil material obtained at an archeological site. Tao's species, *Trionyx liupani*, which is tentatively referred to *Rafetus swinhoei*, is based on materials thought to be of late Pleistocene age, dredged from bottom sediments in the Penghu Channel.

LACERTILIA*

GEKKONIDAE

ALSOPHYLAX Fitzinger, 1843.

Alsophylax L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 18, 90. Type species: *Lacerta pipiens* P. S. Pallas, "1811–1831" (1827), by original designation and monotypy.

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* "*Sampoderma allergorhaihorhai*" C. M. Bogert and R. Martín del Campo, 1956 (Bull. Amer. Mus. Nat. Hist., New York, 109: 208; type locality: Gobi [Desert], China), a supposedly poisonous species distantly related to the American *Heloderma* according to Bogert and Martín del Campo, has no standing under the "Code" (1985, Article 1), since it is a mythical species that is based on a man-made object.

Alsophylax pipiens (Pallas, 1827).

Lacerta pipiens P. S. Pallas, "1811–1831" (1827), Zoogr. Rosso-Asiat., St.-Petersburg, 3: 27. Type locality: Mt. Bogdo, Caspian Desert (see Note).

Alsophylax pipiens: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 19.

RANGE: Northwestern China. Kazakhstan (Caspian Sea to Lake Zaysan) and Mongolia, south to Uzbekistan, northern Turkmenistan, and Afghanistan.

NOTE: N. N. Szczerbak and M. L. Golubev (1986, Gecko Fauna USSR Adjac. Countries, Kiev: 58, 65) mapped the type locality to a site on the border of Russia and Kazakhstan just north of Astrakhan'.

Alsophylax przewalskii Strauch, 1887. (PLATE 21A)

Alsophylax przewalskii A. Strauch, 1887, Mém. Acad. Impér. Sci. St.-Pétersbourg, ser. 7, 35(2): 55. Type locality: Lower Tarim River, Chami (=Hami Shi) Oasis, Tschertschen (=Qiemo Co.) Oasis, Tschertschen-Darja, and Lob-Nor (=Lop Nur Lake), Xinjiang Uygur Autonomous Region, China; 2,500 feet (Tarim River) (see Note).

Gymnodactylus microtis W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 44(2): 193. Type locality: Eastern Turkestán (=southern Xinjiang Uygur Autonomous Region), China.

RANGE: Xinjiang, China.

NOTE: The type locality of *Alsophylax przewalskii* has been restricted to the Lower Tarim River (H. Wermuth, 1965, Das Tierreich, Berlin, 80: 6).

COSYMBOTUS Fitzinger, 1843.

Cosymbotus L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 19, 104. Type species: *Stellio platyurus* J. G. Schneider, 1792, by original designation.

Cosymbotus platyurus (Schneider, 1792). (PLATE 21B)

Stellio platyurus J. G. Schneider, 1792, Amphib. Physiol., Traiecti ad Viadrum (=Frankfurt am Oder), 2: 30. Type locality: Not given.

Cosymbotus platyurus: A. Loveridge, 1948, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 101: 316.

RANGE: Guangdong and southeastern Xizang (Tibet), China; an old record for Taiwan is discounted (see Note). Sri Lanka; northern India (Darjeeling, Sikkim) and Nepal; southeastern Asia (Thailand and Malaysia) through Indoaustralian Archipelago to New Guinea; Philippines.

NOTE: H. Ota (1989, *in* M. Matsui, T. Hikida, and R. C. Goris (eds.), Current Herpetol. East Asia, Kyoto: 254) noted that the only record for Taiwan was a single specimen collected in the 1860s; probably the locality was in error.

CYRTODACTYLUS Gray, 1827.

Cyrtodactylus J. E. Gray, 1827, Philos. Mag., London, ser. 2, 2: 56. Type species: *Cyrtodactylus pulchella* J. E. Gray, 1827, of eastern India to Malaysia, by monotypy.

NOTE: We do not follow N. N. Szczerbak and M. L. Golubev (1984, Vestn. Zool., Kiev, 1984(2): 52–54), who placed the Palaearctic *Cyrtodactylus* into their new genus *Tenuidactylus*,

since *Cyrtopodion* L. J. Fitzinger, 1843 (Syst. Rept., Vienna, 1: 18; type species: *Stenodactylus scaber* C. H. G. von Heyden *in* E. Rüppell, 1827, of the Middle East) is an available older name and a comprehensive allocation of species has not been done.

N. N. Szczerbak and M. L. Golubev (1986, Gecko Fauna USSR Adjac. Countries, Kiev: 200, 206) included *Cyrtodactylus stoliczkai* F. Steindachner, 1867 (type locality: near Karoo, north of Dras, Kashmir) in the Chinese fauna on the basis of a specimen supposedly collected at Yarkand (Xinjiang Uygur Autonomous Region). This specimen formed the type of *Cyrtodactylus yarkandensis* J. Anderson, 1872 (Proc. Zool. Soc. London, 1872: 381; type locality: "Yarkand" [=Shache, Xinjiang]), but W. T. Blanford (1878, Sci. Res. Second Yarkand Miss., Rept. Amphib., Calcutta: 13) stated that it was most probably collected at Ladak (in Kashmir, India) and not in China. There are no known records of *C. stoliczkai* from China.

Cyrtodactylus elongatus (Blanford, 1875). (PLATE 21C)

Gymnodactylus elongatus W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 44(2): 193. Type locality: Yangihissar (=Yengisar), eastern Turkestán (=Xinjiang Uygur Autonomous Region), China.

Cyrtodactylus elongatus: G. Underwood, 1954, Proc. Zool. Soc. London, 124: 475.

RANGE: Gansu and Xinjiang, China. Southern Mongolia.

Cyrtodactylus khasiensis (Jerdon, 1870).

Pentadactylus Khasiensis T. C. Jerdon, 1870, Proc. Asiatic Soc. Bengal, Calcutta, 1870: 75. Type locality: Khasi Hills, Assam, India.

Cyrtodactylus khasiensis: G. Underwood, 1954, Proc. Zool. Soc. London, 124: 475.

RANGE: Xizang (Tibet), China. India (Darjeeling and Assam) and Burma.

Cyrtodactylus medogensis (Zhao and Li, 1987).

Tenuidactylus medogensis E.-M. Zhao and S.-Q. Li, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6: 48. Type locality: Kabu, Medog Co., Xizang (Tibet) Autonomous Region, China; 1,250 meters.

RANGE: Known only from the type locality.

Cyrtodactylus russowii (Strauch, 1887). (PLATE 21D)

Gymnodactylus Russowii A. Strauch, 1887, Mém. Acad. Impér. Sci. St.-Pétersbourg, ser. 7, 35: 49. Type locality: Nowo Alexandrowsk, Chodshent, Mangyschlak, Mursa-Robat, Mohol-Tau, Tschimkent, Brunnen Abadchir (Mangyschlak), Tchinas, Saamin, Wüste Glodnaja, Utsch-Kurgan am Naryn, and Chark-Usjur (see Note).

Cyrtodactylus russovii: G. Underwood, 1954, Proc. Zool. Soc. London, 124: 475.

RANGE: Northern Xinjiang, China. Eastern Caucasus; eastern border of Caspian Sea eastward through Turkmenistan to eastern Kazakhstan; northern Iran.

NOTE: R. Mertens and H. Wermuth (1960, Amphib. Rept. Europas, ed. 3, Frankfurt am Main: 78) restricted the type locality to Nowo Aleksandrowsk. According to N. N. Szczerbak and M. L. Golubev (1986, Gecko Fauna USSR Adjac. Countries, Kiev: 167), Nowo Aleksandrovsk was meant in a broad geographic sense; this should not be confused with Novoaleksandrovsk, a town northwest of Stavropol on the northern edge of the Caucasus. Szczerbak and Golubev further stated that the type locality is 30 km east of Fort Shevchenko (formerly Fort Alexsandrovsk), Kazakhstan, on the Mangyschlak Peninsula, but they mapped this locality (1986: 170) much farther to the east.

Cyrtodactylus tibetanus (Boulenger, 1905). (PLATE 21E)

Alsophylax tibetanus G. A. Boulenger, 1905, Ann. Mag. Nat. Hist., London, ser. 7, 15: 378. Type locality: Chaksam Ferry, Tsangpo (=Yarlung Zangbo Jiang) Valley, Xizang (Tibet) Autonomous Region, China; 12,500 feet.

Cyrtodactylus tibetanus: S.-Q. Hu, E.-M. Zhao, Y.-M. Jiang, L. Fei, C.-Y. Ye, Q.-X. Hu, Q.-Y. Huang, Y.-Z. Huang, and W.-S. Tian. "1987" (1988), Amphib.-Reptilia Xizang, Beijing: 117.

RANGE: Xizang (Tibet), China.

GEHYRA Gray, 1834.

Gehyra J. E. Gray, 1834, Proc. Zool. Soc. London, 1834: 100. Type species: *Gehyra Pacifica* J. E. Gray, 1834 (=*Gecko oceanicus* R.-P. Lesson, 1830) of the East Indies, Australia, and Oceania, by monotypy (see Note).

NOTE: *Gecko oceanicus* was first proposed by Lesson on plate 2, published in 1830. The species name is commonly cited as 1831, but this refers to the associated text (see R.-P. Lesson, 1829–1831, in bibliography, for details).

Gehyra mutilata (Wiegmann, 1834). (PLATE 21F)

Hemidactylus (Peropus) mutilatus A. F. A. Wiegmann, 1834, Nova Acta Acad. Leopold. Carol., Halle, 17: 238. Type locality: Manila, Philippines.

Gehyra mutilata: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 148.

RANGE: Yunnan, Hainan, Hong Kong, and Taiwan, China. Madagascar; Sri Lanka and India through southeastern Asia; Japan (Okinawa); Philippines; Indoaustralian Archipelago to New Guinea; Oceania. Introduced into western Mexico and the USA (Hawaiian Islands); record of introduction in New Zealand is in error (Aaron M. Bauer, pers. comm.).

GEKKO Laurenti, 1768.

Gekko J. N. Laurenti, 1768, Synops. Rept., Vienna: "34" (43). Type species: *Gekko verticillatus* J. N. Laurenti, 1768 (=*Lacerta Gecko* C. Linnaeus, 1758), by absolute tautonomy (see L. Stejneger, 1936, Copeia, Ann Arbor, 1936: 135).

Gekko auriverrucosus Zhou and Liu, 1982.

Gekko auriverrucosus K.-Y. Zhou and Y.-Z. Liu, 1982, *in* K.-Y. Zhou, Y.-Z. Liu, and D.-J. Li, Acta Zootaxon. Sinica, Beijing, 7: 438. Type locality: Hejin Co., Shanxi Prov., China; 459 meters.

RANGE: Known only from the type locality.

Gekko chinensis (Gray, 1842). (PLATE 21G)

Gecko chinensis J. E. Gray, 1842, Zool. Misc., London, 2: 57. Type locality: China.

Gekko chinensis: C. H. Pope, 1935, Rept. China, New York: 462.

Gekko similignum M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 198. Type locality: Ang-mao (=Hongmao, Baisha Co.), near the Five Finger Mountain (=Mt. Wuzhi), Hainan Island, Hainan Prov., China; 600 meters.

Gekko scabridus Y.-Z. Liu and K.-Y. Zhou, 1982, *in* K.-Y. Zhou, Y.-Z. Liu, and D.-J. Li, Acta Zootaxon. Sinica, Beijing, 7: 443. Type locality: Yongren Co., Yunnan Prov., China; 1,531 meters.

RANGE: Southern China including Hong Kong and Hainan, westward to Yunnan and Sichuan. Northern Vietnam.

Gekko gecko (Linnaeus, 1758). (PLATE 21H)

Lacerta Gecko C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 205. Type locality: Indiis (see Note).

Gekko gecko: T. Barbour, 1912, Mem. Mus. Comp. Zool., Harvard Coll., Cambridge, 44: 82.

Gecko Reevesii J. E. Gray, 1831, *in* E. Griffith and E. Pidgeon, Anim. King. Cuvier, 9(Synops. Spec.): 48. Type locality: China.

RANGE: Southern China (possibly including Taiwan; see Note), westward to Yunnan. Bangladesh to Indochina, south through Indoaustralian Archipelago; Philippines. Introduced into the USA (Florida).

NOTE: The type locality of *Gekko gecko* has been restricted to Java, Indonesia (R. Mertens, 1955, Senckenb. Biol., Frankfurt am Main, 36: 22).

H. Ota (1989, *in* M. Matsui, T. Hikida, and R. C. Goris (eds.), Current Herpetol. East Asia, Kyoto: 253–254) believes that the old records for Taiwan represent temporary invasions since there are no recent records for this species on the island.

Gekko hokouensis Pope, 1928. (PLATE 22A)

Gekko japonicus hokouensis C. H. Pope, 1928, Amer. Mus. Novit., New York, 325: 1. Type locality: Hok'ou (=Hekou or Yanshan), northeast Kiangsi (=Jiangxi Prov.), China.

Gekko hokouensis: K.-Y. Zhou, Y.-Z. Liu, and D.-J. Li. 1982, Acta Zootaxon. Sinica, Beijing, 7: 441.

Gekko liboensis K.-Y. Zhou and D.-J. Li, 1982, *in* K.-Y. Zhou, Y.-Z. Liu, and D.-J. Li, Acta Zootaxon. Sinica, Beijing, 7: 440. Type locality: Libo Co., Guizhou Prov., China; 430 meters.

RANGE: Eastern China, from Jiangsu south to Fujian, west to Hunan and Guizhou; Taiwan, including Lanyu Island. Japan (southern Kyushu Island; Ryukyu Islands, including the Senkaku Group).

NOTE: We provisionally recognize this species as distinct from *Gekko japonicus*, primarily based on the existence of some sympatric populations (of what appear to be the same two species, both in mainland China and in Japan) as well as on karyological differences. H. Ota (1991, *in* M. Matsui, T. Hikida, and R. C. Goris [eds.], Current Herpetol. East Asia, Kyoto: 233–234) has pointed out that *G. japonicus* has three junior synonyms that are older than the name *G. hokouensis*, any of which could be synonymous with *hokouensis* and have nomenclatorial priority. Thus, the correct name for this taxon cannot be decided until the types of all of these species are compared.

Gekko japonicus (Duméril and Bibron, 1836).

Platydactylus Japonicus A.-M.-C. Duméril and G. Bibron, 1836, Erpétol. Gén., Paris, 3: 337. Type locality: Japan.

Gekko japonicus: K. P. Schmidt, 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 477.

Hemidactylus nanus T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 482. Type locality: Chusan Is. (=Zhoushan Is.), Zhejiang Prov., China.

RANGE: Eastern China, west to eastern Sichuan and northward to southern Shaanxi and Gansu (see Note). Southern Korea and Japan (Honshu, Shikoku, Kyushu, and Yakushima islands).

NOTE: Records of this species from Taiwan and from several localities in mainland China are now believed to represent a newly resurrected sibling species, *Gekko hokouensis* (see above).

Gekko kikuchii (Ôshima, 1912).

Gecko kikuchii M. Ôshima, 1912, Philippine Jour. Sci., Manila, sect. D, 7: 241. Type locality: Kôtôsho or Botel Tobago Island (=Lanyu), Formosa (=Taiwan Prov.), China.

Gekko kikuchii: Y. Okada, 1936, Sci. Rep. Tokyo Bunr. Daigaku, sect. B, 2: 256.

RANGE: Restricted to Lanyu Island, off southern coast of Taiwan, China.

Gekko subpalmatus (Günther, 1864). (PLATE 22B)

Gecko subpalmatus A. Günther, 1864, Rept. Brit. India, London: 104. Type locality: Chikiang (=Zhejiang) Prov., China.

Gekko subpalmatus: K. P. Schmidt, 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 478.

Gecko melli T. Vogt, 1922, Arch. Naturg., Berlin, ser. A, 88(10): 136. Type locality: Southern China (see Note).

RANGE: Southern China, Zhejiang in the east to Sichuan in the west.

NOTE: The type locality of *Gekko melli* is the mountains of northeastern Kuangtung (=Guangdong) Province, 500–800 meters, according to R. Mell (1922, Arch. Naturg., Berlin, ser. A, 88(10): 111); the type locality has been restricted to northeastern Guangdong Province by lectotype designation (A. M. Bauer and R. Günther, 1991, Mitt. Zool. Mus. Berlin, 67: 284).

Gekko swinhonis (Günther, 1864).

Gecko swinhonis A. Günther, 1864, Rept. Brit. India, London: 104. Type locality: Northern China.

Gekko swinhonis K. P. Schmidt, 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 478.

RANGE: Northern China, south to Zhejiang.

Gekko taibaiensis Song, 1985.

Gekko taibaiensis M.-T. Song, 1985, Acta Herpetol. Sinica, Chengdu, [new ser.], 4: 329. Type locality: Taibai County, Shaanxi Prov., China; 950 meters.

RANGE: Known only from the type locality.

GONIUROSAURUS Barbour, 1908.

Goniurosaurus T. Barbour, 1908, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 51: 316. Type species: *Goniurosaurus hainanensis* T. Barbour, 1908 (=*Eublepharis Lichtenfelderi* F. Mocquard, 1897), by monotypy.

Goniurosaurus lichtenfelderi (Mocquard, 1897). (PLATE 22C)

Eublepharis Lichtenfelderi F. Mocquard, 1897, Bull. Mus. Hist. Nat., Paris, 3: 213. Type locality: Baie d'Along, Îles Norway, Gulf of Tonkin, Vietnam.

Goniurosaurus lichtenfelderi: A.-R. Börner, 1981, Misc. Art. Saurol. [privately printed], Cologne, 9: 3.

RANGE: Guangxi and Hainan, China. Vietnam (Îles Norway).

1. ***Goniurosaurus lichtenfelderi hainanensis*** Barbour, 1908. (PLATE 22C)

Goniurosaurus hainanensis T. Barbour, 1908, Bull. Mus. Comp. Zool., Harvard Coll., Cambridge, 51: 316. Type locality: Mt. Wuchi (=Wuzhi Shan), central Hainan Island, Hainan Prov., China.

Goniurosaurus lichtenfelderi hainanensis: L. Grismer, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 45.

RANGE: Guangxi and Hainan, China.

HEMIDACTYLUS Oken, 1817.

Hemidactylus L. Oken, 1817, Isis von Oken, Jena, 1(8): page 1183 (see Note). Type species: *Gecko tuberculosus* F.-M. Daudin, "X" (1802) (=*Gecko Mabouia* A. Moreau de Jonnès, 1818) of Africa, southern Asia, and Oceania, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 172) (see Note).

NOTE: Authorship of this genus is sometimes attributed to G. Cuvier ("1817" [1816], Règne Anim., [first ed.], Paris, 2: v, 47), but he used the form "Hemidactyles," which is a vernacular rather than a Latin form and, thus, unavailable under the "Code." However, other Cuvier names in the same volume generally are accepted (for example, *Calotes*). L. Oken (1817, Isis von Oken, Jena, 1(8): 1183) was the first to use a Latinized form, based on Cuvier's name, by listing the abbreviation "*Hemidact.*" in a list of gecko genera beginning with *Thecadactylus*. No species are listed by Oken.

Cuvier included two species in his "Hemidactyles." The earliest designation of a type species was by L. J. Fitzinger (1843, Syst. Rept., Vienna, 1: 19) who listed *Gecko verruculatus* G. Cuvier, 1829, but as this is a synonym of a different species, *Hemidactylus turcicus* C. Linnaeus, 1758, one not listed by Cuvier in 1816, it is an invalid designation. The next earliest designation was that of L. Stejneger (1907, Bull. U.S. Natl. Mus., Washington, 58: 172) who gave "*Gecko tuberculeux*" F.-M. Daudin, 1802.

Hemidactylus bowringii (Gray, 1845). (PLATE 22D)

?*Lacerta chinensis* P. Osbeck, 1765, Reise Ostind. China, Rostock: 175, 366. Type locality: Canton (=Guangzhou Shi, Guangdong Prov.), China (*nomen dubium*; see Note).

Doryura Bowringii J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 156. Type locality: Not given (see Note).

Hemidactylus bowringii: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 139.

RANGE: Southern China including Hainan and Taiwan. South and southeastern Asia eastward to Japan (Ryukyu Islands).

NOTE: P. Osbeck's "*Lacerta chinensis*" was first described in 1757 (Dagbok Ostind. Resa, Stockholm: 134, 280) which, being pre-Linnaean, is unavailable. Osbeck's 1765 German edition used the name "*chinensis*" in a vernacular sense and not as a Latin binomial.

Both M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 99) and C. H. Pope (1935, Rept. China, New York: 459) stated that the type locality of *Hemidactylus bowringii* is Hong Kong or vicinity, but the actual provenance of Charles Bowring's specimens is open to question (see page 212, *Riopa bowringii*, Note).

Hemidactylus brookii Gray, 1845.

Hemidactylus Brookii J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 153. Type locality: Borneo and "Australia," the latter in error (see Note).

RANGE: Zhejiang, Hong Kong (introduced?), and Macao, China. Tropical Africa, South and southeastern Asia, Indoaustralian Archipelago, and West Indies (Cuba, Hispaniola, Dominican Republic, Puerto Rico).

NOTE: The type locality has been restricted to Borneo (M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 89, and C. H. Pope, 1935, Rept. China, New York: 460).

Hemidactylus frenatus Duméril and Bibron, 1836. (PLATE 22E)

Hemidactylus frenatus A.-M.-C. Duméril and G. Bibron, 1836, Erpétol. Gén., Paris, 3: 366. Type locality: Southern Africa, Mauritius, Madagascar, Ceylon (=Sri Lanka), Indonesia (Amboine, Java, Timor), Mariannas Islands, and India (Bengal) (see Note).

Hemidactylus pumilus E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 502. Type locality: Hong Kong, China.

RANGE: Taiwan, Hong Kong, Guangdong, Hainan, and southern Yunnan, China. Southern and eastern Africa, Madagascar, Mauritius, South and southeastern Asia, Philippines, Japan (Ryukyu and Bonin islands), Indoaustralian Archipelago east to New Guinea and northern Australia; Oceania and Mexico. Introduced into Mariana Islands (Guam) and USA (Hawaiian Islands).

NOTE: The type locality of *Hemidactylus frenatus* has been restricted to Java, Indonesia (A. Loveridge, 1947, Bull. Mus. Comp. Zool., Harvard Coll., Cambridge, 98: 127); J. Guibé (1954, Catal. Types Léz., Paris: 6) gave "Java" as the locality for the two syntypes.

Hemidactylus garnotii Duméril and Bibron, 1836.

Hemidactylus Garnotii A.-M.-C. Duméril and G. Bibron, 1836, Erpétol. Gén., Paris 3: 368. Type locality: L'île de Taïti (=Tahiti, Society Islands, South Pacific).

RANGE: Taiwan, Hong Kong, Guangdong, Hainan, and southern Yunnan, China. Nepal, India (Darjeeling, Assam, Sikkim), and Burma to Thailand, Malaysia, Philippines, Indo-Australian Archipelago and Oceania (French Polynesia, Carolines, New Caledonia). Introduced into USA (Hawaiian Islands and Florida).

NOTE: H. Ota and T. Hikida (1985, Japan. Jour. Herpetol., Kyoto, 11: 52) and H. Ota, T. Hikida and E.-M. Zhao (1986, Japan. Jour. Herpetol., Kyoto, 11: 79) reported specimens of the "*Hemidactylus garnotii–vietnamensis* species complex" from Taiwan, Hainan, and Yunnan provinces, China. Karyological studies must be performed before *H. vietnamensis* I. S. Darevsky and L. A. Kupriyanova, 1984 (*in* I. S. Darevsky, L. A. Kupriyanova, and V. V. Roshchin, Jour. Herpetol., Athens [Ohio], 18: 281; type locality: Kuk-Fiong Reserve, Hanamninh Prov., Vietnam) can be confirmed for China.

Hemidactylus stejnegeri Ota and Hikida, 1989.

Hemidactylus stejnegeri H. Ota and T. Hikida, 1989, Jour. Herpetol., Oxford (Ohio), 23: 51. Type locality: Hongye (=Hualien), Taiwan Prov., China.

RANGE: Taiwan, China. Philippines (Luzon Island).

HEMIPHYLLODACTYLUS Bleeker, 1860.

Hemiphyllodactylus P. Bleeker, 1860, Natuurkund. Tijdschr. Nederland. Indië, Batavia (=Djakarta), ser. 4, 20: 327. Type species: *Hemiphyllodactylus typus* P. Bleeker, 1860), by monotypy.

Hemiphyllodactylus typus Bleeker, 1860. (PLATE 22F)

Hemiphyllodactylus typus P. Bleeker, 1860, Natuurkund. Tijdschr. Nederland. Indië, Batavia (=Djakarta), ser. 4, 20: 327. Type locality: Goenong Parong, Java, Indonesia.

RANGE: Taiwan, China. Sri Lanka and India, Philippines, Japan (Ryukyu Islands), Indoaustralian Archipelago to Oceania. Introduced into the USA (Hawaiian Islands).

Hemiphyllodactylus yunnanensis (Boulenger, 1903).

Gehyra yunnanensis G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 429. Type locality: Yunnan Fu (=Kunming Shi), Yunnan Prov., China.

Hemiphyllodactylus yunnanensis: M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 109.

Hemiphyllodactylus yunnanensis longlingensis K.-Y. Zhou and Y.-Z. Liu, 1981, *in* K.-Y. Zhou, Y.-Z. Liu, and G.-P. Yang, Acta Zootaxon. Sinica, Beijing, 6: 203. Type locality: Longling Co., Yunnan Prov., China; 1,530 meters.

Hemiphyllodactylus yunnanensis jinpingensis K.-Y. Zhou and Y.-Z. Liu, 1981, *in* K.-Y. Zhou, Y.-Z. Liu, and G.-P. Yang, Acta Zootaxon. Sinica, Beijing, 6: 204. Type locality: Jinping Co., Yunnan Prov., China; 1,260 meters.

Hemiphyllodactylus yunnanensis dushanensis K.-Y. Zhou and Y.-Z. Liu, 1981, *in* K.-Y. Zhou, Y.-Z. Liu, and G.-P. Yang, Acta Zootaxon. Sinica, Beijing, 6: 206. Type locality: Dushan Co., Guizhou Prov., China; 970 meters.

RANGE: Yunnan and Guizhou, China. Northern Burma through Thailand to Laos.

LEPIDODACTYLUS Fitzinger, 1843.

Lepidodactylus L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 19, 98. Type species: *Platydactylus Lugubris* A.-M.-C. Duméril and G. Bibron, 1836, by original designation.

Lepidodactylus lugubris (Duméril and Bibron, 1836). (PLATE 22G)

Platydactylus Lugubris A.-M.-C. Duméril and G. Bibron, 1836, Erpétol. Gén., Paris, 3: 304. Type locality: L'île d'Otaïti (=Tahiti, Society Islands, South Pacific).

Lepidodactylus lugubris: L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 98.

RANGE: Taiwan, China. Sri Lanka, India (Nicobar and Andaman Islands), Burma, Malaysia, Japan (Ryukyu and Bonin islands), Indoaustralian Archipelago to Oceania. Introduced into Ecuador (mainland and Galapagos Islands), Nicaragua, Panama (Canal Zone), and the USA (Hawaiian Islands).

Lepidodactylus yami Ota, 1987. (PLATE 22H)

Lepidodactylus yami H. Ota, 1987, Copeia, Lawrence, 1987: 164. Type locality: Near Imoru, Lanyu Island, Taiwan Prov., China.

RANGE: Lanyu Island, off the southern coast of Taiwan, China.

TERATOSCINCUS Strauch, 1863.

Teratoscincus A. Strauch, 1863, Bull. Acad. Impér. Sci. St.-Pétersbourg, ser. 3, 6: col. 480. Type species: *Teratoscincus Keyserlingii* A. Strauch, 1863 (=*Stenodactylus scincus* H. Schlegel, 1858), by monotypy.

Teratoscincus przewalskii Strauch, 1887. (PLATE 23A)

Teratoscincus przewalskii A. Strauch, 1887, Mém. Acad. Impér. Sci. St.-Pétersbourg, ser. 7,

35(2): 71. Type locality: Chami (=Hami Shi), Tcharchalyk (=Ruoqiang Co.), and Nija (or Niya, =Minfeng) oases, Xinjiang Uygur Autonomous Region, China; 4,300 feet (Nija oasis) (see Note).

RANGE: Xinjiang, Gansu, and Nei Mongol (Inner Mongolia), China. Mongolia.

NOTE: The type locality has been restricted to Oasis of Hami, Sinkiang (=Xinjiang), by C. H. Pope (1935, Rept. China, New York: 458).

Teratoscincus scincus (Schlegel, 1858). (PLATE 23B)

Stenodactylus scincus H. Schlegel, 1858, Handl. Beoefen. Dierk., Breda, 2: 16. Type locality: Ili River, eastern Turkestan (=southern Xinjiang Uygur Autonomous Region), China.

Teratoscincus scincus: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 12.

Teratoscincus roborowskii J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 159. Type locality: Oasis of Ssatschsheu (=Dunhuang Co., Gansu Prov.), China.

RANGE: Gansu and Xinjiang, China. Eastern Arabia; central and eastern Iran and western Pakistan, north to the east coast of Caspian Sea and eastward to eastern Kazakhstan and northern Afghanistan.

AGAMIDAE

ACANTHOSAURA Gray, 1831.

Acanthosaura J. E. Gray, 1831, *in* E. Griffith and E. Pidgeon, Animal Kingd. Cuvier, London, 9(Synops. Spec.): 56. Type species: *Agama armata* T. Hardwicke and J. E. Gray, 1827, by monotypy.

Acanthosaura armata (Hardwicke and Gray, 1827).

Agama armata T. Hardwicke and J. E. Gray, 1827, Zool. Jour., London, 3: 216. Type locality: Singapore.

Acanthosaura armata: J. E. Gray, 1831, *in* E. Griffith and E. Pidgeon, Anim. Kingd. Cuvier, London, 9(Synops. Spec.): 56 (combination implied).

RANGE: Hainan, China. Burma and southern Thailand south to Malay Peninsula and Indonesia (Sumatra).

Acanthosaura lepidogaster (Cuvier, 1829). (PLATE 23C)

Calotes lepidogaster G. Cuvier, 1829, Règne Anim., ed. 2, Paris, 2: 39. Type locality: Cochinchine (=Vietnam).

Acanthosaura lepidogaster: E. H. Taylor, 1963, Univ. Kansas Sci. Bull., Lawrence, 44: 863.

Acanthosaura hainanensis G. A. Boulenger, "1899" (1900), Proc. Zool. Soc. London, 1899: 957. Type locality: Five Finger Mountains (=Mt. Wuzhi), Hainan Island, Hainan Prov., China.

Acanthosaura braueri T. Vogt, 1914, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1914: 97. Type locality: Guangdong or Guangxi, southern China.

RANGE: Yunnan eastward through Guangdong to Fujian, and including Hainan, China. Vietnam, Cambodia, and northern Thailand.

AGAMA Daudin, 1802.

Agama F.-M. Daudin, "X" (1802), Hist. Nat. Reptiles, Paris, 3: 333. Type species: *Agama colonorum* F.-M. Daudin, 1802 (=*Lacerta Agama* C. Linnaeus, 1758) of Africa, by absolute tautonomy.

NOTE: Recent authors have placed all Chinese species of *Agama* into the genus *Stellio* J. N. Laurenti, 1768 (Synops. Rept., Vienna: 56), except for *Agama sanguinolenta*, which is placed in *Trapelus* G. Cuvier, "1817" (1816) (Règne Anim., [first ed.], Paris, 2: 35); for discussion, see two papers by N. B. Ananjeva and G. Peters and by N. B. Ananjeva and T. M. Sokolova (1990, Proc. Zool. Inst. USSR Acad. Sci., Leningrad, 207: 3–21). We take a more conservative position below since a comprehensive study and allocation of species has not yet been made for Chinese species and there are several unresolved nomenclatorial problems.

Agama himalayana (Steindachner, 1867).

Stellio himalayanus F. Steindachner, 1867, Reise Österreich. Freg. Novara, Vienna, Zool., 1(Reptilia): 22. Type locality: Lei (=Leh) and Kargil, Kashmir, India.

Agama himalayana: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 362.

RANGE: Xinjiang, China. Southeastern Turkmenistan eastward through Tajikistan to western Kirgizstan; Afghanistan, northern Pakistan, and India (Kashmir).

Agama sacra Smith, 1935. (PLATE 23D)

Agama himalayana sacra M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 214. Type locality: Near Lhasa, Xizang (Tibet) Autonomous Region, China.

Stellio sacer: N. B. Ananjeva and G. Peters, 1990, Proc. Zool. Inst. USSR Acad. Sci., Leningrad, 207: 3.

RANGE: Xizang (Tibet), China.

Agama sanguinolenta (Pallas, 1827). (PLATE 23E)

Lacerta sanguinolenta P. S. Pallas, "1831" (1827), Zoogr. Rosso-Asiat., St. Petersburg, 3: 23. Type locality: Kum-Ankatar, Terec (=Terek) River, eastern Caucasus, Russia.

Agama Sanguinolenta: A.-M.-C. Duméril and G. Bibron, 1851, *in* A.-M.-C. Duméril and A.-H.-A. Duméril, Catal. Méthod. Coll. Rept., Paris: 102.

RANGE: Western Xinjiang, China. Eastern Caucasus; east shore of Caspian Sea eastward to eastern Kazakhstan and southward to northern Iran and Afghanistan.

Agama stoliczkana (Blanford, 1875). (PLATE 23F)

Stellio Stoliczkanus W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 44(2): 191. Type locality: Plains of eastern Turkestán (=southern Xinjiang Uygur Autonomous Region), China.

Agama stoliczkana: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 360.

Agama tarimensis E. Zugmayer, 1909, Zool. Jahrb., Syst. Geogr. Biol. Tiere, Jena, 27: 493. Type locality: Khotan (=Hotan), Xinjiang Uygur Autonomous Region, China.

RANGE: Xinjiang and Gansu, China. Western Mongolia.

Agama tuberculata Hardwicke and Gray, 1827.

Agama tuberculata T. Hardwicke and J. E. Gray, 1827, Zool. Jour., London, 3: 218. Type locality: India.

RANGE: Southern Xizang (Tibet), China. Afghanistan, northern Pakistan and India, and Nepal.

CALOTES Cuvier, 1816.

Calotes G. Cuvier, "1817" (1816), Règne Anim., [first ed.], Paris, 2: 35 (see Note). Type species: *Lacerta Calotes* C. Linnaeus, 1758, by absolute tautonomy.

NOTE: Although the title page is dated 1817, Cuvier's volume was published by November 1816 (according to C. Roux, 1976, Jour. Soc. Bibliogr. Nat. Hist., London, 8: 31). It is common for publishers of commercial books to forward date books to make them seem more current and salable. For example, W. E. Duellman and L. Trueb's "Biology of Amphibians" is dated "1986" on the verso of the title page, but was first distributed by October 1985.

Calotes brevipes Werner, 1904.

Calotes brevipes F. Werner, 1904, Zool. Anz., Leipzig, 27: 462. Type locality: Tonkin (=northern Vietnam) (see Note).

Acanthosaura fruhstorferi F. Werner, 1904, Zool. Anz., Leipzig, 27: 461. Type locality: Tonkin (=northern Vietnam) (see Note).

Acanthosaura quinquicarinata T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 28. Type locality: Loshiang (=Luoxiang), Kwangsi (=Guangxi Zhuang Autonomous Region), China.

RANGE: Guangxi, China. Northern Vietnam.

NOTE: M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 188), acting as first revisor, chose *Calotes fruhstorferi* in preference to *C. brevipes*. However, R. Mertens (1954, Senckenbergiana, Frankfurt am Main, 34: 185–186) noted that the former name is preoccupied by *Dendragama Fruhstorferi* O. Boettger, 1893 (Zool. Anz., Leipzig, 16: 335; type locality: Western Java), a synonym of *C. Tympanistra* J. E. Gray, 1831 (*in* E. Griffith and E. Pidgeon, Anim. Kingd. Cuvier, London, 9(Synop. Spec.): 56); thus, the correct name is *C. brevipes*. M. A. Smith (1935: 188) restricted the type locality of *C. fruhstorferi* to the Man-son Mountains, Tonkin, 3,000–4,000 feet.

Calotes emma Gray, 1845.

Calotes Emma J. E. Gray, 1845, Catal. Spec. Liz. Brit. Mus., London: 244. Type locality: "Afghanistan," in error.

Calotes alticristatus K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 2. Type locality: Yunnanfu (=Kunming Shi), Yunnan Prov., China.

RANGE: Guangdong and Yunnan, China. India (Assam) and Burma through Thailand to Vietnam (including Pulo Condore islands) and Malaysia (Malay Peninsula).

Calotes jerdoni Günther, 1871. (PLATE 23G)

Calotes jerdoni A. Günther, "1870" (1871), Proc. Zool. Soc. London, 1870: 779. Type locality: Khasi Hills (implied), Assam, India.

Calotes yunnanensis N. Annandale, 1905, Jour. Proc. Asiatic Soc. Bengal, Calcutta, new ser., 1: 87. Type locality: Yunnan Prov., China (see Note).

RANGE: Xizang (Tibet) and western Yunnan, China. India (Assam) and Burma.

NOTE: M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 194) restricted the type locality of *Calotes yunnanensis* to Teng-yueh (=Momein, now Tengchong County), Yunnan Province, China.

Calotes kakhienensis (Anderson, 1879).

Oriocalotes kakhienensis J. Anderson, "1878" (1879), Anat. Zool. Res.: Zool. Result. Exped.

West. Yunnan, London, 1: 806. Type locality: Ponsee (=Pengxi), western Yunnan Prov., China.

Calotes kakhienensis: M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 188.

RANGE: Yunnan, China. Burma east of Irrawadi River.

Calotes kingdonwardi Smith, 1935.

Calotes kingdon-wardi M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 204. Type locality: Adung Valley, Burma-Tibetan border; 7,000 feet.

Calotes kingdonwardi bapoensis D.-T. Yang and C.-Y. Su, 1979, *in* D.-T. Yang, C.-Y. Su, and S.-M. Li, Acta Zootaxon. Sinica, Beijing, 4: 186. Type locality: Bapo, Gongshan Co., Yunnan Prov., China; 1,450 meters.

RANGE: Western Yunnan, China. Burma-Tibetan border (Adung Valley).

Calotes medogensis Zhao and Li, 1984.

Calotes medogensis E.-M. Zhao and S.-Q. Li, 1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(4): 77. Type locality: Yarang, Medog Co., Xizang (Tibet) Autonomous Region, China; 910 meters.

RANGE: Known only from the type locality.

Calotes microlepis Boulenger, 1887.

Calotes microlepis G. A. Boulenger, 1887, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 5: 476. Type locality: Pla-poo, Tenasserim, Burma; 1,000–1,400 meters.

RANGE: Hainan and Guizhou, China. Burma and Vietnam; India (Assam?).

Calotes mystaceus Duméril and Bibron, 1837.

Calotes mystaceus A.-M.-C. Duméril and G. Bibron, 1837, Erpétol. Gén., Paris, 4: 408. Type locality: Birmans (=Burma).

RANGE: Yunnan, China. India (Andaman and Nicobar Islands) and Burma to Thailand, Cambodia, and Vietnam.

Calotes versicolor (Daudin, 1802). (PLATE 24A)

Agama versicolor F.-M. Daudin, "X" (1802), Hist. Nat. Rept., Paris, 3: 395. Type locality: Not given (see Note).

Calotes versicolor L. J. Fitzinger, 1826, Neue Classif. Rept., Vienna: 49.

RANGE: Yunnan east to Guangdong, China, including Hainan and Hong Kong. Southeastern Iran to Afghanistan and Nepal, south through India to Sri Lanka; Burma to Indochina, south to Indonesia (Sumatra).

NOTE: M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 189) gave the type locality as "India," on what basis we cannot determine; later, in the same account (1935: 192), he restricted the type locality to Pondicherry (India).

DRACO Linnaeus, 1758.

Draco C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 199. Type species: *Draco volans* C. Linnaeus, 1758, of southeast Asia, Philippines, and Indonesia, by monotypy.

Draco blanfordii Boulenger, 1885.

Draco major W. T. Blanford, 1878, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 47(2): 125.

Type locality: East of Tavoy, Nawlabú Hill, Tenasserim, Burma. Name preoccupied by *Draco major* J. N. Laurenti, 1768 (Synops. Rept., Vienna: 50).

Draco blanfordii G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 267 (replacement name).

RANGE: Southwestern Yunnan, China. Thailand, Burma (Tenasserim), and Malay Peninsula.

Draco maculatus (Gray, 1845). (FRONTISPIECE; PLATE 24B–C)

Dracunculus maculatus J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 236. Type locality: Penang (Malaysia) and Asia (see Note).

Draco maculatus: T. Cantor, 1847, Jour. Asiatic Soc. Bengal, Calcutta, 16: 645.

Draco whiteheadi G. A. Boulenger, "1899" (1900), Proc. Zool. Soc. London: 956. Type locality: Five Finger Mts. (=Mt. Wuzhi), Hainan Island, Hainan Prov., China.

RANGE: Hainan and Guangxi westward to southern Yunnan and southeastern Xizang (Tibet), China. Burma to Vietnam and southward in the Malayan Peninsula to 8° North Latitude.

NOTE: The type locality of *Draco maculatus* has been restricted to Penang, Malaysia (M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 138), but this locality may be in error because Smith (1935: 140) claimed that the species is not known south of 8° North Latitude; it is possible that Penang, a major port, was merely the shipping point and not the place of collection of Gray's type.

JAPALURA Gray, 1853.

Japalura J. E. Gray, 1853, Ann. Mag. Nat. Hist., London, ser. 2, 12: 387. Type species: *Japalura variegata* J. E. Gray, 1853, of northern India and Nepal, by monotypy.

Japalura andersoniana Annandale, 1905.

Japalura andersoniana N. Annandale, 1905, Jour. Proc. Asiatic Soc. Bengal, Calcutta, new ser., 1: 85. Type locality: Duffla (=Dafla Hills), Assam-Bhutan frontier, India.

RANGE: Xizang (Medog region), China. India (Assam-Bhutan border).

Japalura brevipes Gressitt, 1936.

Japalura brevipes J. L. Gressitt, 1936, Proc. Biol. Soc. Washington, 49: 117. Type locality: Bukai (=Wuchie), near Horisha (=Puli), central Formosa (=Taiwan Prov.), China; 1,200 meters.

RANGE: Central Taiwan, China.

Japalura dymondi (Boulenger, 1906).

Acanthosaura Dymondi G. A. Boulenger, 1906, Ann. Mag. Nat. Hist., London, ser. 7, 17: 567. Type locality: Tongchuan fu (=Dongchuan Shi), Yunnan Prov., China.

Japalura dymondi: M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 172.

RANGE: Yunnan and southwestern Sichuan, China.

Japalura flaviceps Barbour and Dunn, 1919. (PLATE 24D)

Japalura flaviceps T. Barbour and E. R. Dunn, 1919, Proc. New Engl. Zool. Club, Cambridge, 7: 16. Type locality: Shores of Tung River (=Dadu He), western Szechuan (=Sichuan Province), China.

RANGE: Western Sichuan and eastern Xizang (Tibet), northward to southern Gansu and Shaanxi and southward to northern Yunnan, China; western Hubei.

Japalura grahami (Stejneger, 1924).

Phoxophrys grahami L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 120. Type locality: Sui-fu (=Yibin Shi), Szechwan (=Sichuan) Prov., China.

Japalura grahami: R. F. Inger, 1960, Copeia, Philadelphia, 1960: 221.

RANGE: Known only from the type locality.

Japalura kumaonensis (Annandale, 1907).

Acanthosaura kumaonensis N. Annandale, 1907, *in* G. A. Boulenger, N. Annandale, F. Wall, and C. T. Regan, Rec. Indian Mus., Calcutta, 1: 152. Type locality: Naini Tal and Mussoorie, Nepal; 4,500–6,000 feet.

Japalura kumaonensis: M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 171.

RANGE: Xizang (Tibet), China. Nepal.

Japalura makii Ota, 1989. (PLATE 24E)

Japalura makii H. Ota, 1989, Copeia, Gainesville, 1989: 570. Type locality: Chitou (=Hsitou), Nantou, Taiwan Prov., China; about 1,500 meters.

RANGE: Central Taiwan, China.

Japalura micangshanensis Song, 1987.

Japalura micangshanensis M.-T. Song, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 59. Type locality: Qingmuchuan, Ningqiang Co., Shaanxi Prov., China; 700 meters.

Japalura ningjiangensis M.-T. Song, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(4): 68 (in error for *micangshanensis*).

RANGE: Known only from the type locality.

Japalura polygonata (Hallowell, 1861).

Diploderma polygonatum E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 490. Type locality: Amakarima Island, Ryukyu Islands, Japan.

Japalura polygonata: A. Günther, 1864, Rept. Brit. India, London: 134.

RANGE: Northern Taiwan, China. Japan (Ryukyu Islands).

NOTE: This taxon was long known as *Japalura swinhonis*; H. Ota (1991, Herpetologica, Austin, 47: 288–292) has shown that the name *swinhonis* must be applied to the species previously called *J. mitsukurii* and that the taxon formerly named *swinhonis* is conspecific with *J. polygonata* of Japan.

1. ***Japalura polygonata xanthostoma*** Ota, 1991.

Japalura polygonata xanthostoma H. Ota, 1991, Herpetologica, Austin, 47: 288. Type locality: Waishuangchi, Taipei Prefecture, Taiwan Prov., China; 100 meters.

RANGE: Northern Taiwan, China.

Japalura splendida Barbour and Dunn, 1919. (PLATE 24F)

Japalura splendida T. Barbour and E. R. Dunn, 1919, Proc. New Engl. Zool. Club, Cambridge, 7: 18. Type locality: Gorge of Yangtze River (=Chang Jiang), near Ichang (=Yichang Shi), Hupeh (=Hubei Prov.), China.

RANGE: Southwestern China, eastward to Hunan and northward to Henan and Gansu.

Japalura swinhonis Günther, 1864. (PLATE 24G)

Japalura swinhonis A. Günther, 1864, Rept. Brit. India, London: 133. Type locality: Formosa (=Taiwan Prov.), China.

Japalura mitsukurii L. Stejneger, 1898, Jour. Coll. Sci. Imper. Univ. Tokyo, 12: 218. Type locality: Botel Tobago Island (=Lanyu Island), Taiwan Prov., China.

Japalura swinhonis formosensis Y.-S. Liang and C.-S. Wang, 1976, Quart. Jour. Taiwan Mus., Taipei, 29: 162. Type locality: Puli, Nan-tou Hsien (=Nantou Co.), central Taiwan, China; 540 meters (see Note).

RANGE: Taiwan (including Lanyu and Lü Dao islands), China.

NOTE: This taxon has long been known as *Japalura mitsukurii*; see page 191, *J. polygonata* (Note) and H. Ota (1991, Herpetologica, Austin, 47: 280–288) for a justification of the use of *J. swinhonis*.

Liang and Wang (1976) also used the alternate spellings "*formosanis*" and "*formosania*" elsewhere in their original description, thus under the "Code" (1985, Article 32[a][i]) the first revisor's choice is the correct one. We follow H. Ota (1988, Amphibia-Reptilia, Leiden, 9: 375) in his choice of *formosensis*.

Japalura szechwanensis Hu and Zhao, 1966.

Japalura szechwanensis S.-Q. Hu and E.-M. Zhao (as Djao), 1966, Acta Zootaxon. Sinica, Peking, 3: 158. Type locality: Bai Shui Ho (=Baishui He), Pen Hsien (=Peng Co.), Szechwan (=Sichuan) Prov., China; 2,000 meters.

RANGE: Sichuan, Guizhou, and Guangxi, China.

Japalura varcoae (Boulenger, 1918).

Acanthosaura varcoæ G. A. Boulenger, 1918, Ann. Mag. Nat. Hist., London, ser. 9, 2: 162. Type locality: Yunnan Fou (=Kunming Shi) and Wuting Chu (=Wuding Co.), Yunnan Prov., China.

Japalura varcoæ: M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 172.

RANGE: Yunnan and Guizhou, China.

Japalura yunnanensis Anderson, 1879. (PLATE 25A)

Japalura yunnanensis J. Anderson, "1878" (1879), Anat. Zool. Res.: Zool. Result. Exped. West. Yunnan, London, 1: 803. Type locality: Momien, Teng-yue-chow (=Tengchong Co.), Yunnan Prov., China.

RANGE: Yunnan, China. Cambodia.

LEIOLEPIS Cuvier, 1829.

Leiolepis G. Cuvier, 1829, Règne Anim., ed. 2, Paris, 2: 37. Type species: *Leiolepis Guttatus* G. Cuvier, 1829, of Indochina, by monotypy.

Leiolepis reevesii (Gray, 1831). (PLATE 25B)

Uromastyx Revesii [*sic*] J. E. Gray, 1831, *in* E. Griffith and E. Pidgeon, Anim. Kingd. Cuvier, London, 9(Synops. Spec.): 62. Type locality: Not given (see Note).

Leiolepis Reevesii: J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 263.

RANGE: Macao, Guangdong, Hainan, and Guangxi, China. Vietnam.

NOTE: The type locality of *Leiolepis reevesii* is "China" (according to J. E. Gray, 1845: 263). John Reeves (senior) lived in Macao and often worked in Canton (=Guangzhou Shi); thus, the type was probably obtained in this part of southern China.

Previously, Chinese specimens of this lizard were called *L. belliana* T. Hardwicke and J. E. Gray, 1827 (Zool. Jour., London, 3: 220; type locality: Penang, Malaysia) until G. Peters (1971, Zool. Jahrb., Syst., Jena, 98: 11–130) demonstrated that *L. reevesii* was specifically distinct.

ORIOCALOTES Günther, 1864.

Oriocalotes A. Günther, 1864, Rept. Brit. India, London: 146. Type species: *Calotes minor* J. E. Gray, 1845 (=*Oriocalotes paulus* M. A. Smith, 1935, a replacement name), by monotypy.

Oriocalotes paulus Smith, 1935. (PLATE 25C)

Calotes minor J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 244 (non *Agama minor* T. Hardwicke and J. E. Gray, 1827; see Note). Type locality: "Affghanistan" and Khassia hill (=Khasi Hills), India (see Note).

Oriocalotes minor: A. Günther, 1864, Rept. Brit. India, London: 147.

Oriocalotes paulus M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 166 (replacement name for *Calotes minor* J. E. Gray, 1845).

RANGE: Xizang (Tibet), China. India (Sikkim, Khasi Hills).

NOTE: M. A. Smith (1935: 226–227) demonstrated that *Calotes minor* J. E. Gray, 1845, is an unavailable name. Smith (1935: 166) also restricted the type locality to Khasi Hills, India.

PHRYNOCEPHALUS Kaup, 1825.

Phrynocephalus J. Kaup (as Caup), 1825, Isis von Oken, Jena, 16(5): col. 591. Type species: *Lacerta caudivolvula* P. S. Pallas, "1811–1831" (1827) (=*Lacerta guttata* J. F. Gmelin, 1789) of southeastern Europe and western Asia, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 18).

NOTE: In writing this book, no genus has presented a greater challenge to our understanding than has *Phrynocephalus*. The classification of Chinese taxa that follows represents the current status of taxa recognized by Chinese biologists, which differs markedly from other interpretations (for example, see G. Peters, 1984, Mitt. Zool. Mus. Berlin, 60: 23–67). Lizards of this genus in China and elsewhere are now under intensive study and this review includes ecological as well as molecular studies. Thus, the arrangement given below is an interim one at best. Moreover, we have been unable to satisfactorily allocate 15 of J. von Bedriaga's new taxa of Chinese *Phrynocephalus* and, therefore, we list these on pages 280–283 in the section "Names of Uncertain Status."

Phrynocephalus albolineatus Zhao, 1979.

Phrynocephalus albo-lineatus K.-T. Zhao, 1979, Acta Univ. Inner Mongolia, Hohhot, 1979(2): 113. Type locality: 45 kilometers south of Tacheng Co., Xinjiang Uygur Autonomous Region, China; 584 meters.

RANGE: Northern Xinjiang, China.

Phrynocephalus axillaris Blanford, 1875. (PLATE 25D)

Phrynocephalus axillaris W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 44(2): 192. Type locality: In the plains of eastern Turkestán (=southern Xinjiang Uygur Autonomous Region), China.

Phrynocephalus axillaris var. *idae* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 168. Type locality: Wüste Chami (=Hami Shi), Nan-schan, and southern Tjan-schan (=Tian Shan), Xinjiang Uygur Autonomous Region, and Ssatschsheu (=Dunhuang Co.), Gansu Prov., China.

Phrynocephalus axillaris var. *murielis* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 168, 170. Type locality: Chami-Wüste (=Hami Shi), between Ssatschsheu (=Dunhuang Co., Gansu Prov.) and Bugass, and Lük-tschun (=Lukchun), Xinjiang Uygur Autonomous Region, China.

Phrynocephalus axillaris var. *ericae* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 168, 171. Type locality: Wüste Chami (=Hami Shi), between Ssatschsheu (=Dunhuang Co., Gansu Prov.) and Bugass, Lük-tschun (=Lukchun), and between Lük-tschun and Bugass, Xinjiang Uygur Autonomous Region, China.

Phrynocephalus axillaris var. *Klemenzi* J. von Bedriaga, 1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 163. Type locality: Turfan (=Turpan Co.), lower Tarim River, and Balgantai-gol (=Balguntay River) in Tjan-schan (=Tian Shan), Xinjiang Uygur Autonomous Region, China.

RANGE: Xinjiang and Gansu, China.

Phrynocephalus erythrurus Zugmayer, 1909.

Phrynocephalus erythrurus E. Zugmayer, 1909, Zool. Jahrb., Syst. Geogr. Biol. Tiere, Jena, 27: 504. Type locality: Sagüs Kul, northwestern Tibet (=Xizang Autonomous Region), China; 4,600–4,700 meters (see Note).

RANGE: Northwestern Xizang, China.

NOTE: G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 47) stated that the lectotype of *Phrynocephalus erythrurus* was collected in the Sagüs-kol Plain, on the south side of the "Keria" (=Yutian) Mountains, which would place it in the Kunlun Shan range along the Xinjiang-Xizang (Tibet) border, south of Keriya (=Yutian, Xinjiang).

Phrynocephalus forsythii Anderson, 1872.

Phrynocephalus forsythii J. Anderson, 1872, Proc. Zool. Soc. London, 1872: 390. Type locality: Yarkand (=Shache, Xinjiang Uygur Autonomous Region), China.

RANGE: Xinjiang, China.

Phrynocephalus frontalis Strauch, 1876.

Phrynocephalus frontalis A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 15. Type locality: Ordos Desert, Nei Mongol (Inner Mongolia) Autonomous Region, China.

Phrynocephalus Potanini J. von Bedriaga, 1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 144. Type locality: Chuan-che (=Bailong Jiang?), Gansu Prov., and Ulan-Morin River (=Ulan Moron He) in Ordos (Desert), Nei Mongol Autonomous Region (Inner Mongolia), China (see Note).

?*Phrynocephalus suschkinianus* S. F. Zarevsky (as Carevskij), 1927, Comp. Rend. Acad. Sci. URSS, Leningrad, ser. A, 1927: 304. Type locality: Along Dangar-ho (=Huang Shui,

tributary of the upper Huang He), eastern Nanshan, border area of Gansu and Qinghai provinces, China.

RANGE: Gansu, Ningxia, Shaanxi, Nei Mongol, and Hebei, China.

NOTE: The original proposal of *Phrynocephalus potanini* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 389–397. G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 39) fixed the type locality of *P. potanini* as "Fluss Shan-Marin" (=Ulan Muren, Ordos Desert), by lectotype designation.

Phrynocephalus grumgrzimailoi Bedriaga, 1907.

Phrynocephalus Grum-Grzimailoi J. von Bedriaga, 1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 145. Type locality: Gutschen (=Qitai Co.), northern edge of Tjan-schan (=Tian Shan), Xinjiang Uygur Autonomous Region, China (see Note).

RANGE: Northern Xinjiang, China.

NOTE: The original proposal of *Phrynocephalus grumgrzimailoi* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 420–427.

Phrynocephalus guentheri Bedriaga, 1906.

Phrynocephalus guentheri J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 168. Type locality: Not given (see Note).

RANGE: Nei Mongol (Inner Mongolia), China.

NOTE: The type locality is Edsin-gol River (=Ruo Shui), near Naryn (according to J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 403).

Phrynocephalus guttatus (Gmelin, 1789).

Lacerta guttata J. F. Gmelin, 1789, Linn. Syst. Nat., ed. 13, Leipzig, 1: 1078. Type locality: Ural Desert (see Note).

Phrynocephalus guttatus: J. Kaup, 1827, Isis von Oken, Leipzig, 20: col. 614.

RANGE: Northern Xinjiang, China. Russia from northwest coast of Caspian Sea eastward to eastern Kazakhstan.

NOTE: The type locality has been restricted to Jaiki Steppes, lower Ural River, Kazakhstan (H. Wermuth, 1967, Das Tierreich, Berlin, 86: 79).

Phrynocephalus helioscopus (Pallas, 1771).

Lacerta helioscopa P. S. Pallas, 1771, Reise Versch. Prov. Russ. Reichs, St. Petersburg, 1: 457. Type locality: "In deserti australioris" (see Note).

Phrynocephalus helioscopa: J. Kaup, 1827, Isis von Oken, Leipzig, 20: col. 613.

RANGE: Western Xinjiang, China. Turkey, Iran, and Armenia eastward to eastern Kazakhstan and Mongolia.

NOTE: In his diary, P. S. Pallas (1771, 1: 406) mentioned *Phrynocephalus helioscopus* in his remarks concerning "Inderskie Gory" (=Inderskaya Steppe). Probably on this basis the type locality was restricted to Inderskaya Gory, a region of the lower Ural River valley in western Kazakhstan (R. Mertens and L. Müller, 1928, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 41: 26).

Phrynocephalus hongyuanensis Zhao, Jiang, and Huang, 1980. (PLATE 25E)

Phrynocephalus vlangalii hongyuanensis E.-M. Zhao, Y.-M. Jiang, and Q.-Y. Huang, 1980, *in* Y.-M. Jiang, Q.-Y. Huang, and E.-M. Zhao, Acta Zool. Sinica, Beijing, 26: 178. Type locality: Hongyuan Co., Sichuan Prov., China (see Note); 3,500 meters.

Phrynocephalus hongyuanensis: Y.-Z. Wang and Y.-M. Jiang, 1992, *in* Y.-M. Jiang (ed.), Coll. Papers Herpetol., Chengdu: 111.

RANGE: Known only from the type locality.

NOTE: Y.-Z. Wang and Y.-M. Jiang (1992: 111, 115) noted that the holotype was collected at Waqên, Hongyuan County.

Phrynocephalus koslowi Bedriaga, 1906.

Phrynocephalus koslowi J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 162. Type locality: Lük-Tschun (=Lukchun), Tjan-schan (=Tian Shan Mountains), Xinjiang Uygur Autonomous Region, China.

RANGE: Known only from the type locality.

Phrynocephalus ludovici Mocquard, 1910.

Phrynocephalus Ludovici F. Mocquard, 1910, Bull. Mus. Natl. Hist. Nat., Paris, 16: 146. Type locality: Koutchar (=Kuqa), Xinjiang Uygur Autonomous Region, China.

RANGE: Known only from the type locality.

Phrynocephalus mystaceus (Pallas, 1776). (PLATE 25F)

Lacerta mystacea P. S. Pallas, 1776, Reise Versch. Prov. Russ. Reichs, St. Petersburg, 3: 702. Type locality: "Arenosis Naryn" and "deserti Comani" (see Note).

Phrynocephalus mystacia [*sic*]: J. Kaup, 1827, Isis von Oken, Leipzig, 20: col. 613.

RANGE: Western Xinjiang, China. Northwest coast of Caspian Sea of Russia to eastern Kazakhstan, south to northern Iran.

NOTE: The type locality has been restricted to the Naryn Steppe, northern coast of Caspian Sea (R. Mertens and L. Müller, 1928, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 41: 26). A. Bannikov, I. S. Darevsky, V. G. Ishchenko, A. K. Rustamov, and N. N. Szczerbak (1977, Guide Rept. Amphib. USSR, Moscow: 134) gave the type locality as "Naryn Steppe (eastern Kavkaz)."

Phrynocephalus przewalskii Strauch, 1876. (PLATE 25G)

Phrynocephalus Przewalskii A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 10. Type locality: Alashan Desert, Nei Mongol Autonomous Region (Inner Mongolia), China.

Phrynocephalus affinis A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 13. Type locality: Alashan (=Tengger) and Ordos deserts, Nei Mongol Autonomous Region (Inner Mongolia), China (see Note).

?*Phrynocephalus carinatus* S. F. Zarevsky (as Carevskij), 1927, Comp. Rend. Acad. Sci. URSS, Leningrad, ser. A, 1927: 305. Type locality: Along Dangar-ho (=Huang Shui, tributary of upper Huang He), eastern Nanshan, border area of Gansu and Qinghai provinces, China.

?*Phrynocephalus elegans* S. F. Zarevsky (as Carevskij), 1927, Comp. Rend. Acad. Sci. URSS, Leningrad, ser. A, 1927: 305. Type locality: Eastern Alashan (=Tengger Desert, Nei Mongol Autonomous Region), between Tingyuanying (=Dingyuanying, Nei Mongol) and Scharuzan-Sumé, Ningsia (=Ningxia Hui Autonomous Region), China (see Note).

RANGE: Nei Mongol (Inner Mongolia), Ningxia, Gansu, and Qinghai, China.

NOTE: G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 41) gave further details on the type locality of *Phrynocephalus elegans* and fixed the type locality of *P. affinis* (1984: 42) as Ordos Desert, by lectotype designation.

Phrynocephalus theobaldi Blyth, 1863. (PLATE 25H)

Phrynocephalus Theobaldi E. Blyth, 1863, Jour. Asiatic Soc. Bengal, Calcutta, 32: 90. Type locality: Lake Chomoriri (=Tso Morari, Kashmir, India).

RANGE: Xinjiang and Xizang (Tibet), China. India (Kashmir) and Nepal.

Phrynocephalus versicolor Strauch, 1876. (PLATE 26A)

Phrynocephalus versicolor A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 18. Type locality: Alashan (=Tengger) Desert, Nei Mongol Autonomous Region, China.

Phrynocephalus versicolor var. *hispida* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 331. Type locality: Öst-Dschungarien (=Junggar Basin), Xinjiang Uygur Autonomous Region, China.

Phrynocephalus versicolor var. *Doriai* [*sic*] J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 332. Type locality: Chuldscha (=Yining Shi), Dschyn-cho (=Jinghe Co.), Kasch (=Kashi Shi), and See Ebi-nor (=Ebinur Lake), Tjan-schan (=Tian Shan Mtns.), Xinjiang Uygur Autonomous Region, China (see Note).

Phrynocephalus versicolor var. *Siebenrocki* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 333. Type locality: Between Metschin-Ola (=Mieh-Ch'eng-O-La Shan [mountain], about 30 kilometers northeast of Barkol) and Stadt Barkul (=Barkol Co.), on northern boundary of Tjan-schan (=Tien Shan Mtns.), Xinjiang Uygur Autonomous Region, China.

?*Phrynocephalus parvulus* S. F. Zarevsky (as Carevskij), 1927, Comp. Rend. Acad. Sci. URSS, Leningrad, ser. A, 1927: 305. Type locality: Eastern Alashan (=Tengger) Desert (Nei Mongol Autonomous Region), between Tingyuanying (=Dingyuanying, Nei Mongol) and Scharuzan-Sumé, Ningsia (=Ningxia Hui Autonomous Region), China (see Note).

RANGE: Xinjiang, Gansu, Ningxia, and Nei Mongol (Inner Mongolia), China. Eastern Kazakhstan, Russia (Tuvin District in Siberia), and Mongolia.

NOTE: G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 36) fixed the type locality of *Phrynocephalus doriai* as Ebinur Lake and that of *P. parvulus* (1984: 40) as eastern Alashan (=Tengger) Desert, both by lectotype designation.

Phrynocephalus vlangalii Strauch, 1876. (PLATE 26B–C)

Phrynocephalus Vlangalii A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 20. Type locality: Kuku-noor (=Qinghai Hu) Lake, Qinghai Prov., China.

Phrynocephalus vlangalii var. *roborowskii* A. Strauch, "1905" (1906), *in* J. von Bedriaga, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 172. Type locality: Provinz Zaidam (=Qaidam Basin), Qinghai Prov., China.

Phrynocephalus vlangalii var. *nanschanica* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 172, 177. Type locality: Ssatschsheu (=Dunhuang Co.), Gansu Prov., Nan-Schan (=Nanshan), and between Kurlyk (=Nomhon), Zaidam (=Qaidam Basin, Qinghai Prov.), China (see Note).

Phrynocephalus Vlangalii var. *Grombtschewskii* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 463. Type locality: Dabsun-Gobi (=Qaidam Basin), south of Kuku-nor-Gebirge (="Koko Nor," or Qinghai Hu mountain), Qinghai Prov., China.

Phrynocephalus Vlangalii var. *geckoides* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 466. Type locality: Estuary of the Tschurmyn River, province uncertain; Guiduï (=Guide Co.), mountain near Guiduï, and Gomi (=Kyikug), all in Qinghai Prov., China (see Note).

Phrynocephalus Vlangalii var. *parva* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 468. Type locality: Dy Tschu (=Moron Us and Tuotuo rivers?), Qinghai Prov., and northern Tibet (=Xizang Autonomous Region), China (see Note).

Phrynocephalus Vlangalii var. *Pylzowi* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 471. Type locality: Chuanche (=Bailong Jiang?), Gansu Prov., and Gomi (=Kyikug), Qinghai Prov., China (see Note).

Phrynocephalus Vlangalii var. *Lidskii* J. von Bedriaga, 1909, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(3): 479. Type locality: Russki mountain range; Tibet (=Xizang Autonomous Region); northern Tibet; Tschertschen (=Qiemo Co.); between Atschan and Ssuchet; Kara-ssai (=Karasay, Xinjiang Uygur Autonomous Region); Tochtachun; and Keria (=Yutian) Mountains, southern Xinjiang Uygur Autonomous Region-northern Xizang Autonomous Region (Tibet) region, China (see Note).

?*Phrynocephalus birulai* S. F. Zarevsky (as Carevskij), 1927, Comp. Rend. Acad. Sci. URSS, Leningrad, ser. A, 1927: 304. Type locality: Southern Alashan (=Tengger Desert, Nei Mongol Autonomous Region) on boundary of Kansu (=Gansu Prov.) and the length of the Tangar River, eastern Nan-shan, border area of Gansu and Qinghai Prov., China (see Note).

RANGE: Xinjiang, Gansu, Qinghai, and northwestern Sichuan, China.

NOTE: G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 39) fixed the type locality of *Phrynocephalus birulai* as South Alashan (=Tengger) Desert, by lectotype designation. Similarly, Peters (1984: 44) fixed the type locality of *P. nanshanica* as Nanshan, that of *P. geckoides* as the estuary of the Tschurmyn River (page 45), that of *P. pylzowi* as the Huang-ho (page 46), that of *P. parva* as Di chu (page 46), and that of *P. lidskii* as Keria (=Yutian) Mountains (page 47).

PHYSIGNATHUS Cuvier, 1829.

Physignathus G. Cuvier, 1829, Règne Anim., ed. 2, Paris, 2: 41. Type species: *Physignathus cocincinus* G. Cuvier, 1829, by monotypy.

NOTE: The only Latinized form of this name in Cuvier was misspelled "*Phyhignat,us*" [*sic*] (volume 2, page 41). However, the vernacular name "Physignathes" was given several times (volume 2, pages v and 41; volume 3, page 486), from which the correct Latin form can be inferred.

Physignathus cocincinus Cuvier, 1829. (PLATE 26F)

Physignathus cocincinus G. Cuvier, 1829, Règne Anim., ed. 2, Paris, 2: 41. Type locality: Cochinchine (=Vietnam).

RANGE: South China. Eastern Indochina to eastern Thailand.

PTYCTOLAEMUS W. Peters, 1864.

Ptyctolaemus W. Peters, 1864, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1864: 386. Type species: *Otocryptis (Ptyctolaemus) gularis* W. Peters, 1864, by monotypy.

Ptyctolaemus gularis (Peters, 1864). (PLATE 26D–E)

Otocryptis (Ptyctolaemus) gularis W. Peters, 1864, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1864: 386. Type locality: "Calcutta," in error.

Ptyctolæmus gularis: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 1: 273.

RANGE: Xizang (Tibet), China. India (Assam).

ANGUIDAE

OPHISAURUS Daudin, 1803.

Ophisaurus F.-M. Daudin, "11" (1803), Bull. Sci. Soc. Philomath., Paris, ser. 2, 3: 188. Type species: *Anguis ventralis* C. Linnaeus, 1766, of North America, by monotypy (see Note).

NOTE: Four genera of Chinese reptiles (*Ophisaurus, Eryx, Python,* and *Bungarus*) are generally cited as of F.-M. Daudin (1803, Hist. Nat. Rept., Paris, vols. 5 and 7, published between April and September, 1803, according to F. Harper [1940, Amer. Midl. Nat., Notre Dame, 23: 715–716]), but there is good evidence that all four names appeared earlier and on two occasions. Indeed, both of these earlier publications are even cited in volume 5 of Daudin's "Histoire Naturelle." The point is important not only for correct citation, but for designation of type species since in the earlier accounts fewer species were listed. One of these articles (1803, Magas. Encyclopéd. Millin, Paris, 5: 433–438) was apparently published in March or April 1803, according to M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 111) and F. Harper (1940: 715), but we cannot determine the precise date. The other article (1803, Bull. Sci. Soc. Philomath., Paris, ser. 2, 3: 187–188), however, is precisely dated on the front cover of the issue as "Ventôse, II An" (or 20 February to 20 March 1803, the sixth month of the 11th year of the French Republican calendar). Thus, we cite this reference for all four genera.

Ophisaurus formosensis Kishida, 1930. (PLATE 26G)

Ophisaurus formosensis K. Kishida, 1930, Lansania, Tokyo, 2: 125. Type locality: Hinokiyama (=Kueishan), Bunzan-gori (=general area of Hsintien), Taihoku-shiu (=Taipei Co.), Taiwan Prov., China; 1,400 meters.

RANGE: Taiwan, China.

Ophisaurus gracilis (Gray, 1845).

Pseudopus gracilis J. E. Gray, 1845, Catal. Liz. Brit. Mus., London: 56. Type locality: Khagic (=Khasi) Hills, India.

Ophisaurus gracilis: G. A. Boulenger, 1885, Catal. Liz. Brit. Mus., London, 2: 283.

RANGE: Guangxi to Sichuan and southeastern Xizang (Tibet), China. India (Darjeeling and Assam) and Burma; northern Laos and Vietnam.

Ophisaurus hainanensis Yang, 1983.

Ophisaurus hainanensis R.-S. Yang, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 67.

Type locality: Xinan Tree Farm, Mt. Diaoluo, Hainan Island, Guangdong (now part of Hainan) Prov., China; 950 meters.

RANGE: Hainan, China.

Ophisaurus harti Boulenger, 1899. (PLATE 26H)

Ophisaurus harti G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 160. Type locality: Kuatun (=Guadun), northwestern Fokien (=Fujian) Prov., China; 3,000 to 4,000 feet or more.

RANGE: Southern China including Taiwan, northward to Hubei and Anhui. Northern Vietnam.

NOTE: É. R. Brygoo ("1987" [1988], Bull. Mus. Natl. Hist. Nat., Paris, ser. 4, 9: 727–752) recorded *Ophisaurus ludovici* F. Mocquard, 1905 (Bull. Mus. Hist. Nat., Paris, 11: 76; type locality: Bao Lake, upper Tonkin [=northern Vietnam]) from southwest China, but we regard *O. ludovici* as synonymous with *O. harti*.

SHINISAURIDAE

SHINISAURUS Ahl, 1930.

Shinisaurus E. Ahl, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde, Berlin, 1929: 329. Type species: *Shinisaurus crocodilurus* E. Ahl, 1930, by monotypy.

NOTE: In describing this new genus and species, Ahl erected for it the new family Shinisauridae, although many later writers have followed S. B. McDowell, Jr., and C. M. Bogert (1954, Bull. Amer. Mus. Nat. Hist., New York, 105: 27) in placing it together with *Xenosaurus* of northern Middle America in the family Xenosauridae. Q.-X. Hu, Y.-M. Jiang, and E.-M. Zhao (1984, Acta Herpetol. Sinica, Chengdu, [new ser.], 3(1): 1–7), however, restored the family Shinisauridae.

Shinisaurus crocodilurus Ahl, 1930. (PLATE 27A–B)

Shinisaurus crocodilurus E. Ahl, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 329. Type locality: Yao shan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 1,500 meters (see Note).

RANGE: Guangxi, China.

NOTE: For details about the type locality, see R. Mell ("1929" [1930], Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 310).

VARANIDAE

VARANUS Merrem, 1820.

Varanus B. Merrem, 1820, Versuch Syst. Amph. / Tent. Syst. Amphib., Marburg: 58 (Latin version). Type species: *Lacerta Varia* J. White, 1790, of Australia (see Note), by subsequent designation (J. E. Gray, 1827, Philos. Mag., London, ser. 2, 2: 55).

NOTE: As explained by C. D. Sherborn (1891, Ann. Mag. Nat. Hist., London, ser. 6, 7: 535), White's amphibians and reptiles probably were determined by George Shaw, to whom authorship has sometimes been attributed. However, applying Article 50 of the "Code" (1985), authorship must rest with White since no indication of Shaw's responsibility is given in the original publication. It should also be noted that G. Shaw (1802, Gen. Zool., London, 3: 215) did not claim authorship for the name *Lacerta varia*.

Varanus irrawadicus Yang and Li, 1987.

Varanus irrawadicus D.-T. Yang and S.-M. Li, 1987, Chin. Herpetol. Res., Chongqing, 1987: 60. Type locality: Wanding Valley, Yunnan Prov., China.

RANGE: Known only from the type locality.

Varanus salvator (Laurenti, 1768). (PLATE 27C–D)

Stellio salvator J. N. Laurenti, 1768, Synops. Rept., Vienna: 56. Type locality: "America," in error (see Note).

Varanus salvator: T. Cantor, 1847, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 16: 635.

RANGE: Hong Kong, Guangdong, Hainan, Guangxi, and southern Yunnan, China. Specimens have been collected in Taiwan, but these are believed to be escapees that were imported inadvertently on cargo ships (K.-Y. Lue, S.-H. Chen, Y.-S. Chen, and S.-L. Chen, 1987, Taiwan Lizards, Wufeng: 24). Sri Lanka and India (Bengal) eastward through Burma and Indochina; Indoaustralian Archipelago; Australia (islands of Torres Strait?).

NOTE: The type locality has been restricted to Ceylon (=Sri Lanka) (R. Mertens, 1959, Senckenberg. Biol., Frankfurt am Main, 40: 236).

DIBAMIDAE

DIBAMUS Duméril and Bibron, 1839.

Dibamus A.-M.-C. Duméril and G. Bibron, 1839, Erpétol. Gén., Paris, 5: 833. Type species: *Dibamus Novæ-Guineæ* A.-M.-C. Duméril and G. Bibron, 1839, of the Philippines, Indonesia, and New Guinea, by monotypy.

Dibamus bogadeki Darevsky, 1992. (PLATE 27E–G)

Dibamus bogadeki I. S. Darevsky, 1992, Asiatic Herpetol. Res., Berkeley, 4: 8. Type locality: Hei Ling Chau (island), between Lantau and Hong Kong islands, Hong Kong, China.

RANGE: Hei Ling Chau and Shek Kwu Chau islands, Hong Kong, China.

Dibamus bourreti Angel, 1935.

Dibamus Bourreti F. Angel, 1935, Bull. Mus. Natl. Hist. Nat., Paris, ser. 2, 7: 354. Type locality: Tam Dao, Vinh Yen Prov., Tonkin, Vietnam; 900 meters.

RANGE: Guangxi, China. Northern Vietnam.

LACERTIDAE

EREMIAS Fitzinger, 1834.

Eremias L. J. Fitzinger, 1834, *in* A. F. A. Wiegmann, Herpetol. Mex., Berlin, 1: 9. Type species: *Lacerta variabilis* P. S. Pallas, "1811–1831" (1827) (=*Eremias arguta* P. S. Pallas, 1773), by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 21) (see Note).

NOTE: In the original description of *Eremias*, two species are listed (*Lacerta velox, L. variabilis*), but neither one is designated as type. Several 20th century authors state that *L. velox* P. S. Pallas, 1771 is the type species, on what basis we cannot determine.

Eremias argus Peters, 1869. (PLATE 27H)

Eremias argus W. Peters, 1869, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1869: 61. Type locality: Chefoo (=Yantai Shi), Srov., China.

Eremias barbouri K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 2. Type locality: Mai Tai Chao (=Tumd Zuoqi), "northern Shansi," China (see Note).

RANGE: Liaoning south to Jiangsu and westward to Qinghai, China. Russia (region of Lake Baikal), Mongolia, and Korea.

NOTE: C. H. Pope (1935, Rept. China, New York: 497) placed Mai Tai Chao in "Suiyuan" Province, a region now part of Nei Mongol Autonomous Region (Inner Mongolia), China.

Eremias arguta (Pallas, 1773).

Lacerta arguta P. S. Pallas, 1773, Reise Versch. Prov. Russ. Reichs, St. Petersburg, 2: 718. Type locality: "Irtin australiorem . . . M[are] Caspium" (see Note).

Eremias arguta: J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 39.

Eremias arguta var. *Potanini* J. von Bedriaga, 1912, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(4): 631. Type locality: Desert near Mt. Ssalburty, southwest of Bulun-Tochoi (=Fuhai Co.), Tschungarien (=Junggar Basin), Xinjiang Uygur Autonomous Region, China.

RANGE: Xinjiang and Nei Mongol (Inner Mongolia), China. Northeastern Rumania south to northern Iran, eastward through Russia (north to 53° North Latitude) to the Altay region and Mongolia.

NOTE: In addition to the localities given by Pallas in his formal description of *Lacerta arguta*, in the itinerary of his expedition (1773, 2: 493) he mentioned another locality: Gratschefskoi outpost. Although R. Mertens and H. Wermuth (1960, Amphib. Rept. Europe, ed. 3, Frankfurt am Main: 98) gave Irtysch River as the type locality, N. N. Szczerbak (1974, Palaearctic Des. Liz., Kiev: 167) stated that it is between the Ural and Emba rivers, a region along the north coast of the Caspian Sea in western Kazakhstan. Later, Szczerbak (1981, *in* W. Böhme, Handb. Rept. Amphib. Europas, Wiesbaden, 1: 437) gave the type locality as between the Volga and Emba rivers, apparently in error.

Eremias brenchleyi Günther, 1872.

Eremias Brenchleyi A. Günther, 1872, Ann. Mag. Nat. Hist., London, ser. 4, 10: 419. Type locality: "Mongolia" (in error; see Note).

RANGE: Nortrn China, southward to northern Anhui and Jiangsu. Unconfirmed, and unlikely, record for Russia (Lake Baikal region).

NOTE: A. Günther (1873, *in* J. L. Brenchley, Jottings Cruise H.M.S. *Curaçoa* South Sea Is., London: 396) gave the type locality as the district of Mongolia called "The Land of Grass" (or Steppes), but the species is not known from Mongolia.

Eremias buechneri Bedriaga, 1906.

Eremias buechneri J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Petersbourg, 10: 184. Type locality: Northern edge of Kuenlün (=Kunlun) Mountains, Altyn-Tagh (=Altun) Mountains, Yarkand (=Shache), and Tolan River in Kaschgarei (=Kashi Shi), Xinjiang Uygur Autonomous Region; Zaidam (=Qaidam basin), Qinghai Prov., China (see Note).

RANGE: Western Xinjiang and probably Qinghai, China. Eastern Kirgizstan.

NOTE: N. N. Szczerbak (1974, Palaearctic Des. Liz., Kiev: 48) restricted the type locality to southern Kashgar (=Kashi Shi).

Eremias grammica (Lichtenstein, 1823).

Lacerta grammica H. Lichtenstein, 1823, Verzeich. Doublet. Zool. Mus. Königl. Univ. Berlin: 100. Type locality: Aegypt (=Egypt), Nubia (=Sudan), and Tataria (=Tatar Republic of Russia) (see Note).

Eremias (Scapteira) grammicus: L. A. Lantz, 1928, Bull. Mus. Géorgie, Tbilisi, 5: 117.

RANGE: Western Xinjiang, China. Northeastern Iran and northern Afghanistan; east shore of Caspian Sea to eastern Kazakhstan.

NOTE: N. N. Szczerbak (1974, Palaearctic Des. Liz., Kiev: 247) restricted the type locality to Karakum, Uzbekistan.

Eremias multiocellata Günther, 1872. (PLATE 27-I)

Eremias multiocellata A. Günther, 1872, Ann. Mag. Nat. Hist., London, ser. 4, 10: 419. Type locality: Desert of Gobi, on the route from Sumé to the Tola River, Mongolia.

RANGE: Xinjiang and Qinghai eastward through Nei Mongol (Inner Mongolia) to western Liaoning, China. Mongolia; eastern Kirgizstan to southern Tuvin District in Siberian Russia.

1. *Eremias multiocellata multiocellata* Günther, 1872. (PLATE 27-I)

Eremias multiocellata multiocellata G. A. Boulenger, 1921, Monogr. Lacert., London, 2: 329 (combination implied).

Podarces (Eremias) planiceps A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 39. Type locality: Gansu (Prov.), China.

Eremias multiocellata var. *koslowi* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 183. Type locality: Oase Ssatschsheu (=Dunhuang Co.) and Nan-schan (=Nanshan), Gansu Prov., China.

Eremias multiocellata var. *reticulata* J. von Bedriaga, 1912, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(4): 589, 597. Type locality: Eastern Tschungarei (=eastern Junggar Basin), Xinjiang Uygur Autonomous Region, China.

RANGE: Eastern Xinjiang and Qinghai eastward through Nei Mongol (Inner Mongolia) to western Liaoning, China. Mongolia; eastern Kazakhstan to southern Tuvin District in Siberian Russia.

2. *Eremias multiocellata yarkandensis* Blanford, 1875.

Eremias Yarkandensis W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 44(2): 194. Type locality: Eastern Turkestán (=southern Xinjiang Uygur Autonomous Region), China.

Eremias multiocellata var. *yarkandensis* G. A. Boulenger, 1921, Monogr. Lacert., London, 2: 329.

Eremias Yarkandensis var. *saturata* W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 44(2): 194. Type locality: Valleys of the Kuenluen (=Kunlun) range, south of Yárkand (=Shache), Xinjiang Uygur Autonomous Region, China.

RANGE: Western Xinjiang, China. Eastern Kirgizstan and southeastern Kazakhstan.

Eremias przewalskii (Strauch, 1876). (PLATE 28A)

Podarces (Eremias) Przewalskii A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov,

St. Petersburg, 2(3): 43. Type locality: Alashan Desert, Nei Mongol (Inner Mongolia), China.

Eremias przewalskii: G. A. Boulenger, 1887, Catal. Liz. Brit. Mus., London, 3: 105.

Podarces (Eremias) Kessleri A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 36. Type locality: Alashan Desert, Nei Mongol (Inner Mongolia), and Gansu Prov., China (see Note).

Podarces (Eremias) brachydactyla A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 41. Type locality: Alashan Desert, Nei Mongol (Inner Mongolia), China (see Note).

RANGE: Nei Mongol (Inner Mongolia) west to Qinghai and Xinjiang, China. Russia (southern Tuvin District) and Mongolia.

NOTE: G. A. Boulenger (1887: 105), acting as first revisor, chose the name *przewalskii* in preference to *kessleri* and *brachydactyla*.

Eremias quadrifrons (Strauch, 1876).

Podarces (Eremias) quadrifrons A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 34. Type locality: Alashan Desert, Nei Mongol (Inner Mongolia), China.

Eremias quadrifrons: G. A. Boulenger, 1887, Catal. Liz. Brit. Mus., London, 3: 105.

RANGE: Nei Mongol (Inner Mongolia), China.

Eremias velox (Pallas, 1771).

Lacerta velox P. S. Pallas, 1771, Reise Versch. Prov. Russ. Reichs, St. Petersburg, 1: 406, 457. Type locality: "Inderskiensem lacum" (see Note).

Eremias velox: A. F. A. Wiegmann, 1834, Herpetol. Mex., Berlin: 9.

Eremias velox var. *roborowskii* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. St.-Pétersbourg, 10: 181. Type locality: Ssatschsheu (=Dunhuang Co.), Kansu (=Gansu Prov.) and Lük-tschun (=Lukchun), Xinjiang Uygur Autonomous Region, China.

RANGE: Xinjiang, Gansu, and Nei Mongol (Inner Mongolia), China. Caucasus of Azerbaijan eastward to eastern Kazakhstan (north to 53° North Latitude), south to northern Iran and Afghanistan.

NOTE: On page 406 of Pallas's itinerary (1771), he mentions *Eremias velox* from "Inderskie Gory" and, apparently on this basis, the type locality of *E. velox* is given as Inderskija mountain, lower Ural River, western Kazakhstan, by R. Mertens and H. Wermuth (1960, Amphib. Rept. Europe, ed. 3, Frankfurt am Main: 98).

Eremias vermiculata Blanford, 1875. (PLATE 28B)

Eremias vermiculata W. T. Blanford, 1875, Jour. Asiatic Soc. Bengal, Calcutta, new sér., 44(2): 194. Type locality: Eastern Turkestán (=southern Xinjiang Uygur Autonomous Region), China.

Podarces (Eremias) Pylzowi A. Strauch, 1876, *in* N. Przewalski, Mongol. Strana Tangutov, St. Petersburg, 2(3): 28. Type locality: Alashan Desert, Nei Mongol (Inner Mongolia), China.

RANGE: Xinjiang east to Nei Mongol (Inner Mongolia), China. Mongolia and eastern Kazakhstan.

LACERTA Linnaeus, 1758.

Lacerta C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 200. Type species: *Lacerta agilis*

C. Linnaeus, 1758, of Europe and central Asia, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 20).

Lacerta agilis Linnaeus, 1758. (PLATE 28C)

Lacerta agilis C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 203. Type locality: Europe and India (see Note).

RANGE: Western Xinjiang, China. Northern and central Europe, east through Russia (to Lake Baikal; north to 63° North Latitude), south to northern Turkey and Kirgizstan; northwestern Mongolia.

NOTE: The type locality of *Lacerta agilis* was restricted to southern Sweden (R. Mertens and L. Müller, 1928, Abhandl. Senckenberg. Naturforsch. Gesellsch., Frankfurt am Main, 41: 40).

1. ***Lacerta agilis exigua*** Eichwald, 1831. (PLATE 28C)

Lacerta exigua E. Eichwald, 1831, Zool. Special., Vilnius, 3: 188. Type locality: "Uralensi monte" (=Ural Mountains of Russia and Kazakhstan).

Lacerta agilis var. *exigua*: G. A. Boulenger, 1887, Catal. Liz. Brit. Mus., London, 3: 21.

Lacerta agilis var. *kurtuana* N. F. Kashchenko, 1909, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 14: 125. Type locality: Between Qinggil (=Qinghe) River and Choro-Saro (river), Kurtu (river), Kairty River, and Mukurtai, west of Lake Ulungur, all in northern Xinjiang Uygur Autonomous Region, China; Georgiyevka, Bazarka (both in Semipalatinsk region), and Bakhty, all in eastern Kazakhstan, and Ajgulak' (Altai region) of Siberian Russia.

RANGE: Western Xinjiang, China. Ukraine east of Dnepr River through Russia to Lake Baikal, south to Armenia and northern Turkey; northwestern Mongolia.

Lacerta vivipara Jacquin, 1787. (PLATE 28D)

Lacerta vivipara J. F. von Jacquin, 1787, Nova Acta Helvet., Phys.-Mathemat.-Anat.-Botan.-Med., Basel, 1: 33. Type locality: "Monte Schneeberg," southwest of Vienna, Austria.

RANGE: Xinjiang (Altai region) and Heilongjiang, China. Europe (north to 73° North Latitude) including British Isles east to Siberian Russia (Primorskiy Territory [=Maritime District] and Sakhalin Island); northern Mongolia and Japan (Hokkaido Island).

PLATYPLACOPUS Boulenger, 1917.

Platyplacopus G. A. Boulenger, 1917, Mem. Asiatic Soc. Bengal, Calcutta, 5: 231. Type species: *Takydromus kuehnei* J. VanDenburgh, 1909, by monotypy.

Platyplacopus intermedius (Stejneger, 1924).

Takydromus intermedius L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 120. Type locality: Shin-kai-si (=Xin-kai Si), Mt. Omei (=Mt. Emei), near Kiating (=Leshan Shi), Szechwan (=Sichuan) Prov., China; 4,400 feet.

Platyplacopus intermedius: C. H. Pope, 1935, Rept. China, New York: 475.

RANGE: Southwestern China.

Platyplacopus kuehnei (VanDenburgh, 1909). (PLATE 28E)

Takydromus kuehnei J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 50. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China.

Platyplacopus kuehnei: G. A. Boulenger, 1917, Mem. Asiatic Soc. Bengal, Calcutta, 5: 232.
Tachydromus chinensis T. Vogt, 1914, Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1914: 98. Type locality: Northern Kuangtung (=Guangdong) Prov., China.
Platyplacopus kuehnei carinatus J. L. Gressitt, 1938, Proc. Biol. Soc. Washington, 51:129. Type locality: Ta Han (=Da'an), Hainan Island, Hainan Prov., China; 775 meters.
RANGE: Taiwan, Guangdong, Hainan, Guangxi, AND Guizhou, China.

Platyplacopus sylvaticus (Pope, 1928).

Apeltonotus sylvaticus C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 1. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China.
Platyplacopus sylvaticus: C. H. Pope, 1935, Rept. China, New York: 476.
RANGE: Known only from the type locality.

TAKYDROMUS Daudin, 1802.

Takydromus F.-M. Daudin, "X" (1802), Hist. Nat. Rept., Paris, 3: 251. Type species: *Takydromus sexlineatus* F.-M. Daudin "X" (1802), by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 21) (see Note).
NOTE: The spelling "*Tachydromus*," which has been used by many authors, is an unjustified emendation of Daudin's original spelling under the "Code" (1985, Article 32). L. Stejneger (1907, Bull. U.S. Natl. Mus., Washington, 58: 229) gave *Takydromus quadrilineatus* F.-M. Daudin, 1802, as type species, on what basis we cannot determine.

Takydromus amurensis (Peters, 1881). (PLATE 28F)

Tachydromus amurensis W. Peters, 1881, Sitzungs-Ber. Gesellsch. Naturforsch. Freunde Berlin, 1881: 71. Type locality: Kissakewitsch (=Kossakewitcha), Amur, Russia.
Takydromus amurensis: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 245.
?*Tachydromus Wolteri* var. *cupreus* P. Pavlov, 1932, Publ. Mus. Hoang ho Pai ho, Tien Tsin, 12: 9. Type locality: Man Keou, Manchuria, China.
?*Tachydromus Wolteri* var. *mandchuriensis* P. Pavlov, 1932, Publ. Mus. Hoang ho Pai ho, Tien Tsin, 12: 10. Type locality: Soun and Man Keou, Manchuria, China.
RANGE: Northeastern China. Russia (Primorskiy Territory [=Maritime District]), Korea, and Japan (Tsushima Islands).

Takydromus formosanus (Boulenger, 1894).

Tachydromus formosanus G. A. Boulenger, 1894, Ann. Mag. Nat. Hist., London, ser. 6, 14: 462. Type locality: Taiwanfoo (=Tainan) and central Formosa (=Taiwan), Taiwan Prov., China.
Takydromus formosanus: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 235.
RANGE: Taiwan, China.

Takydromus hsuehshanensis Lin and Cheng, 1981.

Takydromus hsuehshanensis J.-Y. Lin and H.-Y. Cheng, 1981, Bull. Inst. Zool., Acad. Sinica, Taipei, 20: 43. Type locality: Mt. Hsiao-hsueh, Taiwan Prov., China; 2,500–2,950 meters.
RANGE: Central Taiwan, China.

Takydromus sauteri VanDenburgh, 1909. (PLATE 28G)

Takydromus sauteri J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 50. Type locality: Koshun (=Hengchun), Formosa (=Taiwan Prov.), China.

RANGE: Taiwan (including Lanyu Island), China.

Takydromus septentrionalis (Günther, 1864). (PLATE 28H)

Tachydromus septentrionalis A. Günther, 1864, Rept. Brit. India, London: 70. Type locality: Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Takydromus septentrionalis: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 232.

RANGE: Southern China, north to Jilin and west to Gansu.

Takydromus sexlineatus Daudin, 1802. (PLATE 29A)

Takydromus sexlineatus F.-M. Daudin, "X" (1802), Hist. Nat. Rept., Paris, 3: "356" (=256) (see Note). Type locality: Not given (see Note).

RANGE: Southern China including Hainan and Hong Kong, westward to Yunnan. India (Assam) through Burma and Thailand to Vietnam, south to Indonesia (Sumatra, Java, Borneo).

NOTE: The page number of Daudin's original description was corrected to 256 in the reprinted version of his book. J. Guibé (1954, Catal. Types Léz., Paris: 68) gave the type locality of *Takydromus sexlineatus* as "Indes orientales."

1. ***Takydromus sexlineatus ocellatus*** (Guérin-Méneville, 1829). (PLATE 29A)

Tachydromus ocellatus F.-É. Guérin-Méneville, "1829–1844" (1829), Icon. Règne Anim. Cuvier, Rept., Paris: Atlas plate 5. Type locality: Not given (see Note).

Takydromus sexlineatus ocellatus: M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 368.

Tachydromus meridionalis A. Günther, 1864, Rept. Brit. India, London: 70. Type locality: Southern China and probably Cochinchina (=Vietnam) (see Note).

Tachydromus kwangsiensis E. Ahl, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 327. Type locality: Yao shan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; 1,500 meters (see Note).

RANGE: Southern China including Hainan and Hong Kong, westward to Yunnan. Eastern Burma, Thailand, Vietnam, and northern part of Malay Peninsula.

NOTE: We credit *Takydromus sexlineatus ocellatus* to Guérin-Méneville rather than to G. Cuvier, to whom the name is often attributed, since it is clear from his text that the references to Cuvier were merely for ease of referral to the second edition of Cuvier's "Règne Animal." Guérin-Méneville's plate 5, which gives no description or type locality, was published in 1829; his text, published "1829–1838" (1844), page 7, listed the type locality as "Les Indes orientales." M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 368) suggested that the actual type locality is "Cochinchine" (=Vietnam) since G.-L. Duvernoy ("1836–1849," *in* Règne Anim. Cuvier [disciples edition], Reptiles, Paris, plate 11, published 1838) gave this locality and was apparently working with the same material as Guérin-Méneville.

G. A. Boulenger (1921, Monogr. Lacert., London, 2: 154) stated that all types of *T. meridionalis* were from southern China. For details about the type locality of *T. kwangsiensis*, see R. Mell ("1929" [1930], Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 310).

Takydromus stejnegeri VanDenburgh, 1912. (PLATE 29B)

Takydromus stejnegeri J. VanDenburgh, 1912, Adv. Diag. New Rept. Amphib. Loo Choo Is. Formosa [privately printed], San Francisco: 8. Type locality: Taipeh (=Taipei), Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

Takydromus wolteri (Fischer, 1885).

Tachydromus Wolteri J. G. Fischer, 1885, Jahresber. Naturhist. Mus. Hamburg (Jahrb. Wissensch. Anstalt. Hamburg, 2), 1884: 82. Type locality: Chemulpo, Korea.

Takydromus wolteri: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 247.

RANGE: Jiangsu to Jiangxi westward to Hubei and eastern Sichuan, China. Korea and Russia (southern Primorskiy Territory [=Maritime District]).

SCINCIDAE

ASYMBLEPHARUS Eremtschenko and Szczerbak, 1980.

Asymblepharus V. K. Eremtschenko (Jeriomtschenko) and N. N. Szczerbak, 1980, Vestn. Zool., Kiev, 1980(4): 14. Type species: *Ablepharus alaicus* V. S. Elpatjevsky, 1901, by original designation.

Asymblepharus alaicus (Elpatjevsky, 1901). (PLATE 29C)

Ablepharus alaicus V. S. Elpatjevsky, 1901, Dnevn. Zool. Otdel. Imper. Obszest. Lubit. Estestvozn., Moscow, 3: 38. Type locality: Pamiri, foothills of Alay Mountains (see Note).

Asymblepharus alaicus: V. K. Eremtschenko (Jeriomtschenko) and N. N. Szczerbak, 1980, Vestn. Zool., Kiev, 1980(4): 14.

RANGE: Western Xinjiang, China. Tadjikistan (Tianshan and Pamir-Alai mountain ranges) to southeastern Kazakhstan.

NOTE: The type locality is near Daraut-Kurgan, Kirgizstan, according to V. K. Eremtschenko (Jeriomtschenko) and N. N. Szczerbak (1986, Ablepharine Lizards USSR Adjacent Count., Frunze: 21).

1. ***Asymblepharus alaicus kucenkoi*** (Nikolsky, 1902). (PLATE 29C)

Ablepharus kucenkoi A. M. Nikolsky, 1902, Annu. Mus. Zool. Impér. Acad. Sci. St.-Petersburg, 7(Reptilia et Amphibia): 7. Type locality: Bank of Issyk-kul (lake), Kirgizstan.

Asumblepharus [sic] *alaicus kucenkoi*: V. K. Eremtschenko (Jeriomtschenko) and N. N. Szczerbak, 1986, Ablepharine Lizards USSR Adjac. Count., Frunze: 46.

RANGE: Western Xinjiang, China. Kirgizstan and southeastern Kazakhstan.

ATEUCHOSAURUS Gray, 1845.

Ateuchosaurus J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 107. Type species: *Ateuchosaurus Chinensis* J. E. Gray, 1845, by monotypy.

Ateuchosaurus chinensis Gray, 1845. (PLATE 29D)

Ateuchosaurus Chinensis J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 107. Type locality: China.

Lygosaurus sowerbyi L. Stejneger, 1924, Occas. Papers Boston Soc. Nat. Hist., 5: 120. Type locality: Futsing District (=Fuqing Co.), Fukien (=Fujian) Prov., China.

Lygosaurus salsburyi K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 2. Type locality: Nodoa (=Nada, Zhan Co.), Hainan Island, Hainan Prov., China.

Mabuia albomaculata T. Vogt, 1927, Zool. Anz., Leipzig, 69: 282. Type locality: South China.

RANGE: Fujian west to Guizhou, south to Guangdong and Hainan, China.

EMOIA Gray, 1845.

Emoia J. E. Gray, 1845, Catal. Spec. Liz. Coll. Brit. Mus., London: 95. Type species: *Scincus atrocostatus* R.-P. Lesson, 1830, by subsequent designation (M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 11).

Emoia atrocostata (Lesson, 1830). (PLATE 29E)

Scincus atro-costatus [*sic*] R.-P. Lesson, 1830, Voy. Autour Monde *Coquille* Duperrey, Paris, Zool.: Atlas, reptiles plate 4. Type locality: Oualan (=Ualah or Kusaie Island?), Caroline Archipelago, Pacific Ocean (see Note).

Emoia atrocostatum: T. Barbour, 1912, Mem. Mus. Comp. Zool. Harvard Coll., Cambridge, 44: 94.

RANGE: Southern Taiwan (including Lanyu Island), China. Singapore and adjacent Malay Peninsula; Philippines and Japan (Ryukyu Islands); Indoaustralian Archipelago to New Guinea and Australia (Cape York Peninsula; Christmas Island, south of Java); Pacific Islands as far east as Vanuatu.

NOTE: Lesson's name dates from publication of plate 4, issued 3 April 1830 (according to R. M. Mengel, 1983, Catal. Ellis Coll. Ornithol. Books Univ. Kansas, Lawrence, 2: 171). The full description, including the type locality given here, was published late in 1831 (according to Mengel [1983: 171], and also C. D. Sherborn and B. B. Woodward, 1906, Ann. Mag. Nat. Hist., London, ser. 7, 17: 336); in Lesson's text (Zool., 2: 50) the species name is spelled *atrocostatus*. W. C. Brown (1991, Mem. California Acad. Sci., San Francisco, 15: 10), however, stated that plate 4 of Duperrey's voyage was published in 1826, but did not provide evidence; it is possible that he has confused the 1830–1831 report with the published results of an earlier voyage of the *Coquille* in 1822–1825, also commanded by Duperrey.

EUMECES Wiegmann, 1834.

Eumeces A. F. A. Wiegmann, 1834, Herpetol. Mex., Berlin, 1: 36. Type species: *Scincus pavimentatus* I. Geoffroy Saint-Hilaire, 1827 (=*Scincus Schneiderii* F.-M. Daudin, 1802), of North Africa and the Middle East, by subsequent designation (A. F. A. Wiegmann, 1835, Arch. Naturgesch., Berlin, 1(2): 288).

Eumeces capito Bocourt, 1879.

Eumeces capito M.-F. Bocourt, 1879, *in* A.-H.-A. Duméril, M.-F. Bocourt, and F. Mocquard, Miss. Scient. Mexique Amér. Centr., Rech. Zool., 3(Rept.), Paris, livr. 6: 429. Type locality: "Côte orientale des États-Unis," in error (see Note).

Eumeces xanthi A. Günther, 1889, Ann. Mag. Nat. Hist., London, ser. 6, 4: 220. Type locality: Ichang (=Yichang Shi), Hubei Prov., China.

Eumeces pekinensis L. Stejneger, 1924, Occas. Pap. Boston Soc. Nat. Hist., 5: 120. Type locality: Hsin-lung-shan (=Mt. Xinglong), Imperial Hunting Grounds, Chili (=Hebei) Prov., 65 miles northeast of Peking (=Beijing), China.

RANGE: Northern China, southward to Hubei and Sichuan.

NOTE: H. M. Smith, R. B. Smith, and J. Guibé (1975, Great Basin Nat., Salt Lake City, 35: 109–112) showed that *Eumeces capito* and *E. xanthi* are conspecific and they suggested (page 110) that Bocourt's type of *E. capito* might have originated in northern China.

Eumeces chinensis (Gray, 1838). (PLATE 29F)

Tiliqua chinensis J. E. Gray, 1838, Ann. [Mag.] Nat. Hist., London, [ser. 1], 2: 289. Type locality: China.

Eumeces chinensis: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 208.

Plestiodon pulchrum A.-M.-C. Duméril and G. Bibron, 1839, Erpétol. Gén., Paris, 5: 710. Type locality: China.

RANGE: Southern China, including Taiwan and Hainan. Vietnam (Dao Bach Long Vi or Nightingale Island, central Gulf of Tonkin).

1. ***Eumeces chinensis chinensis*** (Gray, 1838).

Eumeces chinensis chinensis: C. H. Pope, 1935, Rept. China, New York: 485.

RANGE: Southern China, including Hainan. Vietnam (Dao Bach Long Vi or Nightingale Island).

2. ***Eumeces chinensis daishanensis*** Mao, 1983.

Eumeces chinensis daishanensis J.-R. Mao, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 57. Type locality: Hengle Shan, Daishan Co., Zhejiang Prov., China; 50 meters.

RANGE: Zhoushan Islands, Zhejiang, China.

3. ***Eumeces chinensis formosensis*** VanDenburgh, 1912. (PLATE 29F)

Eumeces chinensis formosensis J. VanDenburgh, 1912, Adv. Diag. New Rept. Amphib. Loo Choo Is. Formosa, San Francisco: 6. Type locality: San Shi Ka (=Shanshang), Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

4. ***Eumeces chinensis leucostictus*** Hikida, 1988.

Eumeces chinensis leucostictus T. Hikida, 1988, Japan. Jour. Herpetol., Kyoto, 12: 119. Type locality: Nanliao, Lutao (=Lü Dao), Island, Taitong (=Taitung) County, Taiwan Prov., China.

RANGE: Known only from the type locality, an island off the southeastern coast of-Taiwan, China.

Eumeces elegans Boulenger, 1887. (PLATE 29G)

Eumeces elegans G. A. Boulenger, 1887, Catal. Liz. Brit. Mus., London, 3: 371. Type locality: Shanghai, Ningpo (=Ningbo Shi), Formosa (=Taiwan), Pescadore (=Penghu) Islands, and Kiukiang (=Jiujiang) Mountains, China (see Note).

RANGE: Southern China including Taiwan, westward to Yunnan, northward through Sichuan to southern Henan. Japan (Senkaku Group, in the southern Ryukyu Islands).

NOTE: The type locality was restricted to Ningpo (=Ningbo), Zhejiang Province, China (C. H. Pope, 1935, Rept. China, New York: 486).

Eumeces liui Hikida and Zhao, 1989.

Eumeces liui T. Hikida and E.-M. Zhao, 1989, Copeia, Gainesville, 1989: 111. Type locality: Nanjing, Jiangsu Prov., China.

RANGE: Hubei, Jiangsu, and Zhejiang, China.

Eumeces popei Hikida, 1989.

Eumeces popei T. Hikida, 1989, Copeia, Gainesville, 1989: 89. Type locality: Chong'an County, Fujian Prov., China.

RANGE: Known only from the type locality.

Eumeces quadrilineatus (Blyth, 1853).

Plestiodon quadrilineatum E. Blyth, 1853, Jour. Asiatic Soc. Bengal, Calcutta, 22: 652. Type locality: China (Hong Kong?).

Eumeces quadrilineatus: M.-F. Bocourt, 1879, *in* A.-H.-A. Duméril, M.-F. Bocourt, and F. Mocquard, Miss. Scient. Mexique Amér. Centr., Rech. Zool., 3(Rept.), Paris, livr. 6: 423.

Eumeces quadrivirgatus E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 502. Type locality: Hong Kong Island, China; near summit of mountain.

RANGE: Guangxi, Guangdong, Hainan, and Hong Kong, China. Thailand, Cambodia, and Vietnam.

Eumeces tunganus Stejneger, 1924. (PLATE 29H)

Eumeces tunganus L. Stejneger, 1924, Jour. Washington Acad. Sci., 14: 384. Type locality: Luting Kiao (=Luding Qiao [bridge]), where road to Tatsienlu (=Kangding Co.) crosses Tung River (=Dadu He), western Szechwan (=Sichuan) Prov., China; 5,000–6,000 feet.

RANGE: Western Sichuan, China.

MABUYA Fitzinger, 1826.

Mabuya L. J. Fitzinger, 1826, Neue Classif. Rept., Vienna: 23, 52. Type species: *Mabuya dominicensis* L. J. Fitzinger, 1826 (=*Lacertus Mabouya* B.-G.-É. Lacepède, 1788) of the West Indies and northern South America, by virtual tautonomy.

NOTE: The International Commission (1950, Bull. Zool. Nomen., London, 4: 356) corrected its earlier error, which stated that the type species of *Mabuya* is *Scincus Sloanii* F.-M. Daudin, 1802, a species that was not listed by Fitzinger in his original description of the genus.

Mabuya longicaudata (Hallowell, 1856). (PLATE 30A)

Euprepis longicaudata E. Hallowell, 1856 (1857?), Proc. Acad. Nat. Sci. Philadelphia, 8: 155. Type locality: Siam.

Mabuya longicaudata: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 214.

Euprepes (Tiliqua) bicarinatus W. Peters, 1867, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1867: 22. Type locality: Hong Kong, China.

Euprepes (Tiliqua) Ruhstrati J. G. Fischer, 1886, Abhandl. Naturwissensch. Ver. Hamburg, 9: 7. Type locality: South Formosa (=Taiwan Prov.), China.

RANGE: Yunnan, Guangdong, Hainan, Hong Kong, and Taiwan (including Lanyu Island), China. Southeastern Asia, including Malay Peninsula.

Mabuya multicarinata (Gray, 1845).

Tiliqua multicarinata J. E. Gray, 1845, Catal. Spec. Lizards Coll. Brit. Mus., London: 109. Type locality: Philippines.

Mabuia multicarinata: G. A. Boulenger, 1887, Catal. Lizards Brit. Mus. (Nat. Hist.), London, 3: 185.

Mabuya multicarinata: E. H. Taylor, 1918, Philippine Jour. Sci., Manila, ser. D, 13: 247.

RANGE: Taiwan (Lanyu Island), China. Philippines; Palau (Belau) Islands, east of Philippines.

NOTE: H. Ota (1991, Bull. Coll. Sci. Univ. Ryukyus, Nishihara, 51: 11–18) assigned the Lanyu Island population to the subspecies *Mabuya multicarinata borealis* W. C. Brown and A. C. Alcala, 1980 (Philippine Lizards Fam. Scincidae, Dumaguete City: 128; type locality: Subic Bay area, Luzon Island, Philippines), a taxon otherwise restricted to the northern Philippines.

Mabuya multifasciata (Kuhl, 1820).

Scincus multifasciatus H. Kuhl, 1820, Beitr. Zool. Vergleich. Anat., Frankfurt am Main, [1]: 126. Type locality: Not given (see Note).

Mabuya multifasciata: L. J. Fitzinger, 1826, Neue Classif. Rept., Vienna: 52.

RANGE: Taiwan, Hainan, and Yunnan, China. Southeastern Asia to India (Assam, Nicobar Islands); Indoaustralian Archipelago to New Guinea; Philippines.

NOTE: According to R. Mertens (1930, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 42: 257), the type locality is probably Java, Indonesia.

RIOPA Gray, 1839.

Riopa J. E. Gray, 1839, Ann. [Mag.] Nat. Hist., London, [ser. 1], 2: 332. Type species: *Lacerta punctata* C. Linnaeus, 1758, of India and Sri Lanka, by subsequent designation (M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 312; see Note).

NOTE: Gray listed three species in his original description of *Riopa,* but he did not designate a type. M. A. Smith (1935, 2: 312, 318) designated the type as *Lygosoma punctata,* whose authorship he gave as "Gmelin, Hist. Amphib. 1799, p. 197, based on [A.] Seba's fig. [=volume] ii, pl. 12, fig. 6." We can find no such Gmelin reference. Smith probably meant J. G. Schneider (1801, Hist. Amphib., Jena, 2: 197), who discussed *Scincus Punctatus.*

Riopa bowringii (Günther, 1864). (PLATE 30B)

Eumeces bowringii A. Günther, 1864, Rept. Brit. India, London: 91. Type locality: Hong Kong?, China (in error?; see Note).

Riopa bowringi M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 315.

RANGE: Hong Kong?, China. Indochina west to Burma, south through Malay Peninsula; Philippines.

NOTE: M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 315–316) questioned the type locality and the species has not been recorded subsequently in Hong Kong despite extensive recent collections (S. J. Karsen, M. W.-N. Lau, and A. Bogadek, 1986, Hong Kong Amphib. Rept., Hong Kong). John Bowring, collector of the type, sent many reptiles to the British Museum that were supposedly from Hong Kong, but this locality has been doubted (see C. H. Pope, 1935, Rept. China, New York: 132). If the type locality can be shown to be in error, this genus and species must be omitted from the Chinese fauna.

SCINCELLA Mittleman, 1950.

Scincella M. B. Mittleman, 1950, Herpetologica, San Diego, 6: 19. Type species: *Scincus lateralis* T. Say *in* E. James, 1823, of North America, by original designation.

NOTE: P. E. Ouboter (1986, Zool. Verhand., Leiden, 229: 1–66) reviewed the Asian *Scincella* and placed six Chinese species in the synonymy of *S. modesta*. The pattern of variation in Chinese populations suggests more than one species; we propose the following arrangement until detailed study of the extensive collections in Chinese museums can be done.

Scincella barbouri (Stejneger, 1925).

Leiolopisma barbouri L. Stejneger, 1925, Jour. Washington Acad. Sci., 15: 150. Type locality: Yunnan-fu (=Kunming Shi), Yunnan Prov., China.

Scincella barbouri: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 22.

RANGE: Northeastern Yunnan and probably Sichuan, China.

Scincella doriae (Boulenger, 1887).

Lygosoma doriæ G. A. Boulenger, 1887, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 4: 620. Type locality: Kakhien Hills and Bhamò, Burma.

Scincella doriae: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 24.

RANGE: Sichuan and Yunnan, China. Northern Burma and probably Thailand.

Scincella formosensis (VanDenburgh, 1912).

Leiolopisma laterale formosensis J. VanDenburgh, 1912, Adv. Diag. New Rept. Amphib. Loo Choo Is. Formosa [privately published], San Francisco: 7. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China (see Note).

Scincella formosensis: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 24.

Lygosoma laterale var. *formosensis* J. C. Thompson, 1912, Herpetol. Notices [privately published], San Francisco, 3: 2. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China (not of J. VanDenburgh, 1912; see Note).

RANGE: Taiwan, China.

NOTE: Within a six-month period, J. VanDenburgh and J. C. Thompson described the same four new taxa from Taiwan (in the genera *Scincella*, *Sphenomorphus*, and *Calliophis*), and sometimes used the same scientific name and even holotype. Although T. Barbour (1917, Occas. Pap. Mus. Zool. Univ. Michigan, Ann Arbor, 44: 1–9) attempted to sort out the chronological priority of names, incorrect scientific names have been used in the literature on several occasions. In the interest of establishing the correct names, we present the following information in some detail.

Five publications are involved, listed here in apparent order of publication. We assume, as did Barbour (1917: 1), that the dates of publication printed on the five publications are correct; only in the case of Thompson's third paper do we have independent evidence, which appears to confirm his printed date.

1. Herpetological notices no. 1, Prodrome of a description of a new genus of Ranidæ from the Loo Choo Islands, by J. C. Thompson. Privately published by author, San Francisco, 3 pages (published 15 June 1912).
2. Herpetological notices no. 2, Prodrome of descriptions of new species of Reptilia and Batrachia from the Far East, by J. C. Thompson. Privately published by author, San Francisco, 4 pages (published 28 June 1912).
3. Advance diagnoses of new reptiles and amphibians from the Loo Choo Islands and Formosa, by J. VanDenburgh. Privately published by author, San Francisco, 8 pages (published 29 July 1912).

4. Herpetological notices no. 3, On reptiles new to the island arcs of Asia, by J. C. Thompson. Privately published by author, San Francisco, (1), 5 pages (published 31 July 1912; British Museum [Nat. Hist.] library copy was accessioned 15 August 1912).
5. Concerning certain species of reptiles and amphibians from China, Japan, the Loo Choo Islands, and Formosa, by J. VanDenburgh. Proc. California Acad. Sci., San Francisco, ser. 4, 3: 187–258 (published 16 December 1912; fuller treatments of species briefly diagnosed in his 29 July paper).

In the case of *Scincella formosensis*, VanDenburgh's name apparently was published just two days before Thompson's. For further discussion of the conflict between VanDenburgh and Thompson, see K. Adler (1989, Soc. Study Amphib. Reptiles, Oxford [Ohio], Contr. Herpetol., 5: 73).

Scincella himalayana (Günther, 1864).

Eumeces himalayanus A. Günther, 1864, Rept. Brit. India, London: 86. Type locality: Himalayas (Kashmir, Garhval, Simla).

Scincella himalayana: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 25.

RANGE: Xinjiang and Xizang (Tibet), China. Northern Pakistan and India; Nepal.

Scincella huanrenensis Zhao and Huang, 1982.

Scincella huanrenensis E.-M. Zhao and K.-C. Huang, 1982, Acta Herpetol. Sinica, Chengdu, [new ser.], 1: 3. Type locality: Huanren Co., Liaoning Prov., China; 700 meters.

RANGE: Liaoning, China.

Scincella ladacensis (Günther, 1864).

Eumeces ladacensis A. Günther, 1864, Rept. Brit. India, London: 88. Type locality: Ladak (=Ladakh), "Tibet" (see Note).

Scincella ladacense: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 26.

RANGE: Xizang (Tibet), China. Northern Pakistan, India (Kashmir), and Nepal.

NOTE: A. Günther (1864: 88) gave the type locality as "Ladak (Tibet)," but M. A. Smith (1935, Fauna Brit. India, Rept. Amphib., London, 2: 300) gave "Ladak, Kashmir." The Ladakh Mountains cross the Xizang-Kashmir (India) border, but Ladakh is in Kashmir.

Scincella modesta (Günther, 1864).

Eumeces modestus A. Günther, 1864, Rept. Brit. India, London: 87. Type locality: Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Scincella modesta: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 27.

RANGE: Central China northward to Hebei in the east.

1. ***Scincella modesta modesta*** (Günther, 1864).

Scincella modesta modesta: Y.-Z. Wang and E.-M. Zhao, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 276.

RANGE: Central China.

2. ***Scincella modesta septentrionalis*** (Schmidt, 1925).

Leiolopisma septentrionalis K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 2. Type locality: Hsing Lung Shan (=Mt. Xinglong), Eastern Tombs, Chihli (=Hebei) Prov., China.

Scincella modesta septentrionalis: Y.-Z. Wang and E.-M. Zhao, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 276.
RANGE: Hebei, China.

Scincella monticola (Schmidt, 1925). (PLATE 30C)
Leiolopisma monticola K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 2. Type locality: Snow Mountain (=Yulong Xueshan) Village, Likiang (=Lijiang) Co., Yunnan Prov., China; 9,000 feet.
Scincella monticola: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 27.
Leiolopisma monticola pingliensis M.-T. Song, 1987, Acta Herpetol. Sinica, Chengdu, [new ser.], 6(1): 63. Type locality: Qianjiaping, Pingli Co., Shaanxi Prov., China; 1,950 meters.
RANGE: Shaanxi, western Sichuan, and northwestern Yunnan, China.

Scincella potanini (Günther, 1896).
Lygosoma potanini A. Günther, 1896, Annu. Mus. Zool. Acad. Impér. Sci. St. Pétersbourg, 1: 204. Type locality: Ta-tsien-lu (=Kangding Co.), Sichuan Prov., China.
Scincella potanini: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 29.
RANGE: Western Sichuan, China.

Scincella przewalskii (Bedriaga, 1912).
Lygosoma Przewalskii J. von Bedriaga, 1912, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(4): 669. Type locality: Dschachar Mountain, on the upper Chuanche (=Bailong Jiang?), Gansu Prov., China.
Scincella przewalskii: Y.-Z. Wang and E.-M. Zhao, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 276.
RANGE: Gansu, China.

Scincella reevesii (Gray, 1838). (PLATE 30D)
Tiliqua Reevesii J. E. Gray, 1838, Ann [Mag.] Nat. Hist., London, [ser. 1], 2: 292. Type locality: China (see Note).
Scincella reevesi: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 29.
RANGE: Guangxi, Guangdong, Hainan, and Hong Kong, China. Indochina west to Burma, south to Malay Peninsula.
NOTE: John R. Reeves lived in Macao and regularly worked in Canton (=Guangzhou Shi); thus, the type was probably obtained somewhere in this part of southern China.

Scincella schmidti (Barbour, 1927).
Leiolopisma schmidti T. Barbour, 1927, Copeia, [old ser.], Northampton, 165: 95. Type locality: Mt. Washan, western Szechwan (=Sichuan Prov.), China.
RANGE: Known only from the type locality.

Scincella sikimmensis (Blyth, 1853).
Mocoa sikimmensis E. Blyth, 1853, Jour. Asiatic Soc. Bengal, Calcutta, 22: 652. Type locality: Sikkim.
Scincella sikkimense: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 30.
RANGE: Xizang (Tibet), China. Bangladesh, India (Darjeeling, Sikkim, Rangpur), and Nepal.

Scincella tsinlingensis (Hu and Zhao, 1966). (PLATE 30E)

Leiolopisma tsinlingensis S.-Q. Hu and E.-M. Zhao (as Djao), 1966, *in* S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, Acta Zool. Sinica, Peking, 18: 82. Type locality: Mt. Tsinling (=Qin Ling), Chouchih (=Zhouzhi Co.), Shaanxi Prov., China; 1,800 meters.

Scincella tsinlingensis: Y.-Z. Wang and E.-M. Zhao, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 276.

RANGE: Shaanxi, Ningxia, Gansu, and Sichuan, China.

SPHENOMORPHUS Fitzinger, 1843.

Sphenomorphus L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 23. Type species: *Lygosoma melanopogon* A.-M.-C. Duméril and G. Bibron, 1839, of the Celebes and New Guinea, by original designation.

Sphenomorphus courcyanus (Annandale, 1912).

Lygosoma courcyanum N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 43. Type locality: Rotung and Upper Rotung, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 1,300 feet (Rotung) and about 2,000 feet (Upper Rotung) (see Note).

Sphenomorphus courcyanus: M. B. Mittleman, 1952, Smithsonian Misc. Coll., Washington, 117(17): 23.

RANGE: Southern Xizang (Tibet), China. India (Assam).

NOTE: The type locality has been restricted to Rotung (M. A. Smith, 1935, Fauna Brit. India, Rept. Amphib., London, 2: 289).

Sphenomorphus incognitus (Thompson, 1912).

Lygosoma incognita J. C. Thompson, 1912, Herpetol. Notices [privately published], San Francisco, 2: 3. Type locality: Koshun (=Hengchun), Formosa (=Taiwan Prov.), China (see Note).

Sphenomorphus boulengeri J. VanDenburgh, 1912, Adv. Diag. New Rept. Amphib. Loo Choo Is. Formosa [privately published], San Francisco: 6. Type locality: Koshun (=Hengchun), Formosa (=Taiwan Prov.), China (see Note).

Sphenomorphus leveretti K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 1. Type locality: Mountains south of Nodoa (=Nada, Zhan Co.), Hainan Island, Hainan Prov., China.

RANGE: Southern China including Hainan and Taiwan, westward to Hubei and Yunnan.

NOTE: This lizard has long been known under the name *Sphenomorphus boulengeri*, but Thompson's name was apparently published one month earlier than VanDenburgh's (for fuller discussion, see page 213, *Scincella formosensis*, Note); they share the same holotype.

Sphenomorphus indicus (Gray, 1853). (PLATE 30F)

Hinulia Indica J. E. Gray, 1853, Ann. Mag. Nat. Hist., London, ser. 2, 12: 388. Type locality: Sikkim Himalaya.

Sphenomorphus indicus: J. VanDenburgh, 1912, Proc. California Acad. Sci., San Franciso, ser. 4, 3: 230.

Lygosoma formosensis J. C. Thompson, 1912, Herpetol. Notices [privately published], San Francisco, 2: 3. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China (see Note).

Sphenomorphus indicus formosensis J. VanDenburgh, 1912, Adv. Diag. New Rept. Amphib. Loo Choo Is. Formosa [privately published], San Francisco: 6. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China (not of J. C. Thompson, 1912; see Note).

Lygosoma (Hinulia) indicum taeniatum F. Werner, 1922, Anz. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 59: 220. Type locality: Yünschan (=Yun Shan), near Wukang (=Wugang Co.), southwestern Hunan, China; 1,000–1,200 meters (see Note).

Lygosoma (Hinulia) indicum multilineatum F. Werner, 1922, Anz. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 59: 221. Type locality: Tjionra, on Salween River (=Nu Jiang), northwestern Yunnan, China (see Note).

RANGE: Southern China including Hainan and Taiwan, west to eastern Xizang (Tibet) and north to Henan, Shaanxi, and Gansu. India (Darjeeling and Sikkim) east to Indochina and south to Malay Peninsula.

NOTE: For details on the nomenclatorial priority of Thompson's name over that of VanDenburgh, see discussion on page 213, *Scincella formosensis* (Note).

F. Werner (1924, Denkschr. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 99: 43) provided expanded descriptions of the type series of *taeniatum* and of *multilineatum*; he added that Tjionra, the type locality of *multilineatum*, is at an altitude of 1,700 meters. We cannot locate Tjionra in Yunnan, but further up the Salween (Nu) River is the town Lhorong, the Chinese pronunciation of which is close to Tjionra. Lhorong, however, is in Xizang (Tibet) Autonomous Region.

Sphenomorphus maculatus (Blyth, 1853).

Lissonota maculata E. Blyth, 1853, Jour. Asiatic Soc. Bengal, Calcutta, 22: 653. Type locality: Asám (=Assam), India.

Sphenomorphus maculatus: C. H. Pope, 1935, Rept. China, New York: 483.

RANGE: Southern Yunnan and southeastern Xizang (Tibet), China. Nepal, India (Darjeeling; Andamans and Nicobars) and Burma to Thailand.

Sphenomorphus taiwanensis Chen and Lue, 1987.

Sphenomorphus taiwanensis S.-H. Chen and K.-Y. Lue, 1987, Bull. Inst. Zool., Acad. Sinica, Taipei, 26: 116. Type locality: Mt. Hohuan (=Hohuanshan, Nantou Co.), Taiwan Prov., China; about 3,200 meters.

RANGE: Central Taiwan, China.

TROPIDOPHORUS C. Duméril and Bibron, 1839.

Tropidophorus A.-M.-C. Duméril and G. Bibron, 1839, Erpétol. Gén., Paris, 5: 554. Type species: *Tropidophorus Cocincinensis* A.-M.-C. Duméril and G. Bibron, 1839, of Indochina, by monotypy.

Tropidophorus berdmorei (Blyth, 1853).

Aspris Berdmorei E. Blyth, 1853, Jour. Asiatic Soc. Bengal, Calcutta, 22: 651. Type locality: Mergui, Burma.

Tropidophorus Berdmorei: W. Theobald, 1868, Proc. Linn. Soc. London, Zool., 10: 24.

Tropidophorus yunnanensis G. A. Boulenger, 1887, Catal. Liz. Brit. Mus., London, 3: 362. Type locality: Hotha Valley (=Husa, Longchuan Co.), Yunnan Prov., China.

RANGE: Yunnan, China. Burma and Thailand; Vietnam.

Tropidophorus guangxiensis Wen, 1992.

Tropidophorus guangxiensis Y.-T. Wen, 1992, Asiatic Herpetol. Res., Berkeley, 4: 18. Type locality: Daming Shan, Wuming Xian (county), Guangxi Zhuang Autonomous Region, China; 1,240 meters.

RANGE: Known only from the type locality.

Tropidophorus hainanus Smith, 1923.

Tropidophorus hainanus M. A. Smith, 1923, Proc. Zool. Soc. London, 1923: 779. Type locality: Ang Mao (=Hongmao), near the Five Finger mountains (=Mt. Wuzhi), Baisha Co., Hainan Island, Hainan Prov., China; 600 meters.

RANGE: Hainan, Guangxi, and Jiangxi, China. Vietnam.

Tropidophorus sinicus Boettger, 1886. (PLATE 30G)

Tropidophorus Sinicus O. Boettger, 1886, Zool. Anz., Leipzig, 9: 519. Type locality: Ding-hu-shan (=Mt. Dinghushan), Si-Kiang River (=Xi Jiang), Guang-dung (=Guangdong) Prov., China.

RANGE: Guangxi, Guangdong, and Hong Kong, China. Vietnam.

SERPENTES

TYPHLOPIDAE

RAMPHOTYPHLOPS Fitzinger, 1843.

Ramphotyphlops L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 24. Type species: *Typhlops multilineatus* H. Schlegel, 1839, of New Guinea, by original designation (see Note).

NOTE: Although *Typhlina* J. G. Wagler, 1830 (Natürl. Syst. Amphib. Classif. Säugth. Vögel; Munich, Stuttgart, and Tübingen: 196) has priority, the name *Ramphotyphlops* was conserved by Opinion 1207 of the International Commission on Zoological Nomenclature (1982, Bull. Zool. Nomen., London, 39: 106–108).

For the dating of Schlegel's *Typhlops multilineatus*, often given as 1844, see the bibliography under Schlegel, 1837–1844 (page 398).

Ramphotyphlops albiceps (Boulenger, 1898). (PLATE 31A)

Typhlops albiceps G. A. Boulenger, 1898, Ann. Mag. Nat. Hist., London, ser. 7, 1: 124. Type locality: Chantaboon (=Chantabun), Siam (=Thailand).

Ramphotyphlops albiceps: A. G. C. Grandison, 1978, Ann. Naturhist. Mus. Wien, 81: 283.

RANGE: Hong Kong, China. Burma and Thailand; Malay Peninsula and Singapore.

Ramphotyphlops braminus (Daudin, 1803). (PLATE 31B)

Eryx braminus F.-M. Daudin, "XI" (1803), Hist. Nat. Rept., Paris, 7: 279. Type locality: Vizagapatam (=Visakhapatnam), India.

Ramphotyphlops braminus: R. A. Nussbaum, 1980, Herpetologica, Lawrence, 36: 215.

Ophthalmidium tenue E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 497. Type locality: Hong Kong, China, possibly in error (see Note).

RANGE: Southern China including Hainan, Hong Kong, and Taiwan, northward to eastern Sichuan. Sri Lanka and India east to Indochina and north to Japan (Ryukyu Islands, including the Senkaku Group), south to Malay Peninsula. Introduced into Africa, Arabia, Iran, Australia, islands of Indian and Pacific oceans, western and eastern Mexico, and the USA (Florida, Hawaiian Islands).

NOTE: Inexplicably, E. Hallowell ("1860" [1861]) listed *Ophthalmidium tenue* in the section of his paper dealing with Japan (pages 495–501); either the section placement or the type locality is incorrect.

TYPHLOPS Oppel, 1811.

Typhlops M. Oppel, "1810" (1811), Ann. Mus. Hist. Nat., Paris, 16: 380. Type species: *Anguis lumbricalis* C. Linnaeus, 1758, of the West Indies, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 24) (see Note).

NOTE: Oppel credited the name *Typhlops* to J. G. Schneider (1801, Hist. Amphib., Jena, 2: 339), who used the word "Typhlopes" to designate a subdivision of the genus *Anguis*. Schneider's use of the plural form suggests that he intended the term as a vernacular name, but he did provide a description and designate included species.

According to C. D. Sherborn (1914, Ann. Mag. Nat. Hist., London, ser. 8, 13: 367), the section of the *Annales* in which Oppel's name appeared was published between January and March 1811; this was earlier by over one month than Oppel's German version of the monograph (1811, Ordnung. Famil. Gattung. Rept., Munich: 54), which is commonly cited as the original description of *Typhlops*. The foreword in the latter work is dated 11 May 1811.

Typhlops diardii Schlegel, 1839. (PLATE 31C–D)

Typhlops Diardii H. Schlegel, 1839, Abbild. Amphib., Düsseldorf: 39. Type locality: Cochinchina (=Vietnam) (see Note).

RANGE: Hainan and Yunnan, China. Nepal, India (Assam), Bangladesh, and Burma to Indochina, south through Malay Peninsula; Indonesia (Sumatra, Borneo) and a questionable record from western New Guinea.

NOTE: A.-M.-C. Duméril and G. Bibron (1844, Erpétol. Gén., Paris, 6: 301) stated that the type specimen's locality is "Indes orientales."

Typhlops koshunensis Ôshima, 1916.

Typhlops koshunensis M. Ôshima, 1916, Zool. Mag., Tokyo, 28: 85. Type locality: Formosa (=Taiwan Prov.), China (see Note).

RANGE: Southern Taiwan, China.

NOTE: In the original description, Ôshima referred to specimens described in his earlier paper (1910, Annot. Zool. Japon., Tokyo, 7: 186, under the name *Typhlops leucoproctus* G. A. Boulenger, 1889) which represent the types of *T. koshunensis*; these were from Kuraru (=Kueitzuchiao), Koshun (=Hengchun County), Taiwan.

ACROCHORDIDAE

ACROCHORDUS Hornstedt, 1787.

Acrochordus C. F. Hornstedt, 1787, Kongl. Vetensk. Acad. nya Handl., Stockholm, [new ser. 1], 8: 307. Type species: *Acrochordus Javanicus* C. F. Hornstedt, 1787, by monotypy.

Acrochordus granulatus (Schneider, 1799). (PLATE 31E)

Hydrus Granulatus J. G. Schneider, 1799, Hist. Amphib., Jena, 1: 243. Type locality: Not given (see Note).

Acrochordus granulatus: T. Cantor, 1847, Jour. Asiatic Soc. Bengal, Calcutta, 16: 906.

RANGE: Hainan, China. Coasts of Sri Lanka and India east to Indochina, south through the Indoaustralian Archipelago to New Guinea and the north coast of Australia; Solomon Islands; Philippines.

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 134) gave the type locality as India, in error; none was given in the original description. Smith apparently erred by mistranslating the fifth line on page 244 of Schneider (1799), which, in any event, is in a section transposed from page 250, according to the errata leaf at the end of the volume.

XENOPELTIDAE

XENOPELTIS Reinwardt, 1827.

Xenopeltis C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 564. Type species: *Xenopeltis unicolor* C. G. C. Reinwardt, 1827, *in* F. Boie, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 24).

Xenopeltis hainanensis Hu and Zhao, 1972.

Xenopeltis hainanensis S.-Q. Hu and E.-M. Zhao (as Djao), 1972, *in* E.-M. Zhao (as Djao), Key Chin. Snakes [=Mater. Herpetol. Res., 1], Chengdu: 36. Type locality: Dali, Mt. Diaoluo, Lingshui Co., Hainan Island, Guangdong (now part of Hainan) Prov., China; 200 meters.

RANGE: Guangxi east to Zhejiang and south to Hainan, China.

Xenopeltis unicolor Reinwardt, 1827. (PLATE 31F)

Xenopeltis unicolor C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 564. Type locality: Java, Indonesia (see Note).

Xenopeltis concolor C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 564. Type locality: None given.

Xenopeltis leucocephala C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 564. Type locality: None given.

RANGE: Guangdong and Yunnan, China. Burma east to Vietnam, south through Malay Peninsula; Philippines; Indonesia (Sumatra to Celebes, Borneo).

NOTE: T. Cantor (1847, Jour. Asiatic Soc. Bengal, Calcutta, 16: 901), acting as first revisor, chose *unicolor*, in preference to *concolor* and *leucocephala*.

UROPELTIDAE

CYLINDROPHIS Wagler, 1828.

Cylindrophis J. G. Wagler, 1828, Icones Amphib.; Munich, Stuttgart, and Tübingen, 1: plate 5 and unnumbered text page accompanying plate 5. Type species: *Cylindrophis resplendens* J. G. Wagler, 1828 (=*Anguis ruffa* J. N. Laurenti, 1768), by monotypy.

NOTE: Based on morphology, S. B. McDowell (1975, Jour. Herpetol., Athens [Ohio], 9: 23) placed *Cylindrophis* (formerly in family Aniliidae) in the family Uropeltidae, which includes eight genera of primitive burrowing snakes endemic to India and Sri Lanka. Recent molecular studies, involving both electrophoretic methods and microcomplement fixation comparisons of serum albumins, have confirmed this placement (J. E. Cadle, H. C. Dessauer, C. Gans, and D. F. Gartside, 1990, Biol. Jour. Linnean Soc., London, 40: 293–320).

Cylindrophis ruffus (Laurenti, 1768). (PLATE 31G)

Anguis ruffa J. N. Laurenti, 1768, Synops. Rept., Vienna: 71 (see Note). Type locality: Surinam, in error.

Cylindrophis rufa: J. E. Gray, 1842, Zool. Misc., London: 46.

RANGE: Hainan, Hong Kong, and Fujian, China. Burma east through Thailand to Vietnam, south through Malay Peninsula to Indonesia (Sumatra, Java, Komodo, Borneo, Celebes).

NOTE: Although most modern authors spell the specific name "*rufus*," we preserve Laurenti's original spelling; it is clear from his diagnosis that he intended the double "f" (see also K. Adler, E.-M. Zhao, and I. S. Darevsky [1992, Asiatic Herpetol. Res., Berkeley, 4: 40]).

BOIDAE

ERYX Daudin, 1803.

Eryx F.-M. Daudin, "11" (1803), Bull. Sci. Soc. Philomath., Paris, 3: 188. Type species: *Boa turcica* G.-A. Olivier, "An 9" (1801) (=*Anguis Jaculus* C. Linnaeus, 1758), of the Middle East and northern Africa, by monotypy.

NOTE: For details on the date of publication of the name *Eryx*, see page 199, *Ophisaurus* (Note). In his original description, Daudin listed only one species ("*Boa turc*, Latreille, Hist. rept."); later (1803, Magas. Encyclopéd. Millin, Paris, 5: 437) he gave more information ("Ex. Olivier; Voyage dans l'Empire Ottoman, pl. 16, fig. 2. *Boa turc*").

Eryx miliaris (Pallas, 1773).

Anguis miliaris P. S. Pallas, 1773, Reise Versch. Prov. Russ. Reich., St. Petersburg, 2: 718. Type locality: Near Caspian Sea.

Eryx miliaris: E. Eichwald, 1831, Zool. Special., Vilna, 3: 176.

Eryx miliaris var. *roborowskii* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 193. Type locality: Lük-Tschun (=Lukchun), Xinjiang Uygur Autonomous Region, and Ssatschsheu (=Dunhuang Co.), Gansu Prov., China.

Eryx miliaris var. *koslowi* J. von Bedriaga, "1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 10: 193. Type locality: Between Lük-Tschun (=Lukchun) and Bugass, Xinjiang Uygur Autonomous Region, and Kuku-ussu River in Nan-Schan, province uncertain, China.

RANGE: Xinjiang through Gansu to western Nei Mongol (Inner Mongolia) and Ningxia, China (see Note). Russia from western border of Caspian Sea east through Kazakhstan, south to northern Iran and Afghanistan.

NOTE: Herpetologists have not always distinguished Chinese specimens of *Eryx miliaris* and *E. tataricus* and, therefore, it is presently impossible to describe their separate ranges in China. Pending a review of Chinese *Eryx*, we can give only a composite range for China.

Eryx tataricus (Lichtenstein, 1823). (PLATE 31H)

Boa tatarica M. H. C. Lichtenstein, 1823, *in* E. Eversmann, Reise Orenburg Buchara, Berlin: 146 (see Note). Type locality: "Nähe des Aralsees" (=vicinity of Aral Sea, Kazakhstan-Uzbekistan border).

Eryx tataricus: S. F. Zarevsky (as Tzarewski), 1915, Annu. Mus. Zool. Acad. Impér. Sci. Petrograd, 20: 362.

RANGE: Xinjiang through Gansu to western Nei Mongol (Inner Mongolia) and Ningxia, China (see Note for *Eryx miliaris*). East shore of Caspian Sea in Turkmenistan eastward to eastern Kazakhstan; northern Iran, Pakistan, Afghanistan, and northwestern India; southern Mongolia.

NOTE: M. H. C. Lichtenstein also described *Boa tatarica* elsewhere (1823, Verzeich. Doublet. Zool. Mus., Berlin: 104; type locality: Tataria [=Tatar Republic, Russia]), which is the citation often given for this name; however, in that work Lichtenstein cited the page number of his description in Eversmann's "Reise" (but not vice versa), so we presume that the "Reise" was published first.

PYTHON Daudin, 1803.

Python F.-M. Daudin, "11" (1803), Bull. Sci. Soc. Philomath., Paris, 3: 187. Type species: Plates 24 ("Pedda Poda B") and 39 ("Bora") of P. Russell, 1796 (=*Coluber Molurus* C. Linnaeus, 1758), by monotypy (see Note).

NOTE: For details on the date of publication of the name *Python*, see page 199, *Ophisaurus* (Note). L. J. Fitzinger's (1843, Syst. Rept., Vienna, 1: 24) designation of *Python Peronii* G. Cuvier *in* J. G. Wagler, 1828 (=*Morelia argus* [Linnaeus, 1758], of Australia and New Guinea) as type is invalid, since this species was not listed by Daudin. Likewise, A. F. Stimson's (1969, Das Tierreich, Berlin, 89: 28) subsequent designation of type is rendered unnecessary in view of the correct, original citation of Daudin's name.

Python molurus (Linnaeus, 1758). (PLATE 31-I)

Coluber Molurus C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 225. Type locality: "Indiis."

Python molurus: J. E. Gray, 1842, Zool. Misc., London: 44.

RANGE: Southern Yunnan east to Fujian, including Hainan and Hong Kong; Sichuan, China. Pakistan, Sri Lanka, Nepal, and India east to Indochina, south to Indonesia.

1. ***Python molurus bivittatus*** Kuhl, 1820. (PLATE 31-I)

Python bivittatus H. Kuhl, 1820, Beitr. Zool. Vergleich. Anat., Frankfurt am Main, [1]: 94. Type locality: None given (see Note).

Python molurus bivittatus: R. Mertens, 1930, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 42: 287.

RANGE: Southern Yunnan east to Fujian, including Hainan, Macao, and Hong Kong; eastern Sichuan, China. Burma eastward through Indochina; Indonesia (Borneo, Celebes, Java, Sumbawa).

NOTE: R. Mertens (1930: 287) restricted the type locality to Java, Indonesia.

COLUBRIDAE

ACHALINUS Peters, 1869.

Achalinus W. Peters, 1869, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1869: 436. Type species: *Achalinus spinalis* W. Peters, 1869, by monotypy.

Achalinus ater Bourret, 1937.

Achalinus niger R. Bourret, 1935, Bull. Gén. Instr. Publique, Hanoi, 1935(5): 103. Type locality: Tam dao, Tonkin, Vietnam; 900 meters (name preoccupied by *Achalinus niger* M. Maki, 1931 [see below]).

Achalinus ater R. Bourret, 1937, Annexe Bull. Gén. Instr. Publique, Hanoi, 1937(4): 72. (substitute name for *Achalinus niger* R. Bourret, 1935).

RANGE: Guizhou and Guangxi, China. Northern Vietnam.

Achalinus formosanus Boulenger, 1908.

Achalinus formosanus G. A. Boulenger, 1908, Ann. Mag. Nat. Hist., London, ser. 8, 2: 222. Type locality: Punkiho (=Fenchihu), Kagi district (=Chiayi), central Formosa (=Taiwan Prov.), China.

Achalinopsis sauteri F. Steindachner, 1913, Anz. Kaiserl. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 50: 219. Type locality: Formosa (=Taiwan Prov.), China (see Note).

RANGE: Taiwan, China. Japan (southern Ryukyu Islands).

NOTE: F. Steindachner (1913, Denkschr. Kaiserl. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 90: 327) gave the type locality of *Achalinus sauteri* as Suishario (=Shuisheliao), Formosa.

Achalinus hainanus Huang, 1975.

Achalinus hainanus Z.-J. Huang, 1975, *in* Sichuan Biological Research Institute and Beijing Institute of Zoology, Acta Zool. Sinica, Peking, 21: 380. Type locality: Chien Fung Ling (=Mt. Jianfeng), Hainan Island, Hainan Prov., China; 800 meters.

RANGE: Known only from the type locality.

Achalinus jinggangensis (Zong and Ma, 1983).

Achalinopsis jinggangensis Y. Zong and J.-F. Ma, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 61. Type locality: Dajing Village, Mt. Jinggang, Jiangxi Prov., China; 940 meters.

Achalinus jinggangensis: H. Ota and M. Toyama, 1989, Copeia, Gainesville, 1989: 601.

RANGE: Known only from the type locality.

Achalinus meiguensis Hu and Zhao, 1966. (PLATE 32A)

Achalinus meiguensis S.-Q. Hu and E.-M. Zhao (as Djao), 1966, Acta Zootaxon. Sinica, Peking,

3: 162. Type locality: Liang Ho Kou (=Lianghekou), Meigu Co., Sichuan Prov., China; 2,520 meters.

RANGE: Western Sichuan, China.

Achalinus niger Maki, 1931.

Achalinus niger M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 60 (English vers.), 32 (Japanese vers. of 1931). Type locality: Mt. Arisan (=Alishan), central Formosa (=Taiwan Prov.), China (see Note).

RANGE: Taiwan, China.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo: 65) re-described *Achalinus niger* in the expanded Japanese text of 1933.

Achalinus rufescens Boulenger, 1888.

Achalinus rufescens G. A. Boulenger, 1888, Ann. Mag. Nat. Hist., London, ser. 6, 2: 43. Type locality: Hongkong, China.

Achalinus meridianus M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 200. Type locality: Namkao (=Nangao, near Mt. Wuzhi), Hainan Island, Hainan Prov., China; 300 meters.

Stoliczkaia kwangsiensis T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 44. Type locality: Loshiang (=Luoxiang), Kwangsi (=Guangxi) Zhuang Autonomous Region, China.

RANGE: Southern China including Hainan, westward to Guizhou; Shaanxi. Northern Vietnam.

Achalinus spinalis Peters, 1869.

Achalinus spinalis W. Peters, 1869, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1869: 436. Type locality: Japan.

Ophielaps Braconnieri H.-É. Sauvage, 1877, Bull. Soc. Philomath. Paris, ser. 7, 1: 109. Type locality: Eastern Kiangsi (=Jiangxi) Prov., China.

Achalinus spinalis weigoldi R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 206. Type locality: Wa shan (=Mt. Wa), "eastern" Szechwan (=Sichuan) Prov., China (see Note).

RANGE: Central China, as far east as Fujian, and to Yunnan and Sichuan in the west; northward to Gansu and Shaanxi. Japan and northern Vietnam.

NOTE: Mt. Wa is in western, not eastern, Sichuan.

AHAETULLA Link, 1807.

Ahaetulla H. F. Link, 1807, Beschreib. Natural.-Samml. Univ. Rostock, 2: 73. Type species: *Ahaetulla mycterizans* H. F. Link, 1807 (=*Coluber Nasutus* B.-G.-É. Lacepède, 1789), of South and Southeast Asia, by subsequent designation (W. Meise and W. Hennig, 1932, Zool. Anz., Leipzig, 99: 296–297).

NOTE: For a discussion of the proper allocation of this generic name, long in dispute, see J. M. Savage (1952, Bull. Chicago Acad. Sci., 9: 203–216). Although some authorities still use *Dryophis* J. W. Dalman (1823, Analecta Entomol., Stockholm: 7; type species: *Coluber Nasutus* B.-G.-É. Lacepède, 1789), the name *Ahaetulla* was placed on the official list and *Dryophis* rejected by decision of the International Commission on Zoological Nomenclature (Opinion 524; 1958, Bull. Zool. Nomen., London, 19: 261–276).

Ahaetulla prasina Reinwardt, 1827. (PLATE 32B)

Coluber Nasutus G. Shaw, 1802, Gen. Zool., London, 3: 548 (see Note). Type locality: Java, Indonesia (name preoccupied by *Coluber Nasutus* B.-G.-É. Lacepède, 1789).

Dryophis prasina C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 545. Type locality: Java, Indonesia.

Ahaetulla prasina: L. Stejneger, 1933, Copeia, Ann Arbor, 1933: 201.

Dryophis prasinus chinensis R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 323. Type locality: Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note).

RANGE: South China including Hong Kong, westward through Guizhou and Yunnan to southeastern Xizang (Tibet). India (Assam, Sikkim) through Burma to Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo, Celebes) and the Philippines.

NOTE: This use of the name *Coluber nasutus* is usually credited to P. Russell (1804, Indian Serp., London, 2: 28), but Shaw's name was published earlier; for explanation of date, see the bibliography (page 396) under Russell, 1801 (–1810).

R. Mell ("1929" [1930]: 310) implied that the type locality of *Dryophis prasinus chinensis* is Yao shan (=Dayao Shan).

AMPHIESMA Duméril, Bibron, and Duméril, 1854.

Amphiesma A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(1): 724. Type species: *Coluber stolatus* C. Linnaeus, 1758, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 264).

NOTE: The genus was first diagnosed by A.-M.-C. Duméril (1853, Mém. Acad. Sci., Paris, 23: 478; author's reprint, page 82), under the vernacular name "Amphiesme."

Amphiesma atemporalis (Bourret, 1934).

Natrix atemporalis R. Bourret, 1934, Bull. Gén. Instr. Publique, Hanoi, 1934(4): 75. Type locality: Tonkin (=northern Vietnam).

Amphiesma atemporalis: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 50.

RANGE: Hong Kong, Guangdong, and Guangxi west to Yunnan and Guizhou, China. Northern Vietnam.

Amphiesma bitaeniata (Wall, 1925).

Natrix bitæniata F. Wall, 1925, Jour. Bombay Nat. Hist. Soc., 30: 806. Type locality: Kutkai, North Shan States, Burma; 4,500 feet.

Amphiesma bitaeniata: E. V. Malnate, 1960, Proc. Acad. Nat. Hist. Philadelphia, 112: 50.

RANGE: Yunnan, China. Burma.

Amphiesma boulengeri (Gressitt, 1937).

Natrix boulengeri J. L. Gressitt, 1937, Proc. Biol. Soc. Washington, 50: 125. Type locality: Taiyong (=Dayang, formerly Jieyang Co., now Jiexi Co.), eastern Kwangtung (=Guangdong) Prov., China; 640 meters.

Amphiesma boulengeri: E. V. Malnate, 1960, Proc. Acad. Nat. Hist. Philadelphia, 112: 50.

RANGE: Southern China including Hainan, westward to Yunnan and Guizhou.

Amphiesma craspedogaster (Boulenger, 1899).

Tropidonotus craspedogaster G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 163. Type locality: Kuatun (=Guadun), about 270 miles from Foochow (=Fuzhou Shi), Fukien (=Fujian Prov.), China; 3,000–4,000 feet or more.

Amphiesma craspedogaster: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 50.

Tropidonotus gastrotaenia F. Werner, 1922, Anz. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 59: 221. Type: Yünschan (=Yun Shan), near Wukang (=Wugang Co.), southwestern Hunan Prov., China; 1,000–1,2000 meters (see Note).

Natrix chrysarga chekiangensis R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 204. Type locality: Hainan (now Hainan Prov.), Chekiang (=Zhejiang Prov.); and Formosa (?) (=Taiwan Prov.), China (see Note).

RANGE: Southern China, northward to southern Shanxi, west to southern Gansu.

NOTE: F. Werner (1924, Denkschr. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 99: 45) provided an expanded description of the type series of *Tropidonotus gastrotaenia*.

C. H. Pope (1935, Rept. China, New York: 102–103) stated that Mell's type of *Natrix chrysarga chekiangensis* is from Zhejiang Province.

Amphiesma johannis (Boulenger, 1908).

Tropidonotus johannis G. A. Boulenger, 1908, Ann. Mag. Nat. Hist., London, ser. 8, 2: 244. Type locality: Yunnan fu (=Kunming Shi), Yunnan Prov., China.

Amphiesma johannis: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 50.

RANGE: Southwestern China.

Amphiesma khasiensis (Boulenger, 1890).

Tropidonotus khasiensis G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 344. Type locality: Khási Hills, India.

Amphiesma khasiensis: E. V. Malnate, 1960, Proc. Acad. Nat. Hist. Philadelphia, 112: 50.

RANGE: Yunnan and Xizang (Tibet), China. India (Assam), Burma, Laos, and Vietnam.

Amphiesma metusia Inger, Zhao, Schaffer, and Wu, 1990.

Amphiesma metusia R. F. Inger, E.-M. Zhao, H. B. Shaffer, and G.-F. Wu, 1990, Fieldiana: Zool., Chicago, new ser., 58: 18. Type locality: Wa Shan (=Mt. Wa), Hongya Co., Sichuan Prov., China; 1,200 meters (see Note).

RANGE: Known only from the type locality.

NOTE: The binomial *Amphiesma metusia* was first used on the inside rear cover of *Sichuan Journal of Zoology*, Chengdu, 1989, issue number 1, where the name is attributed to the same four authors. A locality is given (Mt. Wa, Sichuan Province) and a color photograph of the species appears on the cover of the same issue. This first use of the name, however, does not fulfill one requirement of the "Code" (1985, Article 13[a][i]) for establishment of a new name in that it is not accompanied by a description in words that differentiates *A. metusia* from other species.

Amphiesma miyajimae (Maki, 1931). (PLATE 32C)

Natrix miyajimae M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 49 (English vers.), 27 (Japanese vers. of 1931). Type locality: Taihoku (=Taipei), Formosa (=Taiwan Prov.), China (see Note).

Amphiesma miyajimae: E.-M. Zhao and Y.-M. Jiang, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 239.

RANGE: Taiwan, China.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo: 54) re-described *Amphiesma miyajimae* in the expanded Japanese text of 1933, in which the name is misspelled "*miyatimae*."

Amphiesma modesta (Günther, 1875).

Tropidonotus modestus A. Günther, 1875, Proc. Zool. Soc. London, 1875: 232. Type locality: Himalayas (see Note).

Amphiesma modesta: E. V. Malnate, 1960, Proc. Acad. Nat. Hist. Philadelphia, 112: 50.

RANGE: Yunnan, Guizhou, and Guangdong, China. India (Athrough northern Burma and Thailand to Cambodia, northern Laos, and Vietnam; Malay Peninsula?

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 290) stated that the type locality is Khasi Hills (Assam, India).

Amphiesma octolineata (Boulenger, 1904).

Tropidonotus octolineatus G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 133. Type locality: Yunnan Fu (=Kunming Shi), Yunnan Prov., China; about 6,000 feet (see Note).

Amphiesma octolineata: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 50.

Tropidonotus quadrilineatus G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 132. Type locality: Yunnan Fu (=Kunming Shi), Yunnan Prov., China; about 6,000 feet.

Tropidonotus pleurotænia G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 133. Type locality: Yunnan Fu (=Kunming Shi), Yun., China; about 6,000 feet.

Tropidonotus parallelus var. *sublævis* R. Despax, 1913, Bull. Mus. Hist. Nat., Paris, 19: 180. Type locality: Mienning (=Mianning Co.), west Sé-Tchouen (=Sichuan Prov.), China; 2,000 meters.

Natrix septemlineata K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 2. Type locality: Tengyueh (=Tengchong Co.), Yunnan Prov., China.

Natrix nigroreticulata M. L.-Y. Chang, 1932, Contr. Biol. Lab. Sci. Soc. China, Nanking, ser. Zool., 8: 40. Type locality: Sien-Shan-Tze (=Xixiang Ci), Omei-hsien (=Emei Co.), Sichuan Prov., China.

RANGE: Southwest China.

NOTE: C. H. Pope (1935, Rept. China, New York: 114), acting as first revisor, chose *octolineatus* in preference to *quadrilineatus* and *pleurotaenia*.

Amphiesma optata (Hu and Zhao, 1966).

Natrix optata S.-Q. Hu and E.-M. Zhao (as Djao), 1966, Acta Zootaxon. Sinica, Peking, 3: 160. Type locality: Liang Feng Kang (=Liang Feng Gang), Mt. Omei (=Emei), Szechwan (=Sichuan) Prov., China; 700 meters.

Amphiesma optata: E.-M. Zhao and Y.-M. Jiang, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 239.

RANGE: Southwest China eastward to Hunan and southward to Guangxi.

Amphiesma parallela (Boulenger, 1890).

Tropidonotus parallelus G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 345. Type locality: Sikhim (=Sikkim); Khási Hills, India; hills of Upper Burma; and Yunnan, China.

Amphiesma parallela: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 50.
RANGE: Yunnan and Xizang (Tibet), China. Nepal and India (Sikkim, Assam) to Burma; Vietnam.

Amphiesma platyceps (Blyth, 1854).

Tropidonotus platyceps E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 297. Type locality: Asám (=Assam), Khásya (=Khasi) Hills, and near Darjiling (=Darjeeling), India.
Amphiesma platyceps: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 50.
RANGE: Xizang (Tibet), China. India (from Kashmir eastward to Assam) and Nepal.

Amphiesma popei (Schmidt, 1925).

Natrix popei K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 3. Type locality: Nodoa (=Nada), Hainan Island, Guangdong (now part of Hainan) Prov., China.
Amphiesma popei: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 51.
RANGE: South China including Hainan, west to Yunnan and Guizhou.

Amphiesma sauteri (Boulenger, 1909).

Tropidonotus sauteri G. A. Boulenger, 1909, Ann. Mag. Nat. Hist., London, ser. 8, 4: 495. Type locality: Kosempo (=Chiahsien, Kaohsiung Co.), Taiwan Prov., China.
Amphiesma sauteri: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 51.
Natrix copei J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 52. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China.
Amphiesma sauteri maximus E. V. Malnate, 1962, Proc. Acad. Nat. Sci. Philadelphia, 114: 272. Type locality: Hsaioyangchi [*sic*] (=Xiaoyangxi), Szechwan (=Sichuan) Prov., China.
RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Northern Vietnam.

Amphiesma stolata (Linnaeus, 1758). (PLATE 32D)

Coluber stolatus C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 219. Type locality: "America," in error (see Note).
Amphiesma stolatum: A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(1): 727.
Natrix stolata chinensis R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Berlin, 1929: 319. Type locality: None given (see Note).
RANGE: Southern China including Taiwan, Hong Kong, and Hainan. South and southeastern Asia, from Pakistan and Sri Lanka to Indochina.
NOTE: C. Linnaeus (1766, Syst. Nat., ed. 12, Stockholm, 1: 380) corrected the type locality of *Amphiesma stolata* to Asia.

In his original description of *Natrix stolata chinensis*, Mell ("1929" [1930]: 310) implied that the type locality is Yao shan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China; he provided an expanded description of this subspecies later ("1929" [1931], Lingnan Sci. Jour., Canton, 8: 201).

Amphiesma venningi (Wall, 1910).

Tropidonotus venningi F. Wall, 1910, Jour. Bombay Nat. Hist. Soc., 20: 345. Type locality: Haka Chin Hills, Burma.
Amphiesma venningi: E. V. Malnate, 1960, Proc. Acad. Nat. Hist. Philadelphia, 112: 51.
RANGE: Yunnan, China. Burma.

Amphiesma vibakari (Boie, 1826).

Tropidonotus vibakari H. Boie, 1826, Isis von Oken, Jena, 18: col. 207. Type locality: Decima Island, Japan, in error? (see Note).

Amphiesma vibakari: E. V. Malnate, 1960, Proc. Acad. Nat. Hist. Philadelphia, 112: 51.

RANGE: Northeastern China, from Liaoning northward. Japan, Korea, and Russia (Primorskiy and Khabarovskiy territories, Amurskaya Oblast).

NOTE: The supposed type locality was given by Boie (1826) in column 203. Decima (sometimes spelled Dejima or Deshima) was the location of the Dutch trading station, situated on a small artificial island in the harbor of Nagasaki. It is likely that the type was actually obtained elsewhere by Japanese collectors, since the Dutch merchants were forbidden to leave Decima Island except once each year, when they were permitted to travel to the capital, Edo (present-day Tokyo), to call on the shogun. At least one naturalist, however, was allowed to leave Decima; P. F. von Siebold, physician to the Dutch mission during 1823–1828, traveled outside Decima in order to teach (Akihito, 1992).

1. ***Amphiesma vibakari ruthveni*** (VanDenburgh, 1923).

Natrix vibakari ruthveni J. VanDenburgh, 1923, Proc. California Acad. Sci., San Francisco, ser. 4, 13: 3. Type locality: Fusan, Kjong-Sang-Do Prov., Korea.

Amphiesma vibakari ruthveni: R. G. Webb, J. K. Jones, and G. W. Byers, 1962, Univ. Kansas Publ., Mus. Nat. Hist., Lawrence, 15: 165.

RANGE: Northeastern China, from Liaoning northward. Korea and Russia (Primorskiy and Khabarovskiy territories, Amurskaya Oblast).

AMPHIESMOIDES Malnate, 1961.

Amphiesmoides E. V. Malnate, 1961, Not. Nat. (Acad. Nat. Sci. Philadelphia), 341: 4. Type species: *Tropidonotus ornaticeps* F. Werner, 1924, by original designation.

Amphiesmoides ornaticeps (Werner, 1924). (PLATE 32E)

Tropidonotus ornaticeps F. Werner, 1924, Sitzungsber. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 133: 30. Type locality: Northern Hainan Island, Hainan Prov., China.

Amphiesmoides ornaticeps: E. V. Malnate, 1961, Not. Nat. (Acad. Nat. Sci. Philadelphia), 341: 4.

Natrix andrewsi K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 2. Type locality: Mountains south of Nodoa (=Nada, Zhan Co.), Hainan Island, Hainan Prov., China.

RANGE: Hainan, Guangxi, andan, China.

ATRETIUM Cope, 1861.

Atretium E. D. Cope, 1861, Proc. Acad. Nat. Sci. Philadelphia, 13: 299. Type species: *Coluber schistosus* F.-M. Daudin, 1803, by monotypy.

Atretium yunnanensis Anderson, 1879. (PLATE 32F)

Atretium schistosum var. *yunnanensis* J. Anderson, "1878" (1879), Anat. Zool. Res.: Zool. Result. Exped. West. Yunnan, London, 1: 822. Type locality: Muangla (=Lianghe,

Yingjiang Co.), and Hotha (=Husa, Longchuan Co.), Yunnan Prov., China; 2,000 (Muangla) and 4,500 feet (Hotha).

Atretium yunnanensis: M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 320.

Helicops schistosus var. *andersonii* F. Wall, 1909, Rec. Indian Mus., Calcutta, 3: 146. Type locality: "Yunnan," China (see Note).

RANGE: Western Yunnan, China.

NOTE: Wall's *Helicops schistosus* var. *andersonii* was based on the same three specimens described previously as *Atretium yunnanensis* by Anderson; thus they have the same type locality.

BLYTHIA Theobald, 1868.

Blythia W. Theobald, 1868, Jour. Asiatic Soc. Bengal, Calcutta, 37(extra number 146): 44 (38 in author's reprint). Type species: *Calamaria reticulata* E. Blyth, 1854, by monotypy.

Blythia reticulata (Blyth, 1854). (PLATE 32G)

Calamaria reticulata E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 287. Type locality: Asám (=Assam), India.

Blythia reticulata: W. Theobald, 1868, Jour. Asiatic Soc. Bengal, Calcutta, 37(extra no. 146): 44 (38 in author's reprint).

Aproaspidops antecursorum N. Annandale, 1912, Rec. Indian Mus., Calcutta, 8: 46. Type locality: Janakmukh, Xizang (Tibet) Autonomous Region, China (in territory occupied by India); 600 feet.

RANGE: Southeastern Xizang (Tibet), China. India (Assam) and Burma.

BOIGA Fitzinger, 1826.

Boiga L. J. Fitzinger, 1826, Neue Classif. Rept., Vienna: 60. Type species: *Coluber irregularis* B. Merrem *in* J. M. Bechstein, 1802, of Australia, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 381).

Boiga cyanea (Duméril, Bibron, and Duméril, 1854).

Triglyphodon Cyaneum A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris 7(2): 1079. Type locality: Not given.

Boiga cyanea: F. Wall, 1924, Jour. Bombay Nat. Hist. Soc., 29: 873.

RANGE: Yunnan, China. India (Darjeeling, Assam) and Burma, east through Thailand to Cambodia and Vietnam.

Boiga kraepelini Stejneger, 1902.

Boiga kræpelini L. Stejneger, 1902, Proc. Biol. Soc. Washington, 15: 16. Type locality: Kelung (=Keelung or Chilung), Formosa (=Taiwan Prov.), China.

Dinodon multitemporalis M. Ôshima, 1910, Annot. Zool. Japon., Tokyo, 7: 198. Type locality: Formosa (=Taiwan Prov.), China.

Boiga sinensis K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 4. Type locality: Fukien (=Fujian) Prov., China.

RANGE: Southern China including Taiwan and Hainan, westward to Sichuan and Guizhou.

Boiga multomaculata (Reinwardt, 1827). (PLATE 33A)

Dipsas multomaculata C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 549. Type locality: Java, Indonesia.

Boiga multimaculata: M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 203.

Boiga multimaculata hainanensis R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 213. Type locality: Hainan Island, Hainan Prov., China.

Boiga multimaculata sikiangensis R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 213. Type locality: Kwangtung (=Guangdong Prov.), China.

RANGE: Southern China including Hong Kong and Hainan. India (Assam) and Burma through Indochina; Indonesia (Java, Sumatra, Borneo).

Boiga nigriceps (Günther, 1863). (PLATE 32H)

Dipsas nigriceps A. Günther, 1863, Ann. Mag. Nat. Hist., London, ser. 3, 12: 359. Type locality: Not given.

Boiga nigriceps: M. A. Smith, 1930, Bull. Raffles Mus., Singapore, 3: 64.

RANGE: Guangxi, China. Thailand and Malay Peninsula to Indonesia (Sumatra, Java, Borneo).

CALAMARIA Boie, 1826.

Calamaria H. Boie, 1826, *in* F. Boie, Isis von Oken, Jena, 19: col. 981. Type species: *Coluber Calamarius* C. Linnaeus, 1758, of Indonesia, by original designation and virtual tautonomy (see Note).

NOTE: L. J. Fitzinger (1826, Neue Classif. Rept., Vienna: 56) first used the genus name *Calamaria*, but as a *nomen nudum*. Although the International Commission on Zoological Nomenclature in 1926 placed *Calamaria* on the Official List of Generic Names, with *C. calamarius* as type species, L. D. Brongersma, R. F. Inger, and H. Marx (1966, Bull. Zool. Nomen., London, 22: 303–313) appealed to the commission to set aside its earlier decision and to designate *C. lumbricoidea* H. Boie *in* F. Boie, 1827, of Southeast Asia, Indonesia, and the Philippines, as type species. The reasons for this proposal are complex and the appeal has not yet been acted on. M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 236) incorrectly stated that the type species is *C. Linnaei* H. Boie *in* F. Boie, 1827.

Calamaria pavimentata Duméril, Bibron, and Duméril, 1854.

Calamaria pavimentata A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(1): 71. Type locality: Java, Indonesia, probably in error (see Note).

Calamaria quadri-maculata A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(1): 73. Type locality: Java, Indonesia, in error (see Note).

Calamaria berezowskii A. Günther, 1896, Annu. Mus. Zool. Acad. Impér. Sci. St.-Pétersbourg, 1: 205. Type locality: Lun-ngan-fu (=Pingwu Co.), Sze-chuen (=Sichuan Prov.), China.

Calamaria pavimentata formosana M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 136 (English vers.). Type locality: Arisan (=Alishan) and Kwarenko (=Hualien), Formosa (=Taiwan Prov.), China (see Note).

RANGE: South and Southwest China including Hainan and Taiwan. Indochina westward to India (Assam) and southward through Malaya Peninsula; Japan (Ryukyu Islands).

NOTE: R. F. Inger and H. Marx (1965, Fieldiana: Zool., Chicago, 49: 213) noted that *Calamaria*

pavimentata has not been collected in Java despite extensive field work there; thus, the type locality probably is in error.

G. A. Boulenger (1894, Catal. Snakes Brit. Mus., London, 2: 348), acting as first revisor, chose *pavimentata* in preference to *quadrimaculata*. M. Maki (1933, Monogr. Snakes Japan, Tokyo: 142) re-described *C. pavimentata formosana* in the expanded Japanese text of 1933; he cited different type specimens and different type localities for *formosana* in the English and Japanese versions of his book.

Calamaria septentrionalis Boulenger, 1890. (PLATE 33B)

Calamaria septentrionalis G. A. Boulenger, 1890, Proc. Zool. Soc. London, 1890: 34. Type locality: Kiu Kiang (=Jiujiang Shi, Jiangxi Prov.) and Hong Kong, China.

RANGE: Southern China including Hong Kong and Hainan, westward to Guizhou and northward to Henan. Northern Vietnam.

Calamaria yunnanensis Chernov, 1962.

Calamaria yunnanensis S. A. Chernov, 1962, Proc. Zool. Inst., Acad. Sci. SSSR, Leningrad, 30: 383. Type locality: Jingdong Co., Yunnan Prov., China; 1,100–1,200 meters.

RANGE: Known only from the type locality.

CHRYSOPELEA Boie, 1826.

Chrysopelea H. Boie, 1826, Bull. Universel Sci. Indust. Férussac (sect. 2, Bull. Sci. Nat. Geol.), Paris, 9: 237. Type species: *Coluber Ornatus* G. Shaw, 1802, by original designation.

Chrysopelea ornata (Shaw, 1802). (PLATE 33C)

Coluber Ornatus G. Shaw, 1802, Gen. Zool., London, 3(2): 477. Type locality: "Martinico" (=Martinique), West Indies, in error; Ceylon and Java, East Indies.

Chrysopelea ornatus: F. Boie, 1827, Isis von Oken, Jena, 20: col. 546.

RANGE: Fujian, Hong Kong, Hainan, and Yunnan, China. India and Sri Lanka to Burma and Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo, Celebes); Philippines.

COLUBER Linnaeus, 1758.

Coluber C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 216. Type species: *Coluber Constrictor* C. Linnaeus, 1758, of North America, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 26).

Coluber ravergieri Ménétriés, 1832. (PLATE 33D)

Coluber Ravergieri E. Ménétriés, 1832, Catal. Raisonné Obj. Zool. Voy. Caucase Perse, St. Petersburg: 69. Type locality: Bakou (=Baku, Azerbaijan).

RANGE: Xinjiang, China. Caucasus; eastern shore of Caspian Sea east to eastern Kazakhstan; western Mongolia; Israel and Turkey east through Iraq and Iran to Afghanistan and Pakistan (see Note).

NOTE: This description of the range of *Coluber ravergieri* excludes those populations in the eastern Mediterranean region that have been referred to a newly resurrected sibling

species, *C. nummifer* A. Reuss, 1834 (see B. Schätti and A. Agasian, 1985, Zool. Abhandl. Staatliches Mus. Tierkunde Dresden, 40: 109–123).

Coluber spinalis (Peters, 1866). (PLATE 33E)

Masticophis spinalis W. Peters, 1866, Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1866: 91. Type locality: "Mexico," in error.

Coluber spinalis: J. R. Slevin, 1925, Proc. California Acad. Sci., San Francisco, ser. 4, 14: 98.

RANGE: Northern China, Xinjiang in the west to Heilongjiang in the east, southward to Jiangsu. Eastern Kazakhstan and Russia (Far East?); Mongolia and Korea; Afghanistan?

CYCLOPHIOPS Boulenger, 1888.

Cyclophiops G. A. Boulenger, 1888, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 6: 7. Type species: *Cyclophiops doriae* G. A. Boulenger, 1888, by monotypy.

NOTE: D. Cundall (1981, Copeia, New York, 1981: 353–371) separated the Asiatic species of *Opheodrys* from the American species and placed the former into the genus *Entechinus* E. D. Cope ("1894" [1895], Proc. Acad. Nat. Sci. Philadelphia, 46: 427; type species: *Cyclophis major* A. Günther, 1858, by monotypy). *Cyclophiops* is an older available name, however, as was first noted by M. Toriba (1989, Japan. Jour. Herpetol., Kyoto, 13: 22). An even earlier name, *Eurypholis* E. Hallowell ("1860" [1861], Proc. Acad. Nat. Sci. Philadelphia, 12: 493; type species: *Eurypholis semicarinatus* E. Hallowell, "1860" [1861], of Japan), is preoccupied by *Eurypholis* F. J. Pictet, "1849" (1850), a fossil species of fish.

Cyclophiops doriae (Boulenger, 1888).

Cyclophiops doriae G. A. Boulenger, 1888, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 6: 599. Type locality: Kakhien (=Kachin) Hills, Burma.

RANGE: Yunnan, China. Burma (Kachin Hills) and India (Assam).

Cyclophiops major (Günther, 1858). (PLATE 33F)

Cyclophis major A. Günther, 1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 120. Type locality: Near Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Cyclophiops major: H. Ota, 1991, *in* Y.-S. Lin and K.-H. Chang (eds.), Proc. First Internatl. Symp. Wildlife Cons., Taipei: 76.

Herpetodryas chloris E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 503. Type locality: Hong Kong Island, China.

Liopeltis major bicarinata M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 110 (English vers.). Type locality: Daibuzan (=Tawushan), Formosa (=Taiwan Prov.), China; about 1,500 meters (see Note).

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, northward to Henan and Gansu. Northern Vietnam.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo: 117) re-described *Liopeltis major bicarinata* in the expanded Japanese text of 1933.

Cyclophiops multicinctus (Roux, 1907).

Ablabes multicinctus J. Roux, 1907, Zool. Anz., Leipzig, 31: 762. Type locality: Tonkin (=northern Vietnam).

Liopeltis sinii T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 93. Type locality: Loshiang (=Luoxiang), Kwangsi (=Guangxi Zhuang Autonomous Region), China.

RANGE: Hainan, Guangxi, and southern Yunnan, China. Laos and Vietnam.

DENDRELAPHIS Boulenger, 1890.

Dendrelaphis G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 339. Type species: *Ahætula* [sic] *caudolineata* J. E. Gray, 1834, of Malaysia, by original designation.

Dendrelaphis gorei (Wall, 1910).

Dendrophis gorei F. Wall, 1910, Jour. Bombay Nat. Hist. Soc., 19: 829. Type locality: Jaipur (Namsang) and Dibrugarh (Atabari), India.

Dendrelaphis gorei: W.-S. Tian and Y.-M. Jiang, 1986, Identif. Man. Chin. Amphib. Rept., Beijing: 148.

RANGE: Xizang (Tibet), China. India (Darjeeling, Assam) and Burma; Vietnam?

Dendrelaphis pictus (Gmelin, 1789). (PLATE 33G)

Coluber pictus J. F. Gmelin, 1789, Linné Syst. Nat., ed. 13, Leipzig, 1(3): 1116. Type locality: Not given (see Note).

Dendrelaphis pictus: R. Mertens, 1934, Arch. Hydrobiol., Stuttgart, suppl., 12(4): 693.

RANGE: South China including Hainan and Hong Kong, westward to Yunnan. India (including Andaman Islands), Burma, Malay Peninsula, and Indochina; Indonesia (Sumatra, Java).

NOTE: K. R. G. Welch (1988, Snakes Orient, Malabar: 54) listed "Borneo" as the type locality, on what basis we cannot determine.

1. ***Dendrelaphis pictus pictus*** (Gmelin, 1789). (PLATE 33G)

Dendrelaphis pictus pictus: R. Mertens, 1934, Arch. Hydrobiol., Stuttgart, suppl., 12(4): 693.

RANGE: South China including Hainan and Hong Kong, westward to Yunnan. India, Burma, Malay Peninsula, and Indochina; Indonesia (Sumatra, Java).

Dendrelaphis subocularis (Boulenger, 1888).

Dendrophis subocularis G. A. Boulenger, 1888, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 6: 600. Type locality: Bhamò, Burma.

Dendrelaphis subocularis: G. A. Boulenger, 1894, Catal. Snakes Brit. Mus., London, 2: 89.

RANGE: Yunnan, China. Burma, Thailand, and Vietnam.

DINODON Duméril, 1853.

Dinodon A.-M.-C. Duméril, 1853, Mém. Acad. Sci., Paris, 23: 463 (author's reprint, page 67). Type species: *Dinodon cancellatum* A.-M.-C. Duméril, 1853 (=*Lycodon rufo-zonatus* T. Cantor, 1842), by monotypy.

Dinodon flavozonatum Pope, 1928. (PLATE 34A)

Dinodon flavozonatum C. H. Pope, 1928, Amer. Mus. Novit., New York, 325: 2. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China.

RANGE: Southern China including Hainan. Northern Burma and northern Vietnam.

Dinodon rosozonatum Hu and Zhao, 1972.

Dinodon rosozonatum S.-Q. Hu and E.-M. Zhao (as Djao), 1972, *in* E.-M. Zhao (as Djao), Key Chin. Snakes [=Mater. Herpetol. Res., 1], Chengdu: 36. Type locality: Dali, Mt. Diaoluo, Hainan Island, Guangdong (now part of Hainan) Prov., China; 200 meters.

RANGE: Hainan, China.

Dinodon rufozonatum (Cantor, 1842). (PLATE 34B)

Lycodon rufo-zonatus T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 483. Type locality: Chusan (=Zhoushan) Islands, Zhejiang Prov., China.

Dinodon rufozonatus: W. Peters, 1881, Sitzungs-Ber. Gesellsch. Naturforsch. Freunde Berlin, 1881: 89.

Dinodon cancellatum A.-M.-C. Duméril, 1853, Mém. Acad. Sci., Paris, 23: 463 (author's reprint, page 67). Type locality: none given (see Note).

Coronella striata E. Hallowell, 1856 (1857?), Proc. Acad. Nat. Sci. Philadelphia, 8: 152. Type locality: Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Dinodon rufozonatus var. *Formosana* O. Boettger, 1885, Ber. Thätig. Offenbacher Ver. Naturk., Offenbach am Main, 24–25: 125. Type locality: Formosa (=Taiwan Prov.), China.

Dinodon rufozonatum williamsi K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 2. Type locality: Changsha, Hunan Prov., China.

Dinodon rufozonatum yunnanense R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 207. Type locality: Western Yunnan Prov., China.

RANGE: Widely distributed in China, including Taiwan and Hainan, absent only from Nei Mongol (Inner Mongolia) west to Xinjiang and Xizang (Tibet). Korea and Japan (Tsushima Islands and Ryukyu Islands, including the Senkaku Group); Laos and northern Vietnam. There is an unconfimed record for Russia (southern Primorskij Territory).

NOTE: The type of *Dinodon cancellatum*, based on its scutellation and color pattern, is probably from China, according to L. Stejneger (1907, Bull. U.S. Natl. Mus., Washington, 58: 365).

Dinodon septentrionalis (Günther, 1875).

Ophites septentrionalis A. Günther, 1875, Proc. Zool. Soc. London, 1875: 233. Type locality: Northern parts of India (see Note).

Dinodon septentrionalis: G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 363.

RANGE: Yunnan, China; records from Taiwan are in error (see Note). India (Darjeeling, Assam) through northern Burma; Japanese records are in error (see Note).

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 270) stated that the type locality is East Himalayas or Khasi Hills. The published records of this species from Taiwan and Japan are due to confusion with *Ophites ruhstrati* (see H. Ota, 1988, Jour. Taiwan Mus., Taipei, 41: 85–91).

ELAPHE Fitzinger, 1833.

Elaphe L. J. Fitzinger, 1833, *in* J. G. Wagler, Descript. Icones Amphib.; Munich, Stuttgart and Tübingen, 3: text to plate 27 (unnumbered). Type species: *Elaphe Parreyssii* [*sic*] L. J. Fitzinger *in* J. G. Wagler, 1833 (=*Coluber Quatuor-lineatus* B.-G.-É. Lacepède, 1789), of southeast Europe and western Asia, by monotypy.

Elaphe bimaculata Schmidt, 1925. (PLATE 34C)

Elaphe bimaculata K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 3. Type locality: Ningkwo (=Ningguo) Co., Anhwei (=Anhui) Prov., China.

RANGE: Central China, from eastern Sichuan to Jiangsu, north to Hebei.

Elaphe carinata (Günther, 1864). (PLATE 34D)

Phyllophis carinata A. Günther, 1864, Rept. Brit. India, London: 295. Type locality: China.

Elaphe carinata: L. Stejneger, 1898, Jour. Coll. Sci. Imper. Univ. Tokyo, 12: 221.

Coluber phyllophis G. A. Boulenger, 1891, Ann. Mag. Nat. Hist., London, ser. 6, 7: 280. Type locality: Kiu Kiang (=Jiujiang Shi), Kiangsi (=Jiangxi) Prov., and near Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Spaniopholis Souliei F. Mocquard, 1897, Bull. Mus. Hist. Nat., Paris, 3: 216. Type locality: Tsékou, Valley of Upper Mékong River (=Lancang River), Yunnan Prov., China.

Spaniopholis kreyenbergi L. Müller, 1907, Zool. Anz., Leipzig, 31: 829. Type locality: Pingshiang (=Pingxiang Shi), Kiangsi (=Jiangxi) Prov., China.

Elaphe osborni K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 3. Type locality: Tengyueh (=Tengchong) Co., Yunnan Prov., China.

Coluber camillo-schneideri T. Vogt, 1927, Zool. Anz., Leipzig, 59: 284. Type locality: Southern China, probably Yunnan Prov.

Elaphe carinata deqinensis [*sic*] D.-T. Yang and C.-Y. Su, *in* D.-T. Yang, C.-Y. Su, and S.-M. Li, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(3): 43. Type locality: Deqin (=Dêqên), Yunnan Prov., China; 2,000–2,900 meters (*nomen nudum*).

Elaphe carinata deqenensis D.-T. Yang and C.-Y. Su, 1984, Zool. Res., Kunming, 5(2): 160. Type locality: Deqen Xian, Yunnan Prov., China; 2,900 meters.

RANGE: Widely distributed in southern China including Taiwan, northward to Henan, Shaanxi, and Gansu. Northern Vietnam and Japan (Ryukyu Islands, including the Senkaku Group).

Elaphe davidi (Sauvage, 1884).

Tropidonotus Davidi H.-É. Sauvage, 1884, Bull. Soc. Philomath., Paris, ser. 7, 8: 144. Type locality: China.

Elaphe davidi: C. H. Pope, 1935, Rept. China, New York: 238.

Coluber halli G. A. Boulenger, 1914, Ann. Mag. Nat. Hist., London, ser. 8, 13: 576. Type locality: Chikfeng or Hata (=Chifeng Shi), northern "Chihili" (=Chihli, now Hebei Prov.); Chifeng is now part of Nei Mongol (Inner Mongolia) Autonomous Region, China.

RANGE: Northeastern China southward to Hebei and Shanxi. Korea.

Elaphe dione (Pallas, 1773). (PLATE 34E)

Coluber Dione P. S. Pallas, 1773, Reise Versch. Prov. Russ. Reich., St. Petersburg, 2: 717. Type locality: Salt steppes near the Caspian Sea and mountains near Irtin (see Note).

Elaphe dione: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 315.

Zamenis Pellioti F. Mocquard, 1910, Bull. Mus. Natl. Hist. Nat., Paris, 16: 150. Type locality: Kö Kiu Wein (=Gongjiawan), vicinity of Lan-Tcheou (=Lanzhou Shi), Kan-Sou (=Gansu Prov.), China.

RANGE: Northern China southward to Sichuan in the west and Jiangsu in the east. Ukraine (north coast of Black Sea) eastward through Kazakhstan and southern Russia (to Far East District) and Korea; Afghanistan and northern Iran.

NOTE: In addition to the localities given by Pallas in his formal description of *Elaphe dione*, in the itinerary of his expedition (1773, 2: 493) he noted another locality: Gratschefskoi outpost.

Elaphe frenata (Gray, 1853). (PLATE 34F)

Herpetrodryas [sic] *frenatus* J. E. Gray, 1853, Ann. Mag. Nat. Hist., London, ser. 2, 12: 390. Type locality: Khassia (=Khasya), Assam, India.

Elaphe frenata: C. H. Pope, 1935, Rept. China, New York: 244.

Rhadinophis melli T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 140. Type locality: Southern China (see Note).

Gonyosoma caldwelli K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 4. Type locality: Yenping (=Nanping Shi), Fukien (=Fujian Prov.), China.

Chrysopelea ornata var. *lungchuanensis* B.-Q. (as B.-C.) Hu, M.-H. Huang (as Hwang), S.-X. He (as S.-S. Ho), and K.-J. (as K.-C.) Wei, 1958, Acta Zool. Sinica, Peking, 10: 117. Type locality: Lungchuan (=Longquan) Co., Chekiang (=Zhejiang) Prov., China.

RANGE: Southern China, to southwest Sichuan. India (Assam) and northern Vietnam.

NOTE: R. Mell (1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 121) gave the type locality of *Rhadinophis melli* as Teeberg (=Chayuanshan) and Drachenkopf (=Longtoushan), both east of Siu-dsau (=Qujiang), Guangdong Province, China; 550–800 meters (Qujiang).

Elaphe hodgsonii (Günther, 1860).

Spilotes hodgsonii A. Günther, 1860, Proc. Zool. Soc. London, 1860: 156. Type locality: Ladak (=Ladakh Mountains, Tibet-Kashmir border) and Nepal; 15,200 feet (Ladakh).

Elaphe hodgsoni: G. E. Shaw, E. O. Shebbeare, and P. E. Barker, 1939, Jour. Darjeeling [later, Bengal] Nat. Hist. Soc., 14: 75.

RANGE: Xizang (Tibet), China. India (from Ladakh and Kashmir to Sikkim and Assam).

Elaphe mandarinus (Cantor, 1842). (PLATE 34G)

Coluber mandarinus T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 483. Type locality: Chusan (=Zhoushan) Islands, Zhejiang Prov., China.

Elaphe mandarinus: L. Stejneger, 1925, Proc. U.S. Natl. Mus., Washington, 66: 84.

Elaphe takasago S. Takahashi, 1930, Terrestr. Snakes Japan, Tokyo: unnumbered page (=species no. 22). Type locality: Mt. Taiheizan (=Taipingshan), northern Formosa (=Taiwan Prov.), China.

RANGE: Widely distributed over southern China including Taiwan, westward to southeastern Xizang (Tibet) and northward to Shaanxi. Northern Burma, Laos, and Vietnam.

Elaphe moellendorffi (Boettger, 1886). (PLATE 34H)

Cynophis Moellendorffi O. Boettger, 1886, Zool. Anz., Lepizig, 9: 520. Type locality: Nan-ning, Ju-tshang (=Yong) River, Guang-hsi (=Guangxi Zhuang Autonomous Region), and Canton (=Guangzhou Shi), Guang-dung (=Guangdong Prov.), China.

Elaphe moellendorffii: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 322.

RANGE: Guangdong and Guangxi, China. Northern Vietnam.

Elaphe perlacea Stejneger, 1929.

Elaphe perlacea L. Stejneger, 1929, Proc. Biol. Soc. Washington, 42: 129. Type locality: Yachow (=Yaan) Prefecture, Szechwan (=Sichuan) Prov., China.

RANGE: Western Sichuan, China.

Elaphe porphyracea (Cantor, 1839). (PLATE 35A)

Coluber porphyraceus T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 51. Type locality: Míshmee Hills, Asám (=Assam), India.

Elaphe porphyracea: J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 53.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, northward to Henan and Gansu. India (Darjeeling, Sikkim, Assam), and Burma to Thailand, Laos, and northern Vietnam; Malay Peninsula and Indonesia (Sumatra).

1. ***Elaphe porphyracea hainana*** Mell, 1931.

Elaphe porphyracea hainana R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 209. Type locality: Hainan Island, Hainan Prov., China.

RANGE: Hainan, China.

2. ***Elaphe porphyracea nigrofasciata*** (Cantor, 1839).

Psammophis nigrofasciatus T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 53. Type locality: Sincapore (=Singapore).

Elaphe porphyracea nigrofasciata: C. H. Pope, 1935, Rept. China, New York: 257.

Liopeltis kawakamii M. Ôshima, 1910, Annot. Zool. Japon., Tokyo, 7: 193. Type locality: Formosa (=Taiwan Prov.), China.

Elaphe porphyracea sikiangensis R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 209. Type locality: Kwangtung (=Guangdong Prov.) and Fukien (=Fujian Prov.), China (see Note).

RANGE: Southern China from east coast to Guizhou, including Taiwan and Hong Kong. Northern Vietnam and Laos.

NOTE: C. H. Pope (1935, Rept. China, New York: 257), based on data with the type specimen, gave the type locality of *Elaphe porphyracea sikiangensis* as Suliukuan (=Shiliuguan), Lofaoshan (=Mt. Luofu), Kwangtung (=Guangdong Province), China; about 600 meters.

3. ***Elaphe porphyracea porphyracea*** (Cantor, 1839). (PLATE 35A)

Elaphe porphyracea porphyracea: K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175:3.

Simotes Vaillanti H.-É. Sauvage, 1876, L'Institut, Paris, new ser., 4: 275. Type locality: China.

Elaphe porphyracea pulchra K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 175: 3. Type locality: Yunnanfu (=Kunming Shi), Yunnan Prov., China.

RANGE: Southwest China northward to Gansu and Shaanxi, eastward to Henan. India (Darjeeling, Sikkim, Assam), Burma, and Thailand through Malay Peninsula to Indonesia (Sumatra).

Elaphe prasina (Blyth, 1854).

Coluber prasinus E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 291. Type locality: Asám (=Assam), India.

Elaphe prasina: M. A. Smith, 1930, Bull. Raffles Mus., Singapore, 3: 48.

RANGE: Yunnan, Guizhou, and Hainan, China. India (Darjeeling, Assam) and Burma, south to Malay Peninsula; northern Thailand, Laos, and Vietnam.

Elaphe radiata (Schlegel, 1837). (PLATE 35B)

Coluber radiatus H. Schlegel, 1837, Essai Physion. Serp., The Hague, 2: 135. Type locality: Java, Sumatra, and Cochinchine (=Vietnam) (see Note).

Elaphe radiata: C. H. Pope, 1929, Bull. Amer. Mus. Nat. Hist., New York, 58: 446.
RANGE: South China including Hong Kong, westward to Yunnan. India (Orissa, Sikkim, eastern Himalayas); Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo).
NOTE: C. H. Pope (1935, Rept. China, New York: 261) restricted the type locality to Java.

Elaphe rufodorsata (Cantor, 1842). (PLATE 35C)
Tropidonotus rufodorsatus T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 483. Type locality: Chusan (=Zhoushan) Islands, Zhejiang Prov., China.
Elaphe rufodorsata: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 310.
Ablabes sex-lineatus A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris 7(1): 324. Type locality: China.
Simotes Herzi O. Boettger, 1886, Zool. Anz., Leipzig, 9: 519. Type locality: Hills near Shanghai, Kiang-su Prov. (=Jiangsu Prov.; Shanghai is now a separate municipality), China.
RANGE: Widely distributed in northeastern China west to Shanxi, south to Hubei and Fujian. Russia (Primorskiy Territory) and Korea.

Elaphe schrenckii (Strauch, 1873). (PLATE 35D)
Elaphis Schrenckii A. Strauch, 1873, Mém. Acad. Impér. Sci. St.-Pétersbourg, ser. 7, 21(4): 100. Type locality: Chinggan'schen Wachtposten (=Khingan Military Post) and Chinggan-Gebirge (=Khingan Mountain), eastern Siberia; Possiet Bay and Wladiwostok (=Vladivostok), Primorskiy Territory, Russia, and "Hakodate [Hokkaido Island], Japan," the last locality in error (see Note).
Elaphe schrenckii: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 313.
RANGE: North and central China. Russia (Amur River Basin of Siberia, Primorskiy Territory) and Korea.
NOTE: L. Stejneger (1907: 313), by type designation, fixed the type locality as Khingan Military Post, eastern Siberia; see A. Strauch (1873: 272) for list of specimens.

1. ***Elaphe schrenckii anomala*** (Boulenger, 1916). (PLATE 35D)
Coluber anomalus G. A. Boulenger, 1916, Ann. Mag. Nat. Hist., London, ser. 8, 17: 243. Type locality: Chihfeng (=Chifeng Shi), northeast Chihli Prov., now part of Nei Mongol (Inner Mongolia) Autonomous Region, China.
Elaphe schrenckii anomala: C. H. Pope, 1935, Rept. China, New York: 266.
Elaphe schrenki [sic] *besenbruchi* L. Müller, 1923, Zool. Anz., Leipzig, 57: 150. Type locality: Tsingtau (=Qingdao Shi), Shantung (=Shandong Prov.), China.
RANGE: Northern China southward to Anhui and Hunan. Korea.

2. ***Elaphe schrenckii schrenckii*** (Strauch, 1873).
Elaphe schrenckii schrenckii: C. H. Pope, 1935, Rept. China, New York: 268.
RANGE: Heilongjiang and Jilin, China. Russia (Amur River Basin and Primorskiy Territory) and Korea.

Elaphe taeniura Cope, 1861.
Elaphe tæniurus E. D. Cope, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 565. Type locality: Ningpo (=Ningbo Shi, Zhejiang Prov.), China, and Siam (=Thailand).

Elaphis yunnanensis J. Anderson, "1878" (1879), Anat. Zool. Res. Zool. Result. Exped. West. Yunnan, London, 1: 813. Type locality: Momien (=Tengchong Co.), Yunnan Prov., China.

Coluber taeniurus var. *friesei* F. Werner, 1926, Sitzungsber. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 135: 245. Type locality: Takao (=Kaohsiung), Formosa (=Taiwan), China.

RANGE: Most of China including Taiwan and Hainan, but not recorded from northeast or west. Japan and Russia (southern Primorskiy Territory), with unconfirmed record in Korea. India (Darjeeling, Assam) and Burma east through Indochina to Vietnam, south to northern half of Malay Peninsula.

ENHYDRIS Latreille, 1801.

Enhydris P.-A. Latreille, "X" (1801), *in* C.-S. Sonnini and P.-A. Latreille, Hist. Nat. Rept., Paris, 4: 200. Type species: *Enhydris cærulea* P.-A. Latreille *in* C.-S. Sonnini and P.-A. Latreille, 1801 (=*Hydrus Enhydris* J. G. Schneider, 1799), by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 300; see Note) and also by tautonomy.

NOTE: L. J. Fitzinger's (1843, Syst. Rept., Vienna, 1: 28) designation of *Enhydris cyanocincta* Merrem, 1820 (=*Hydrophis cyanocinctus* F.-M. Daudin, 1803) as the type species is invalid because it is not one of the six species originally included by Latreille.

Until recently, *Enhydris enhydris* J. G. Schneider, 1799 (Hist. Amphib., Jena, 1: 245; type locality: none given by Schneider, but his description was based on P. Russell's [1796, Indian Serp., London, 1: 35, plate 30] description of the "Mutta Pam; Aly Pam," having a locality of "Lake of Ankapilly" [=Ankapilly Lake, India], which, therefore, is the actual type locality) was included in the Chinese fauna on the basis of an old specimen that was supposedly from Hong Kong. J. D. Romer (1961, Mem. Hong Kong Nat. Hist. Soc., 5: 13), however, noted that this specimen most probably originated in Java and was mixed with a collection from Hong Kong and Thailand. Moreover, recent collectors in Hong Kong have failed to find *E. enhydris* (S. J. Karsen, M. W.-N. Lau and A. Bogadek, 1986, Hong Kong Amphib. Rept., Hong Kong: 98–100).

Enhydris maculosa W. T. Blanford, 1881 (Proc. Zool. Soc. London, 1881: 226, substitute name for *Hypsirhina maculata* W. T. Blanford, 1879, Jour. Asiatic Soc. Bengal, Calcutta, new ser., 48: 130; type locality: vicinity of Bassein, Pegu, Burma. Name preoccupied by *H. maculata* A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854) has been reported from Guangdong Province, China (K. K. Gyi, 1970, Univ. Kansas Publ. Mus. Nat. Hist., Lawrence, 20: 116), but our examination of four of the five known Chinese specimens (Academy of Natural Sciences of Philadelphia, numbers 5095–5098) revealed that they are *E. chinensis*.

Enhydris bennettii (Gray, 1842). (PLATE 35E)

Hypsirhina Bennettii J. E. Gray, 1842, Zool. Misc., London: 67. Type locality: China.

Enhydris bennettii: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 302.

Hypsirhina maculata A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(2): 950. Type locality: China.

RANGE: Hainan, Guangdong, Hong Kong, and Fujian, China.

Enhydris chinensis (Gray, 1842). (PLATE 35F)

Hypsirhina Chinensis J. E. Gray, 1842, Zool. Misc., London: 66. Type locality: China.

Enhydris chinensis: M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 203.
Hypsirhina sinensis A. Stanley, "1914" (1915), Jour. North-China Branch Royal Asiatic Soc., Shanghai, new ser., 45: 30 (in error for *chinensis*).
RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Northern Vietnam.

Enhydris plumbea (Boie, 1827). (PLATE 35G)
Homalopsis plumbea H. Boie, 1827, *in* F. Boie, Isis von Oken, Leipzig, 20: col. "560" (550). Type locality: Java, Indonesia.
Enhydris plumbea: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 300.
RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Burma and Thailand to Vietnam, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo, Celebes).

LIOPELTIS Fitzinger, 1843.

Liopeltis L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 26. Type species: *Herpetodryas tricolor* H. Schlegel, 1837, of Indonesia, by original designation.

Liopeltis frenatus (Günther, 1858). (PLATE 35H)
Cyclophis frenatus A. Günther, 1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 120. Type locality: Mountains near "Afghanistan," in error.
Liopeltis frenatus: F. Wall, 1923, Jour. Bombay Nat. Hist. Soc., 29: 467.
RANGE: Xizang (Tibet) and Yunnan, China. India (Assam), Burma, Laos, and Vietnam.

MACROPISTHODON Boulenger, 1893.

Macropisthodon G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 265. Type species: *Amphiesma flaviceps* A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, of Malaysia and Sumatra, by subsequent designation (M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 314).

Macropisthodon rudis Boulenger, 1906. (PLATE 36A)
Macropisthodon rudis G. A. Boulenger, 1906, Ann. Mag. Nat. Hist., London, ser. 7, 17: 568. Type locality: Tongchuan fu (=Dongchuan Shi), Yunnan Prov., China.
Pseudagkistrodon carinatus J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 51. Type locality: Formosa (=Taiwan Prov.), China (see Note).
RANGE: Southern China including Taiwan, from Yunnan and Sichuan east to Zhejiang and south to Guangdong.
NOTE: J. VanDenburgh (1909: 52) listed two specific Taiwanese localities for *Pseudagkistrodon carinatus*: Toroku (=Tailuge or Tailuko) and Mt. Arisan (=Alishan), but his type was labelled merely "Formosa."

1. ***Macropisthodon rudis multiprefrontalis*** Zhao and Jiang, 1981.
Macropisthodon rudis multiprefrontalis E.-M. Zhao and Y.-M. Jiang, 1981, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 55. Type locality: Xichang, Sichuan Prov., China; 2,650 meters.
RANGE: Western Sichuan, China.

2. ***Macropisthodon rudis rudis*** Boulenger, 1906. (PLATE 36A)

Macropisthodon rudis rudis: E.-M. Zhao and Y.-M. Jiang, 1981, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 55.

Natrix namiei M. Ôshima, 1910, Annot. Zool. Japon., Tokyo, 7: 189. Type locality: Formosa (=Taiwan Prov.), China.

Macropisthodon rudis var. *melanogaster* T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 138. Type locality: South China (see Note).

RANGE: Southern China including Taiwan, from Yunnan and eastern Sichuan east to Zhejiang and south to Guangdong.

NOTE: The type locality of Vogt's *Macropisthodon rudis* var. *melanogaster* was corrected to Tsangshan (=Mt. Cang), near Tali (=Dali), Yunnan Province, China; 2,300 meters (see C. H. Pope, 1935, Rept. China, New York: 163–164).

NATRIX Laurenti, 1768.

Natrix J. N. Laurenti, 1768, Synops. Rept., Vienna: 73. Type species: *Natrix vulgaris* J. N. Laurenti, 1768 (=*Coluber Natrix* C. Linnaeus, 1758), of Europe, by absolute tautonomy (see Note).

NOTE: L. Stejneger (1936, Copeia, Ann Arbor, 1936: 139) claimed that the type species was also designated by J. Fleming (1822, Philos. Zool., Edinburgh, 2: "29," in error by Stejneger for page 291). Fleming did not mention *Natrix natrix*, though; under genus "45. Natrix" (page 291), he listed only one species (*T[ropidonotus] torquata*). This is not a type-species designation, since for other genera (e.g., page 294) he listed more than one species.

Natrix natrix (Linnaeus, 1758).

Coluber natrix C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 220. Type locality: Europe (see Note).

Natrix natrix: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 263 (combination implied).

RANGE: Xinjiang, China. Europe (to 67° North Latitude in Scandinavia) and northwest Africa eastward through Central Asia (to Lake Baikal in Russia) and northwest Mongolia; south through Iran and Turkey.

NOTE: The type locality has been restricted to Sweden (R. Mertens and L. Müller, 1928, Abhandl. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 41: 49).

Natrix tessellata (Laurenti, 1768). (PLATE 36B)

Coronella tessellata J. N. Laurenti, 1768, Synops. Rept., Vienna: 87. Type locality: "In Japidia (=Iapydia), vulgo Cars (=alpine meadow)" (=Italy?).

Natrix tessellata: B. Merrem, 1820, Versuch Syst. Amphib. / Tent. Syst. Amphib., Marburg: 136 (Latin version).

RANGE: Xinjiang, China. Central Europe and northeastern Africa (Egypt) through Middle East to Iran and central Asia (in Russia to 54° North Latitude), including northern Pakistan and Afghanistan; northwestern India?

OLIGODON Boie, 1827.

Oligodon F. Boie, 1827, Isis von Oken, Jena, 20: col. 519. Type species: *Coluber bitorquatus* C. G. C. Reinwardt *in* F. Boie, 1827, of Indonesia, by original designation.

Oligodon albocinctus (Cantor, 1839).

Coronella albocincta T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 50. Type locality: Chirra Púnji (=Cherrapungi), Asám (=Assam), India.

Oligodon albocinctus: F. Wall, 1923, Rec. Indian Mus., Calcutta, 25: 326.

RANGE: Xizang (Tibet) and Yunnan, China. India (Assam, Sikkim) east through Burma.

Oligodon bellus (Stanley, 1917).

Coronella bella A. Stanley, "1916" (1917), Jour. North-China Branch Royal Asiatic Soc., Shanghai, 47: 84. Type locality: Kuatun (=Guadun) Hills, northwest Fokien (=Fujian Prov.), China.

Oligodon bella: H.-B. Ding and J. Zheng, 1974, Snakes Fujian Prov., Fuzhou: 39.

RANGE: Fujian and Yunnan, China.

Oligodon chinensis (Günther, 1888).

Simotes chinensis A. Günther, 1888, Ann. Mag. Nat. Hist., London, ser. 6, 1: 169. Type locality: Mountains north of Kiu Kiang (=Jiujiang Shi), on Yantsze [*sic*] (=Chang Jiang) River, Jiangxi Prov., China.

Oligodon chinensis: M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 206.

RANGE: Southern China, including Hainan. Northern Vietnam.

Oligodon cinereus (Günther, 1864).

Simotes cinereus A. Günther, 1864, Rept. Brit. India, London: 215. Type locality: Gamboja (=Cambodia) (see Note).

Oligodon cinereus: M. A. Smith, 1940, Rec. Indian Mus., Calcutta, 42: 481.

Simotes swinhonis A. Günther, 1864, Rept. Brit. India, London: 215. Type locality: Amoy (=Xiamen Shi), Fujian Prov., China (see Note).

RANGE: South China westward to Yunnan, including Hong Kong and Hainan. India (Assam) through Burma and Thailand to Laos, Cambodia, and Vietnam, south to northern end of Malay Peninsula.

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 215), acting as first revisor, chose *cinereus* in preference to *swinhonis*.

1. ***Oligodon cinereus cinereus*** (Günther, 1864).

Simotes cinereus A. Günther, 1864, Rept. Brit. India, London: 215. Type locality: Gamboja (=Cambodia).

Holarchus dolleyanus E. D. Cope, "1894" (1895), Proc. Acad. Nat. Sci. Philadelphia, 46: 423. Type locality: Hainan Island, Hainan Prov., China.

RANGE: South China including Hong Kong and Hainan.

2. ***Oligodon cinereus tamdaoensis*** (Bourret, 1935).

Holarchus violaceus tamdaoensis R. Bourret, 1935, Bull. Gén. Instr. Publique, Hanoi, 1935(8): 265. Type locality: Tamdao, Vinh-Yên Prov., Tonkin (=northern Vietnam); 900 meters.

RANGE: Yunnan, Guizhou, and Guangxi, China. Northern Vietnam.

Oligodon cyclurus (Cantor, 1839). (PLATE 36C–D)

Coronella cyclura T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 50. Type locality: Not given (see Note).

Oligodon cyclurus: M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 202.
RANGE: Yunnan, China. India (Assam) east through Burma and Thailand to Cambodia and Vietnam.
NOTE: The type locality is presumably the Indian subcontinent, based on the title of Cantor's paper (1839: 48) and other information in his article.

Oligodon eberhardti Pellegrin, 1910.

Oligodon Herberti var. *Eberhardti* J. Pellegrin, 1910, Bull. Soc. Zool. France, Paris, 35: 30. Type locality: Tam Dao, northwest of Hanoi, Tongking (=northern Vietnam).
Oligodon eberhardti: C. H. Pope, 1935, Rept. China, New York: 300.
Macrocalamus wongii T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 101. Type locality: Lohsiang (=Luoxiang), Kwangsi (=Guangxi Zhuang Autonomous Region), China.
RANGE: Guangxi and Fujian, China. Vietnam, Laos, and Cambodia.

Oligodon formosanus (Günther, 1872). (PLATE 36E)

Simotes formosanus A. Günther, 1872, Ann. Mag. Nat. Hist., London, ser. 4, 9: 20. Type locality: Takou (=Kaohsiung), Formosa (=Taiwan Prov.), China.
Oligodon formosanus: M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 208.
Simotes hainanensis O. Boettger, 1894, Ber. Senckenberg. Naturforsch. Gesellsch., Frankfurt am Main, 1894: 133. Type locality: Hainan Island, Hainan Prov., China.
Holarchus nesiotis T. Barbour, 1908, Bull. Mus. Comp. Zool. Harvard Coll., Cambridge, 51: 318. Type locality: Tingan (=Dingan Co.), Hainan Island, Hainan Prov., China.
Holarchus formosanus violaceoides R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 323. Type locality: Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note).
Holarchus formosanus brunnea R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde, Berlin, 1929: 323. Type locality: Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note).
RANGE: Southern China including Taiwan, Hong Kong, and Hainan, westward to Yunnan. Northern Vietnam.
NOTE: The type locality of both *Holarchus formosanus violaceoides* and *H. formosanus brunnea* is Yao shan (=Dayao Shan), according to Mell ("1929" [1930]: 312).

Oligodon lacroixi Angel and Bourret, 1933.

Oligodon Lacroixi F. Angel and R. Bourret, 1933, Bull. Soc. Zool. France, Paris, 58: 138. Type locality: Chapa, Tonkin (=northern Vietnam); 1,500 meters.
RANGE: Yunnan, China. Northern Vietnam.

Oligodon lungshenensis Zheng and Huang, 1978.

Oligodon lungshenensis J. Zheng (as Cheng) and Z.-J. Huang, 1978, *in* Z.-J. Huang, J. Zheng (as Cheng), and J.-J. Fang, Jour. Fujian Normal Univ., Fuzhou, ser. Nat. Sci., 1978(2): 92. Type locality: Longsheng Co., Guangxi Zhuang Autonomous Region, China.
Oligodon guizhouensis D.-J. Li, 1979, *in* L. Wu, D.-J. Li, R.-H. Xu, Q. Dong, and J.-S. Liu, Jour. Zunyi Med. Coll., Zunyi, 1979(2): 104. Type locality: Yong-le, Leishan Co., Guizhou Prov., China; 1,210 meters.
RANGE: Guizhou, China.

NOTE: In China, this species has been known as *Oligodon guizhouensis*. D.-J. Li was the first to recognize the distinctiveness of this new species; he submitted a manuscript describing the species, but it was not published for more than two years. Meanwhile, Zheng and Huang published their new species. The Herpetological Society of China, meeting in Chengdu in December 1982, decided that Li's name should be the proper one for this species. This decision, however, has no standing under the "Code" (1985) and since Zheng and Huang's name is older, it must have precedence, despite the merits of Li's case.

Oligodon melanozonatus Wall, 1922.

Oligodon melanozonatus F. Wall, 1922, Rec. Indian Mus., Calcutta, 24: 29. Type locality: Upper Rotung Valley, Abor Hills, Xizang Autonomous Region (Tibet), China (in territory occupied by India); about 2,000 feet.

RANGE: Known only from the type locality.

Oligodon multizonatus Zhao and Jiang, 1981.

Oligodon multizonatum E.-M. Zhao and Y.-M. Jiang, 1981, Acta Herpetol. Sinica, Chengdu, [old ser.], 5: 54. Type locality: Luding Co., Sichuan Prov., China; 1,400 meters.

RANGE: Western Sichuan and southeastern Gansu, China.

Oligodon ningshaanensis Yuan, 1983.

Oligodon ningshaanensis H. Yuan, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(2): 65. Type locality: Huoditang, Ningshaan Co., Shaanxi Prov., China; 1,650 meters.

RANGE: Southern Shaanxi, China.

Oligodon ornatus VanDenburgh, 1909.

Oligodon ornatus J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 53. Type locality: Shinchiku (=Hsinchu), Formosa (=Taiwan Prov.), China.

Holarchus torquatus konishii M. Ôshima, 1910, Annot. Zool. Japon., Tokyo, 7: 196. Type locality: Urai (=Wulai), Shinkô (=Shenkeng), northern Formosa (=Taiwan Prov.), China.

Simotes nusyi J. Roux, 1919, Rev. Suisse Zool., Geneva, 27: 61. Type locality: Fokien (=Fujian Prov.), China.

RANGE: Sichuan and Hunan east to Fujian and north to Anhui; Taiwan, China.

Oligodon taeniatus (Günther, 1861).

Simotes tæniatus A. Günther, 1861, Proc. Zool. Soc. London, 1861: 189. Type locality: Siam? (see Note).

Oligodon tæniatus: M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 208.

RANGE: Yunnan, China. Thailand, Laos, Cambodia, and southern Vietnam.

NOTE: Günther mentioned (1861: 187) that the types were "transmitted from Chartaboum, on the coast of Siam," but this is probably just the point of shipment and not the place of collection. G. A. Boulenger (1894, Catal. Snakes Brit. Mus., London, 2: 228), however, stated that the types were from Camboja (=Cambodia).

OPHITES Wagler, 1830.

Ophites J. G. Wagler, 1830, Natürl. Syst. Amphib. Classif. Säugth. Vögel; München, Stuttgart, and Tübingen: 186. Type species: *Lycodon subcinctus* C. G. C. Reinwardt *in* F. Boie, 1827, by monotypy.

NOTE: Previously, Chinese snakes of the genus *Ophites* have been placed in *Lycodon* H. Boie, 1826 (Bull. Universel Sci. Indust. Férussac [sect. 2, Bull. Sci. Nat. Géol.], Paris, 9: 238). In that paper Boie referred only three species with certainty to *Lycodon*: *Coluber audax* F.-M. Daudin, 1803; *C. hebe* F.-M. Daudin, 1803; and *C. aulicus* C. Linnaeus, 1758. Most modern authorities have accepted *C. aulicus* as the type species, but, in a generally overlooked reference, F. Boie (1827, Isis von Oken, Jena, 20: col. 522) stated "Typus: *Col. Audax* Linn." for *Lycodon*. The reference to Linnaeus is a *lapsus*, for elsewhere in his article (col. 525) Boie clearly credited *audax* to Daudin. This choice of type creates a problem because *C. audax* (=*Coronella cervina* J. N. Laurenti, 1768) is a species currently referred to *Siphlophis* L. J. Fitzinger, 1843 (type: *Coluber audax*), a genus of South American snakes containing five species (J. A. Peters and B. Orejas-Miranda, 1970, Bull. U.S. Natl. Mus., Washington, 297(Snakes): 280–281). It appears that the American species must be called *Lycodon*.

The next available name for the Oriental species is *Ophites*, a fact pointed out long ago by L. Stejneger (1907, Bull. U.S. Natl. Mus., Washington, 58: 356). Later, however, Stejneger (1910, Proc. U.S. Natl. Mus., Washington, 38: 107) stated that L. J. Fitzinger (1826, Neue Classif. Rept., Vienna: 30) appeared to fix the type as *Coluber aulicus*, but nowhere did Fitzinger refer to *C. aulicus* as type or use an equivalent term, as required under the "Code" (1985). Instead, Fitzinger (1826: 30–31) gave a list of many genera, each with the names of one *or more* included species; this cannot be construed as designation of type.

Ophites aulicus (Linnaeus, 1758). (PLATE 36F)

Coluber aulicus C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 220. Type locality: "America," in error.

Ophites aulicus: F. Wall, 1923, Spol. Zeylan., Colombo, 12: 257.

RANGE: South China, from Fujian and Guangdong westward to Yunnan, including Hong Kong. Sri Lanka and India north to Himalayas and Assam, through Burma to Indochina, south through Malay Peninsula to Indonesia (as far as Timor); Philippines. Introduced to Mauritius (Indian Ocean).

Ophites fasciatus Anderson, 1879.

Ophites fasciatus J. Anderson, "1878" (1879), Anat. Zool. Res. Zool. Result. West. Yunnan, London, 1: 827. Type locality: Ponsee (=Pengxi), western Yunnan Prov., China.

Dinodon yunnanensis F. Werner, 1922, Anz. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 59: 221. Type locality: Yünnanfu (=Kunming Shi), Yunnan Prov., China (see Note).

RANGE: Southwestern China, from Yunnan and Guangxi to Hubei, northward to Shaanxi and Gansu; Fujian. India (Assam) and Burma east through Thailand to northern Laos.

NOTE: F. Werner (1924, Denkschr. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 99: 46–47) provided an expanded description of the type of *Dinodon yunnanensis*.

Ophites laoensis (Günther, 1864). (PLATE 36G)

Lycodon laoensis A. Günther, 1864, Rept. Brit. India, London: 317. Type locality: Laos Mountains (see Note) and Siam.

RANGE: Yunnan, China. Laos, Vietnam, Thailand, and Malay Peninsula.

NOTE: It is not clear whether the "Laos Mountains" locality is in Thailand or southern Vietnam (see page 170, *Pyxidea mouhotii*, Note).

Ophites ruhstrati Fischer, 1886. (PLATE 36H)

Ophites Ruhstrati J. G. Fischer, 1886, Abhandl. Naturwissensch. Ver. Hamburg, 9: 16. Type locality: Southern Formosa (=Taiwan Prov.), China.

Dinodon futsingensis C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 4. Type locality: Futsing Hsien (=Fuqing Co.), Fukien (=Fujian Prov.), China.

RANGE: Southern China including Hong Kong and Taiwan, northward to Anhui and west to Sichuan and southeastern Gansu. Japan (southern Ryukyu Islands).

NOTE: In Japan and Taiwan this species has often been called *Dinodon septentrionalis* (see H. Ota, 1988, Jour. Taiwan Mus., Taipei, 41: 85–91).

Ophites subcinctus (Reinwardt, 1827). (PLATE 37A)

Lycodon subcinctus C. G. C. Reinwardt, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 551. Type locality: Java, Indonesia.

Ophites subcinctus: J. G. Wagler, 1830, Natürl. Syst. Amphib. Säugth. Vögel; Munich, Stuttgart, and Tübingen: 186.

RANGE: Yunnan, Guangdong, Hainan, Hong Kong, and Fujian, China. Indochina south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo); Philippines.

OPISTHOTROPIS Günther, 1872.

Opisthotropis A. Günther, 1872, Ann. Mag. Nat. Hist., London, ser. 4, 9: 16. Type species: *Opisthotropis ater* A. Günther, 1872, of West Africa, by monotypy.

NOTE: The identity of the type species is not known. Recent authors on the African herpetofauna do not list it as African, and C. H. Pope (1935, Rept. China, New York: 164) stated that it was "of doubtful origin." All other known species in this genus are known from China south to Indonesia, and the type of *Opisthotropis ater* may represent one of them with incorrect locality data. The next available generic name for the Oriental species is *Calamohydrus* G. A. Boulenger, 1888 (Ann. Mag. Nat. Hist., London, ser. 6, 2: 43; type species: *C. Andersonii* G. A. Boulenger, 1888), but no change is recommended until the type of *ater* is re-examined.

Opisthotropis andersonii (Boulenger, 1888).

Calamohydrus Andersonii G. A. Boulenger, 1888, Ann. Mag. Nat. Hist., London, ser. 6, 2: 44. Type locality: Hongkong, China.

Opisthotropis Andersonii: G. A. Boulenger, 1891, Ann. Mag. Nat. Hist., London, ser. 6, 7: 343.

RANGE: Hong Kong, China.

Opisthotropis balteata (Cope, 1895). (PLATE 37B)

Trimerodytes balteatus E. D. Cope, "1894" (1895), Proc. Acad. Nat. Sci. Philadelphia, 46: 426. Type locality: Hainan Island, Hainan Prov., China.

Opisthotropis balteata: C. H. Pope, 1935, Rept. China, New York: 167.

Liparophis Bedoti M. G. Peracca, 1904, Rev. Suisse Zool., Geneva, 12: 664. Type locality: China.

Opisthotropis multicincta T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 82. Type locality: Loshiang (=Luoxiang), Kwangsi (=Guangxi Zhuang Autonomous Region), China.

RANGE: Guangxi, Guangdong, Hainan, and Hong Kong, China. Northern Vietnam and Cambodia.

Opisthotropis guangxiensis Zhao, Jiang, and Huang, 1978.

Opisthotropis guangxiensis E.-M. Zhao, Y.-M. Jiang, and Q.-Y. Huang, 1978, Mater. Herpetol. Res., Chengdu, 4: 21. Type locality: Mt. Yao (=Dayao Shan), Guangxi Zhuang Autonomous Region, China (see Note).

Opisthotropis yaoshanensis Z.-J. Huang and J. Zheng (as Cheng), 1978, *in* Z.-J. Huang, J. Zheng (as Cheng), and J.-J. Fang, Jour. Fujian Normal Univ., Fuzhou, ser. Nat. Sci., 1978(2): 91. Type locality: Tuxian, Jinxiu Co., Guangxi Zhuang Autonomous Region, China.

RANGE: Guangxi, China.

NOTE: A more extensive description of *Opisthotropis guangxiensis* was published by Zhao and Jiang in 1979 (*in* E.-M. Zhao, Y.-M. Jiang, and Q.-Y. Huang, Nature, Shanghai, 2: 313), but in the original article authorship of the separate species is not given, and therefore authorship rests with the authors of the entire article, which includes Huang. The name *O. guangxiensis* was first mentioned in a meeting abstract (1978, Proc. Symp. China Soc. Zool.-China Soc. Entomol., Chengdu: unpaginated) authored by Jiang alone, but such abstracts are not considered published under the "Code" (1985).

The papers describing *Opisthotropis guangxiensis* and *O. yaoshanensis* were both issued late in 1978, in October and November, respectively.

Opisthotropis jacobi Angel and Bourret, 1933.

Opisthotropis Jacobi F. Angel and R. Bourret, 1933, Bull. Soc. Zool. France, Paris, 58: 130. Type locality: Chapa, Lao Kay, Tonkin (=northern Vietnam); 1,500 meters.

RANGE: Yunnan, China. Northern Vietnam.

Opisthotropis kuatunensis Pope, 1928. (PLATE 37C)

Opisthotropis kuatunensis C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 5. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China.

RANGE: Zhejiang, Fujian, Jiangxi, Guangxi, and Hong Kong, China.

Opisthotropis lateralis Boulenger, 1903. (PLATE 37D)

Opisthotropis lateralis G. A. Boulenger, 1903, Ann. Mag. Nat. Hist., London, ser. 7, 12: 350. Type locality: Man-Son Mountains, Tonkin, Vietnam; 3,000–4,000 feet.

Tapinophis shini R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 321. Type locality: Yaoshan (=Dayao Shan), Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note).

RANGE: Hong Kong, Guangxi, and Guizhou, China. Northern Vietnam.

NOTE: The type locality of *Tapinophis shini* was given by Mell ("1929" [1930]: 312).

Opisthotropis latouchii (Boulenger, 1899).

Tapinophis latouchii G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 164. Type locality: Kuatun (=Guadun), about 270 miles from Foochow (=Fuzhou Shi), Fukien (=Fujian Prov.), China; 3,000–4,000 feet or more.

Opisthotropis latouchii: C. H. Pope, 1935, Rept. China, New York: 173.

Cantonophis praefrontalis F. Werner, 1909, Jahresh. Ver. Vaterl. Naturk. Württemberg, 65: 57. Type locality: Canton (=Guangzhou Shi), Guangdong Prov., China.

RANGE: Southern China westward to Sichuan.

Opisthotropis maxwelli Boulenger, 1914.

Opisthotropis maxwelli G. A. Boulenger, 1914, Ann. Mag. Nat. Hist., London, ser. 8, 14: 483. Type locality: South Fokien (=Fujian Prov.), China.

RANGE: Fujdong, and Guangxi, China.

Opisthotropis praemaxillaris (Angel, 1929).

Paratapinophis praemaxillaris F. Angel, 1929, Bull. Mus. Natl. Hist. Nat., Paris, ser. 2, 1: 78. Type locality: Xieng-Khouang, Upper Laos.

Opisthotropis praemaxillaris: C. H. Pope, 1935, Rept. China, New York: 164.

RANGE: Yunnan, China. Northern Laos and Thailand.

PAREAS Wagler, 1830.

Pareas J. G. Wagler, 1830, Natürl. Syst. Amphib. Classif. Säugth. Vögel; Munich, Stuttgart, and Tübingen: 181. Type species: *Dipsas carinata* C. G. C. Reinwardt *in* J. G. Wagler, 1830 (=*Amblycephalus carinatus* H. Boie, 1828), by monotypy.

Pareas boulengeri (Angel, 1920).

Amblycephalus Boulengeri F. Angel, 1920, Bull. Mus. Natl. Hist. Nat., Paris, 26: 113. Type locality: Koeï Tchéou (=Guizhou Prov.), China.

Pareas boulengeri: S.-Q. Hu, E.-M. Zhao (as Djao), and C.-C. Liu, 1973, Acta Zool. Sinica, Beijing, 19: 158.

RANGE: Gansu south to Guangxi and Guangdong, east to Jiangxi, China.

Pareas carinatus (Boie, 1828). (PLATE 37E)

Amblycephalus carinatus H. Boie, 1828, Isis von Oken, Leipzig, 21: col. 1035. Type locality: Java, Indonesia.

Pareas carinata: J. G. Wagler, 1830, Natürl. Syst. Amphib., Säugth. Vögel; Munich, Stuttgart, and Tübingen: 181 (combination implied).

RANGE: Yunnan, China. Indochina and Malay Peninsula.

Pareas chinensis (Barbour, 1912). (PLATE 37F)

Amblycephalus chinensis T. Barbour, 1912, Mem. Mus. Comp. Zool., Harvard Coll., Cambridge, 40: 132. Type locality: Luluping (=Ebian Co.), western Szechwan (=Sichuan Prov.), China.

Pareas chinensis: B.-Q. Hu, M.-H. Huang, Z.-T. Xie, E.-M. Zhao, Y.-M. Jiang, Q.-Y. Huang, Y. Zong, and J.-F. Ma, 1980, Atlas Chin. Snakes, Shanghai: 110.

Amblycephalus kuangtungensis T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 141. Type locality: Southern China (see Note).

Amblycephalus yunnanensis T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 142. Type locality: Southern China (see Note).

Amblycephalus niger C. H. Pope, 1928, Amer. Mus. Novit., New York, 325: 4. Type locality: Yunnanfu (=Kunming Shi), Yunnan Prov., China.

RANGE: Southern China.

NOTE: R. Mell (1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 125) gave the type locality of *Amblycephalus kuangtungensis* as Su-liu-gun (=Shiliuguan), Lofau (=Mt. Luofu), 500 meters, and east of Siu-dsau (=Qujiang Co.), Drachenkopf (=Longtoushan), 600 meters,

both Guangdong Province, and that of *A. yunnanensis* as Talifu (=Dali Co.), western Yunnan Province, 2,200 meters, and Drachenkopf (=Longtoushan), Guangdong Province.

Pareas formosensis (VanDenburgh, 1909).

Amblycephalus formosensis J. VanDenburgh, 1909, Proc. California Acad. Sci., San Francisco, ser. 4, 3: 55. Type locality: Kanshirei (=Kuantzuling), Formosa (=Taiwan Prov.), China.

Pareas formosensis: B.-Q. Hu, M.-H. Huang, Z.-T. Xie, E.-M. Zhao, Y.-M. Jiang, Q.-Y. Huang, Y. Zong, and J.-F. Ma, 1980, Atlas Chin. Snakes, Shanghai: 111.

Psammodynastes compressus M. Ôshima, 1910, Annot. Zool. Japon., Tokyo, 7: 201. Type locality: Kokwangai, Taihoku (=Taipei), Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

Pareas hamptoni (Boulenger, 1905).

Amblycephalus hamptoni G. A. Boulenger, 1905, Jour. Bombay Nat. Hist. Soc., 16: 236. Type locality: Mogok, Upper Burma.

Pareas hamptoni: M. A. Smith, 1930, Ann. Mag. Nat. Hist., London, ser. 10, 6: 681.

Amblycephalus carinatus hainanus M. A. Smith, 1923, Jour. Nat. Hist. Soc. Siam, Bangkok, 6: 204. Type locality: Five Finger Mountains (=Mt. Wuzhi), Hainan Island, Hainan Prov., China; 1,300 meters.

RANGE: Hong Kong, Hainan, Guizhou, and Yunnan, China. Burma, Laos, and Vietnam; this species has been reported from a locality in northeastern Thailand (Pok Loi) that was later incorporated into Laos.

Pareas komaii (Maki, 1931).

Amblycephalus komaii M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 149 (English vers.). Type locality: Mt. Arisan (=Alishan), Taiwan Prov., China (see Note).

Pareas komaii: K. Nakamura and S.-I. Uéno, 1971, Japan. Rept. Amphib. Colour, Osaka: 141.

RANGE: Central Taiwan, China.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo: 155) re-described *Pareas komaii* in the expanded Japanese text of 1933.

Pareas macularius Theobald, 1868.

Pareas macularius W. Theobald, 1868, Jour. Linnean Soc., London, Zool., 10: 54. Type locality: Tenasserim and Martaban, Burma (see Note).

Pareas modestus W. Theobald, 1868, Jour. Linnean Soc., London, Zool., 10: 55. Type locality: Rangoon, Burma (see Note).

RANGE: Southern China, from Yunnan to Guangdong. India (Darjeeling) through Burma and Thailand to Laos and Vietnam, south to northern Malay Peninsula.

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 118), apparently acting as first revisor, chose *macularius* in preference to *modestus*. Theobald credited the name *macularius* to E. Blyth, but there is no indication that the description originated with Blyth, so the name is here credited to Theobald.

Pareas margaritophorus (Jan, 1866). (PLATE 37G)

Leptognathus margaritophorus G. Jan, 1866, *in* M.-F. Bocourt, Nouv. Arch. Mus. Hist. Nat., Paris, 2(Bull.): 8. Type locality: Siam (=Thailand).

Pareas margaritophorus: W. Theobald, 1876, Descr. Catal. Rept. Brit. India, Calcutta: 203.

Pareas Moellendorffi O. Boettger, 1885, Ber. Offenbach. Ver. Naturk., Offenbach am Main, 24–25: 125. Type locality: Canton (=Guangzhou Shi), Guangdong Prov., China (see Note).

RANGE: Hong Kong and Hainan, China. Indochina as far west as Burma; northern Malay Peninsula.

NOTE: O. Boettger (1898, Katal. Rept.-Samml. Mus. Senckenb. Naturforsch. Gesellsch., Frankfurt am Main, 2: viii, 128), fixed the type locality of *Pareas moellendorffi* as Lo-fou-shan (=Mt. Luofu), near Kanton (=Guangzhou Shi), by lectotype designation.

Pareas monticola (Cantor, 1839).

Dipsas monticola T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 53. Type locality: Naga Hills, Asám (=Assam), India.

Pareas monticola: A. Günther, 1864, Rept. Brit. India, London: 327.

RANGE: Xizang (Tibet) and Yunnan, China. India (Darjeeling, Sikkim, Assam).

Pareas stanleyi (Boulenger, 1914).

Amblycephalus stanleyi G. A. Boulenger, 1914, Ann. Mag. Nat. Hist., London, ser. 8, 14: 484. Type locality: Northwestern Fokien (=Fujian Prov.), China (see Note).

Pareas stanleyi: B.-Q. Hu, M.-H. Huang, Z.-T. Xie, E.-M. Zhao, Y.-M. Jiang, Q.-Y. Huang, Y. Zong, and J.-F. Ma, 1980, Atlas Chin. Snakes, Shanghai: 113.

Amblycephalus sinensis A. Stanley, "1916" (1917), Jour. North-China Branch Royal Asiatic Soc., Shanghai, new ser., 47: 83. Type locality: Kuatun (=Guadun) Hills, northwest Fokien (=Fujian Prov.) near border of Kiangsi (=Jiangxi) Prov., China.

RANGE: Zhejiang, Fujian, and Guizhou, China.

NOTE: C. H. Pope (1935, Rept. China, New York: 376) stated that the type of *Pareas stanleyi* was collected at Kuatun, Fujian Province.

PLAGIOPHOLIS Boulenger, 1893.

Plagiopholis G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 301. Type species: *Plagiopholis blakewayi* G. A. Boulenger, 1893, by monotypy (see Note).

NOTE: *Plagiopholis* and *Trirhinopholis* G. A. Boulenger, 1893 (Catal. Snakes Brit. Mus., London, 1: 419; type species: *T. nuchalis* G. A. Boulenger, 1893) are synonymous, and *Plagiopholis* was chosen by the first revisor (M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 324).

Plagiopholis blakewayi Boulenger, 1893.

Plagiopholis blakewayi G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 301. Type locality: Toungyi, Shan States, Burma; 5,000 feet.

RANGE: Southwest China. Burma.

Plagiopholis nuchalis (Boulenger, 1893).

Trirhinopholis nuchalis G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 419. Type locality: Toungyi, South Shan States, Burma.

Plagiopholis nuchalis: M. A. Smith, 1940, Rec. Indian Mus., Calcutta, 42: 484.

RANGE: Yunnan, China. Burma and Thailand.

Plagiopholis styani (Boulenger, 1899). (PLATE 37H)

Trirhinopholis styani G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 164. Type locality:

Kuatun (=Guadun), 270 miles from Foochow (=Fuzhou), Fokien (=Fujian) Prov., China; 3,000–4,000 feet or more.

Plagiopholis styani: H.-B. Ding and J. Zheng, 1974, Snakes Fujian Prov., Fuzhou: 2.

RANGE: Southern China northward to southeastern Gansu.

Plagiopholis unipostocularis Zhao, Jiang, and Huang, 1978.

Plagiopholis unipostocularis E.-M. Zhao, Y.-M. Jiang, and Q.-Y. Huang, 1978, Mater. Herpetol. Res., Chengdu, 4: 21. Type locality: Yunnan Prov., China (see Note).

RANGE: Yunnan, China.

NOTE: The re-description of *Plagiopholis unipostocularis* was published by Zhao and Huang in 1979 (*in* E.-M. Zhao, Y.-M. Jiang, and Q.-Y. Huang, Nature, Shanghai, 2: 313), but in the original article authorship of the separate species is not given, and therefore authorship rests with the authors of the entire article, which includes Jiang. The name *P. unipostocularis* was first mentioned in a meeting abstract (1978, Proc. Symp. China Soc. Zool.-China Soc. Entomol., Chengdu: unpaginated) authored by Huang alone, but such abstracts are not considered published under the "Code" (1985).

PSAMMODYNASTES Günther, 1858.

Psammodynastes A. Günther, 1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 140. Type species: *Psammophis pulverulenta* H. Boie *in* F. Boie, 1827.

Psammodynastes pulverulentus (Boie, 1827). (PLATE 38A)

Psammophis pulverulenta H. Boie, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 547. Type locality: Java, Indonesia.

Psammodynastes pulverulentus: G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 363.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Nepal and India (Assam, Sikkim, Darjeeling) through Burma to Laos and Vietnam, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo); Philippines.

PSAMMOPHIS Fitzinger, 1826.

Psammophis L. J. Fitzinger, 1826, Neue Classif. Rept., Vienna: 29, 30. Type species: *Coluber sibilans* C. Linnaeus, 1758, of Africa, by monotypy.

Psammophis lineolatus (Brandt, 1838). (PLATE 38B)

Coluber caspius H. Lichtenstein, 1823, *in* E. Eversmann, Reise Orenburg nach Buchara, Berlin: 146. Type locality: None given (preoccupied by *Coluber caspius* J. F. Gmelin, 1789, Carol. Linné Syst. Nat., ed. 13, Leipzig, 1(3): 1112 [see Note]).

Coluber (Taphrometopon) lineolatus J. F. Brandt, 1838, Bull. Sci. Acad. Impér. St.-Pétersbourg, 3: col. 243. Type locality: East coast of Caspian Sea, "Turcomanie" (=Turkmenistan), and vicinity of Astrabad (=Gorgan or Gurgan) in northern Persia (=Iran).

Psammophis lineolatus: M. A. Smith, 1943, Fauna Brit. India, Rept. Amphib., London, 3: 367.

RANGE: Xinjiang, Gansu, and Ningxia, China. East shore of Caspian Sea to extreme eastern Kazakhstan, south to Iran, Pakistan, and Afghanistan; Mongolia.

NOTE: The name *Coluber caspius* is often attributed, in error, to "Iwan, Voy. en Russ. i. p. 317. pl. 21" (e.g., A. Günther, 1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 102). G. A. Boulenger (1893, Catal. Snakes Brit. Mus., London, 1: 395) added to this citation an incorrect date, "1769." The work in question is I. I. Lepechin's "The Diary of the Journey of Ivan Lepechin, Doctor and Adjunct of the Academy of Sciences, in the Different Provinces of Russia in 1768 and 1769," volume 1, published 1771 (see the bibliography, page 381, for a fuller description). Nowhere in this work does Lepechin, a Russian botanist, use the name *Coluber caspius*. Günther mistook the author's given name (Ivan, or Iwan) for his surname and Boulenger apparently confused the date of the journey with the date of publication. It is clear that Gmelin based *C. caspius* on Lepechin's description, since his only citation for that species is "Lepechin it. I. p. 317. t. 21." In any event, Gmelin's *caspius* is a junior synonym of *Coluber gemonensis* (J. N. Laurenti, 1768) of the Adriatic coast and Greece and not an available name for this Asian taxon.

PSEUDOXENODON Boulenger, 1890.

Pseudoxenodon G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 340. Type species: *Tropidonotus macrops* E. Blyth, 1854, by monotypy.

Pseudoxenodon bambusicola Vogt, 1922. (PLATE 38C)

Pseudoxenodon bambusicola T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 138. Type locality: Southern China (see Note).

Pseudoxenodon melli T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 139. Type locality: Southern China (see Note).

RANGE: Southern China including Hainan, westward to Guizhou. Northern Vietnam.

NOTE: R. Mell (1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 118) gave the type locality of *Pseudoxenodon bambusicola* as the mountains at the Hunan-Kiangsi (=Jiangxi) border, China, 600–900 meters, and that of *P. melli* as Drachenkopf (=Longtoushan, east of Qujiang County), Guangdong Province, China, 600 meters and more.

F. Werner (1926, Zool. Anz., Leipzig, 67: 144), acting as the first revisor, chose *bambusicola* in preference to *melli*.

Pseudoxenodon karlschmidti Pope, 1928.

Pseudoxenodon karlschmidti C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 3. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian Prov.), China.

RANGE: South China including Hainan, westward to Guizhou. Northern Vietnam.

1. ***Pseudoxenodon karlschmidti karlschmidti*** Pope, 1928.

Pseudoxenodon karlschmidti karlschmidti: C. H. Pope, 1935, Rept. China, New York: 147.

RANGE: Fujian, China.

2. ***Pseudoxenodon karlschmidti popei*** Gressitt, 1936.

Pseudoxenodon popei J. L. Gressitt, 1936, Proc. Biol. Soc. Washington, 49: 119. Type locality: Loi Mother Mountain (=Limu Ling), central Hainan Island, Hainan Prov., China; 1,450 meters.

Pseudoxenodon karlschmidti popei: B.-Q. Hu, M.-H. Huang, Z.-T. Xie, E.-M. Zhao, Y.-M. Jiang, Q.-Y. Huang, Y. Zong, and J.-F. Ma, 1980, Atlas Chin. Snakes, Shanghai: 98.

RANGE: Hainan, China.

3. ***Pseudoxenodon karlschmidti sinii*** Fan, 1931.

Pseudoxenodon sinii T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 72 (see Note). Type locality: Loshiang (=Luoxiang), Kwangsi (=Guangxi Zhuang Autonomous Region), China.

Pseudoxenodon karlschmidti sinii: C. H. Pope, 1935, Rept. China, New York: 150.

Pseudoxenodon angusticeps sikiangensis R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 204 (see Note). Type locality: Kwangtung (=Guangdong Prov.), China.

RANGE: Guizhou, Guangxi, and Guangdong, China. Northern Vietnam.

NOTE: Fan's name, *Pseudoxenodon sinii*, was issued May 1931 and Mell's *P. angusticeps sikiangensis* was published 31 July 1931.

Pseudoxenodon macrops (Blyth, 1854).

Tropidonotus macrops E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 296. Type locality: Near Darjiling (=Darjeeling), Assam, India.

Pseudoxenodon macrops: G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 340.

RANGE: Southwest China, eastward to Guangxi and Fujian and northward to Gansu, Shaanxi, and Henan. India (Darjeeling, Assam) and Nepal through Burma and Thailand to Vietnam, south to Malay Peninsula.

1. ***Pseudoxenodon macrops fukienensis*** Pope, 1928.

Pseudoxenodon fukienensis C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 2. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian Prov.), China.

Pseudoxenodon macrops fukienensis: B.-Q. Hu, M.-H. Huang, Z.-T. Xie, E.-M. Zhao, Y.-M. Jiang, Q.-Y. Huang, Y. Zong, and J.-F. Ma, 1980, Atlas Chin. Snakes, Shanghai: 99.

RANGE: Fujian, Guangxi, and Guizhou, China.

2. ***Pseudoxenodon macrops macrops*** (Blyth, 1854).

Pseudoxenodon macrops macrops: C. H. Pope, 1935, Rept. China, New York: 153.

Tropidonotus tigrinus var. *niger* T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 138. Type locality: South China (see Note).

Tropidonotus handeli F. Werner, 1922, Anz. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 59: 221. Type locality: Lidjiang (=Lijiang Co.), Yunnan Prov., China; 2,500 meters (see Note).

RANGE: Yunnan, Sichuan, and Xizang (Tibet), China. India (Assam, Darjeeling) and Nepal through Burma and Thailand to Vietnam, south to Malay Peninsula.

NOTE: C. H. Pope (1935, Rept. China, New York: 152) stated that the type of Vogt's *Tropidonotus tigrinus* var. *niger* was from Yunnan. F. Werner (1924, Denkschr. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 99: 45–46) provided an expanded description of the type of *Tropidonotus handeli*.

3. ***Pseudoxenodon macrops sinensis*** Boulenger, 1904.

Pseudoxenodon sinensis G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 134. Type locality: Yunnan Fu (=Kunming Shi), Yunnan Prov., China; about 6,000 feet.

Pseudoxenodon macrops sinensis: C. H. Pope, 1935, Rept. China, New York: 154.

RANGE: Southwest China eastward to Hubei, and northward to Gansu, Shaanxi, and Henan.

Pseudoxenodon stejnegeri Barbour, 1908. (PLATE 38D)

Pseudoxenodon stejnegeri T. Barbour, 1908, Bull. Mus. Comp. Zool., Harvard Coll., Cambridge, 51: 317. Type locality: Mt. Arizan (=Alishan), central Formosa (=Taiwan Prov.), China.

RANGE: Southern China including Taiwan, northward to Henan.

1. ***Pseudoxenodon stejnegeri stejnegeri*** Barbour, 1908. (PLATE 38D)

Pseudoxenodon stejnegeri stejnegeri: M. Toriba, 1983, *in* E.-M. Zhao, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 80.

Pseudoxenodon macrops var. *sauteri* F. Steindachner, 1913, Denkschr. Kaiserl. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 90: 329. Type locality: Suishario (=Shuisheliao), Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

2. ***Pseudoxenodon stejnegeri striaticaudatus*** Pope, 1928.

Tropidonotus dorsalis A. Günther, 1864, Rept. Brit. India, London: 263. Type locality: Chikiang (=Zhejiang Prov.), China (see Note).

Pseudoxenodon striaticaudatus C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 4. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China.

Pseudoxenodon stejnegeri striaticaudatus: M. Toriba, 1983, *in* E.-M. Zhao, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(4): 80.

Pseudoxenodon nothus H. M. Smith, 1942, Copeia, Ann Arbor, 1942: 52 (substitute name for *Tropidonotus dorsalis* A. Günther, 1864, suppressed homonym of *Tropidonotus sirtalis* var. *dorsalis* G. Jan, 1865, Arch. Zool. Anat. Fisiol., Modena, 3: 204; see Note).

RANGE: Southern China, northward to Henan.

NOTE: Günther's Zhejiang specimen previously also served as one of the syntypes of *Xenodon macrophthalmus* A. Günther (1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 58; type locality: Khasya (=Khasi Hills), India, Sikkim, Himalaya, and Chikiang [=Zhejiang], China). See H. M. Smith (1942: 52) for an explanation of the unavailability of Günther's name *Tropidonotus dorsalis*, for which Smith proposed the substitute *Pseudoxenodon nothus*; however, since *stejnegeri*, *nothus*, and *striaticaudatus* are now considered to be conspecific, the latter name has priority over *nothus* for the mainland subspecies.

PTYAS Fitzinger, 1843.

Ptyas L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 26. Type species: *Coluber Blumenbachii* B. Merrem, 1820 (=*Coluber mucosus* C. Linnaeus, 1758), by original designation.

Ptyas korros (Schlegel, 1837). (PLATE 38E)

Coluber korros H. Schlegel, 1837, Essai Physion. Serp., The Hague, 2: 139. Type locality: Java and Sumatra, Indonesia.

Ptyas korros: E. D. Cope, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 563.

Ptyas korros chinensis R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 320. Type locality: Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note).

Ptyas korros indicus R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 208. Type locality: Southwestern Yunnan, China.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, westward to Yunnan and Guizhou. India (Assam) through Burma to Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo).

NOTE: R. Mell ("1929" [1930]: 312) gave the type locality of *Ptyas korros chinensis* as Yao shan (=Dayao Shan).

Ptyas mucosus (Linnaeus, 1758). (PLATE 38F)

Coluber mucosus C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 226. Type locality: "in Indiis."

Ptyas mucosus: E. D. Cope, "1860" (1861), Proc. Acad. Nat. Sci., Philadelphia, 12: 563.

Leptophis trifrenatus E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 503. Type locality: Hong Kong Island, China.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, westward to eastern Xizang (Tibet). Southern Turkmenistan, Afghanistan, Pakistan, India, and Sri Lanka, east to Indochina; Indonesia (Sumatra, Java).

RHABDOPHIS Fitzinger, 1843.

Rhabdophis L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 27. Type species: *Tropidonotus subminiatus* H. Schlegel, 1837, by original designation.

Rhabdophis chrysargus (Schlegel, 1837).

Tropidonotus Chrysargus H. Boie, 1827, *in* F. Boie, Isis von Oken, Jena, 20: col. 534 (*nomen dubium*; see Note). Type locality: Java.

Tropidonotus chrysargos H. Schlegel, 1837, Essai Physion. Serp., The Hague, 2: 312 (see Note). Type locality: Magmedon Mountain and forests near Kapang, Java, Indonesia.

Rhabdophis chrysarga: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 49.

RANGE: Hainan, China. Indochina south through Malay Peninsula; Indonesia (Sumatra, Java, Borneo, Celebes) and Philippines.

NOTE: The name *Tropidonotus chrysargus* was first used for this species by H. Boie in a virtual *nomen nudum*, although the count for ventral scutes is given. Schlegel's description is the first one clearly identifiable as this taxon.

Rhabdophis himalayanus (Günther, 1864).

Tropidonotus himalayanus A. Günther, 1864, Rept. Brit. India, London: 265. Type locality: Sikkim and Nepal.

Rhabdophis himalayanus: F. Wall, 1923, Jour. Bombay Nat. Hist. Soc., 29: 605.

RANGE: Yunnan and Xizang (Tibet), China. India (Sikkim, Assam), Nepal, Bhutan, Bangladesh, and northern Burma.

Rhabdophis leonardi (Wall, 1923).

Natrix leonardi F. Wall, 1923, Jour. Bombay Nat. Hist. Soc., 29: 466. Type locality: Sinlum Kaba, Upper Burma; about 6,000 feet.

Rhabdophis leonardi: Y.-M. Jiang and E.-M. Zhao, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(1): 61.

Natrix swinhonis reducta R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 203. Type locality: North and middle Yunnan (Prov.), China.

RANGE: Yunnan, Xizang (Tibet), and southwestern Sichuan, China. Burma.

Rhabdophis nigrocinctus (Blyth, 1856).

Tropidonotus nigrocinctus E. Blyth, "1855" (1856), Jour. Asiatic Soc. Bengal, Calcutta, 24: 717. Type locality: Mergui and valley of Tenasserim River, Burma (see Note).

Rhabdophis nigrocincta: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 49.

RANGE: Yunnan, China. Burma, Thailand, and Vietnam.

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 307) gave the type locality as "Pegu, Burma," in error; apparently he confused the two collection sites noted in Blyth ("1855" [1856]: 711).

Rhabdophis nuchalis (Boulenger, 1891). (PLATE 38G)

Tropidonotus nuchalis G. A. Boulenger, 1891, Ann. Mag. Nat. Hist., London, ser. 6, 7: 281. Type locality: Ichang (=Yichang Shi), Hubei Prov., China.

Rhabdophis nuchalis: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 49.

RANGE: Hubei westward to Sichuan and Guizhou and northward to southern Shaanxi and southeastern Gansu, China. Burma and northern Vietnam.

1. ***Rhabdophis nuchalis nuchalis*** (Boulenger, 1891). (PLATE 38G)

Rhabdophis nuchalis nuchalis: Y.-M. Jiang and E.-M. Zhao, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(1): 59.

Natrix nivalis K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 3. Type locality: Snow Mountain Village, Likiang (=Lijiang Co.), Yunnan Prov., China; 9,000 feet.

Tropidonotus nuchalis var. *collaris* T. Vogt, 1927, Zool. Anz., Leipzig, 69: 283. Type locality: Southern China, probably Yunnan.

RANGE: Hubei westward to eastern Sichuan and Guizhou, northward to southern Shaanxi and southeastern Gansu, China. Burma and northern Vietnam.

2. ***Rhabdophis nuchalis pentasupralabialis*** Jiang and Zhao, 1983.

Rhabdophis nuchalis pentasupralabialis Y.-M. Jiang and E.-M. Zhao, 1983, Acta Herpetol. Sinica, Chengdu, [new ser.], 2(1): 60. Type locality: Jiulong Co., Sichuan Prov., China; 2,750 meters.

RANGE: Western Sichuan, China.

Rhabdophis subminiatus (Schlegel, 1837). (PLATE 38H)

Tropidonotus subminiatus H. Schlegel, 1837, Essai Physion. Serp., The Hague, 2: 313. Type locality: Sawa, Java, Indonesia.

Rhabdophis subminiata: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 49.

RANGE: South China, from Yunnan east to Fujian, including Hong Kong and Hainan. India (Sikkim) east through Indochina, south through Malay Peninsula and Indonesia (to Java and Borneo).

1. ***Rhabdophis subminiatus helleri*** (Schmidt, 1925). (PLATE 38H)

Natrix helleri K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 3. Type locality: Tengyueh (=Tengchong Co.), Yunnan Prov., China; 5,500 feet.

Rhabdophis subminiata helleri: E. H. Taylor, 1965, Univ. Kansas Sci. Bull., Lawrence, 45: 854.

RANGE: South China from Yunnan to Fujian including Hong Kong. Extreme northern Thailand and Laos.

2. ***Rhabdophis subminiatus subminiatus*** (Schlegel, 1837).

Rhabdophis subminiatus subminiatus: E. H. Taylor, 1965, Univ. Kansas Sci. Bull., Lawrence, 45: 851.

?*Natrix subminiata hongkongensis* R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 203. Type locality: Hong Kong, China, in error? (see Note).

RANGE: Hainan, China. Indochina south through Malay Peninsula and Indonesia (to Java and Borneo).

NOTE: C. H. Pope (1935, Rept. China, New York: 132) implied that the specimens on which *Natrix subminiata hongkongensis* was based were collected in Java.

Rhabdophis swinhonis (Günther, 1868). (PLATE 39A)

Tropidonotus Swinhonis A. Günther, 1868, Ann. Mag. Nat. Hist., London, ser. 4, 1: 420. Type locality: Formosa (=Taiwan Prov.), China.

Rhabdophis swinhonis: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 49.

RANGE: Taiwan, China.

Rhabdophis tigrinus (Boie, 1826). (PLATE 39B)

Tropidonotus tigrinus H. Boie, 1826, Isis von Oken, Jena, 18: col. 205. Type locality: Decima (=Dejima) Island, Japan, in error? (see Note).

Rhabdophis tigrina: E. V. Malnate, 1960, Proc. Acad. Nat. Sci. Philadelphia, 112: 49.

RANGE: Widely distributed in China, except western third and extreme south. Japan, Korea, and eastern Russia (Primorskiy and Khabarovsk territories).

NOTE: Decima was the site of the Dutch trading station in Nagasaki harbor; see page 229, *Amphiesma vibakari* (Note).

1. ***Rhabdophis tigrinus formosanus*** (Maki, 1931).

Natrix tigrina formosana M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 44 (English vers.), 25 (Japanese vers. of 1931). Type locality: Hattsukan (=Patungkuan), Taichu (=Taichung), Formosa (=Taiwan Prov.), China; 300 meters (see Note).

Rhabdophis tigrinus formosanus: H. Ota and A. Mori, 1985, Japan. Jour. Herpetol., Kyoto, 11: 41.

RANGE: Taiwan, China.

NOTE: M. Maki spelled the name "*formosa*" in the English text (1931: 44); in both Japanese texts, the plates, and even the English index and key it is *formosana*, thus presumably it is his intended spelling that we preserve. M. Maki (1933, Monogr. Snakes Japan, Tokyo: 49) re-described *formosanus* in the expanded Japanese text of 1933.

2. ***Rhabdophis tigrinus lateralis*** (Berthold, 1859). (PLATE 39B)

Tropidonotus lateralis A. A. Berthold, 1859, Nachr. Georg-Augusts-Univ. Königl. Gesellsch. Wissensch. Göttingen, 1859: 180. Type locality: China.

Rhabdophis tigrina lateralis: E.-M. Zhao and Y.-M. Jiang, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 239.

Tropidonotus orientalis A. Günther, "1861" (1862), Proc. Zool. Soc. London, 1861: 391. Type locality: Pekin (=Beijing), China.

RANGE: Throughout China, except the western third and the extreme south.

RHABDOPS Boulenger, 1893.

Rhabdops G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 300. Type species: *Ablates* [sic] *Olivaceus* R. H. Beddome, 1863, of southern India, by subsequent designation (C. H. Pope, 1935, Rept. China, New York: 176).

Rhabdops bicolor (Blyth, 1854). (PLATE 39C)

Calamaria bicolor E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 289. Type locality: Asám (=Assam), India.

Rhabdops bicolor: G. A. Boulenger, 1893, Catal. Snakes Brit. Mus., London, 1: 301.

RANGE: Western Yunnan, China. India (Assam, Meghalaya) and northern Burma (Kachin Hills).

RHYNCHOPHIS Mocquard, 1897.

Rhynchophis F. Mocquard, 1897, Bull. Mus. Hist. Nat., Paris, 3: 214. Type species: *Rhynchophis Boulengeri* F. Mocquard, 1897, by monotypy.

Rhynchophis boulengeri Mocquard, 1897. (PLATE 39D)

Rhynchophis Boulengeri F. Mocquard, 1897, Bull. Mus. Hist. Nat., Paris, [ser. 1], 3: 215. Type locality: Baie d'Along, Îles Norway, Gulf of Tonkin, Vietnam.

Proboscidophis versicolor T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 114. Type locality: Kutchen (=Guchen), Yaoshan (=Dayao Shan), Guangxi Zhuang Autonomous Region, China.

RANGE: Guangxi and Hainan, China. Northern Vietnam.

SIBYNOPHIS Fitzinger, 1843.

Sibynophis L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 26. Type species: *Coluber geminatus* M. Oppel *in* H. Boie, 1826, of Southeast Asia and Indonesia, by original designation.

Sibynophis chinensis (Günther, 1889). (PLATE 39E)

Ablabes chinensis A. Günther, 1889, Ann. Mag. Nat. Hist., London, ser. 6, 4: 220. Type locality: Ichang (=Yichang Shi), Hubei Prov., China.

Sibynophis chinensis: C. H. Pope, 1935, Rept. China, New York: 82.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, west to Yunnan and Sichuan. Northern Vietnam.

1. ***Sibynophis chinensis chinensis*** (Günther, 1889). (PLATE 39E)

Henicognathus Sumichrasti M.-F. Bocourt, 1886, *in* A.-H.-A. Duméril, M.-F. Bocourt, and F. Mocquard, Miss. Scient. Mexique Amér. Centr., Rech. Zool., 3(Rept.), Paris, livr. 10: 628 (see Note). Type locality: Cocopriets (=Cacoprieto), Isthmus of Tehuantepec (part of Oaxaca, Mexico), in error (see Note).

Sibynophis chinensis chinensis: E.-M. Zhao, 1987, Chin. Herpetol. Res., Chongqing, 1987: 4.

Sibynophis hainanensis K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 2. Type locality: Nodoa (=Nada, Zhan Co.), Hainan Island, Hainan Prov., China.

Sibynophis collaris parkeri R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 201. Type locality: Formosa (=Taiwan Prov., China).

Sibynophis collaris formosensis M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 25 (English vers.), 15 (Japanese vers. of 1931). Type locality: Taihoku (=Taipei), Formosa (=Taiwan Prov.), China (see Note).

RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Vietnam.

NOTE: As demonstrated by J. Guibé and R. Roux-Estève, 1963, Herpetologica, Salt Lake City, 18: 268–269), *Henicognathus sumichrasti* is a senior homonym of *Sibynophis chinensis chinensis*; in the interest of stability, Günther's name *chinensis* was conserved by action of the International Commission of Zoological Nomenclature (1965, Bull. Zool. Nomen., London, 22: 180–181). Bocourt's purported type locality is certainly incorrect and, given the known range of *chinensis*, it is possible that the type of *sumichrasti* originated in southern China.

M. Maki (1933, Monogr. Snakes Japan, Tokyo: 29) re-described *S. collaris formosensis* in the expanded Japanese text of 1933.

2. ***Sibynophis chinensis grahami*** (Boulenger, 1904).

Polyodontophis Grahami G. A. Boulenger, 1904, Ann. Mag. Nat. Hist., London, ser. 7, 13: 132. Type locality: Yunnan Fu (=Kunming Shi), Yunnan Prov., China (see Note).

Sibynophis chinensis grahami: E.-M. Zhao, 1987, Chin. Herpetol. Res., Chongqing, 1987: 4.

RANGE: Yunnan-Guizhou Plateau, China.

NOTE: C. H. Pope (1935, Rept. China, New York: 89) gave the type locality as between Kunming and "Kale Tsing Fou" or Kutsing (=Quqing Shi), based on data with the type specimen.

3. ***Sibynophis chinensis miyiensis*** Zhao and Kou, 1987.

Sibynophis chinensis miyiensis E.-M. Zhao and Z.-T. Kou, 1987, *in* E.-M. Zhao, Chin. Herpetol. Res., Chongqing, 1987: 4. Type locality: Miyi Co., Sichuan Prov., China; 880 meters.

RANGE: Southwestern Sichuan and northwestern Yunnan, China.

Sibynophis collaris (Gray, 1853).

Psammophis collaris J. E. Gray, 1853, Ann. Mag. Nat. Hist., London, ser. 2, 12: 390. Type locality: Khassia (=Khasi Hills), Assam, India.

Sibynophis collaris: M. A. Smith, 1930, Bull. Raffles Mus., Singapore, 3: 40.

RANGE: Southeastern Xizang (Tibet) and Yunnan, China. India (Assam and Simla), Burma, and Thailand east to Laos and Vietnam and south to Malay Peninsula.

SINONATRIX Rossman and Eberle, 1977.

Sinonatrix D. A. Rossman and W. G. Eberle, 1977, Herpetologica, Lawrence, 33: 42. Type species: *Tropidonotus annularis* E. Hallowell, 1857, by original designation.

Sinonatrix aequifasciata (Barbour, 1908).

Natrix aequifasciata T. Barbour, 1908, Bull. Mus. Comp. Zool., Harvard Coll., Cambridge, 51: 317. Type locality: Mt. Wuchi (=Mt. Wuzhi), central Hainan Island, Hainan Prov., China.

Sinonatrix aequifasciata: D. A. Rossman and W. G. Eberle, 1977, Herpetologica, Lawrence, 33: 42.

RANGE: Southern China including Hong Kong and Hainan, westward to Yunnan and Guizhou.

Sinonatrix annularis (Hallowell, 1856). (PLATE 39F)

Tropidonotus annularis E. Hallowell, 1856 (1857?), Proc. Acad. Nat. Sci. Philadelphia, 8: 151. Type locality: Ningpo (=Ningbo Shi), Zhejiang Prov., China.

Sinonatrix annularis: D. A. Rossman and W. G. Eberle, 1977, Herpetologica, Lawrence, 33: 42.

Tropidonotus chinensis G. Jan, 1859, *in* A. A. Berthold, Nachr. Georg-Augusts-Univ. Königl. Gesellsch. Wissensch. Göttingen, 1859: 180. Type locality: China.

Tropidonotus semifasciatus A. A. Berthold, 1859, Nachr. Georg-Augusts-Univ. Königl. Gesellsch. Wissensch. Göttingen, 1859: 180 (substitute name for *T. chinensis* G. Jan, 1859).

Tropidonotus habereri F. Werner, 1903, Abhandl. Königl. Bayer. Akad. Wissensch., Munich, ser. 2, 22: 354. Type locality: Ningpo (=Ningbo Shi) Mountain, Zhejiang Prov., China.

RANGE: Southern and eastern China including Taiwan and Hainan, westward to Sichuan.

Sinonatrix percarinata (Boulenger, 1899). (PLATE 39G)

Tropidonotus percarinatus G. A. Boulenger, 1899, Proc. Zool. Soc. London, 1899: 163. Type locality: Kuatun (=Guadun), Chongan Co., about 270 miles from Foochow (=Fuzhou), northwest Fokien (=Fujian) Prov., China.

Sinonatrix percarinata: D. A. Rossman and W. G. Eberle, 1977, Herpetologica, Lawrence, 33: 42.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Northern Burma to Vietnam.

1. ***Sinonatrix percarinata percarinata*** (Boulenger, 1899).

Sinonatrix percarinata percarinata: E.-M. Zhao and Y.-M. Jiang, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 240.

RANGE: Southern China including Hong Kong and Hainan. Northern Burma to Vietnam.

2. ***Sinonatrix percarinata suriki*** (Maki, 1931). (PLATE 39G)

Natrix suriki M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 38 (English vers.), 22 (Japanese vers. of 1931). Type locality: Makazayazaya (=Hsinmachia), southern Formosa (=Taiwan Prov.), China (see Note).

Sinonatrix percarinata suriki: E.-M. Zhao and Y.-M. Jiang, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 240.

RANGE: Taiwan, China.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo: 43) re-described *Natrix suriki* in the expanded Japanese text of 1933.

THERMOPHIS Malnate, 1953.

Thermophis E. V. Malnate, 1953, Copeia, Ann Arbor, 1953: 92. Type species: *Tropidonotus baileyi* F. Wall, 1907, by monotypy.

Thermophis baileyi (Wall, 1907). (PLATE 39H)

Tropidonotus baileyi F. Wall, 1907, Jour. Bombay Nat. Hist. Soc., 17: 617. Type locality: Thibet (=Xizang Autonomous Region), China; about 14,000 feet.

Thermophis baileyi: E. V. Malnate, 1953, Copeia, Ann Arbor, 1953: 92.

RANGE: Lhasa region, Xizang (Tibet), China.

TRACHISCHIUM Günther, 1858.

Trachischium A. Günther, 1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 30. Type species: *Trachischium rugosum* A. Günther, 1858 (=*Calamaria fusca* E. Blyth, 1854), of northern India, by monotypy.

Trachischium monticola (Cantor, 1839). (PLATE 40A)

Calamaria monticola T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 50. Type locality: Naga Hills, Asám (=Assam), India.

Trachischium monticola: G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 286.

RANGE: Xizang (Tibet), China. India (Assam, Meghalaya) and Bangladesh.

Trachischium tenuiceps (Blyth, 1854). (PLATE 40B)

Calamaria tenuiceps E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 288. Type locality: Vicinity of Darjiling (=Darjeeling), India.

Trachischium tenuiceps: G. A. Boulenger, 1890, Fauna Brit. India, Rept. Batrach., London: 286.

RANGE: Xizang (Tibet), China. Bangladesh, India (Darjeeling, Sikkim), and Nepal.

XENOCHROPHIS Günther, 1864.

Xenochrophis A. Günther, 1864, Rept. Brit. India, London: 273. Type species: *Psammophis cerasogaster* T. Cantor, 1839, of India, by monotypy.

Xenochrophis piscator (Schneider, 1799). (PLATE 40C)

Hydrus Piscator J. G. Schneider, 1799, Hist. Amphib., Jena, 1: 247. Type locality: East Indies.

Xenochrophis piscator: E. V. Malnate and S. A. Minton, 1965, Proc. Acad. Nat. Sci. Philadelphia, 117: 19.

Amphiesma flavipunctatum E. Hallowell, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 503. Type locality: Canton River (=Zhu Jiang, Guangzhou Shi), China (see Note).

RANGE: South China including Taiwan, Hong Kong, and Hainan. South and Southeast Asia, from Afghanistan, Pakistan, and Sri Lanka east to Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo, Celebes).

NOTE: E. H. Taylor (1965, Univ. Kansas Sci. Bull., Lawrence, 45: 832, 835) regarded *Xenochrophis piscator* and *X. flavipunctatum* as separate species, based on the existence of sympatric populations in northern Thailand. It is not known, however, which of these is conspecific with the taxon called *piscator* in China; collections of this snake have not been compared from across its wide range in China to determine whether one or both species are represented. Thus, we take a conservative position here in using only the name *piscator*.

Hallowell ("1860" [1861]: 504) mentioned a specimen from Hong Kong that has been construed by some as the type of *flavipunctatum* (for example, D. M. Cochran, 1961, Bull. U.S. Natl. Mus., Washington, 220: 158), but he drew his description from another specimen that was collected from the Canton River.

ZAOCYS Cope, 1861.

Zaocys E. D. Cope, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 563. Type species: *Coluber dhumnades* T. Cantor, 1842, by original designation and monotypy.

Zaocys carinatus (Günther, 1858).

Coryphodon carinatus A. Günther, 1858, Catal. Colubr. Snakes Brit. Mus., London: 112. Type locality: Borneo, Indonesia; Chusan (=Zhoushan Islands, Zhejiang Prov.), China; Khasya (=Khasi), Burma; Sikkim; Affghanistan [*sic*] (see Note).

Zaocys carinatus: A. Günther, 1864, Rept. Brit. India, London: 256.

RANGE: Yunnan, China. Burma and Thailand east to Vietnam, south to Malay Peninsula and Indonesia (Sumatra, Java, Borneo).

NOTE: Günther's original description was a composite of three species: *Zaocys carinatus, Z. nigromarginatus* (E. Blyth, 1854), and *Z. dhumnades* (T. Cantor, 1842); Günther later (1864: 256) restricted the name *carinatus* to his specimen from Borneo.

Zaocys dhumnades (Cantor, 1842). (PLATE 40D)

Coluber dhumnades T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 483. Type locality: Chusan (=Zhoushan) Islands, Zhejiang Prov., China.

Zaocys dhumnades: E. D. Cope, "1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 563.

Ablabes vittatus A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(1): 326. Type locality: China.

Zaocys oshimai L. Stejneger, 1925, Proc. U.S. Natl. Mus., Washington, 66(25): 88. Type locality: Urai (=Wulai) Island, Formosa (=Taiwan Prov.), China.

Zaocys dhumnades montanus C. H. Pope, 1928, Amer. Mus. Novit., New York, 325: 2. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China.

RANGE: Southern China, including Taiwan, from Guangdong north to Hebei and west to Gansu.

Zaocys nigromarginatus (Blyth, 1854).

Coluber nigromarginatus E. Blyth, 1854, Jour. Asiatic Soc. Bengal, Calcutta, 23: 290. Type locality: Vicinity of Darjiling (=Darjeeling), India.

Zaocys nigromarginatus: A. Günther, 1864, Rept. Brit. India, London: 257.

RANGE: Guizhou, Yunnan, southwestern Sichuan, and southeastern Xizang (Tibet), China. Nepal and India (Darjeeling, Sikkim, Assam) and northern Burma; unconfirmed record for northern Vietnam.

ELAPIDAE

ACALYPTOPHIS Boulenger, 1896.

Acalyptophis G. A. Boulenger, 1896, Catal. Snakes Coll. Brit. Mus., London, 3: 269. Substitute name for *Acalyptus* A.-M.-C. Duméril, 1853 (Mém. Acad. Sci., Paris, 23: 522; name preoccupied by *Acalyptus* C. J. Schoenherr, 1836, a genus of Coleoptera). Type species: *Acalyptus Peronii* A.-M.-C. Duméril, 1853, by monotypy.

Acalyptophis peronii (Duméril, 1853). (PLATE 40E)

Acalyptus Peronii A.-M.-C. Duméril, 1853, Mém. Acad. Sci., Paris, 23: 522 (author's reprint, page 126). Type locality: Nouvelle-Hollande? (=Australia).

Acalyptophis peronii G. A. Boulenger, 1896, Catal. Snakes Brit. Mus., London, 3: 269.

RANGE: Coast of Guangdong and Strait of Taiwan, China. Indian Ocean; tropical seas surrounding Australia and New Guinea.

ASTROTIA Fischer, 1855.

Astrotia J. G. Fischer, 1855, *in* C. Bertheau (ed.), Öffentlichen Prüfung, Zöglingen Realschule, Hamburg: 38. Type species: *Hydrophis schizopholis* P. Schmidt, 1846 (=*Hydrus Stokesii* J. E. Gray, 1846), by monotypy (see Note).

NOTE: The name *Astrotia* is commonly cited as "Fischer, 1856, Abhandl. Gebiete Naturwissensch., Hamburg, 3: 38," but the 1855 edition of Fischer's monograph on sea snakes was issued earlier by the secondary school at which he taught. The 1856 version was printed partly from the same plates, but has additional text and plates.

Astrotia stokesii (Gray, 1846). (PLATE 40F)

Hydrus Stokesii J. E. Gray, 1846, *in* J. L. Stokes (ed.), Discov. Australia; Expl. Surv. Voy. H.M.S. *Beagle*, London, 1: 502. Type locality: Australian Seas.

Astrotia stokesi: F. Wall, 1909, Mem. Asiatic Soc. Bengal, Calcutta, 2: 250.

Hydrophis schizopholis P. Schmidt, 1846, Abhandl. Gebiete Naturwissensch. Verein, Hamburg, 1: 166. Type locality: China Sea.

RANGE: China Sea and Strait of Taiwan, China. Coastal areas from western India and Sri Lanka east through Gulf of Siam to China Sea; Indonesia east to New Guinea and the northern and eastern coasts of Australia.

BUNGARUS Daudin, 1803.

Bungarus F.-M. Daudin, "11" (1803), Bull. Sci. Soc. Philomath., Paris, 3: 187 (see Note). Type species: Plate 3 (="Bungarum Pamah") of P. Russell, 1796 (=*Pseudoboa Fasciata* J. G. Schneider, 1801), by monotypy.

NOTE: For details of publication of the name *Bungarus*, see page 199, *Ophisaurus* (Note). Two additional species of *Bungarus* have been recorded in China, both from Hainan Province: *B. lividus* T. Cantor, 1839 (Proc. Zool. Soc. London, 1839: 32; type locality: Naga Hills, Assam, India) and *B. niger* F. Wall, 1908 (Jour. Bombay Nat. Hist. Soc., 18: 715; type locality: Dibrugarh, Sadiya, Sibsagar, and Garo Hills [Assam], Tindharia, and Pashok [East Himalayas], India; 1,000–4,500 feet [Tindharia and Pashok]). These two species are otherwise known only from eastern India. The Hainan specimens generally agree with the published descriptions of these poorly known species, but on zoogeographic grounds we doubt that the Hainan specimens are referrable to either of these taxa. It seems more likely that all of them are melanistic specimens of *B. multicinctus*, but further resesarch is necessary to resolve this. R. E. Kuntz (1963, Snakes of Taiwan, Taipei: 55) reported specimens of *multicinctus* in which "the bands are practically nonexistent." In a specimen of *B. "niger"* from Hainan seen by us, there are faint bands visible on the lower sides.

Bungarus fasciatus (Schneider, 1801). (PLATE 40G)

Pseudoboa Fasciata J. G. Schneider, 1801, Hist. Amphib., Jena, 2: 283. Type locality: None given.

Bungarus fasciatus: A. Günther, 1858, Catal. Colubr. Snakes Coll. Brit. Mus., London: 220.

Bungarus fasciatus bifasciatus R. Mell, "1929" (1930), Sitzungsber. Gesellsch. Naturforsch. Freunde Berlin, 1929: 325. Type locality: Kwangsi (=Guangxi Zhuang Autonomous Region), China (see Note).

RANGE: South China including Hong Kong and Hainan. Northeastern India to Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo).

NOTE: The type locality of *Bungarus fasciatus bifasciatus*, Yao shan (=Dayao Shan), was given by Mell ("1929" [1930]: 312).

Bungarus multicinctus Blyth, 1860. (PLATE 40H)

Bungarus multicinctus E. Blyth, 1860, Jour. Asiatic Soc. Bengal, Calcutta, 29: 98. Type locality: Amoy (=Xiamen Shi), Fujian Prov., or possibly Formosa (Taiwan Prov.) China (see Note).

RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Burma, Laos, and northern Vietnam.

NOTE: For information on the type locality, see Blyth (1860: 87). M. Maki (1931, Monogr. Snakes Japan, Tokyo: 153, English vers.) stated that the type locality was Formosa, but M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 416) listed Amoy. R. Swinhoe, collector of Blyth's type, knew this species both in Formosa and Amoy (see Swinhoe, 1863, Ann. Mag. Nat. Hist., London, ser. 3, 12: 225).

1. ***Bungarus multicinctus multicinctus*** Blyth, 1861. (PLATE 40H)

Bungarus multicinctus multicinctus: R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 214.

RANGE: Southern China including Taiwan, Hong Kong, and Hainan, west to eastern Yunnan.

2. ***Bungarus multicinctus wanghaotingi*** Pope, 1928.

Bungarus wanghaotingi C. H. Pope, 1928, Amer. Mus. Novit., New York, 325: 3. Type locality: Yuan Kiang (=Yuanjiang), "southwestern" (actually south-central) Yunnan Prov., China.

Bungarus multicinctus wanghaotingi: R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 214.

RANGE: Southwestern Yunnan, China. Burma, Laos, and northern Vietnam.

CALLIOPHIS Gray, 1835.

Calliophis J. E. Gray, "1832–1834" (1835), Illustr. Indian Zool. Coll. Hardwicke, London, 2: unnumbered caption page and plate 86. Type species: *Calliophis gracilis* J. E. Gray, 1835, of peninsular Malaya and Sumatra, by monotypy.

Calliophis kelloggi (Pope, 1928).

Hemibungarus kelloggi C. H. Pope, 1928, Amer. Mus. Novit., New York, 320: 6. Type locality: Ch'ungan Hsien (=Chongan Co.), northwest Fukien (=Fujian) Prov., China.

Calliophis kelloggi: H.-B. Ding and J. Zheng, 1974, Snakes Fujian Prov., Fuzhou: 3.

Calliophis wongii T.-H. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., Canton, 11: 128. Type locality: Lohshiang (=Luoxiang), Kwangsi (=Guangxi Zhuang Autonomous Region), China.

RANGE: Southern China including Hainan. Vietnam and possibly northern Laos.

Calliophis macclellandi (Reinhardt, 1844). (PLATE 40-I)

Elaps Macclellandi J. T. Reinhardt, 1844, Calcutta Jour. Nat. Hist., 4: 532. Type locality: Assam, India.

Calliophis macclellandii: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 391.

Callophis [sic] *annularis* A. Günther, 1864, Rept. Brit. India, London: 350. Type locality: "India," in error (see Note).

Calliophis swinhoei J. VanDenburgh, 1912, Adv. Diag. New Rept. Amphib. Loo Choo Is. Formosa [privately published], San Francisco: 8. Type locality: Suishako (=Shuishe), central Formosa (=Taiwan Prov.), China (see Note).

Callophis [sic] *formosensis* J. C. Thompson, 1912, Herpetol. Not. [privately published], San Francisco, 3: 4. Type locality: Kosempo (=Chiahsien), Formosa (=Taiwan Prov.), China (see Note).

RANGE: Southern China including Taiwan, Hong Kong, and Hainan; southwest China north to Gansu and Shaanxi. India (Assam, Darjeeling) and Nepal through Burma to Vietnam; Japan (southern Ryukyu Islands).

NOTE: The type locality of *Callophis annularis* was corrected by G. A. Boulenger (1896, Catal. Snakes Brit. Mus., London, 3: 399) to South China. For priority of *swinhoei* over *formosensis*, see page 213, *Scincella formosensis* (Note).

Calliophis sauteri (Steindachner, 1913).

Oligodon sauteri F. Steindachner, 1913, Anz. Kaiserl. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 50: 219. Type locality: Formosa (=Taiwan Prov.), China (see Note).

Calliophis sauteri: K. Klemmer, 1963, *in* Giftschl. Erde (Behringwerk-Mitteil., Sonderband), Marburg: 285.

Hemibungarus matsudai M. Ôshima, 1920, Ann. Rep. Inst. Sci. Govt. Formosa, Taipei, 8(2): 1 (English vers.), 21 (Japanese vers.). Type locality: Mt. Daijurin (=Tashulinshan), Akô (=Yakou, Kaohsiung Co.), Formosa (=Taiwan Prov.), China.

Calliophis hatori S. Takahashi, 1930, Terrestr. Snakes Japan, Tokyo: species 65 (unnumbered page). Type locality: Giran (=Ilan) and Hsinchu, Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

NOTE: F. Steindachner (1913, Denkschr. Kaiserl. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 90: 338) gave the type locality of *Calliophis sauteri* as Suishario (=Shuisheliao), Formosa.

EMYDOCEPHALUS Krefft, 1869.

Emydocephalus G. Krefft, 1869, Snakes Austral., Sydney: 92. Type species: *Emydocephalus annulatus* G. Krefft, 1869, of Australia, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 413).

NOTE: The description of *Emydocephalus* was published again by Krefft (Proc. Zool. Soc. London, 1869: 321 [issued September 1869, according to F. M. Duncan, 1937, Proc. Zool. Soc. London, 107: 72]), the citation that is sometimes given for the generic name. His book, though, probably was published earlier (the preface is dated 20 March 1869). H. G. Cogger, E. E. Cameron, and H. M. Cogger (1983, Zool. Catal. Australia, Canberra, 1: 246) cited Krefft's book, published on 8 September 1869, as the original description of *Emydocephalus*. In his book, Krefft gave the full citation for each species, except for the seven new species described in his London paper, for which the page numbers were omitted.

Emydocephalus ijimae Stejneger, 1898. (PLATE 41A)

Emydocephalus ijimæ L. Stejneger, 1898, Jour. Coll. Sci., Imper. Univ. Tokyo, 12: 223. Type locality: Riu-Kiu (=Ryukyu) Sea, Japan.

RANGE: Coasts of Taiwan (including Lanyu Island), China. Japan (Ryukyu Islands).

HYDROPHIS Latreille, 1801.

Hydrophis P.-A. Latreille, "X" (1801), *in* C.-S. Sonnini and P.-A. Latreille, Hist. Nat. Rept., Paris, 4: 193. Type species: *Hydrus Fasciatus* J. G. Schneider, 1799, by subsequent designation (M. A. Smith, 1926, Monogr. Sea-Snakes, London: 41) (see Note).

NOTE: L. J. Fitzinger's (1843, Syst. Rept., Vienna, 1: 28) earlier designation of *Hydrophis schistosus* F.-M. Daudin, "XI" (1803) (Hist. Nat. Rept., Paris, 7: 386) as type species is invalid since it was not one of the two species named by Latreille.

Hydrophis caerulescens (Shaw, 1802).

Hydrus Cærulescens G. Shaw, 1802, Gen. Zool., London, 3(2): 561. Type locality: East Indies (see Note).

Hydrophis cærulescens: J. E. Gray, 1842, Zool. Misc., London: 62.

RANGE: Coasts of Shandong and Guangdong, China. Indian Ocean and South China Sea southward to coasts of Indoaustralian Archipelago and northern Australia.

NOTE: H. G. Cogger, E. E. Cameron, and H. M. Cogger (1983, Zool. Catal. Australia, Canberra, 1: 250) stated that the label on the holotype gives the type locality as "Indian Ocean: Vizagapatam" (=Visakhapatnam, east coast of India).

Hydrophis cyanocinctus Daudin, 1803. (PLATE 41B)

Hydrophis cyanocinctus F.-M. Daudin, "XI" (1803), Hist. Nat. Rept., Paris, 7: 383. Type locality: Bengal, India (see Note).

RANGE: South China Sea (including Hainan) and East China Sea (including Taiwan), northward to coastal region of Shandong and Liaoning, China. Coasts of Persian Gulf east through South Asia to Indonesia (Java, Aru Islands) and New Guinea; Philippines, Korea, and Japan.

NOTE: Daudin's description was based on P. Russell's (1801, Indian Serp., London, 2: 10, plate 9, called "Chittul") material, stated by Russell (index, unnumbered page 4) to be from "The Sunderbunds" (=Sundarbans), the tidal area at the mouth of River Ganges, south of Calcutta, India.

Hydrophis fasciatus (Schneider, 1799).

Hydrus Fasciatus J. G. Schneider, 1799, Hist. Amphib., Jena, 1: 240. Type locality: None given (see Note).

Hydrophis fasciatus: W. Peters, "1872" (1873), Monatsber. Königl. Preuss. Akad. Wissensch. Berlin, 1872: 849.

Pelamis Lindsayi J. E. Gray, 1831, *in* E. Griffith and E. Pidgeon, Anim. Kingd. Cuvier, London, 9(Synops. Spec.): 99 (*nomen nudum*).

Aturia Lindsayi J. E. Gray, 1842, Zool. Misc., London: 61. Type locality: China? (see Note).

RANGE: Coasts of Guangxi, Guangdong, Hainan, and Fujian, China. Coasts of India and Burma; Gulf of Thailand, coasts of Philippines and Indonesia (Sumatra, Java, Borneo) and New Guinea.

NOTE: M. A. Smith (1926, Monogr. Sea-Snakes, London: 96) stated that the type of *Hydrophis fasciatus* was labelled "East Indies." We do not recognize subspecies of *fasciatus*, but some authorities use *H. fasciatus atriceps* A. Günther, 1864 (Rept. Brit. India, London: 371. Type locality: Siam) for the Chinese populations; Gray's name *lindsayi* would seem to have priority, if subspecies were recognized.

Hydrophis gracilis (Shaw, 1802).

Hydrus Gracilis G. Shaw, 1802, Gen. Zool., London, 3(2): 560. Type locality: None given.

Hydrophis Gracilis: A.-M.-C. Duméril, G. Bibron, and A.-H.-A. Duméril, 1854, Erpétol. Gén., Paris, 7(2): 1352.

RANGE: South China Sea northward to the coast of Fujian, China. Persian Gulf to Bay of Bengal; coasts of Malay Peninsula through Indoaustralian Archipelago to New Guinea; Gulf of Thailand.

NOTE: For placement of this species in *Hydrophis* instead of *Microcephalophis* R.-P. Lesson, 1832 (*in* C. Bélanger, "1834," Voy. Indes-Orient., Paris, Zool.: 320. Type species: *Hydrus Gracilis* G. Shaw, 1802), see S. B. McDowell (1972, Trans. Zool. Soc. London, 32: 220) and H. K. Voris (1977, Fieldiana: Zool., Chicago, 70: 91, 112).

Hydrophis melanocephalus Gray, 1849.

Hydrophis sublævis var. *Melanocephala* J. E. Gray, 1849, Catal. Spec. Snakes Coll. Brit. Mus., London: 53. Type locality: Indian Ocean and Madras, India (see Note).

Hydrophis melanocephalus: G. A. Boulenger, 1896, Catal. Snakes Brit. Mus., London, 3: 283.

RANGE: Coasts of Taiwan and of Guangdong northward to Zhejiang, China. Korea and Japan (Ryukyu Islands, Hokkaido, Kochi); Yellow Sea?; New Guinea and Australia (see Note).

NOTE: The type locality was restricted to the Indian Ocean, by lectotype designation (H. G. Cogger, E. E. Cameron, and H. M. Cogger, 1983, Zool. Catal. Austral., Canberra, 1: 252).

Given the large hiatus in the known distribution of *Hydrophis melanocephalus*, it is possible that the Oriental populations are specifically distinct from those of the Australian region, to which Cogger, Cameron, and Cogger (1983) have fixed the type locality of *melanocephalus*. If the Oriental form is distinct, the name *Disteira orientalis* L. Stejneger, 1901 (Proc. Biol. Soc. Washington, 14: 191. Type locality: Okinawa Shima, Ryukyu Islands, Japan) is available.

Hydrophis ornatus (Gray, 1842).

Aturia ornata J. E. Gray, 1842, Zool. Misc., London: 61. Type locality: Not given (see Note).

Hydrophis ornata: A. Günther, 1864, Rept. Brit. India, London: 376.

RANGE: Coasts of Guangxi, Guangdong, Hainan, Hong Kong, Taiwan, and Shandong, China. Persian Gulf through Indian Ocean to seas surrounding Indoaustralian Archipelago, Australia and Philippines; Gulf of Thailand; Japan (Ryukyu Islands); western Pacific Ocean.

NOTE: M. A. Smith (1926, Monogr. Sea-Snakes, London: 83) stated that the type locality is the Indian Ocean.

KERILIA Gray, 1849.

Kerilia J. E. Gray, 1849, Catal. Spec. Snakes Coll. Brit. Mus., London: 57. Type species: *Kerilia Jerdonii* J. E. Gray, 1849, by monotypy.

Kerilia jerdonii Gray, 1849. (PLATE 41C)

Kerilia Jerdonii J. E. Gray, 1849, Catal. Spec. Snakes Coll. Brit. Mus., London: 57. Type locality: Madras, India.

RANGE: Coasts of Taiwan, China. Bay of Bengal (to Sri Lanka) east along coasts of Malay Peninsula to Gulf of Thailand and South China Sea; western coast of Borneo.

LAPEMIS Gray, 1835.

Lapemis J. E. Gray, "1832–1834" (1835), Illustr. Indian Zool. Coll. Hardwicke, London, 2: unnumbered caption page and plate 87. Type species: *Lapemis Hardwickii* J. E. Gray, "1832–1834" (1835) (=*Lapemis curtus* G. Shaw, 1802), by monotypy (see Note).

NOTE: M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 468) listed *Hydrus curtus* G. Shaw, 1802 (Gen. Zool., London, 3(2): 562) as the type species, in error. In Gray's work, only *hardwickii* was included in his new genus *Lapemis*.

Lapemis curtus (Shaw, 1802). (PLATE 41D)

Hydrus Curtus G. Shaw, 1802, Gen. Zool., London, 3(2): 562. Type locality: East Indies.

Lapemis curtus: J. E. Gray, 1842, Zool. Misc., London, 2: 60.

RANGE: South China Sea north to the coasts of Fujian and Shandong and the Strait of Taiwan, China. Persian Gulf east through Indian Ocean, Indoaustralian Archipelago, and north coast of Australia; Philippines.

NOTE: Previously, Chinese populations of this species were referred to *Lapemis hardwickii* J. E. Gray, "1832–1834" (1835) (Illustr. Indian Zool. Coll. Hardwicke, London, 2: unnumbered caption page and plate 87; type locality: not given). P. Gritis and H. K. Voris (1990, Fieldiana: Zool., Chicago, new ser., 56: iii, 1–13), however, based on study of a large sample from throughout the range, concluded that the names *curtus* and *hardwickii* apply to a single polymorphic species rather than to two sibling species.

LATICAUDA Laurenti, 1768.

Laticauda J. N. Laurenti, 1768, Synops. Rept., Vienna: 109. Type species: *Laticauda scutata* J. N. Laurenti, 1768 (substitute name for *Coluber laticaudatus* C. Linnaeus, 1758), by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 402).

Laticauda colubrina (Schneider, 1799). (PLATE 41E)

Hydrus Colubrinus J. G. Schneider, 1799, Hist. Amphib., Jena, 1: 238. Type locality: Not given.

Laticauda colubrina: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 406.

RANGE: Coasts of Taiwan, China. Bay of Bengal, coasts of Malay Peninsula and Indoaustralian Archipelago to New Guinea, Australia (Queensland), and New Zealand; western Pacific Ocean (to Fiji); Gulf of Thailand and Philippines; Japan (Ryukyu Islands); unvouchered reports of specimens from the Pacific coasts of Mexico (Chiapas) and Nicaragua.

Laticauda laticaudata (Linnaeus, 1758). (PLATE 41F)

Coluber laticaudatus C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 222. Type locality: "in Indiis."

Laticauda laticaudata: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 402.

RANGE: Coasts of Fujian and Taiwan, China. Bay of Bengal, coasts of Malay Peninsula and Indoaustralian Archipelago to New Guinea and Australia (Queensland); western Pacific Ocean; Gulf of Thailand and Philippines; Japan (Ryukyu Islands).

Laticauda semifasciata (Reinwardt, 1837).

Platurus semifasciatus C. G. C. Reinwardt, 1837, *in* H. Schlegel, Essai Physion. Serp., The Hague, 2: 516. Type locality: Moluques (=Molucca Islands), particularly near Timor, and

east coast of the Celebes, Indonesia; near China; Lioukiou (=Ryukyu) Islands, Japan; Pondichery (=Pondicherry), India; New Guinea; and Tongatabou (=Tonga Islands, South Pacific) (see Note).

Laticauda semifasciata: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 409.

RANGE: Coasts of Fujian, Taiwan, and Liaoning, China. West Pacific Ocean from Japan (Ryukyu Islands) in the north to Samoa Islands in the south, west through Indoaustralian Archipelago and Philippines.

NOTE: The type locality has been restricted to the Molucca Islands by lectotype designation (L. Stejneger, 1907: 409).

NAJA Laurenti, 1768.

Naja J. N. Laurenti, 1768, Synops. Rept., Vienna: 90. Type species: *Coluber Naja* C. Linnaeus, 1758, by absolute tautonomy.

Naja naja (Linnaeus, 1758). (PLATE 41G–H)

Coluber Naja C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 221. Type locality: "in India orientali."

Naja naja: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 394.

RANGE: Southern China, including Taiwan, Hong Kong, and Hainan, north to southwestern Sichuan. Pakistan, India, and Sri Lanka east to Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo, Flores) and Philippines; Iran, Afghanistan, and from Turkmenistan east to Tajikistan.

1. *Naja naja atra* Cantor, 1842. (PLATE 41G)

Naja atra T. Cantor, 1842, Ann. Mag. Nat. Hist., London, [ser. 1], 9: 482. Type locality: Chusan (=Zhoushan Islands), Zhejiang Prov., China.

Naja naja atra: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 394.

Naja tripudians var. *scopinucha* E. D. Cope, "1859" (1860), Proc. Acad. Nat. Sci. Philadelphia, 11: 343. Type locality: Canton River (=Zhu Jiang), province uncertain, China (see Note).

Naja tripudians var. *unicolor* E. von Martens, 1876, Preuss. Exped. Ost-Asien, Zool., Berlin, 1: 382 (substitute name for *N. tripudians atra*).

RANGE: Southern China including Taiwan, Hong Kong, and Hainan. Indochina.

NOTE: The type of Cope's *Naja tripudians* var. *scopinucha* was probably collected at or near Canton (=Guangzhou Shi, Guangdong Province).

2. *Naja naja kaouthia* Lesson, 1831. (PLATE 41H)

Naja Kaouthia R.-P. Lesson, 1831, Bull. Universel Sci. Indust. Férussac (sect. 2, Bull. Sci. Nat. Geol.), Paris, 25: 122. Type locality: None given (see Note).

Naja naja kaouthia: M. A. Smith, 1940, Rec. Indian Mus., Calcutta, 42: 485.

RANGE: Northwestern Guangxi, western Yunnan, and southwestern Sichuan, China. India (Assam and Darjeeling) and Nepal (see Note).

NOTE: R.-P. Lesson, 1832, *in* C. Bélanger, "1834," Voy. Indes-Orient., Paris, Zool.: 314, plate 2) stated that the type was from Bengale (=Bengal), India.

W. Wüster and R. S. Thorpe (1992, Herpetologica, Austin, 48: 69–85) have raised *Naja naja kaouthia* to the status of a full species and re-defined this taxon to include populations

ranging from northern India east through southwestern China and southern Indochina and to northern Malaysia.

OPHIOPHAGUS Günther, 1864.

Ophiophagus A. Günther, 1864, Rept. Brit. India, London: 340. Type species: *Naja elaps* H. Schlegel, 1837 (=*Hamadryas Hannah* T. Cantor, 1836), by monotypy.

NOTE: *Hamadryas* T. Cantor, 1836, is preoccupied by *Hamadryas* J. Hübner, 1818 (Zuträge Samml. Exot. Schmettl., Augsburg: 12), a genus of Lepidoptera. *Hamadryas* is often dated from Hübner, 1806 (Samml. Exot. Schmetterl., Augsburg: 2), but in this earlier work Hübner used the plural form, "*Hamadryades.*"

Ophiophagus hannah (Cantor, 1836). (PLATE 42A–B)

Hamadryas Hannah T. Cantor, 1836, Asiatic Res., Calcutta, 19(1): 87. Type locality: Sunderbuns (=Sundarbans) and near Calcutta, India (see Note).

Ophiophagus hannah: C. M. Bogert, 1945, Copeia, Ann Arbor, 1945: 47.

Dendraspis hannah sinensis P. E. P. Deraniyagala, 1960, Spol. Zeyl., Colombo, 29: 61. Type locality: China (see Note).

RANGE: Southern China including Hong Kong and Hainan, westward to Yunnan, southwestern Sichuan and southeastern Xizang (Tibet). India east through Burma to Indochina, south through Malay Peninsula to Indonesia (Sumatra, Java, Borneo) and Philippines.

NOTE: The Sundarbans are the tidal forests at the mouth of River Ganges, south of Calcutta. Deraniyagala (1960) designated as his type "Pope's (1935) specimen," which was from Kuliang-Kushan (=Guling-Gu Shan) Mountains, near Foochow (=Fuzhou Shi), Fukien (=Fujian Prov.), China. It thus becomes the type locality of *Dendraspis hannah sinensis.*

PELAMIS Daudin, 1803.

Pelamis F.-M. Daudin, "XI" (1803), Hist. Nat. Rept., Paris, 7: 357. Type species: *Hydrus Bicolor* J. G. Schneider, 1799 (=*Anguis platura* C. Linnaeus, 1766), by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 28).

Pelamis platurus (Linnaeus, 1766). (PLATE 42C)

Anguis platura C. Linnaeus, 1766, Syst. Nat., ed. 12, Stockholm, 1: 391. Type locality: Not given.

Pelamis platuros [*sic*]: F.-M. Daudin, "XI" (1803), Hist. Nat. Rept., Paris, 7: 361 (combination implied).

RANGE: South China Sea northward to the coastal regions of Zhejiang and Taiwan. Persian Gulf to Bay of Bengal; coasts of Malay Peninsula and Indoaustralian Archipelago to New Guinea, Australia, New Zealand; Gulf of Thailand and Philippines to Japan, Korea, and Russia (southern Primorskij Territory); Pacific Ocean to America (Mexico to Ecuador).

PRAESCUTATA Wall, 1921.

Præscutata F. Wall, 1921, Ophid. Taproban. Snakes Ceylon, Colombo: 390. Type species: *Thalassophis viperina* P. Schmidt, 1852, by monotypy.

NOTE: S. B. McDowell (1972, Trans. Zool. Soc. London, 32: 244) noted that Wall's name *Praescutata* could be regarded as a typographical error, since Wall corrected the species name to *Thalassophis viperina* in the errata to his book. This interpretation apparently prompted M. A. Smith (1926, Monogr. Sea-Snakes, London: 33) to establish the substitute name *Thalassophina*.

Praescutata viperina (P. Schmidt, 1852). (PLATE 42D)

Thalassophis viperina P. Schmidt, 1852, Abhandl. Gebiete Naturwissensch. Verein Hamburg, 2: 79. Type locality: Coast of Java, Indonesia.

Præscutata viperina: F. Wall, 1921, Ophid. Taproban. Snakes Ceylon, Colombo: 391.

RANGE: South China Sea, northeastward to coastal region of Fujian and Strait of Taiwan, China. Persian Gulf to Bay of Bengal, coasts of Malay Peninsula and Indonesia (Java, Borneo); Gulf of Thailand.

VIPERIDAE

AGKISTRODON Beauvois, 1799.

Agkistrodon A. M. F. J. Palisot de Beauvois, 1799, Trans. Amer. Philos. Soc., Philadelphia, [old ser.], 4: 381. Type species: *Agkistrodon mokasen* A. M. F. J. Palisot de Beauvois, 1799 (=*Boa contortrix* C. Linnaeus, 1766), of North America, by monotypy (see Note).

NOTE: Beauvois spelled the name *mokasen* on page 370 and "*mokason*" on pages 380–381; only on page 370, however, was it given in binomial form.

P. A. Pavlov (1932, Publ. Mus. Hoang ho Pai ho Tien Tsin, 12: 26–27) described three new forms of *Agkistrodon* from various localities in Manchuria, China: *Ancistrodon halys intermedius viridis, A. Blomhoffii brevicaudus coloratus,* and *A. Blomhoffii brevicaudus rubrum.* These names are quadrinomials, though, and so are regarded as being of infrasubspecific rank under the "Code" (1985, Article 45[f][iii]), and thus must be excluded (Article 1[b][5]). They are therefore omitted from the synonymies below.

Agkistrodon blomhoffii (Boie, 1826). (PLATE 42E)

Trigonocephalus Blomhoffii H. Boie, 1826, Isis von Oken, Jena, 18: col. 214. Type locality: Decima (=Dejima) Island, Japan, in error? (see Note).

Agkistrodon blomhoffii: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 457.

RANGE: Southern Liaoning; Beijing area; central China west to Guizhou and Sichuan; Taiwanese records are not considered valid (see Note). Japan and Korea.

NOTE: Decima Island was the site of the Dutch trading station in Nagasaki harbor; see page 229, *Amphiesma vibakari* (Note) for comments.

H. K. Gloyd and R. Conant (1990, Snakes *Agkistrodon* Complex, Oxford [Ohio]: 281) discuss the specimens of *Agkistrodon blomhoffii* from the Pescadores Islands, Taiwan, in detail and suggest that they were introduced. Recent reports of specimens from the Loukwei Experimental Station, Kaohsiung County, have not been verified by Taiwanese herpetologists (K.-Y. Lue, pers. comm.).

1. ***Agkistrodon blomhoffii brevicaudus*** Stejneger, 1907. (PLATE 42E)

Agkistrodon blomhoffii brevicaudus L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 463. Type locality: Fusan (=Pusan), Korea.

Agkistrodon blomhoffii siniticus H. K. Gloyd, 1977, Proc. Biol. Soc. Washington, 90: 1004. Type locality: Ningkwo (=Ningguo Co.), Anhwei (=Anhui) Prov., China.

Agkistrodon blomhoffii dubitatus H. K. Gloyd, 1977, Proc. Biol. Soc. Washington, 90: 1007. Type locality: Hsinglungshan (=Mt. Xinglong), Eastern Tombs, Hopei (=Hebei) Prov., now part of Beijing Municipal City, China.

RANGE: Southern Liaoning; Beijing area; central China west to Guizhou and Sichuan; records from Taiwan are discounted (see *Agkistrodon blomhoffii* [Note]). Korea.

Agkistrodon intermedius (Strauch, 1868). (PLATE 42F)

Trigonocephalus intermedius A. Strauch, 1868, Trans. First Conf. Russ. Nat., St.-Petersburg, 1: 295. Type locality: Yesso (=Esso) Island (now Hokkaido Island, Japan; in error?), banks of Amur River (Heilongjiang Prov., China–eastern Siberia, Russia), and Khinggan (=Hinggan Ling) Mountain Range, Heilongjiang Prov., China (see Note).

Agkistrodon blomhoffii intermedius: L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 464.

Ancistrodon halys stejnegeri H. Rendahl, 1933, Arkiv Zool., Stockholm, 25A(8): 18. Type locality: China.

Agkistrodon halys cognatus H. K. Gloyd, 1977, Proc. Biol. Soc. Washington, 90: 1002. Type locality: Choni (=Jonê, on Tao River), Kansu (=Gansu) Prov., China.

RANGE: Northwestern China, from Xinjiang east to Shanxi. Russia (southern Siberia) and Mongolia.

NOTE: L. Stejneger (1907: 464) gave the type locality of *Agkistrodon intermedius* as "Governm. Irkutsk, East Siberia," but this was not one of Strauch's original localities.

Agkistrodon monticola (Werner, 1922). (PLATE 42G)

Ancistrodon blomhoffii monticola F. Werner, 1922, Anz. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 59: 222. Type locality: Yao-Schan (=Yulong Xueshan), near Lidjiang (=Lijiang), Yunnan Prov., China; 3,600 meters (see Note).

Agkistrodon monticola: C. H. Pope, 1935, Rept. China, New York: 398.

Agkistrodon strauchi popei R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 218. Type locality: Northwest Yunnan, China.

RANGE: Northwestern Yunnan, China.

NOTE: F. Werner (1924, Denkschr. Akad. Wissensch. Wien, ser. Mathemat.-Naturwissensch., Vienna, 99: 49) provided an expanded description of the types of *Agkistrodon monticola.*

Agkistrodon saxatilis (Emelianov, 1937).

Ancistrodon saxatilis A. A. Emelianov, 1937, Bull. Far East. Branch Acad. Sci. USSR, Vladivostok, 1937(24): 26. Type locality: Vladivostok, Voroshilov (=Ussuriysk), and Suchan River, all southern Primorskiy Territory, eastern Siberia, Russia.

Agkistrodon saxatilis: H. K. Gloyd, 1972, Proc. Biol. Soc. Washington, 85: 569.

Agkistrodon shedaoensis continentalis E.-M. Zhao, 1980, Acta Herpetol. Sinica, Chengdu, [old ser.], 1(4): 12. Type locality: Panshi Co., Jilin Prov., China.

RANGE: Northeastern China, south to Shandong. Russia (east of Selemdzha River in eastern Siberia) and Korea.

Agkistrodon shedaoensis Zhao, 1979. (PLATE 43A)

Agkistrodon shedaoensis E.-M. Zhao, 1979, Acta Herpetol. Sinica, Chengdu, [old ser.], 1(1): 4.

Type locality: Shedao (Snake Island), 24 nautical miles northwest of Lüshun (Port Arthur), Liaoning Prov., China; below 215 meters.

RANGE: Known only from the type locality.

Agkistrodon strauchi (Bedriaga, 1912). (PLATE 43B)

Ancistrodon Strauchi J. von Bedriaga, 1912, Wissensch. Res. Przewalski Centr.-Asien Reisen, Zool., St. Petersburg, 3: 728. Type locality: Dytschu (=Moron Us and Tuotuo rivers?), upper Jan-tse-kiang (=Jinsha River, or upper Chang Jiang), Qinghai Prov., Tung-o-lo (=Dong-e-lo) and Daudsen-lu (or Ta-tsian-lu, =Kangding Co.), Sichuan Prov., China (see Note).

Agkistrodon strauchi: L. Stejneger, 1925, Proc. U.S. Natl. Mus., Washington, 66(25): 98.

Agkistrodon tibetanus T. Barbour, 1912, Mem. Mus. Comp. Zool., Harvard Coll., Cambridge, 40: 133. Type locality: Ramala (=Yamala) Pass, beyond Tachienlu (=Kangding Co.), western Szechwan (=Sichuan Prov.), China; 13,000 feet.

Agkistrodon halys qinlingensis M.-T. Song and F.-G. Chen, 1985, La Animala Mondo, Xi'an, 2(2): 99. Type locality: Huangbaiyuan Xiang (33°45' N, 107° E), Taibai Co., Shaanxi Prov., China; 1,500 meters.

Agkistrodon halys liupanensis N.-F. Liu, Z.-M. Song, and W.-Y. Luo, 1989, Jour. Lanzhou Univ. (Nat. Sci.), Lanzhou, 25: 114. Type locality: Liupan Mountain, Ningxia Hui Autonomous Region, China; 2,100 meters.

RANGE: Eastern Xizang (Tibet) and Qinghai east to Ningxia and southern Shaanxi, China.

NOTE: C. H. Pope (1935, Rept. China, New York: 400) restricted the type locality of *Agkistrodon strauchi* to Tungngolo (=Dong-e-lo), Sichuan Province. Bedriaga's name, *A. strauchi*, was published in June 1912, and Barbour's name, *A. tibetanus*, in August 1912.

Agkistrodon ussuriensis (Emelianov, 1929). (PLATE 43C)

Ancistrodon blomhoffii ussuriensis A. A. Emelianov, 1929, Mem. Vladivostok Bur. Russ. Geogr. Soc., 3: 123. Type locality: Pos'yet region, Tetjuche River, Vladivostok, Suchan River, and Nikolsky-Ussuriysk, all Primorskiy Territory, Russia, and Yimianpo (in Shangzhi Xian), Manchuria (=Heilongjiang Prov., China) (see Note).

Agkistrodon halys ussuriensis: K. Klemmer, 1963, *in* Giftschl. Erde (Behringwerk-Mitteil., Sonderband), Marburg: 400.

Agkistrodon ussuriensis: M. Toriba, 1986, Acta Herpetol. Sinica, Chengdu, [new ser.], 5: 62.

RANGE: Northeastern China, from northern Liaoning to Heilongjiang. Russia (Far East) and Korea.

NOTE: A. Emelianov (1929: 152–157) provided other localities in his tabular list of specimens.

AZEMIOPS Boulenger, 1888.

Azemiops G. A. Boulenger, 1888, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 6: 602. Type species: *Azemiops feae* G. A. Boulenger, 1888, by monotypy.

Azemiops feae Boulenger, 1888. (PLATE 43D)

Azemiops feae G. A. Boulenger, 1888, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, 6: 603. Type locality: Kakhien (=Kakhyen) Hills, Burma (see Note).

RANGE: Southern and central China, from western Yunnan and southern Shaanxi east to Zhejiang, south to Guangxi. Northern Burma and northern Vietnam.

NOTE: The Kakhyen Hills are east of Bhamò and near the border of Yunnan Province, China.

DEINAGKISTRODON Gloyd, 1979.

Deinagkistrodon H. K. Gloyd, 1979, Proc. Biol. Soc. Washington, 91: 963. Type species: *Halys acutus* A. Günther, 1888, by original designation.

Deinagkistrodon acutus (Günther, 1888). (PLATE 43E)

Halys acutus A. Günther, 1888, Ann. Mag. Nat. Hist., London, ser. 6, 1: 171. Type locality: Mountains north of Kiu Kiang (=Jiujiang Shi), Jiangxi Prov., China.

Deinagkistrodon acutus: H. K. Gloyd, 1979, Proc. Biol. Soc. Washington, 91: 963.

RANGE: Central China from Zhejiang and Fujian west to Guizhou and southeastern Sichuan; Taiwan. Northern Vietnam; Laos?

TRIMERESURUS Lacepède, 1804.

Trimeresurus B.-G.-É. Lacepède, "XII" (1804), Ann. Mus. Natl. Hist. Nat., Paris, 4: 209. Type species: *Vipera viridis* F.-M. Daudin, 1803 (=*Coluber Gramineus* G. Shaw, 1802), of India, by subsequent designation (L. Stejneger, 1907, Bull. U.S. Natl. Mus., Washington, 58: 465).

Trimeresurus albolabris (Gray, 1842). (PLATE 43F)

Trimesurus [sic] *albolabris* J. E. Gray, 1842, Zool. Misc., London: 48. Type locality: China.

Trimeresurus gramineus albolabris: R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 218.

RANGE: Southern China, from Yunnan east to Guangdong and Hainan, north to Anhui. Northern India and Nepal through Burma to Indochina, south through Indonesia.

Trimeresurus gracilis Ôshima, 1920. (PLATE 43G)

Trimeresurus gracilis M. Ôshima, 1920, Ann. Rept. Inst. Sci. Govt. Formosa, Taihoku, 8(2): 10 (English vers.), 78 (Japanese vers.). Type locality: Mt. Nôkô (=Nengkaoshan), Nanto Co. (=Nantou Co.), central Formosa (=Taiwan Prov.), China.

RANGE: Taiwan, China.

Trimeresurus jerdonii Günther, 1875. (PLATE 43H)

Trimeresurus jerdonii A. Günther, 1875, Proc. Zool. Soc. London, 1875: 233. Type locality: Khassya (=Khasi Hills), Assam, India.

Trimeresurus xanthomelas A. Günther, 1889, Ann. Mag. Nat. Hist., London, ser. 6, 4: 221. Type locality: Ichang (=Yichang Shi), Hupeh (=Hubei Prov.), China.

Lachesis melli T. Vogt, 1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 143. Type locality: Yunnan Prov., China (see Note).

RANGE: Southwest China east to Guangxi and Hubei, north to Henan and west to Gansu. Nepal, India (Assam), and northern Burma; northern Vietnam.

NOTE: R. Mell (1922, Arch. Naturgesch., Berlin, ser. A, 88(10): 126) gave the type locality of *Lachesis melli* as between Shiu-djün (=Qujing County) and Dschaudschou (=Zhaotong County), "western" (in error, northeastern) Yunnan Province, China; 2,700 meters.

Trimeresurus mangshanensis Zhao, 1990. (PLATE 44A)

Trimeresurus mangshanensis E.-M. Zhao, 1990, *in* E.-M. Zhao and Y.-H. Chen, Sichuan Jour. Zool., Chengdu, 9(1): 11. Type locality: Pingkeng, Mangshan (=Mt. Mang), Yizhang Co., Hunan Prov., China; 700–900 meters.

RANGE: Known only from the type locality.

Trimeresurus medoensis Zhao, 1977.

Trimeresurus medoensis E.-M. Zhao (as Djao), 1977, *in* E.-M. Zhao (as Djao) and Y.-M. Jiang, Acta Zool. Sinica, Peking, 23: 66. Type locality: Near A-nie Bridge, Medog Co., Xizang (Tibet) Autonomous Region, China; 1,200 meters

RANGE: Southeastern Xizang (Tibet), China. Northern India and Burma.

Trimeresurus monticola Günther, 1864.

Trimeresurus monticola A. Günther, 1864, Rept. Brit. India, London: 388. Type locality: Nepal and Sikkim.

RANGE: Southern China including Taiwan and Hong Kong; southwest China north to Gansu. Nepal and India (Assam, Darjeeling, Sikkim) through Burma to Thailand and Vietnam, south through Malay Peninsula to Indonesia (Sumatra).

1. ***Trimeresurus monticola makazayazaya*** Takahashi, 1922.

Trimeresurus Makazayazaya S. Takahashi, 1922, Japan. Venom. Snakes, Taipei: species 4 (unnumbered page). Type locality: Makazayazaya (=Hsinmachia), Pingtung, Formosa (=Taiwan Prov.), China.

Trimeresurus monticora [sic] *makazayazaya* S. Takahashi, 1930, Terrest. Snakes Japan, Tokyo: unnumbered page (=page 129).

Trimeresurus orientalis K. P. Schmidt, 1927, Bull. Amer. Mus. Nat. Hist., New York, 54: 544. Type locality: Min River, Shaowu (Co.), Fukien (=Fujian) Prov., China.

Trimeresurus monticola formosensis R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 219. Type locality: Formosa (=Taiwan Prov.), China (non *Trimeresurus gramineus formosensis* M. Maki, 1931).

RANGE: Southern and southeastern China including Taiwan and Hong Kong. Vietnam.

2. ***Trimeresurus monticola monticola*** Günther, 1864.

Trimeresurus monticola monticola: R. Mell, "1929" (1931), Lingnan Sci. Jour., Canton, 8: 218.

RANGE: Yunnan-Guizhou Plateau, Guangxi, and Sichuan, China. Nepal, India, Burma, and Thailand, south through Malay Peninsula to Indonesia (Sumatra).

3. ***Trimeresurus monticola zayuensis*** Jiang, 1977.

Trimeresurus monticola zayüensis Y.-M. Jiang, 1977, *in* E.-M. Zhao (as Djao) and Y.-M. Jiang, Acta Zool. Sinica, Peking, 23: 67. Type locality: Zayü Co., Xizang (Tibet) Autonomous Region, China; 1,800 meters.

RANGE: Known only from the type locality.

Trimeresurus mucrosquamatus (Cantor, 1839).

Trigonocephalus mucrosquamatus T. Cantor, 1839, Proc. Zool. Soc. London, 1839: 32. Type locality: Naga Hills, Assam, India.

Trimeresurus mucrosquamatus: A. Günther, 1864, Rept. Brit. India, London: 390.

RANGE: Widely distributed over southern China including Hainan and Taiwan, from Yunnan north to Gansu in the west, east to Zhejiang. India (Assam), Bangladesh, and Burma; northern Vietnam.

Trimeresurus stejnegeri Schmidt, 1925. (PLATE 44B)

Trimeresurus stejnegeri K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 4. Type locality: Shaowu, Fukien (=Fujian) Prov., China (see Note).

Trimeresurus yunnanensis K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 4. Type locality: Tengyueh (=Tengchong Co.), Yunnan Prov., China.

RANGE: Southern China, including Taiwan and Hainan, and from Yunnan north to southeastern Gansu and east to Jiangsu; Jilin. India (Darjeeling, Assam) and Burma; southeastern Thailand to Vietnam.

NOTE: C. H. Pope (1935, Rept. China, New York: 423–424), acting as first revisor, chose *Trimeresurus stejnegeri* in preference to *yunnanensis*. Note that Pope's action established priority at the species level only (the level at which the two names are synonyms), but that the name *yunnanensis* is still validly applied at the subspecies level (in which case the two names are not synonyms; see below).

1. ***Trimeresurus stejnegeri stejnegeri*** Schmidt, 1925. (PLATE 44B)

Trimeresurus stejnegeri stejnegeri: C. H. Pope, 1935, Rept. China, New York: 418.

Trimeresurus gramineus formosensis M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 214 (English vers.). Type locality: Tainan, Taiwan Prov., China (non *Trimeresurus monticola formosensis* Mell, "1929" [1931]) (see Note).

Trimeresurus gramineus kodairai M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 216 (English vers.). Type locality: Chikushiko (=Chutzuhu), Taihoku (=Taipei), Formosa (=Taiwan Prov.), China (see Note).

Trimeresurus stejnegeri makii K. Klemmer, 1963, *in* Giftschl. Erde (Behringwerk-Mitteil., Sonderband), Marburg: 436 (substitute name for *T. gramineus formosensis* M. Maki, 1931).

RANGE: Southern China including Taiwan and Hainan, and from eastern Sichuan to southeastern Gansu and east to Jiangsu; southeastern Jilin (Mt. Changbai). India (Darjeeling, Assam) and Burma; southeastern Thailand to Vietnam.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo) re-described *Trimeresurus gramineus formosensis* (page 217) and *T. gramineus kodairai* (page 219) in the expanded Japanese text of 1933.

2. ***Trimeresurus stejnegeri yunnanensis*** Schmidt, 1925.

Trimeresurus yunnanensis K. P. Schmidt, 1925, Amer. Mus. Novit., New York, 157: 4. Type locality: Tengyueh (=Tengchong Co.), Yunnan Prov., China.

Trimeresurus stejnegeri yunnanensis: C. H. Pope, 1935, Rept. China, New York: 423.

RANGE: Yunnan and southwestern Sichuan, China.

Trimeresurus tibetanus Huang, 1982. (PLATE 44C)

Trimeresurus tibetanus Z.-Y. Huang, 1982, Acta Fudan Univ., Nat. Sci., Shanghai, 21: 116. Type locality: Chokesumo, Nyalam Co., Xizang (Tibet) Autonomous Region, China; 3,200 meters.

RANGE: Known only from the general area of the type locality.

Trimeresurus xiangchengensis Zhao, Jiang, and Huang, 1978.

Trimeresurus xiangchengensis E.-M. Zhao, Y.-M. Jiang, and Q.-Y. Huang, 1978, Mater. Herpetol. Res., Chengdu, 4: 21. Type locality: Xiangcheng Co., Sichuan Prov., China; 3,000 meters (see Note).

RANGE: Yunnan and western Sichuan, China.

NOTE: The more formal description of *Trimeresurus xiangchengensis* was published by E.-M. Zhao in 1979 (Acta Zootaxon. Sinica, Beijing, 4: 422), but in the original article authorship of the separate species is not given, and therefore authorship rests with the authors of the entire article, which includes Jiang and Huang. The name *T. Xiangchengensis* [*sic*] was first mentioned in a meeting abstract (1978, Proc. Symp. China Soc. Zool.–China Soc. Entomol., Chengdu: unpaginated) authored by Zhao alone, but such abstracts are not considered published under the "Code" (1985).

VIPERA Laurenti, 1768.

Vipera J. N. Laurenti, 1768, Synop. Rept., Vienna: 99. Type species: *Vipera Francisci Redi* J. N. Laurenti, 1768 (=*Coluber Aspis* C. Linnaeus, 1758), of southern Europe, by subsequent designation (L. J. Fitzinger, 1843, Syst. Rept., Vienna, 1: 28).

Vipera berus (Linnaeus, 1758). (PLATE 44D)

Coluber Berus C. Linnaeus, 1758, Syst. Nat., ed. 10, Stockholm, 1: 217. Type locality: "Europa" (see Note).

Vipera berus: F.-M. Daudin, "XI" (1803), Hist. Nat. Rept., Paris, 6: 89.

RANGE: Extreme northern Xinjiang and Jilin, China. North and central Europe including Britain (to 70° North Latitude in Scandinavia), northern and central Asia eastward to Sakhalin Island (Russia), northern Korea, and Mongolia.

NOTE: The type locality has been restricted to Upsala, Sweden, by R. Mertens and L. Müller (1940, Abhandl. Senckenberg. Naturforsch. Gesellsch., Frankfurt am Main, 451: 55). In China, this species is distributed in two widely separated regions; within each there is considerable morphological variation. Since a careful study has not yet been undertaken, we choose not to apply any subspecific names.

Vipera russellii (Shaw and Nodder, 1797). (PLATE 44E)

Coluber Russelii [*sic*] G. Shaw and F. P. Nodder, 1797, Nat. Misc., London, 8: unnumbered text page to plate 291 (see Note). Type locality: India.

Daboia Russellii J. E. Gray, 1849, Catal. Spec. Snakes Coll. Brit. Mus., London: 24 (emended specific name).

Vipera Russellii: A. Strauch, 1869, Mém. Acad. Impér. Sci. St.-Pétersbourg, ser. 7, 14(6): 85.

RANGE: South China including Taiwan. Pakistan, India, and Sri Lanka, east to Burma; central Thailand; Indonesia (eastern Java, Lesser Sundas as far east as Lomblen Island).

NOTE: For half a century, the name was misspelled *russelii*, until emended by J. E. Gray in 1849. In Shaw and Nodder's original description, it is clear that the new species was named for Patrick Russell of India; thus Gray's emendation is valid ("Code" [1985], Article 32 [c][ii]). Authorship typically has been attributed to G. Shaw alone, but the dedicatory page to volume 8 of *Naturalist's Miscellany* is signed by Shaw and F. P. Nodder; moreover, Shaw (1802, Gen. Zool., London, 3(2): 418) himself did not later claim sole authorship. The date of publication of volume 8 of Shaw and Nodder follows C. D. Sherborn (1895, Ann. Mag. Nat. Hist., London, ser. 6, 15: 376).

Although Shaw and Nodder referred to P. Russell's description (1796, Indian Serp., London, 1: 10, plate 7), their description is based on a specimen sent by Russell to the British Museum and not on Russell's published illustration, as wrongly stated by M. A. Smith (1943, Fauna Brit. India, Rept. Amphib., London, 3: 482).

1. ***Vipera russellii formosensis*** Maki, 1931.

Vipera russellii formosensis M. Maki, 1931, Monogr. Snakes Japan, Tokyo: 197 (English vers.). Type locality: Choshu (=Chaochou), Takao (=Kaohsiung), Formosa (=Taiwan Prov.), China (see Note).

RANGE: Taiwan, China.

NOTE: M. Maki (1933, Monogr. Snakes Japan, Tokyo: 201) re-described *formosensis* in the expanded Japanese text of 1933.

2. ***Vipera russellii siamensis*** Smith, 1917. (PLATE 44E)

Vipera russellii siamensis M. A. Smith, 1917, Jour. Nat. Hist. Soc. Siam, Bangkok, 2: 223. Type locality: Sam Kok, about 60 kilometers north of Bangkok, central Siam (=Thailand).

RANGE: Guangxi, Guangdong, and Fujian, China. Central and southern Burma; central Thailand.

Vipera ursinii (Bonaparte, 1835). (PLATE 44F)

Pelias Ursinii C. L. Bonaparte, "1832–1841" (1835), Iconogr. Fauna Ital., Rome, 2(12): unnumbered text page (for *Pelias Chersea*). Type locality: Mountains of Abruzzo, near Province of Ascoli, Italy (see Note).

Vipera ursinii: G. A. Boulenger, 1893, Proc. Zool. Soc. London, 1893: 596.

RANGE: Western Xinjiang, China. Isolated populations in southern and eastern Europe; southwestern and eastern Turkey, northern Iran, and Armenia; Ukraine eastward through Kazakhstan to Mt. Altai, and south to Uzbekistan and Kirgizstan.

NOTE: The type locality is as given in Bonaparte and as determined by lectotype designation (E. Kramer, 1961, Rev. Suisse Zool., Genève, 68: 713). Bonaparte's book was issued in 30 parts over the period 1832–1841, but the account of *Pelias chersea* was in part 12 (published 1835).

CROCODYLIA

ALLIGATORIDAE

ALLIGATOR Cuvier, 1807.

Alligator G. Cuvier, 1807, Ann. Mus. Hist. Nat., Paris, 10: 25. Type species: *Crocodilus lucius* G. Cuvier, 1807 (=*Crocodilus mississipiensis* F.-M. Daudin, 1801), of North America, by subsequent designation (L. Stejneger and T. Barbour, 1917, Check List North Amer. Amphib. Rept., [ed. 1], Cambridge: 41).

Alligator sinensis Fauvel, 1879. (PLATE 44G)

Alligator Sinensis A.-A. Fauvel, 1879, Alligat. China [privately printed], Shanghai: 34 (see Note). Type locality: near Wuhu (Anhui Prov.), Chinkiang (=Zhenjiang Shi, Jiangsu Prov.), Ning-ko-fu (=Ningguo Co., Anhui Prov.), Poyang Lake (=Boyang Lake, Jiangxi Prov.), Chefoo (=Yantai Shi, Shandong Prov.), Shanghai, and Canton (=Guangzhou Shi, Guangdong Prov.), China (see Note).

Alligator chinensis A. Günther, 1889, Ann. Mag. Nat. Hist., London, ser. 6, 4: 219 (in error for *A. sinensis*).

RANGE: East central China, in Chang Jiang (Yangtze River) and associated lakes; presently restricted to Anhui and Zhejiang; probably extirpated in Jiangsu and Jiangxi.

NOTE: Fauvel's original description appeared in a privately published pamphlet issued before the journal version (1879, Jour. North-China Branch Royal Asiatic Soc., Shanghai, new ser., 13: 1–36, 36a–f, 4 plates). The former was apparently printed from the same plates and with an added title page, but lacking pages 36a–f and one plate about historical records of the alligator in China; the scientific sections of the two versions appear to be identical.

Fauvel's description is based on six specimens from various localities (1879: 28–30); although some collection sites are doubtless authentic, others represent places where animals were purchased at market.

NAMES OF UNCERTAIN STATUS

The following species, all frogs and lizards with Chinese type localities, cannot be allocated to known taxa. None of the frogs is mentioned in the most recent, comprehensive review of Chinese frogs (Liu and Hu, 1961) and the lizard names have been ignored, for the most part, in the Chinese herpetological literature.

SALIENTIA*

Rana multistriata E. Hallowell, 1861.

"1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 505. Type locality: Hong Kong, China.

NOTE: This name, like the other two Hallowell names listed below, has never been allocated. None of the types of the three taxa are at the academy in Philadelphia (E. V. Malnate, 1971, Proc. Acad. Nat. Sci. Philadelphia, 123: 345–375), where Hallowell worked, nor are they at the National Museum of Natural History in Washington (D. M. Cochran, 1961, Bull. U.S. Natl. Mus., Washington, 220), although the other collections made by the U.S. North Pacific Exploring Expedition are deposited there.

Rana nebulosa E. Hallowell, 1861.

"1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 505. Type locality: Hong Kong, China.

NOTE: See comments under *Rana multistriata* (above).

Rana trivittata E. Hallowell, 1861.

"1860" (1861), Proc. Acad. Nat. Sci. Philadelphia, 12: 504. Type locality: Hong Kong, Chiña.

NOTE: See comments under *Rana multistriata* (above).

LACERTILIA

Phrynocephalus acutirostris J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 144 (see Note). Type locality: Dschyn-cho (=Jinghe Co.), south of Ebi-nor (=Ebinur Hu) and Chuldscha (=Yining Shi, Xinjiang Uygur Autonomous Region), China (see Note).

* See also the footnote on page 132, concerning *Rana nigrotympanica*.

NOTE: The original proposal of *Phrynocephalus acutirostris* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 339–346. G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 28, 34, and plate 2) fixed the type locality as Kuldja (=Yining Shi) by lectotype designation.

Phrynocephalus alpherakii J. von Bedriaga, 1906.

"1905" (1906), Annu. Mus. Zool. Acad. Impér. Sci. St. Pétersbourg, 10: 220 (see Note). Type locality: Chorgos river (=Korgas River, tributary of the upper Ili River, western Xinjiang Uygur Autonomous Region), China.

NOTE: This taxon was re-described by J. von Bedriaga in 1907 (Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 141, 222).

Phrynocephalus Arcellazzii J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 144 (see Note). Type locality: Gaschun (=Qitai) in the Dschungarei (=Junggar Basin, Xinjiang Uygur Autonomous Region), China.

NOTE: Although spelled *Phrynocephalus "Arcellazii"* on page 144, elsewhere in his book Bedriaga spelled the name *Arcellazzii*. The original proposal of *arcellazzii* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 307–311.

Phrynocephalus Blanfordi J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 144 (see Note). Type locality: Desert on the Nan-schan Mountain range (=Nanshan range along Qinghai-Gansu border), China.

NOTE: The original proposal of *Phrynocephalus blanfordi* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 381–389.

Phrynocephalus carinilabris J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 145 (see Note). Type locality: Chuanche river (=Bailong Jiang?), "Chekon" [*sic*] (=Ziko'u or Hsi-ku, now Zhugqu), southeast Gansu Prov., China (see Note).

NOTE: The original proposal of *Phrynocephalus carinilabris* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 412–420. The type locality was spelled correctly as Chekou in Bedriaga's account of *P. pewzowi*.

Phrynocephalus ciliaris J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 143 (see Note). Type locality: Edsin-gol (river)(=Ruo Shui), which flows from Gaotaï and Sutschschou (=Jiuquan Co.), Gansu Prov., into the Zsaj-jan-chaj Lake (=Gaxun Nur, Nei Mongol Autonomous Region), China.

NOTE: The original proposal of *Phrynocephalus ciliaris* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 297–302.

Phrynocephalus Haeckeli J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 142, 237. Type locality: Desert in the vicinity of Mt. Ssalburty (in Saur Mountains southwest of Bulun-tochoï (=Fuhai Co.) in the Tarbagataï (=Tacheng Co.) district, (northern Xinjiang Uygur Autonomous Region), China (see Note).

NOTE: G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 31) stated that the type of *Phrynocephalus haeckeli* was collected on the bank of Ulungur Lake, Xinjiang.

Phrynocephalus helioscopus var. *Cameranoi* J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 142, 243. Type locality: Kuldscha (=Yining Shi, western Xinjiang Uygur Autonomous Region), China.

Phrynocephalus helioscopus var. *orientalis* J. von Bedriaga, 1912.

1912, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(4): 751. Type locality: Tshungaria orientalis (=eastern Junggar Basin) and Urungu River (=Ulungur, Xinjiang Uygur Autonomous Region), China.

Phrynocephalus Isseli J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 141, 229. Type locality: Desert in vicinity of Mt. Ssalburty (in Saur mountains of the Tarbagatay range, Xinjiang Uygur Autonomous Region), China (see Note).

NOTE: The types of *Phrynocephalus isseli* and *P. haeckeli* were collected on the same expedition by G. N. Potanin and possess consecutive catalogue numbers. They may have been collected at the same locality, but Bedriaga's information for *haeckeli* is more detailed. G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 31) stated that the type of *isseli* was collected on the bank of Ulungur Lake, Xinjiang.

Phrynocephalus Pewzowi J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 139, 173. Type locality: Chuan-che river (=Bailong Jiang?), near Chekou (=Ziko'u or Hsi-ku, now Zhugqu), southeast Gansu Prov., China.

Phrynocephalus Putjatai J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 143 (see Note). Type locality: Near Stadt Gui-Duï (=Guide Co.), southeast of Kuku-Nor Lake (=Qinghai Lake), Qinghai Prov., China.

NOTE: The original proposal of *Phrynocephalus putjatai* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 302–307.

Phrynocephalus Reldæ J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 146 (see Note). Type locality: Gomi (Balekun Gomi or Kyikug, near Gong He Co. south of Kuku-nor or Qinghai Lake), Qinghai Prov., China.

NOTE: The original proposal of *Phrynocephalus reldae* was provided in Bedriaga's key, published in 1907, and a full, formal description, including the type locality, was published in 1909 in the third part of the same book, on pages 495–500.

Phrynocephalus Salenskyi J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 141, 213 (see Note). Type locality: Fluss Urungu (=Ulungur River); Uljungur (=Ulungur); Bulun-Tschi (=Fuhai Co.) on the Uljungur (=Ulungur River, Xinjiang Uygur Autonomous Region), China (see Note).

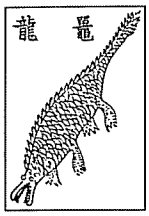
NOTE: The name is sometimes misspelled *Phrynocephalus "Zalenskii"* by Bedriaga (1907: 135, 141, 148), but his footnote on page 213 makes it clear that *salenskyi* is the intended form. G. Peters (1984, Mitt. Zool. Mus. Berlin, 60: 30) fixed the type locality as "Urungu-Fluss" (=Ulungur River) by lectotype designation.

Phrynocephalus Steindachneri J. von Bedriaga, 1907.

1907, Wissensch. Result. Przewalski Central-Asien Reisen, Zool., St. Petersburg, 3(2): 140, 207. Type locality: Gaotaï, northern edge of Nan-schan (=Nanshan mountains), Gansu Prov., China.

DISTRIBUTION

DISTRIBUTION OF CHINESE AMPHIBIANS AND REPTILES



CHINA OCCUPIES A VAST AREA THAT ENCOMPASSES A WIDE RANGE of environments. Accordingly, the herpetofauna is similarly diverse and complex, and its distribution is therefore difficult to comprehend. In this chapter we have organized the available distributional information on the 661 species of Chinese amphibians and reptiles in two ways, as presented in the charts on pages 293–316.

Arrangements of Species

The first arrangement of species is by political unit, that is, the provinces and their minority equivalents, the autonomous regions. These charts also include Hong Kong, the British territory along the Guangdong coast. This first portion of our charts is based upon the species distributions as described in the checklist in this book and also on the detailed and highly useful charts published by Tian, Jiang, and their colleagues (1986). The order of provinces in these charts corresponds approximately to the order of zoogeographical regions (see below), which begins in the northeast of China, extends westward to Xinjiang, then eastward to the coast, and ends in the south of the country.

The second arrangement of species is by zoogeographical division and this information is provided on the same charts. Since there is very little concordance between zoogeographical divisions and political units, these two lists represent quite different arrangements of species. The zoogeographical divisions of China (Figure 37, next page) are not widely known outside the country, so we provide this brief introduction. For surface features, see Figure 38 (opposite page 288).

Zoogeographical Divisions of China

China is divided into seven major zoogeographical regions. These were originally established by Tso-hsin Cheng and Yong-zu Zhang (1959) and later modified by Zhang and Ken-tang Zhao (1978) and Zhang (1979). To a great extent, these zones have been based on the distributions of mammals and birds, although the regions as defined also fairly reflect the distributions of most amphibians and reptiles. As the herpetofauna of China has become better known, the distribution of these vertebrates has also been used to refine and revise the original boundaries of the various regions. In some instances, an analysis of the distributions of amphibians and reptiles has led to certain changes in these boundaries, as in Ningxia, for example (Huang, 1988). These zoogeographical regions, as defined, cover land areas only; therefore, marine species of turtles and snakes are excluded from this

discussion and from the zoogeographical section of our charts. The standard current description of China's zoogeographical divisions was published by Zhang (1979). A popular discussion was published by Shen, Ables, and Xiao (1982).

The names of the seven regions and their subregions are those given by the authors cited above. The acronyms (such as NE and NC) shown below correspond to those used in our map and charts. Representative habitats in these zoogeographical regions are illustrated in a series of color photographs on Plates 45–48.

I. NORTHEASTERN CHINA REGION (NE)

This region is bounded by the Xiao Xingan Ling (Lesser Hsingan Mountain Range) in the north, the Zhangguangcai Ling and Changbai Shan ranges in the east, the Da Xingan Ling (Greater Hsingan Mountain Range) in the west, and Bo Hai (Bohai Sea) to the south. Also included in this region is the northernmost tip

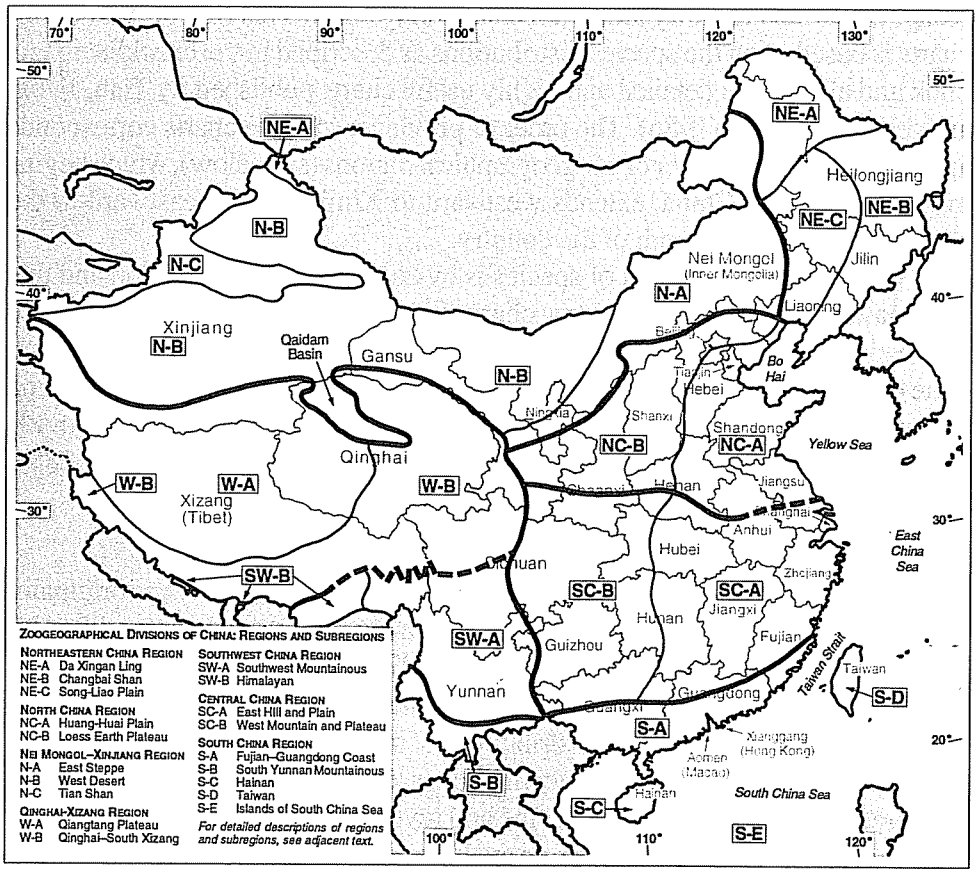


FIGURE 37. Zoogeographical regions of China. China is divided into seven major regions (Zhang, 1979). The dashed lines indicate species mixtures between Oriental and Palaearctic biogeographic realms. Photographs of representative habitats are illustrated on Plates 45–48.

of Xinjiang Uygur Autonomous Region—the Altai Mountains—because of its faunal similarities to the Greater Hsingan Mountain Range.

The climate in this region is cold, temperate, and humid. Among the birds and mammals are several forest species similar to those found in northern Europe and Asia and in North America. Typical species of amphibians and reptiles include (salamanders) *Hynobius leechii, Onychodactylus fischeri*; (frogs) *Bombina orientalis, Bufo stejnegeri, Rana altaica, R. amurensis, R. rugosa*; (lizards) *Lacerta vivipara, Takydromus amurensis, Scincella huanrenensis*; and (snakes) *Amphiesma vibakari, Agkistrodon shedaoensis, A. ussuriensis,* and *Vipera berus.*

The three subdivisions of the Northeastern China Region are:

DA XINGAN LING SUBREGION (NE-A). This subregion includes the entire Da Xingan Ling (Greater Hsingan Mountain Range) and the western part of Xiao Xingan Ling (Lesser Hsingan Mountain Range). Its southeastern boundary begins at Xunke Xian (county) along the Kurbin River, passing westward through the watershed of Xiao Xingan Ling, then through Nenjiang Xian (county) along the southeastern slope of Da Xingan Ling to Butha Qi (a county formerly called Zalantun), then southwestward to the Arxan forest. The northernmost tip of Xinjiang, the Altai mountainous region, is included here.

CHANGBAI SHAN SUBREGION (NE-B). This subregion includes the entire eastern mountainous region of Northeast China, comprising Changbai Shan, the eastern part of Xiao Xingan Ling, Zhangguangcai Ling, Jilin Hada Ling, Laoye Ling, Changbai Shan, and Qian Shan. The southwestern boundary begins at Nenjiang Xian (county) along the southeastern slope of Xiao Xingan Ling, then along the western slope of Zhangguangcai Ling, Jilin Hada Ling, and terminates in the south at the end of the Qian Shan.

SONG-LIAO PLAIN SUBREGION (NE-C). This subregion fits between the two previous subregions, including the plains that belong to the Songhua Jiang and Liao He river system. The western boundary begins at the southern end of Da Xingan Ling, passes through Tongliao Shi (city) to the south, and ends near Jinzhou Shi (city).

II. NORTH CHINA REGION (NC)

The northern boundary of this region extends from about Shanhaiguan (Hebei Province) in the east and from there basically along the Great Wall westward to Zhongning (Ningxia Hui Autonomous Region), then along the Huang He (Yellow River) southwest to Lanzhou (Gansu Province), southwest to the northern slope of Min Shan, and east along a series of mountain ranges (Qin Ling in Shaanxi Province, Funiu Shan in Henan, and Dabie Shan in Anhui) to about Yangzhou (Jiangsu Province), then east toward the coast. The region is bordered by the Bohai and Yellow seas to the east.

The climate of the North China Region is warm, temperate, and relatively dry. Much of the land is cultivated and only a few forests remain, thus wildlife is scarce. *Scutiger liupanensis, Gekko auriverrucosus*, and *Eremias brenchleyi* are the only species of amphibians and reptiles endemic to this region, but others common in this region include (frogs) *Bufo raddei, Kaloula borealis*; (turtles) *Pelodiscus sinensis*; (lizards) *Gekko swinhonis, Eremias argus, E. multiocellata, Eumeces capito*; and (snakes) *Coluber spinalis, Elaphe davidi, E. dione*, and *E. schrenckii*.

The two subdivisions of the North China Region are:

HUANG–HUAI PLAIN SUBREGION (NC-A) and

LOESS EARTH PLATEAU SUBREGION (NC-B).

The boundary between these subregions begins at Shanhaiguan (Hebei Province) and extends from there southwestward, approximately along the Taihang Shan mountain range to its southern end, and then south to the southern boundary of the North China Region.

III. NEI MONGOL–XINJIANG REGION (N)

This region includes Nei Mongol (Inner Mongolia), the Ordos Plateau, the Alashan and Tianshan mountain ranges, and the Tarim, Qaidam, and Junggar basins. It is bordered on the east by the western boundary of the Northeastern China Region. To the south it is bordered by the northern limit of the North China Region in the east, and in the west the boundary extends from Zhongning (Ningxia) along the Huang He south to Lanzhou (Gansu), then northwest along a chain of mountains (Qilian Shan, Altun Shan, and Kunlun Shan) to westernmost Xinjiang Uygur Autonomous Region. There is also an extension of this region southward that includes the Qaidam Pendi (basin) of Qinghai Province.

This is a region of steppes and deserts, including some of the hottest and driest areas on earth. Some of the most well-known animals of this region are mammals, including the Bactrian camel and Przhevalsky's horse. Endemics include (salamanders) *Ranodon sibiricus*; (frogs) *Bufo danatensis–viridis* complex, *Rana asiatica, R. ridibunda, R. tenggerensis*; (turtles) *Testudo horsfieldii*; (lizards) both species of *Alsophylax, Cyrtodactylus elongatus, C. russowii*, both species of *Teratoscincus*, three of *Agama*, twelve of *Phrynocephalus*, seven of *Eremias, Lacerta agilis, Asymblepharus alaicus, Scincella przewalskii*; and (snakes) *Eryx miliaris–tataricus* complex, *Coluber ravergieri*, both species of *Natrix, Psammophis lineolatus*, and *Vipera ursinii*. Many of these species are also found in adjacent parts of Kazakhstan, Russia, and Mongolia.

The Nei Mongol-Xinjiang Region is subdivided into three subregions:

EAST STEPPE SUBREGION (N-A),

WEST DESERT SUBREGION (N-B), and

TIAN SHAN SUBREGION (N-C).


LANDFORMS OF CHINA
50 100 200 300 400 500 miles
0
100 200 400 600 800 km
SCALE
MONGOLIA
INNER MONGOLIA
MANCHURIA
SINKIANG
TIBET
KOREA
JAPAN SEA
YELLOW SEA
EAST CHINA SEA
SOUTH CHINA SEA
Bay of Bengal
TAIWAN (FORMOSA)
HAINAN
LUZON
HOKKAIDO
HONSHU
SHIKOKU
KYUSHU
SAKHALIN I.
LIUCHIU IS.
TARIM BASIN
DZUNGARIAN BASIN
TSAIDAM BASIN
SZECHWAN RED BASIN
ORDOS
TAKLA MAKAN DESERT
GOBI
ALASHAN DESERT
HOPEH
HONAN
SHANTUNG
KWANGTUNG
KWANGSI
YUNNAN
KWEICHOW
SHENSI
SHANSI
KANSU
HUPEH
HUNAN
KIANGSI
CHEKIANG
FUKIEN
KIANGSU
ANHWEI
LIAONING
KIRIN
HEILUNGKIANG
Hungarian Steppe
Lake Baikal
Ulan Bator
Hulun Nur
Dalai Nur
Peking
Tientsin
Shanghai
Nanking
Hankow
Canton
Hong Kong
Macau
Harbin
Vladivostok
Pyongyang
Seoul
Inchon
Tokyo
Sendai
Nagoya
Osaka
Kyoto
Okinawa
Taipei
Calcutta
Bombay
Rangoon
Hanoi
Haiphong
Lhasa
Kashgar
Yarkand
Khotan
Hami
Kuchow
Urumchi
Lanchow
Sian
Chengtu
Chungking
Kunming
Yunnan
Tsingtao
Dairen
Port Arthur
Mukden
Changchun
Kirin
Yingkow
Chinwangtao
Tientsin
Taku
Chefoo
Kunsan
Tsushima
Quelpart I.
Nagasaki
Yaku I.
Wenchow
Foochow
Amoy
Swatow
Formosa Strait
Pescadores
Tainan
Kaohsiung
LanYu
Babuyan Is.
Aparri
Laoag
Haikow
Luichow Pen.
Kaifeng
Loyang
Paotow
Ningsia
Kweisui
Kalgan
Yulin
Kanchow
Nanchang
Changsha
Hengyang
Kweiyang
Wuchow
Nanning
Mengtse
Lashio
Mandalay
Akyab
Chittagong
Dacca
Patna
Benares
Allahabad
Ranchi
Jamshedpur
Damodar R.
Ganges R.
Brahmaputra
Son R.
Tarim R.
Lop Nor
Telli Nor
Orok Nor
Barkol
Turfan
Aksu
Kucha
Khotan
Cherchen
Ak Su
Tumen R.
Yalu R.
Liao R.
Sungari R.
Amur R.
Yangtze
Yellow R.
Hwang Ho
Si Kiang
Min R.
Han R.
Hwai R.
Kiulian
Linhai
Chinkiang
Soochow
Wusih
Wuhu
Anking
Kiukiang
Hwaining
Changteh
Yochow
Hsiangtan
Kweiyang
Kaiyuan
Tsingtao
Tunghai
Lianyungang
Tsinan
Taian
Weihsien
Tsaoyang
Linyu
Chinwang
Kaifeng
Loyang
Sian
Paochow
Kalgan
Kweisui
Ningsia
Lanchow
Tsinghai
Kokonor
Chiayuguan
Hami
Turfan
Urumchi
Kuldja
Issyk Kul
Alma Ata
Aksu
Kashgar
Yarkand
Khotan
Lop Nor
Cherchen
Ak Su
Kuchow
Tsaidam Basin
Dzungarian Basin
Tarim Basin
Takla Makan Desert
Gobi
Alashan Desert
Ordos
Inner Mongolia
Hopeh
Honan
Shensi
Shansi
Kansu
Hupeh
Hunan
Kiangsi
Chekiang
Fukien
Kiangsu
Anhwei
Liaoning
Kirin
Heilungkiang
Kwangtung
Kwangsi
Yunnan
Kweichow
Szechwan Red Basin
Tibet
Sinkiang
Mongolia
Manchuria
Korea
Japan Sea
Yellow Sea
East China Sea
South China Sea
Bay of Bengal
Taiwan (Formosa)
Hainan
Luzon
Hokkaido
Honshu
Shikoku
Kyushu
Sakhalin I.
Liuchiu Is.
Tarbagatai
Black Irtish
Valley of the Lakes
Altai Mts.
Tien Shan
Kunlun Mts.
Nan Shan
Hsing An Ling
Yablonovy Mts.
Stanovoy Range
Sikhote Alin Mts.
Khingan Mts.
Changpai Shan
Kwangsi Chuang
Yunnan Plateau
Kweichow Plateau
Khasi Hills
Assam
Burma
Pakistan
India
East Pakistan
Nepal
Bhutan
Sikkim
Laos
Thailand
Indochina
Malaya
Philippines
Formosa Strait
Pescadores
Tainan
Kaohsiung
Lan Yu
Babuyan Is.
Aparri
Laoag
Luzon
Haikow
Luichow Pen.
Hainan
Haiphong
Hanoi
Vientiane
Chiangmai
Rangoon
Akyab
Chittagong
Dacca
Calcutta
Chilagong
Allahabad
Benares
Patna
Ranchi
Jamshedpur
Damodar R.
Ganges R.
Brahmaputra
Son R.
Tarim R.
Lop Nor
Telli Nor
Orok Nor
Barkol
Turfan
Aksu
Kucha
Khotan
Cherchen
Ak Su
Tumen R.
Yalu R.
Liao R.
Sungari R.
Amur R.
Yangtze
Yellow R.
Hwang Ho
Si Kiang
Min R.
Han R.
Hwai R.
Kiulian
Linhai
Chinkiang
Soochow
Wusih
Wuhu
Anking
Kiukiang
Hwaining
Changteh
Yochow
Hsiangtan
Kweiyang
Kaiyuan
Tsingtao
Tunghai
Lianyungang
Tsinan
Taian
Weihsien
Tsaoyang
Linyu
Chinwang
Kaifeng
Loyang
Sian
Paochow
Kalgan
Kweisui
Ningsia
Lanchow
Tsinghai
Kokonor
Chiayuguan
Hami
Turfan
Urumchi
Kuldja
Issyk Kul
Alma Ata
Aksu
Kashgar
Yarkand
Khotan
Lop Nor
Cherchen
Ak Su
Kuchow
Tsaidam Basin
Dzungarian Basin
Tarim Basin
Takla Makan Desert
Gobi
Alashan Desert
Ordos
Inner Mongolia
Hopeh
Honan
Shensi
Shansi
Kansu
Hupeh
Hunan
Kiangsi
Chekiang
Fukien
Kiangsu
Anhwei
Liaoning
Kirin
Heilungkiang
Kwangtung
Kwangsi
Yunnan
Kweichow
Szechwan Red Basin
Tibet
Sinkiang
Mongolia
Manchuria
Korea
Japan Sea
Yellow Sea
East China Sea
South China Sea
Bay of Bengal
Taiwan (Formosa)
Hainan
Luzon
Hokkaido
Honshu
Shikoku
Kyushu
Sakhalin I.
Liuchiu Is.
Tarbagatai
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Valley of the Lakes
Altai Mts.
Tien Shan
Kunlun Mts.
Nan Shan
Hsing An Ling
Yablonovy Mts.
Stanovoy Range
Sikhote Alin Mts.
Khingan Mts.
Changpai Shan
Kwangsi Chuang
Yunnan Plateau
Kweichow Plateau
Khasi Hills
Assam
Burma
Pakistan
India
East Pakistan
Nepal
Bhutan
Sikkim
Laos
Thailand
Indochina
Malaya
Philippines
48°
44°
40°
36°
32°
28°
24°
20°
16°
84°
88°
92°
96°
100°
104°
108°
112°
116°
120°
124°
128°
132°

FIGURE 38 (overleaf). Landform map of China and surrounding regions. This relief map, drafted by Erwin Raisz, depicts the land surface features of China and adjacent areas. The terminology is current for 1955, when the map was completed, and thus the names are transliterated according to the Wade-Giles system. Sikang and Jehol provinces, both shown on this map, were incorporated into adjacent provinces in 1955. The scale is in kilometers and miles, but elevations are given in feet only.

The boundary between the first two subregions lies along a mountain chain (Lang Shan in Nei Mongol and the Helan Shan between Nei Mongol and Ningxia). The third subregion comprises the entire Tian Shan mountain region of Xinjiang.

IV. QINGHAI-XIZANG REGION (W)

This region consists of the provinces of Qinghai, Xizang (Tibet), and northwestern Sichuan. It is bounded to the north by the western part of the Nei Mongol–Xinjiang Region and to the east by the North China Region and Southwest China Region (see below). It includes the whole of the Qinghai-Xizang Plateau, where the average elevation is about 4,000 meters.

The climate is cold and dry, but there are abundant lakes and marshes. Typical mammals include the yak and the Tibetan wild ass, and birds include the snow pigeon and several species of snow finches. Endemic amphibians and reptiles include (frogs) *Scutiger maculatus, S. nyingchiensis, Altirana parkeri*; (lizards) *Cyrtodactylus tibetanus, Agama sacra,* four species of *Phrynocephalus, Scincella ladacensis*; and (snakes) *Thermophis baileyi.*

The region is subdivided into two subregions:

QIANGTANG PLATEAU SUBREGION (W-A). This subregion comprises the northwestern part of the Qinghai-Xizang Region, with elevations mostly above 4,000 meters.

QINGHAI-SOUTH XIZANG SUBREGION (W-B). This subregion includes the Qinghai Plateau and the Yarlung Zangbo Jiang basin in southern Xizang.

V. SOUTHWEST CHINA REGION (SW)

This region includes mainly the so-called Hengduan Shan mountainous area of southwestern Sichuan and northern Yunnan provinces, as well as the southern slope of the Himalayan Mountains. The high mountains have alpine steppe habitats and the valleys include tropical and subtropical environments. Elephants and macaques live in the valleys and the takin and giant panda occur in the Hengduan Mountains.

Endemic amphibians and reptiles include (salamanders) *Batrachuperus yenyuanensis*, three species of *Cynops*, two of *Tylototriton*; (frogs) *Bombina maxima, Atympanophrys shapingensis, Leptolalax alpinus*, three species of *Megophrys,* nine of *Oreolalax,* seven of *Scutiger, Vibrissaphora ailaonica*, two *Bufo*, five *Amolops*, three *Micrixalus, Nanorana ventripunctata*, thirteen species of *Rana, Philautus medogensis, Polypedates nigropunctatus,* six *Rhacophorus*, two *Theloderma, Calluella yunnanensis, Kaloula verrucosa*; (turtles) *Cuora yunnanensis*; (lizards) two species of *Cyrtodactylus, Agama tuberculata,* two *Calotes*, four *Japalura, Oriocalotes paulus, Ptyctolaemus gularis, Eumeces tunganus*, six *Scincella, Sphenomorphus courcyanus*; and (snakes) *Achalinus*

meiguensis, four species of *Amphiesma, Blythia reticulata, Calamaria yunnanensis, Dendrelaphis gorei,* two *Elaphe*, two *Oligodon, Opisthotropis praemaxillaris,* two *Rhabdophis,* both species of *Trachischium, Zaocys nigromarginatus, Agkistrodon monticola,* and three *Trimeresurus*.

The Southwest China Region is subdivided into two areas:

SOUTHWEST MOUNTAINOUS SUBREGION (SW-A). This subregion consists of the main part of the Hengduan Shan region, including eastern Xizang (Tibet), southwestern Sichuan, and northwestern Yunnan provinces.

HIMALAYAN SUBREGION (SW-B). This subregion consists of the southern slope of the Himalayas, including the so-called "Bent Area" of the great river bend of Yarlung Zangbo Jiang (a river known further downstream as the Brahmaputra) adjacent to northeastern India, and two tiny isolated areas: Yadong (Chomo) between Bhutan and Sikkim (India), and Nyalam, which is adjacent to the central northern border of Nepal.

VI. CENTRAL CHINA REGION (SC)

This large region encompasses much of southeastern China. It is bordered to the north by the North China Region, to the west by the Southwest China Region, and to the south by the South China Region. The Central China Region includes the drainage basin of the middle and lower valleys of the Chang Jiang (Yangtze River). The boundary between the North and Central regions corresponds to that between the Palaearctic and Oriental continental biogeographic realms.

This region harbors a large number of amphibian and reptilian species, and many are endemic to the zone. Endemics include (salamanders) two species of *Hynobius, Liua shihi, Pachyhynobius shangchengensis, Ranodon tsinpaensis, Echinotriton chinhaiensis, Pachytriton brevipes,* three of *Paramesotriton*; (frogs) *Bombina fortinuptialis, Leptolalax liui*, four *Megophrys,* three *Oreolalax,* three *Scutiger,* three of the four *Vibrissaphora,* two *Hyla,* two *Amolops*, twelve *Rana,* two *Philautus,* two *Polypedates, Rhacophorus yaoshanensis, Theloderma leporosa, Kaloula rugifera, Microhyla mixtura*; (turtles) *Chinemys megalocephala,* three *Cuora, Mauremys iversoni*; (lizards) *Gekko taibaiensis, Calotes brevipes,* three *Japalura, Shinisaurus crocodilurus, Platyplacopus sylvaticus,* two *Eumeces, Scincella schmidti*; (snakes) two *Achalinus, Amphiesma metusia,* two *Oligodon, Opisthotropis guangxiensis,* two *Pareas, Trimeresurus mangshanensis*; and (crocodilians) *Alligator sinensis*.

The Central China Region is subdivided into two subregions:

EAST HILL AND PLAIN SUBREGION (SC-A) and

WEST MOUNTAIN AND PLATEAU SUBREGION (SC-B).

The boundary separating the two extends between a point on the northern edge of the region at 113°E and a point on the southern edge at 110°E.

VII. SOUTH CHINA REGION (S)

This region encompasses the area south of the Tropic of Cancer (23°30'N), but extends farther north at the eastern and western ends of this region. Included are the southern portions of Yunnan, Guangxi, and Guangdong provinces, as well as Hong Kong, southern Fujian, and the provinces of Hainan and Taiwan and other islands in the South China Sea. The northern part of this region is subtropical and the south is tropical. The region contains an extraordinary variety of species.

Among amphibians and reptiles, the number of endemic species is large. Indeed, representatives of many genera and several families are found only in this part of China. Those genera that are endemic to this region are marked with an asterisk (*). The endemic species include (caecilians) **Ichthyophis bannanicus*; (salamanders) two species of *Hynobius* (both in Taiwan), *Cynops orphicus*, *Echinotriton andersoni*, two *Paramesotriton*; (frogs) **Leptobrachium* (both Chinese species), *Leptolalax ventripunctatus*, five *Megophrys*, **Ophryophryne* (both species), three *Bufo*, **Pelophryne scalpta*, five *Amolops, Micrixalus liui, Occidozyga martensii*, thirteen *Rana*, **Buergeria* (all three species), three *Chirixalus*, six *Philautus, Polypedates feae*, four *Rhacophorus*, **Kalophrynus* (both species), *Kaloula pulchra*, two *Microhyla*; (turtles) *Chinemys nigricans, Cistoclemmys galbinifrons, Cuora trifasciata, *Cyclemys dentata, Ocadia philippeni, Sacalia pseudocellata, *Indotestudo elongata, *Manouria impressa*; (lizards) **Gehyra mutilata*, two *Gekko*, **Goniurosaurus lichtenfelderi*, four *Hemidactylus, Hemiphyllodactylus typus, *Lepidodactylus* (both species), *Acanthosaura armata*, three *Calotes, Draco blanfordii,* five *Japalura*, **Leiolepis reevesii*, **Physignathus cocincinus,* two *Ophisaurus*, **Varanus* (both species), *Dibamus bogadeki,* four *Takydromus*, **Emoia atrocostata, Eumeces quadrilineatus, *Mabuya* (all three species), **Riopa bowringii*, two *Scincella, Sphenomorphus taiwanensis*, three *Tropidophorus*; and (snakes) *Ramphotyphlops albiceps, Typhlops koshunensis, *Acrochordus granulatus, Xenopeltis unicolor, *Cylindrophis ruffus*, three *Achalinus,* two *Amphiesma*, **Atretium yunnanensis*, two *Boiga, Cyclophiops doriae*, two *Dendrelaphis, Dinodon rosozonatum, Elaphe moellendorffi, Enhydris bennettii,* four *Oligodon,* three *Ophites,* three *Opisthotropis*, four *Pareas*, two *Plagiopholis*, three *Rhabdophis*, **Rhabdops bicolor, Zaocys carinatus, Bungarus fasciatus, Calliophis sauteri, Trimeresurus gracilis,* and *Vipera russellii.*

The South China Region is subdivided into five subregions:

FUJIAN-GUANGDONG COAST SUBREGION (S-A),
SOUTH YUNNAN MOUNTAINOUS SUBREGION (S-B),
HAINAN SUBREGION (S-C),
TAIWAN SUBREGION (S-D), and
ISLANDS OF SOUTH CHINA SEA SUBREGION (S-E).

The boundary between the first two subregions is the Yuan Jiang (upper Red River) in southern Yunnan Province. Xisha Qundao (Paracel Islands), just south of Hainan Island, and Nansha Qundao (the Spratley Islands and nearby scattered islets lying just north of Borneo) are included in the last subregion.

Distribution Charts

The charts on pages 293–316 provide a detailed record of the distribution of Chinese amphibians and reptiles, arranged in two ways. The first part of each chart is organized by political units and the second part by zoogeographical division. Both are listed in approximately the same sequence, beginning in Northeast China and extending westward to Xinjiang, then eastward to the coast, and finally ending in the south of the country.

A plus sign (+) indicates the presence of a species and a minus sign (–) indicates the apparent absence of a species in a given province or zoogeographical zone. The zoogeographical zones are described in the preceding paragraphs and their acronyms are listed below. Since these zoogeographical regions cover land areas only, marine turtles and snakes are omitted from this portion of the charts.

Acronyms for Zoogeographical Regions of China

NE NORTHEASTERN CHINA REGION
NE-A Da Xingan Ling Subregion
NE-B Changbai Shan Subregion
NE-C Song–Liao Plain Subregion

NC NORTH CHINA REGION
NC-A Huang–Huai Plain Subregion
NC-B Loess Earth Plateau Subregion

N NEI MONGOL–XINJIANG REGION
N-A East Steppe Subregion
N-B West Desert Subregion
N-C Tian Shan Subregion

W QINGHAI-XIZANG REGION
W-A Qiangtang Plateau Subregion
W-B Qinghai–South Xizang Subregion

SW SOUTHWEST CHINA REGION
SW-A Southwest Mountainous Subregion
SW-B Himalayan Subregion

SC CENTRAL CHINA REGION
SC-A East Hill and Plain Subregion
SC-B West Mountain and Plateau Subregion

S SOUTH CHINA REGION
S-A Fujian–Guangdong Coast Subregion
S-B South Yunnan Mountainous Subregion
S-C Hainan Subregion
S-D Taiwan Subregion
S-E Islands of South China Sea Subregion

For a map showing the boundaries of these regions and subregions, see page 286.

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
GYMNOPHIONA																																															
ICHTHYOPHIIDAE																																														ICHTHYOPHIIDAE
Ichthyophis bannanicus	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
CAUDATA																																														
HYNOBIIDAE																																														HYNOBIIDAE
Batrachuperus karlschmidti	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-
B. pinchonii	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	-	-	-	-	-
B. tibetanus	106	-	-	-	-	-	-	-	+	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-
B. yenyuanensis	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
Hynobius amjiensis	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
H. chinensis	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
H. formosanus	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
H. leechii	107	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H. mantchuricus	107	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H. sonani	107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Liua shihi	107	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Onychodactylus fischeri	108	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pachyhynobius shangchengensis	108	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
Ranodon sibiricus	108	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
R. tsinpaensis	109	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Salamandrella keyserlingii	109	+	+	+	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-
CRYPTOBRANCHIDAE																																														CRYPTOBRANCHIDAE
Andrias davidianus	110	-	-	-	+	-	+	+	+	-	-	+	-	+	-	+	-	+	+	+	+	+	+	+	+	?	+	-	-	+	-	-	-	+	-	-	-	+	+	-	+	+	+	-	?	-
SALAMANDRIDAE																																														SALAMANDRIDAE
Cynops chenggongensis	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
C. cyanurus	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
C. orientalis	111	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-
C. orphicus	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
C. wolterstorffi	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SC A	SC B	S A	S B	S C	S D	S E
CAUDATA																																															
SALAMANDRIDAE continued																																														SALAMANDRIDAE
Echinotriton andersoni	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
E. asperrimus	112	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	+	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-
E. chinhaiensis	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
Pachytriton brevipes	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
P. labiatus	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
Paramesotriton caudopunctatus	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
P. chinensis	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
P. fuzhongensis	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
P. guangxiensis	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
P. hongkongensis	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Tylototriton kweichowensis	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
T. taliangensis	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
T. verrucosus	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-
SALIENTIA																																													
DISCOGLOSSIDAE																																													DISCOGLOSSIDAE
Bombina fortinuptialis	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
B. maxima	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
B. microdeladigitora	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
B. orientalis	115	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
PELOBATIDAE																																													PELOBATIDAE
Atympanophrys shapingensis	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
Brachytarsophrys carinensis	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	+	-	-
Leptobrachium chapaense	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
L. hasseltii	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Leptolalax alpinus	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
L. liui	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
L. pelodytoides	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	+	+	+	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
L. ventripunctatus	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SALIENTIA																																															
PELOBATIDAE continued																																														PELOBATIDAE
Megophrys boettgeri	118	-	-	-	-	-	-	?	?	-	-	?	-	-	-	+	-	-	-	+	-	+	+	+	+	-	+	-	-	+	-	-	-	?	-	-	-	-	-	-	+	?	+	-	-	-	-
M. brachykolos	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	?	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
M. giganticus	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
M. glandulosa	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
M. kempii	118	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
M. kuatunensis	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
M. lateralis	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
M. mangshanensis	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
M. minor	119	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	+	+	+	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	+	+	+	-	-	-
M. nankiangensis	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
M. omeimontis	119	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	+	-	-	-
M. pachyproctus	120	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
M. palpebralespinosa	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
M. parva	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
M. spinatus	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
Ophryophryne microstoma	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
O. pachyproctus	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
Oreolalax chuanbeiensis	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
O. granulosus	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. jingdongensis	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. lichuanensis	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
O. major	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. omeimontis	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. pingii	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. popei	122	-	-	-	-	-	-	-	?	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	?	-	-	-	-	-
O. rhodostigmatus	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
O. rugosus	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. schmidti	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. xiangchengensis	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
Scutiger alticola	123	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
S. boulengeri	123	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-
S. chintingensis	123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
S. glandulatus	123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SALIENTIA																																															
PELOBATIDAE continued																																														PELOBATIDAE
Scutiger gongshanensis	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
S. liupanensis	124	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
S. maculatus	124	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
S. mammatus	124	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
S. ningshanensis	124	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
S. nyingchiensis	124	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
S. pingwuensis	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
S. ruginosus	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
S. sikimmensis	125	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
S. tuberculatus	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
S. weigoldi	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Vibrissaphora ailaonica	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
V. boringii	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
V. leishanensis	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
V. liui	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
BUFONIDAE																																													BUFONIDAE
Bufo ailaoanus	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
B. andrewsi	127	-	-	-	-	-	+	-	+	-	-	-	-	-	-	+	+	+	+	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-
B. bankorensis	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
B. burmanus	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
B. cryptotympanicus	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-
B. danatensis	127	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
B. galeatus	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
B. gargarizans	128	+	+	+	+	+	+	+	+	+	-	+	-	+	-	+	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+	-	-	-	+	-	+	+	-	-
B. himalayanus	128	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
B. melanostictus	128	-	-	-	-	-	-	-	-	-	?	-	-	-	-	+	+	+	-	-	-	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	-
B. minshanicus	128	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-
B. raddei	128	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	+	-	-	-	-	-	-
B. stejnegeri	129	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B. tibetanus	129	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
B. tuberculatus	129	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
B. viridis	129	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pelophryne scalpta	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SALIENTIA																																																
HYLIDAE																																																HYLIDAE
Hyla annectans	131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	+	-	+	-	-	-
H. chinensis	131	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	+	-
H. japonica	131	+	+	+	+	-	+	-	+	+	-	-	-	-	-	+	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-	+	+	-	-	-	-
H. sanchiangensis	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
H. simplex	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-
H. tsinlingensis	132	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
H. zhaopingensis	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
RANIDAE																																															RANIDAE
Altirana parkeri	132	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	?	+	-	-	-	-	-	-	-	-	-
Amolops afghanus	133	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-
A. chunganensis	133	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	+	+	-	-	-	-	-	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-
A. daiyunensis	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
A. granulosus	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
A. hainanensis	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
A. hongkongensis	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
A. kangtingensis	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
A. liangshanensis	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
A. lifanensis	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
A. loloensis	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
A. macrorhynchus	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
A. mantzorum	135	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-
A. monticola	135	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
A. nasicus	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
A. ricketti	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	+	+	+	+	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-
A. torrentis	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
A. viridimaculatus	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-
A. wuyiensis	135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
Micrixalus borealis	136	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
M. liui	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
M. reticulatus	136	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
M. xizangensis	136	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
Nanorana pleskei	137	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-
N. ventripunctata	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi
SALIENTIA																														
RANIDAE continued																														
Occidozyga lima	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	+	-	+	+	+	+
O. martensii	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	+
Rana adenopleura	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	+	+	+	+	+	+	+	+	+
R. altaica	138	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. amurensis	138	+	+	+	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. andersonii	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	+	-
R. anlungensis	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
R. arnoldi	139	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
R. asiatica	139	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. blanfordii	139	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. boulengeri	140	-	-	-	-	-	-	+	+	-	-	+	-	-	-	+	-	+	+	-	-	-	-	+	-	-	-	-	-	+
R. cancrivora	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+
R. catesbeiana (introduced)	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-
R. chaochiaoensis	140	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
R. chensinensis	140	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-
R. chevronta	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. conaensis	141	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. daunchina	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. exilispinosa	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
R. feae	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	-	-
R. fragilis	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
R. gerbillus	142	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. grahami	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
R. guentheri	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
R. hejiangensis	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. huanrenensis	143	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. japonica	143	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	+	+	+	-	-	-	-
R. jiulongensis	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
R. kuangwuensis	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. kuhlii	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	+	+	+	+	-	-	-	+
R. latouchii	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	+	-	-	-	-
R. liebigii	144	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. limnocharis	144	-	-	-	-	+	+	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
R. liui	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
R. livida	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	+	-	+	+	-	+	+	+	+
R. longicrus	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-

Zoogeographical Regions																														
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A	B	C	A	B		A	B	C	A	B		A	B	A	B	A	B	C	D	E										
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FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SALIENTIA																																															
RANIDAE continued																																														RANIDAE
Rana lungshengensis	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
R. macrodactyla	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
R. maculosa	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
R. margaretae	145	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-
R. minima	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
R. nigrolineata	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
R. nigromaculata	146	+	+	+	+	+	+	+	+	+	+	+	-	+	-	+	+	+	+	+	+	+	+	+	+	-	+	?	-	-	-	+	+	+	-	-	+	+	-	-	+	+	+	-	-	-
R. nigrovittata	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
R. plancyi	146	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	-	-	+	-
R. pleuraden	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
R. polunini	147	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
R. quadranus	147	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
R. ridibunda	147	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. rugosa	147	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R. rugulosa	148	-	-	-	-	-	?	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-
R. sanguinea	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	?	-	?	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
R. sangzhiensis	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
R. sauteri	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-
R. schmackeri	149	-	-	-	-	-	+	-	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	?	-	+	+	-	-	-	-
R. shini	149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
R. shuchinae	149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
R. spinosa	149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
R. spinulosa	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
R. swinhoana	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-
R. taipehensis	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-
R. taiwaniana	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
R. tenggerensis	150	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
R. tiannanensis	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
R. tientaiensis	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
R. tormotus	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
R. unculuanus	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
R. versabilis	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	-	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-
R. weiningensis	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
R. wuchuanensis	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
R. yunnanensis	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SALIENTIA																																															
RHACOPHORIDAE																																														RHACOPHORIDAE
Buergeria japonica	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
B. oxycephala	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
B. robusta	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Chirixalus doriae	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-
C. eiffingeri	152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
C. idiootocus	153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
C. vittatus	153	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-	+	+	-
Philautus albopunctatus	153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
P. andersoni	153	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
P. cavirostris	153	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
P. gracilipes	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
P. jinxiuensis	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
P. longchuanensis	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
P. medogensis	154	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
P. menglaensis	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
P. ocellatus	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
P. palpebralis	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
P. rhododiscus	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
P. romeri	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
Polypedates chenfui	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
P. dennysi	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	?	+	-	+	-	+	+	+	+	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
P. dugritei	155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	-	-
P. feae	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
P. hungfuensis	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
P. megacephalus	156	-	-	-	-	-	-	-	+	-	-	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-
P. mutus	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-
P. nigropunctatus	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
P. omeimontis	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-
Rhacophorus bipunctatus	157	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
R. gongshanensis	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
R. maximus	157	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E	
SALIENTIA																																																	
RHACOPHORIDAE continued																																															RHACOPHORIDAE
Rhacophorus moltrechti	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
R. naso	158	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
R. prasinatus	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
R. reinwardtii	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	
R. rhodopus	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	
R. taipeianus	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
R. translineatus	158	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
R. tuberculatus	159	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
R. verrucopus	159	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
R. yaoshanensis	159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	
Theloderma asperum	159	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
T. leporosa	159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	
T. moloch	160	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
MICROHYLIDAE																																														MICROHYLIDAE
Calluella yunnanensis	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
Kalophrynus menglienicus	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	
K. pleurostigma	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	
Kaloula borealis	161	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	-	-	-	-	-	
K. pulchra	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	
K. rugifera	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	
K. verrucosa	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	
Microhyla berdmorei	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	
M. butleri	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	-	-	
M. heymonsi	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	+	+	+	+	+	+	+	-	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	-	
M. inornata	163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	
M. mixtura	163	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	
M. ornata	163	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	-	
M. pulchra	163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	+	-	+	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi
TESTUDINES																														
PLATYSTERNIDAE																														
Platysternon megacephalum	164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	+	+	+	+	+	-	+	+	+	+
EMYDIDAE																														
Chinemys megalocephala	164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	+
C. nigricans	165	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+
C. reevesii	165	-	-	-	+	+	+	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+
Cistoclemmys flavomarginata	165	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	+	+	+	+	-	+	+	+	-	+	-	+
C. galbinifrons	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+
Cuora aurocapitata	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
C. mccordi	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	?
C. pani	167	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
C. trifasciata	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+
C. yunnanensis	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
C. zhoui	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+
Cyclemys dentata	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+
Geoemyda spengleri	168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	+
Mauremys iversoni	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	?	-	-	-	-	-	-	+	-	-	-	-	-
M. mutica	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	-	-	+	+	+	-	+	+
Ocadia philippeni	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
O. sinensis	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	+	+	+
Pyxidea mouhotii	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	+	+
Sacalia bealei	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	+	-	+	-	+	+	+	+
S. pseudocellata	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
S. quadriocellata	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	+	+
TESTUDINIDAE																														
Indotestudo elongata	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Manouria impressa	171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	+	+	+
Testudo horsfieldii	172	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Zoogeographical Regions																														
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A	B	C	A	B	A	B	C	A	B	A	B	A	B	A	B	C	D	E												
PLATYSTERNIDAE																														
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EMYDIDAE																														
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FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions
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TESTUDINES																															
CHELONIIDAE																															
Caretta caretta	172	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	-	+	+	marine
Chelonia mydas	173	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	+	+	+	marine
Eretmochelys imbricata	173	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	-	+	+	marine
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DERMOCHELYIDAE																															
Dermochelys coriacea	174	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	+	-	+	marine
TRIONYCHIDAE																															
Palea steindachneri	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	+	+	- - - - - - - - - - - - - - + + + + - -
Pelochelys bibroni	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	+	-	+	-	+	+	- - - - - - - - - - - - - + - + + + - -
Pelodiscus sinensis	175	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	- + + + + + + - - - + - + + + ? + + -
Rafetus swinhoei	177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	- - - - - - - - - - - - - + - - + - - -
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A. przewalskii	178	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- - - - - - + - - - - - - - - - - -
Cosymbotus platyurus	178	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	- - - - - - - - - - - + - - + - - + -
Cyrtodactylus elongatus	179	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- - - - - - + - - - - - - - - - - -
C. khasiensis	179	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- - - - - - - - - - + - - - - - - -
C. medogensis	179	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- - - - - - - - - - + - - - - - - -
C. russowii	179	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	- - - - - - + - - - - - - - - - - -
C. tibetanus	180	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- - - - - - - - - + - - - - - - -
Gehyra mutilata	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	+	+	-		- - - - - - - - - - - - - - + + + + +

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
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GEKKONIDAE continued																																													GEKKONIDAE	
Gekko auriverrucosus	180	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
G. chinensis	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
G. gecko	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	?	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	?	-
G. hokouensis	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	+	-
G. japonicus	181	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	+	+	-	-	-	-	+	-	-	-	+	+	-	-	-	-	-	+	+	+	-	-	-	-
G. kikuchii	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
G. subpalmatus	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	+	+	-	+	-	+	-	-	+	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-
G. swinhonis	182	-	-	+	+	+	+	+	+	-	+	+	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-	+	+	-	-	-	-	-
G. taibaiensis	182	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
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Hemidactylus bowringii	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-
H. brookii	183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-
H. frenatus	184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
H. garnotii	184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-
H. stejnegeri	184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
Hemiphyllodactylus typus	184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
H. yunnanensis	185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-
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L. yami	185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
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T. scincus	186	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
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Acanthosaura armata	186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
A. lepidogaster	186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	+	-	+	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-
Agama himalayana	187	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
A. sacra	187	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
A. sanguinolenta	187	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
A. stoliczkana	187	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
A. tuberculata	187	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
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AGAMIDAE continued																																														AGAMIDAE
Calotes brevipes	188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
C. emma	188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
C. jerdoni	188	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-
C. kakhienensis	188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
C. kingdonwardi	189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
C. medogensis	189	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
C. microlepis	189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-
C. mystaceus	189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
C. versicolor	189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
Draco blanfordii	189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
D. maculatus	190	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	-	-
Japalura andersoniana	190	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
J. brevipes	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
J. dymondi	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
J. flaviceps	190	-	-	-	-	-	-	-	+	-	-	+	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-
J. grahami	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
J. kumaonensis	191	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
J. makii	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
J. micangshanensis	191	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
J. polygonata	191	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
J. splendida	191	-	-	-	-	-	+	-	-	-	-	+	-	-	-	+	+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-
J. swinhonis	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
J. szechwanensis	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
J. varcoae	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
J. yunnanensis	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Leiolepis reevesii	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
Oriocalotes paulus	193	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
Phrynocephalus albolineatus	193	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P. axillaris	194	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P. erythrurus	194	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P. forsythii	194	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E	
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Phrynocephalus frontalis	194	-	-	-	+	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	+	-	-	-	-	-	-
P. grumgrzimailoi	195	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
P. guentheri	195	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
P. guttatus	195	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
P. helioscopus	195	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-
P. hongyuanensis	196	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
P. koslowi	196	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
P. ludovici	196	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
P. mystaceus	196	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
P. przewalskii	196	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
P. theobaldi	197	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-
P. versicolor	197	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
P. vlangalii	197	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
Physignathus cocincinus	198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
Ptyctolaemus gularis	199	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
ANGUIDAE																																														ANGUIDAE
Ophisaurus formosensis	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
O. gracilis	199	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-	-
O. hainanensis	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
O. harti	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	+	+	-	+	+	+	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	+	-
SHINISAURIDAE																																														SHINISAURIDAE
Shinisaurus crocodilurus	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
VARANIDAE																																														VARANIDAE
Varanus irrawadicus	201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
V. salvator	201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	?	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	?	-
DIBAMIDAE																																														DIBAMIDAE
Dibamus bogadeki	201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
D. bourreti	201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E	
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E. arguta	202	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-
E. brenchleyi	202	-	-	-	+	+	+	+	-	+	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. buechneri	202	-	-	-	-	-	-	-	-	-	-	-	+	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
E. grammica	203	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
E. multiocellata	203	-	-	+	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
E. przewalskii	203	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
E. quadrifrons	204	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
E. velox	204	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
E. vermiculata	204	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
Lacerta agilis	205	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
L. vivipara	205	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Platyplacopus intermedius	205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-
P. kuehnei	205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	+	-
P. sylvaticus	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
Takydromus amurensis	206	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T. formosanus	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
T. hsuehshanensis	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
T. sauteri	207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
T. septentrionalis	207	-	+	-	-	-	+	-	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	+	+	-	+	-	-	+	-	?	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	-
T. sexlineatus	207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	+	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
T. stejnegeri	208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T. wolteri	208	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	-	+	-	+	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	-
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Asymblepharus alaicus	208	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
Ateuchosaurus chinensis	208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-
Emoia atrocostata	209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Eumeces capito	209	-	-	+	+	-	-	-	+	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-
E. chinensis	210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-	-
E. elegans	210	-	-	-	+	-	+	-	+	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-	-	-	+	-	-	-	-	-	-	+	+	+	+	+	+	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
LACERTILIA																																																
SCINCIDAE continued																																															SCINCIDAE
Eumeces liui	211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
E. popei	211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
E. quadrilineatus	211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
E. tunganus	211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
Mabuya longicaudata	211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-
M. multicarinata	211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
M. multifasciata	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-
Riopa bowringii	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Scincella barbouri	213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	?	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
S. doriae	213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
S. formosensis	213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
S. himalayana	214	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	?	-	-	+	-	-	-	-	-	-
S. huanrenensis	214	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. ladacensis	214	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. modesta	214	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	+	+	-	-	-	-
S. monticola	215	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	?	-	-	-	-	-
S. potanini	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
S. przewalskii	215	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. reevesii	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
S. schmidti	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
S. sikimmensis	215	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
S. tsinlingensis	216	-	-	-	-	-	-	-	+	-	+	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	+	-	-	-	-	-	-
Sphenomorphus courcyanus	216	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
S. incognitus	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	+	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-
S. indicus	216	-	-	-	-	-	+	-	+	-	-	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	-
S. maculatus	217	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
S. taiwanensis	217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Tropidophorus berdmorei	217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
T. guangxiensis	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
T. hainanus	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
T. sinicus	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
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TYPHLOPIDAE																																															TYPHLOPIDAE
Ramphotyphlops albiceps	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
R. braminus	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	+	+	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-
Typhlops diardii	219	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-
T. koshunensis	219	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
ACROCHORDIDAE																																														ACROCHORDIDAE
Acrochordus granulatus	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
XENOPELTIDAE																																														XENOPELTIDAE
Xenopeltis hainanensis	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	-
X. unicolor	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
UROPELTIDAE																																															UROPELTIDAE
Cylindrophis ruffus	221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
BOIDAE																																															BOIDAE
Eryx miliaris and *E. tataricus*	221	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
Python molurus	222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
COLUBRIDAE																																															COLUBRIDAE
Achalinus ater	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
A. formosanus	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
A. hainanus	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
A. jinggangensis	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
A. meiguensis	223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
A. niger	224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
A. rufescens	224	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-
A. spinalis	224	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-
Ahaetulla prasina	225	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-	-	+	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-
Amphiesma atemporalis	225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
A. bitaeniata	225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
A. boulengeri	225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	+	-	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SERPENTES																																															
COLUBRIDAE continued																																															
Amphiesma craspedogaster	226	-	-	-	-	-	+	+	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	+	-	+	-	-	+	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-
A. johannis	226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
A. khasiensis	226	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
A. metusia	226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
A. miyajimae	226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-
A. modesta	227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A. octolineata	227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-
A. optata	227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
A. parallela	227	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
A. platyceps	228	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
A. popei	228	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
A. sauteri	228	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	+	-
A. stolata	228	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	-	+	-	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-
A. venningi	228	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
A. vibakari	229	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphiesmoides ornaticeps	229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-
Atretium yunnanensis	229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
Blythia reticulata	230	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
Boiga cyanea	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
B. kraepelini	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	+	+	+	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	-	+	+	-
B. multomaculata	231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
B. nigriceps	231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
Calamaria pavimentata	231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	+	-	-	+	+	+	-	+	+	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	-
C. septentrionalis	232	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-
C. yunnanensis	232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
Chrysopelea ornata	232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-
Coluber ravergieri	232	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-
C. spinalis	233	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NE C	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SERPENTES																																															
COLUBRIDAE continued																																														COLUBRIDAE
Cyclophiops doriae	233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
C. major	233	-	-	-	-	-	+	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	+	-
C. multicinctus	233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-
Dendrelaphis gorei	234	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
D. pictus	234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
D. subocularis	234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
Dinodon flavozonatum	234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	+	+	+	-	+	-	+	+	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-
D. rosozonatum	235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
D. rufozonatum	235	+	+	+	+	+	+	+	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	+	+	+	-	-	-	+	-	+	+	+	-	+	-	-
D. septentrionalis	235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-
Elaphe bimaculata	236	-	-	-	+	+	+	-	+	-	-	-	-	-	-	+	-	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	-	-	-	-
E. carinata	236	-	-	-	+	-	+	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	-	-	+	-	-	-	-	+	-	-	-	-	+	-	+	+	+	-	-	+	-
E. davidi	236	+	+	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
E. dione	236	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	-	+	-	-	-	-	-	-	-
E. frenata	237	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-
E. hodgsonii	237	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
E. mandarinus	237	-	-	-	+	-	-	-	+	-	-	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-
E. moellendorffi	237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
E. perlacea	237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
E. porphyracea	238	-	-	-	-	-	+	-	+	-	-	+	-	-	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-
E. prasina	238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
E. radiata	238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
E. rufodorsata	239	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	+	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	+	+	-	-	-	-	-
E. schrenckii	239	+	+	+	+	+	-	+	+	+	-	+	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	-	-	-	-	-
E. taeniura	239	-	-	+	+	-	+	+	+	-	-	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-
Enhydris bennettii	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
E. chinensis	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	+	-
E. plumbea	241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	+	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	-
Liopeltis frenatus	241	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi
SERPENTES																														
COLUBRIDAE continued																														
Macropisthodon rudis	241	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	+	+	-	+	-	+	+	+	+	+	+	-	+
Natrix natrix	242	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N. tessellata	242	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oligodon albocinctus	243	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-
O. bellus	243	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-
O. chinensis	243	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	-	+	+	+	+	+	+	-	+	-	+
O. cinereus	243	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	+	+	+
O. cyclurus	243	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
O. eberhardti	244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+
O. formosanus	244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	+	+	+	+	+	+	+
O. lacroixi	244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
O. lungshenensis	244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
O. melanozonatus	245	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O. multizonatus	245	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
O. ningshaanensis	245	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O. ornatus	245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	+	+	+	+	+	-	-	-
O. taeniatus	245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
Ophites aulicus	246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	+	+	-
O. fasciatus	246	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	+	+	+	-	-	-	-	-	+	-	-	-	+
O. laoensis	246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
O. ruhstrati	247	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	-	+	-	+	-	+	+	-	+	+	+	+	-
O. subcinctus	247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	+	+	+
Opisthotropis andersonii	247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
O. balteata	247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+
O. guangxiensis	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
O. jacobi	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
O. kuatunensis	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	+	-	+
O. lateralis	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	-	+
O. latouchii	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	+	+	+	-	-	+	+
O. maxwelli	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	+
O. praemaxillaris	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-

Zoogeographical Regions	NE			NC		N			W		SW		SC		S				
	A	B	C	A	B	A	B	C	A	B	A	B	A	B	A	B	C	D	E
COLUBRIDAE																			
Macropisthodon rudis	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	+	-
Natrix natrix	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
N. tessellata	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
Oligodon albocinctus	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-
O. bellus	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-
O. chinensis	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	+	-
O. cinereus	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
O. cyclurus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
O. eberhardti	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
O. formosanus	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	+	-
O. lacroixi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
O. lungshenensis	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
O. melanozonatus	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. multizonatus	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
O. ningshaanensis	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
O. ornatus	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	+	-
O. taeniatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Ophites aulicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-
O. fasciatus	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	-	-	-
O. laoensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
O. ruhstrati	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	+	-
O. subcinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
Opisthotropis andersonii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
O. balteata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
O. guangxiensis	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
O. jacobi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
O. kuatunensis	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-
O. lateralis	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-
O. latouchii	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-
O. maxwelli	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-
O. praemaxillaris	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-

FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi
SERPENTES																														
COLUBRIDAE continued																														
Pareas boulengeri	249	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	+	-	-	-	-	+	-	-	-	+	-	-	+
P. carinatus	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
P. chinensis	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	+	+	-	+	-	+	-	-	+
P. formosensis	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
P. hamptoni	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	-	-
P. komaii	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
P. macularius	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	-	-	+
P. margaritophorus	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-
P. monticola	251	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
P. stanleyi	251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	+	-	-	-	-	-
Plagiopholis blakewayi	251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-
P. nuchalis	251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
P. styani	251	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	+	-	+	+	-	+	-	-	-	-	+
P. unipostocularis	252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
Psammodynastes pulverulentus	252	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	+	+	+	+	+	+	+	+
Psammophis lineolatus	252	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudoxenodon bambusicola	253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	+	+	-	+	-	+	+
P. karlschmidti	253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	+	-	+	+
P. macrops	254	-	-	-	-	-	+	-	+	-	-	+	-	-	+	+	+	+	+	-	-	-	-	-	+	-	-	-	-	+
P. stejnegeri	255	-	-	-	+	-	+	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	+	-	+	+	-	-	-	+
Ptyas korros	255	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	+	+	+	+	+	+	+	+
P. mucosus	256	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+
Rhabdophis chrysargus	256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
R. himalayanus	256	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
R. leonardi	256	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+
R. nigrocinctus	257	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
R. nuchalis	257	-	-	-	-	-	-	-	+	-	-	+	-	-	+	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-
R. subminiatus	257	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-	+	+	+	+
R. swinhonis	258	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
R. tigrinus	258	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+

Zoogeographical Regions																														
NE			NC			N			W			SW		SC			S												
A	B	C	A	B		A	B	C	A	B		A	B	A	B		A	B	C	D	E								
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FAMILY Species	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions: NE A	NE B	NC A	NC B	N A	N B	N C	W A	W B	SW A	SW B	SC A	SC B	S A	S B	S C	S D	S E
SERPENTES																																														
COLUBRIDAE continued																																														COLUBRIDAE
Rhabdops bicolor	259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
Rhynchophis boulengeri	259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-
Sibynophis chinensis	259	-	-	-	-	-	+	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	+	-
S. collaris	260	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-
Sinonatrix aequifasciata	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	+	+	+	-	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-
S. annularis	261	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	+	+	+	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	+	-
S. percarinata	261	-	-	-	-	-	+	-	+	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	+	-
Thermophis baileyi	261	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
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Zaocys carinatus	263	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
Z. dhumnades	263	-	-	-	+	-	+	-	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	+	+	+	+	-	-	+	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-
Z. nigromarginatus	263	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-
ELAPIDAE																																													ELAPIDAE
Acalyptophis peronii	263	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	marine															
Astrotia stokesii	264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	marine															
Bungarus fasciatus	264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-
B. multicinctus	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	-
Calliophis kelloggi	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	+	+	-	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	+	-	-	+	-	-
C. macclellandi	265	-	-	-	-	-	-	-	+	-	-	+	-	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+	-	+	+	-
C. sauteri	266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Emydocephalus ijimae	266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	marine															

FAMILY Species **SERPENTES**	Text page	Heilongjiang	Jilin	Liaoning	Hebei	Shandong	Henan	Shanxi	Shaanxi	Nei Mongol	Ningxia	Gansu	Xinjiang	Qinghai	Xizang (Tibet)	Sichuan	Yunnan	Guizhou	Hubei	Anhui	Jiangsu	Zhejiang	Jiangxi	Hunan	Fujian	Taiwan	Guangdong	Hong Kong	Hainan	Guangxi	Zoogeographical Regions NE A	B	C	NC A	B	N A	B	C	W A	B	SW A	B	SC A	B	S A	B	C	D	E
ELAPIDAE continued																																																	ELAPIDAE
Hydrophis caerulescens	267	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	marine																			
H. cyanocinctus	267	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	+	+	marine																			
H. fasciatus	267	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	marine																			
H. gracilis	268	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	marine																			
H. melanocephalus	268	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	-	-	marine																			
H. ornatus	268	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	marine																			
Kerilia jerdonii	268	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	marine																			
Lapemis curtus	269	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	marine																			
Laticauda colubrina	269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	marine																			
L. laticaudata	269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	marine																			
L. semifasciata	269	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	marine																			
Naja naja	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+	+	+	+	-				
Ophiophagus hannah	271	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	+	+	-	+	-	+	+	+	-	-	-	-	-	-	+	+	+	+	+	+	+	-	-				
Pelamis platurus	271	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	+	-	marine																			
Praescutata viperina	272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	marine																			
VIPERIDAE																																																VIPERIDAE
Agkistrodon blomhoffii	272	-	-	+	+	-	-	-	+	-	-	+	-	-	-	+	-	+	+	+	+	+	+	-	+	?	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	+	+	-	-	-	?	-
A. intermedius	273	-	-	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	?	+	+	-	-	-	-	-	-	-	-	-	-
A. monticola	273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-
A. saxatilis	273	+	+	+	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-
A. shedaoensis	273	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A. strauchi	274	-	-	-	-	-	-	-	+	-	+	+	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-
A. ussuriensis	274	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azemiops feae	274	-	-	-	-	-	-	-	+	-	-	-	-	-	+	+	+	+	-	+	-	+	+	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	-	-
Deinagkistrodon acutus	275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	+	+	+	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	+	-

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SERPENTES																																															
VIPERIDAE continued																																															VIPERIDAE
Trimeresurus albolabris	275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	-	+	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
T. gracilis	275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
T. jerdonii	275	-	-	-	-	-	+	+	+	-	-	+	-	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	+	-	+	+	-	-	-	-
T. mangshanensis	275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
T. medoensis	276	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
T. monticola	276	-	-	-	-	-	-	-	-	-	-	+	-	-	+	+	+	+	-	-	-	+	-	+	+	+	+	+	-	+	-	-	-	-	-	-	-	-	-	+	+	+	+	-	+	-
T. mucrosquamatus	276	-	-	-	-	-	-	-	+	-	-	+	-	-	-	+	+	+	-	+	-	+	+	+	+	+	+	-	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	-	+	-
T. stejnegeri	276	-	+	-	-	-	-	-	-	-	-	+	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	-	+	-
T. tibetanus	277	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
T. xiangchengensis	277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-
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V. russellii	278	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-
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* For convenience, the literature for the republics of the former Soviet Union is grouped together under the heading "Union of Soviet Socialist Republics," including that for Kazakhstan, Kirgizstan, Russia, Tajikistan, Turkmenistan, and Uzbekistan. The first four of these republics directly border China (see map on page 10).

Introduction



READERS INTERESTED IN FURTHER INFORMATION ABOUT THE amphibians and reptiles of China may consult the following works. This bibliography is divided into three major sections for ease of use. The first section (*General References*) includes information on the biology of amphibians and reptiles worldwide and on the major taxonomic groups, as well as on venomous snakes and the treatment for snake bite. The second section (*Regional References*) is organized in two parts. The first, covering China, is arranged by province or other political unit and lists the most current general publications on the herpetofauna of the area. Because many of the species covered in this book are also native to countries adjacent to China, the second part of section two includes titles covering those regions. The third section (*References Cited in Text*) lists numerous titles on Chinese amphibians and reptiles, including all technical papers and monographs cited in this book.

Many of the books listed below are available through bookstores or book dealers. The older and more technical works may be consulted in the libraries of the larger universities and natural history museums. Where books and articles have been reprinted, these reprints are listed, since they are often easier to obtain than the originals.

This list is not intended to be a comprehensive bibliography of Chinese herpetology. The most extensive lists of literature on the topic were published by Clifford H. Pope (1935) for reptiles and by Alice M. Boring (1945) and Cheng-chao Liu and Shu-qin Hu (1961) for amphibians. These three books, cited on pages 395, 325, and 383, respectively, should be consulted for lists of the older literature.

Method of Citation

Most of these references are in English; if not, then the wording of the title identifies the language or it is otherwise noted. Since many of these references are difficult to obtain, we have given the citations in full so that they can be more readily accessed. We have added the place of publication to these citations, unless the city is part of the formal title of the journal. The name of the city is given as it appears in the original publication; if the names have changed, the modern version is given in the list at the end of this bibliography. For society-sponsored journals that have no fixed place of publication, the city of the organization's treasurer or secretary is cited. For the herpetological sections of larger works, the inclusive page numbers are provided for purposes of access. Where appropriate, we have provided information on date of publication or other annotations, especially for the major works. We have used the designation "[*sic*]" to indicate an author's exact original spelling in those instances in which spellings in the original articles might appear to be typographical errors in this book.

The names of authors are given in full, where known, in the index to this book. During the 1970s, many articles published in mainland China were credited to work units—for example, to "Sichuan Biological Research Institute," rather than to the individual authors—and are cited here as such. However, we have added the names of the actual authors, if known, and these names are cross-indexed. If the date of publication is known to be incorrect, the nominal year of publication is given in quotes, followed by the correct year in parentheses—for example, "1929" (1930). Corrected dates often are given later in the same volume or in the next volume of the journal. For some journals in which the volumes are subdivided into series, each series begins anew with volume 1 and the series number therefore must also be given to provide an unambiguous citation, as for articles published in *Annals and Magazine of Natural History*. Some journals do not number the volumes and use the year in place of a volume number—for example, *Copeia* and *Proceedings of the Zoological Society of London*. Following the volume number, in most instances, is the issue or part number, which is given in parentheses—for example, 17(3); this number is especially critical to note whenever each issue is paginated separately, beginning anew with page 1.

Following the bibliography itself are two lists intended as an aid to understanding the bibliographic citations used in this book. The first list gives the abbreviated words of the literature citations in full, together with their abbreviations. The second list gives the cities of publication, their current names (if different from the name used in the original article), and country.

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3: Lacertilia (Agamidae, Lacertidae), pages 279–502, plates 5–7, 20 June 1909.

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4: (2), (1), ii, 571 pages, errata, 1 folding table, plates 29–32, 34, 36, 38, 40–42, 50, and 55, 1837.
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7 (part 1): vii, (4), xvi, 780 pages, 1 folding table, plates 59, 63, 70, 72, and 75–82, 1854.
7 (part 2): (1), (1), xii, 781–1536 pages, 2 folding tables, plates 83–84, 75bis–84bis, 1854.
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For a discussion of this and the next title, see page 264, *Astrotia* (Note).

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FITZINGER, LEOPOLD J. 1826. Neue Classification der Reptilien nach ihren natürlichen Verwandtschaften. J. G. Heubner, Vienna. (1), (1), (4), 66 pages, folding table.

Meise and Hennig (1935: 148) showed that Fitzinger's "Classification" appeared before volume 19, part 9 of *Isis von Oken*, and Brongersma, Inger, and Marx (1966: 304–305) concluded that this part of the *Isis* was issued in August or September 1826. Since Fitzinger's preface is dated 4 June 1826, we may conclude that his book was published sometime during the summer of 1826.

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The publication date of this volume has been set arbitrarily as 31 December 1843, by H. Smith and Grant (1958: 221).

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FLEMING, JOHN. 1822. The Philosophy of Zoology; or a General View of the Structure, Functions, and Classification of Animals. Archibald Constable, Edinburgh, and Hurst, Robinson, London. Two volumes, as follows: vol. I: lii, 432 pages, 5 plates; vol. II: (1), 618 pages.

For details on date of publication, see Zimmer (1926). Herpetology is on pages 266–305 of volume 2.

FOX, HELEN M., see Armand David, 1949.

FREYTAG, GÜNTHER E. 1962. Über die Wassermolchgattungen *Paramesotriton* Chang 1935, *Pingia* Chang 1935, und *Hypselotriton* Wolterstorff 1934 (Salamandridae). Mitt. Zool. Mus. Berlin, 38(2): 451–458.

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For suggestions concerning one method to cite sections in this book, see Dubois ("1986" [1987]): 100.

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Herpetology is on pages 183–184.

GEOFFROY SAINT-HILAIRE, ÉTIENNE, and ISIDORE GEOFFROY SAINT-HILAIRE. 1827. Description des reptiles qui se trouvent en Égypte, pages 115–160, 8 plates. *In* Description de l'Égypte, ou Recueil des Observations et des Recherches qui ont été faites en Égypte pendant l'Expédition de l'Armée Française. Histoire Naturelle. Tome Premier [Volume 1, part 1]. Imprimerie Impériale, Paris.

According to a note on page 120 and the "Table des Mémoires" (page 337), Étienne Geoffroy Saint-Hilaire wrote pages 115–120 and Isidore, his son, wrote the remainder of the section on reptiles; the section entitled "Reptiles.—Supplément," pages 161–184, 5 plates, was authored by Jean-Victor Audouin and the "Description des Crocodiles d'Égypte," pages 185–264," was by Étienne Geoffroy Saint-Hilaire. Tollitt (1986) dated all sections as 1827, but noted some evidence that pages 115–120 might have been issued as early as 1809. A second edition was published by C. L. F. Panckoucke, Paris, in 1829; in this edition, herpetology is in volume 24, pages 1–140, 13 plates.

GESSNER, CONRAD. 1551–1587. Historiæ Animalium. C. Froschover, Tiguri (=Zürich). Five volumes, as follows:

I: Quadrupedibus Viviparis. (40), 1104, 10 pages, 1551.

II: Quadrupedibus Oviparis. (6), 110, 27 pages, 1554.

III: Avium Natura. (36), 779 pages, portrait, 1555.

IIII [*sic*]: Piscium et Aquatilium Animalium Natura. (40), 1297 pages, 1558.

V: Serpentum Natura. (6), 85, (11) pages, 1587.

Herpetology is covered mostly in volumes 2 and 5, with some also in 4. There were several later editions and reprintings. In Latin, Gessner's name is spelled "Gesner," but in German it has a double "s."

GIRARD, CHARLES F. 1858. United States Exploring Expedition during the Years 1838, 1839, 1840, 1841, 1842. Under the command of Charles Wilkes, U.S.N. Vol. 20. Herpetology. C. Sherman & Son, Philadelphia. xv, 492 pages, 23 plates.

In this original edition published by the United States Government, Girard's name does not appear on the title page; instead, the name Spencer F. Baird appears, but in Baird's introduction he credits the work to Girard. Girard's name does appear on the title page of the unofficial edition (xvii, 496 pages), published by J. B. Lippincott, Philadelphia, 1858, with an enlarged atlas of 32 plates. The latter edition was reprinted by Arno Press, New York, 1978.

GISTEL, JOHANNES. 1848. Naturgeschichte des Thierreichs. Für höhere Schulen [first edition]. Hoffmann, Stuttgart. xvi, 216 pages, 32 plates with four pages of explanation.

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GLOYD, HOWARD K. 1972. The Korean snakes of the genus *Agkistrodon* (Crotalidae). Proc. Biol. Soc. Washington, 85(49): 557–578.

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GLOYD, HOWARD K., and ROGER CONANT. 1990. Snakes of the *Agkistrodon* complex. A monographic review. Soc. Study Amphib. Reptiles, Oxford (Ohio), Contr. Herpetol., 6: vi, 1–614 pages, 52 plates (with abstracts in Chinese, Japanese, Russian, and Spanish).

GMELIN, JOHANN F. 1789. Caroli a Linné Systema Naturae. Tom. I. Pars III [=volume 1, part 3]. G. E. Beer, Lipsiae (=Leipzig). (1), 1033–1516 pages.

Herpetology is on pages 1033–1125. This part of volume 1 was published before 20 November 1789 (Hopkinson, 1907); there is another, probably later edition of this title published by Delamollière in Lugduni Batavorum (=Leiden), also in 1789, but the type has been re-set. Part 3 has no title page and the title given

above is taken from the half title. The full title, as given on the title page of part 1, is "Caroli a Linné . . . Systema Naturae per Regna Tria Naturae."

This series is often referred to as the 13th edition of Linnaeus's "Systema Naturæ"; although it is patterned after Linnaeus's series, it is, in fact, a different work authored entirely by Gmelin. An English edition of Gmelin was published in London in 1802, translated by William Turton.

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GRAVENHORST, JOHANN L. C. 1829. Deliciae Musei Zoologici Vratislaviensis [also: Reptilia Musei Zoologici Vratislaviensis Recensita et Descripta] Fasciculus Primus [=part 1; no further parts were published] continens Chelonios et Batrachia. Leopold Voss, Lipsiae (=Leipzig). xiv, 106 pages, 17 plates.

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I (numbers I–X): (1), (1), (2, =list of plates), 12 plates, 1830–1832.

II (numbers XI–XX): (1), (2, =list of plates), 31 plates,"1832–1834" (1832–1835).

The title given above is taken from the title page of volume 1; it varies on the wrappers. The work was issued in 20 parts and the date of publication of each herpetological plate is given in Sawyer (1953), as follows: volume 1, plates 72, 75, 77–78, 82–83 (1830), 73–74, 76, 79–80 (1831), and 81 (1832); volume 2, plates 60, 63 (1832), 58–59, 61–62, 64, 67, 69–82 (1834), 57, 65–66, 68, 83–87 (1835). Sherborn (1939) claimed that part 1 (containing plates 77 and 83 of volume 1) was issued in 1829; many of the reptilian plates in volume 1 have "1829" printed on them. Further details on dates of publication are given by Zimmer (1926).

The text was never published; M. Smith (1943: 527–530) provided species identifications for several of Gray's plates, the original drawings for which are in the Hardwicke collection housed at the British Museum (Nat. Hist.).

—. 1831. A synopsis of the species of the class Reptilia, pages 1–110. *In* Edward Griffith and Edward Pidgeon, The Class Reptilia arranged by the Baron Cuvier, with Specific Descriptions. (3), (4), 481 pages, 55 plates. *In* Edward Griffith and Edward Pidgeon, The Animal Kingdom Arranged in Conformity with its Organization, by the Baron Cuvier. Whittaker, Treacher, London.

"Reptilia" constitutes volume 9 in this series. Gray's separately paginated "Synopsis," which is found positioned either before or after Griffith and Pidgeon's text, is dated "Oct. 1830" on page 1. Cowan (1969) showed that Griffith and Pidgeon's Reptilia volume was issued in three parts, in September 1830, probably December 1830, and in March 1831, but he did not state whether Gray's "Synopsis" came out separately or with one of the parts. An anonymous review in *Gentleman's Magazine*, London, for September 1830 (pages 251–252), indicated that it did not accompany part one. Until more precise information is available, it seems best to date Gray's "Synopsis" as 1831, as has been done conventionally.

—. 1831. Synopsis Reptilium; or Short Descriptions of the Species of Reptiles. Part I.–Cataphracta. Tortoises, Crocodilians, and Enaliosaurians. Treuttel, Wurtz; G. B. Sowerby; and W. Wood, all of London. viii, 85, (2) pages, 10 or 11 plates.

The list of plates calls for 10 plates, but an 11th is added in some copies.

—. 1831. [Mr. Gray exhibited a specimen of a tortoise which he regarded as the type of a new genus in the family Emydidæ]. Proc. Zool. Soc. London, 1831(1): 106–107.

—. 1831. Description of two new genera of frogs discovered by John Reeves, Esq. in China.

Zool. Misc., London, 1: 38 (reprint edition, Soc. Study Amphib. Reptiles, Oxford [Ohio], 1971).
—. 1834. [Mr. Gray also exhibited specimens of several fresh-water tortoises]. Proc. Zool. Soc. London, 1834: 53–54.
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—. 1838. Catalogue of the slender-tongued saurians, with descriptions of many new genera and species [part 3]. Ann. [Mag.] Nat. Hist., London, [ser. 1], 2(10): 287–293.
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—. 1842. Synopsis of the species of prehensile-tailed snakes, or family Boidæ. Zool. Misc., London, 2: 41–46 (reprint edition, Soc. Study Amphib. Reptiles, Oxford [Ohio], 1971).
—. 1842. Synopsis of the species of rattle-snakes, or family of Crotalidæ. Zool. Misc., London, 2: 47–51 (reprint edition, Soc. Study Amphib. Reptiles, Oxford [Ohio], 1971).
—. 1842. Description of some new species of reptiles, chiefly from the British Museum collection. Zool. Misc., London, 2: 57–59 (reprint edition, Soc. Study Amphib. Reptiles, Oxford [Ohio], 1971).
—. 1842. Monographic synopsis of the water snakes, or the family Hydridæ. Zool. Misc., London, 2: 59–68 (reprint edition, Soc. Study Amphib. Reptiles, Oxford [Ohio], 1971).
—. 1844. Catalogue of the Tortoises, Crocodiles, and Amphisbænians in the Collection of the British Museum. British Mus., London. viii, 80 pages (published 27 July 1844, according to Sherborn, 1926).
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Russell used only vernacular names for the snakes included in this volume and its continuation (see below). M. Smith (1943: 531–532) provided the Latin names.

—. 1801–1809 (–1810?). A Continuation of an Account of Indian Serpents; containing Descriptions and Figures, from Specimens and Drawings, transmitted from Various Parts of India, to the Hon. the Court of Directors of the East India Company. G. and W. Nicol, London. v, ix–xv, 53, (4) pages, portrait, 45 plates on 41 leaves. Published in five sections, as follows:

1: Pages i–v, 1–12, plates 1–10 (on 9 leaves, with plates 3–4 together on one leaf), 1801.
2: Pages 13–20, plates 11–18 (on 7 leaves, with plates 17–18 on one leaf), 1802.
3: Pages 21–28, plates 19–24, 1804.
4: Pages 29–38, plates 25–32 (on 7 leaves, with plates 28–29 on one leaf), 1807.
5: Pages ix–xv, 39–53, (4), portrait, plates 33–[45] (on 12 leaves, with plates [43–44] on one leaf), "1809" [probably 1810].

No previous attempt has been made to assign dates to the various sections of Russell's "Continuation of an Account of Indian Serpents," which is complicated by the author's death in 1805 before the volume was completed and by the fact that his literary executors apparently made errors in labelling the two fascicles that they issued. The collation given above is based on study of a complete copy of the book, in particular the watermarks in the paper, the changes in artists and printers from section to section, and on dated or datable citations made in various parts of the text.

As is clear from Russell's signature mark ("Part II.") at the foot of page 1, he considered "part" as equal to "volume," with Part I thus being his 1796 volume (see above). This view is confirmed in the book's index. Thus, all three sections issued during Russell's lifetime have "Part II" marks. Sections 4 and 5, issued by his executors, are called by them "Part III" (or "Fascicle 3") and "Fascicle 4," respectively; they were apparently unaware that the author had issued three, rather than two, sections of Part II and that he intended "part" to mean "volume." That Russell did, in fact, issue three sections of Part II is confirmed by his biographer, G. S. Boulger (1921).

Dating and paginating the sections are more complicated. Russell's own title page and preface, issued with section 1, are dated 1801. Nowhere in this section is G. Shaw's "General Zoology" (published 1802) cited, but beginning on page 14 there are regular citations to specific pages in Shaw. Boulger (1921) and the introduction to Russell's "Continuation" (page xiv) confirm that the first two sections were issued in 1801 and 1802. The collation of section 3 is more difficult, but based on watermarks, artists, and other features it begins on page 21. On page 24 (which is ligated to page 21 through the fold in the book's spine) there is a footnote reference to a monograph issued in 1804; Boulger (1921: 470) confirmed that the third section was issued in 1804, by Russell himself. Sections 4 and 5 can be segregated by the signature marks ("Part III" and "Fasc. 4" at the foot of the plates) and are dated by the executors in the introduction (page xv) as 1807 and 1809, respectively (confirmed by Boulger). However, on page 52 of section 5, there is a reference to a paper having been read at a meeting of the Royal Society on 21 December 1809. It thus seems unlikely that the final part could have been issued before the end of 1809 and therefore was probably published in 1810. We assume that all plates were issued together with the text sections in which they were cited.

For species identifications of Russell's snakes, see note to Russell's 1796 volume (page 396).

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SAUVAGE, HENRI-ÉMILE. 1876. Sur quelques batracies de la Chine. L'Institut, Paris, new ser., 4(189): 274–275.

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SAVAGE, JAY M. 1952. Two centuries of confusion: he history of the snake name *Ahaetulla*. Bull. Chicago Acad. Sci., 9(11): 203–216.

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SAY, THOMAS, see Edwin James, 1823.

ŠČERBAK, see Szczerbak.

SCHÄTTI, BEAT, and ARAM AGASIAN. 1985. Ein neues Konzept für den *Coluber ravergieri–C. nummifer*–Komplex (Reptilia, Serpentes, Colubridae). Zool. Abhandl. Staatliches Mus. Tierkunde Dresden, 40(9): 109–123 (with English and Russian abstracts).

SCHLEGEL, HERMANN. 1827. Erpetologische Nachrichten. Isis von Oken, Jena, 20(3): cols. 281–294 (H. Boie's notes on Java, edited by Schlegel; see also H. Boie, 1826 and 1828).

—. 1835–1838, see C. J. Temminck and H. Schlegel, 1835–1838.

—. 1837. Essai sur la Physionomie des Serpens. J. Kips, J. Hz. and W. P. van Stockum, La Haye (The Hague); another edition, M. H. Schonekat, Amsterdam. In two parts plus an atlas, as follows:

[1] Partie Générale: (3), (1), xxviii, 251 pages, 1837.

[2] Partie Descriptive: (1), 606, xv, (1) pages, 1837.

Atlas: (1), (1) pages, 21 plates, 3 maps, 2 tables, 1837.

An English translation of the "Partie Générale" (only) was issued in 1843 (Thomas S. Traill [editor]. Maclachlan, Stewart, Edinburgh. vii, 254 pages, errata, frontispiece, 2 plates).

—. 1837–1844. Abbildungen neuer oder unvollständig bekannter Amphibien, nach der Natur oder dem Leben entworfen, herausgegeben und mit einem erläuternden Texte begleitet. Arnz, Düsseldorf. Text and atlas, as follows:

Text: xiv, 141 pages, 1837–1844.

Atlas: Engraved title page, 50 plates, 1837–1844.

Dates of publication according to Brongersma (1942: 346), as follows: pages 1–32, plates 1–10 (1837); pages 33–80, plates 11–20 (1839); plates 21–30 (1839 or 1840); plates 31–40 (1840); pages i–xiv, 81–141, plates 41–50 (1844). According to Troschel (1844: 217), however, the work was completed in 1843. See Stejneger (1907: 540) and the journal *Isis von Oken*, 1837(10): col. 769, and 1839(6): col. 469 for further details on dating.

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Herpetology is on pages 1–62, 543–545, (1); 4 plates.

SCHLEGEL, HERMANN, and SALOMON MÜLLER. 1839–1845. Reptilia, pages 1–72, 10 plates. *In* C. J. Temminck (editor), Verhandelingen over de Natuurlijke Geschiedenis der Nederlandsche Overzeesche Bezittingen door de Leden der Natuurkundige Commissie in Indië en Andere Schrijvers. Luchtmans & van der Hoek, Leiden.

The herpetological section of this series consists of seven separate titles co-authored by Müller and Schlegel. Müller is first author on four of them, but we cite the section under Schlegel and Müller because this is the order of names for the title which contains the original description of *Manouria emys* (pages 29–36, plate 4), which we cite in this book. The Reptilia section was published as follows: pages 1–8, plates 1–3 (1839); plate 4 (1840); pages 9–28, plates 5–6 (1841); plate 7 (1842); plates 8–10 (1843); and pages 29–72 (1845), according to Husson and Holthuis (1955), who give further details. Thus, the name *Testudo emys* originates from publication of plate 4 in 1840.

SCHLEICH, HANS-HERMANN, and ULRICH GRUBER. 1984. Eine neue Grosskopfschildkröte, *Platysternon megacephalum tristernalis* nov. ssp. aus Yünnan, China. Spixiana, Munich, 7(1): 67–73.

SCHMIDT, KARL P. 1925. New reptiles and a new salamander from China. Amer. Mus. Novit., New York, 157: 1–5.

—. 1925. New Chinese amphibians and reptiles. Amer. Mus. Novit., New York, 175: 1–3.

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SCHMIDT, KARL P., and CHENG-CHAO LIU. 1940. A new toad from western China. Zool. Ser. Field Mus. Nat. Hist., Chicago, 24(13): 151–154.

SCHMIDT, PHILIPP. 1846. Beschreibung zweier neuen Reptilien, aus dem naturhistorischen Museum zu Hamburg. Abhandl. Gebiete Naturwissensch. Verein, Hamburg, 1: 163–172, 2 plates.

—. 1852. Beiträge zur ferneren Kenntniss der Meerschlangen. Abhandl. Gebiete Naturwissensch. Verein, Hamburg, 2(2): 69–86, 7 plates.

SCHNEIDER, JOHANN G. 1792. Amphibiorum Physiologiae Specimen Alterum [=part 2] Historiam et Species Generis Stellionum seu Geckonum Sistens. C. L. F. Apitzi, Traiecti ad Viadrum (=Frankfurt am Oder). (1), 54 pages.

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Fasciculus Primus [=part 1]: Ranas, Calamitas, Bufones, Salamandras et Hydros. xiii, (1), 264, (2) pages, 2 plates (1 folding), 1799.

Fasciculus Secundus [=part 2]: Crocodilos, Scincos, Chamaesauras, Boas, Pseudoboas, Elapes, Angues, Amphisbaenas et Caecilias. vi, "364" (=374, corrected in a later printing), (1) pages, 2 folding plates, 1801.

These two volumes were reprinted by A. Asher, Amsterdam, in 1968.

SCHOENHERR, CARL J. 1836. Genera et Species Curculionidum, cum Synonymia hujus Familiæ. Volume 3. Roret, Paris, and F. Fleischer, Leipzig. (vi), 858 pages.

SCHREBER, JOHANN C. D. VON. 1782. Beytrag zur Naturgeschichte der Frösche. Der Naturforscher, Halle, 18(10): 182–193, 1 plate.

SCHWEIGGER, AUGUST F. 1812. Prodromus monographiae cheloniorum [parts 1 and 2]. Königsber. Arch. Naturwissensch. Mathemat., Königsberg, 1: 271–368, 406–462.

SCLATER, WILLIAM L. 1892. List of the Batrachia in the Indian Museum. Trustees Indian Mus., London. viii, 43 pages.

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I: (1), (1), (30), 178 pages, frontispiece, portrait, 111 plates, 1734.

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III: (1), (1), (22), 212 pages, 116 plates, 1758.

IV: (1), (1), 42, 226 pages, 108 plates, 1765.

Volumes 1 and 2 of Seba's "Thesaurus" are primarily herpetological; see Wagler (1833: 896) for a critical review of these two volumes, including the application of Latin names to Seba's figures.

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SHAW, GEORGE. 1802. General Zoology, or Systematic Natural History. Volume III. Amphibia. Published for the author by Thomas Davison, London. In two parts, as follows:

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SHAW, GEORGE, and FREDERICK P. NODDER. 1797. Vivarium Naturæ or the Naturalist's Miscellany. Nodder, London. Volume 8: (1), (1), 186 unnumbered pages, 46 plates.

For a collation and dating of Shaw and Nodder's 24-volume series, see Sherborn (1895) and Allen (1912); for a comment on authorship, see page 278, *Vipera russellii* (Note).

SHCHERBAK, see Szczerbak.

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Corrections were published by Sherborn and Woodward (1906); see next entry.

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SONNINI, CHARLES-S., and PIERRE-ANDRÉ LATREILLE. "X" (1801). Histoire Naturelle des Reptiles, avec Figures Dessinées Après Nature [edition 1]. Deterville, Paris. Four volumes, as follows:

1: Quadrupèdes et Bipèdes Ovipares. (1), (1), xxii, 280 pages, 14 plates, "An X (1801).

2: Quadrupèdes et Bipèdes Ovipares. (1), (1), 332 pages, 21 plates, "An X" (1801).

3: Serpens. (1), 335 pages, 6 plates, "An X" (1801).

4: Serpens. (1), 410 pages, 13 plates, "An X" (1801).

These volumes are dated according to the French Republican calendar; see Harper (1940: 693, 700–701) for additional details. According to the preface, Sonnini wrote the section on salamanders and the "Discours Préliminaire" and Latreille wrote the remainder of the work; thus, these sections are generally credited accordingly in the herpetological literature. There was a second edition in 1826 (re-issued 1830).

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SOWERBY, RICHARD R. 1956. Sowerby of China. Arthur de Carle Sowerby F.R.G.S., F.Z.S. Privately published for author by T. Wilson, Kendal. (6), 58 pages, 5 plates, 1 folding table.

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For an itinerary of the voyage, see Gans (1955).

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Abbreviations in Literature Citations

ABBREVIATION	FULL SPELLING	ABBREVIATION	FULL SPELLING
Abhandl.	Abhandlungen	Akad.	Akademie, Akademii, Akademische
Abt.	Abteilung		
Acad.	Academia, Académie, Academiens, Academy	Amer.	American
		Amphib.	Amphibians
		Anat.	Anatomia, Anatomy
Accad.	Accademia	Anim.	Animal
Adv.	Advancement	Ann.	Annali, Annals
Agricult.	Agricultural, Agriculture	Anniv.	Anniversary

ABBREVIATION	FULL SPELLING
Annot.	Annotationes
Annu.	Annuaire, Annual
Anthol.	Anthology
Anz.	Anzeiger
Aquar.	Aquarienkunde
Arch.	Archiv, Archives
Ark.	Arkiv
Arq.	Arquivos
Art.	Articles
Asiat.	Asiatic
Assoc.	Association
Bayer.	Bayerischen
Ber.	Berichte
Berlin.	Berlinischen
Biogeogr.	Biogeographical
Biol.	Biological, Biologie, Biology
Biosci.	Bioscience
Blätt.	Blätter
Boll.	Bollettino
Bot.	Botanischen
Br.	Branch
Brit.	British
Buchhandl.	Buchhandlung
Bull.	Bulletin
Bunr.	Bunrika
Bur.	Bureau
Caes.	Caesareae
Cah.	Cahiers
Carol.	Carolinae
Chem.	Chemical
Chin.	Chinese, Chinois
Cie.	Compagnie
Circ.	Circular
Civ.	Civico
col(s).	column(s) [where columns, rather than pages, are numbered]
Coll.	Collections, College
Comm.	Commission
Comp.	Comparata, Comparative, Comptes
Conf.	Conference
Contr.	Contributions
Cons.	Conservation
Cracov.	Cracoviensia
Croc.	Crocodile
Cult.	Culturelle
Declar.	Declarations
Denkschr.	Denkschriften
Dept.	Department
Dist.	Distributors
Div.	Division
Doc.	Documents

ABBREVIATION	FULL SPELLING
East.	Eastern
Ecol.	Ecological, Ecology
ed(s).	edition(s), editor(s)
Educat.	Education, Educational
Electr.	Electrical
Encicloped.	Enciclopedico
Encyclopéd.	Encyclopédique
Engineer.	Engineering
Environ.	Environment
Evolut.	Evolution, Evolutionary
Exot.	Exotischer
Exped.	Expedition
Exper.	Experiment, Experimental
Explan.	Explanatory
Fac.	Faculty
Fasc.	Fascicle
Fisiol.	Fisiologia
Fondat.	Fondation
Gén.	Général
Genoot.	Genootschap
Géobiol.	Géobiologie
Geogr.	Geograficheskoe, Geographical, Geographie, Geography
Geol.	Geologie, Geology
Gesellsch.	Gesellschaft
Giorn.	Giornale
Gouvern.	Gouvernement
Govt.	Government
Handl.	Handlingar
Hebd.	Hebdomadaire
Helvet.	Helvetica
Herpetof.	Herpetofauna
Herpetol.	Herpetological, Herpétologie, Herpetology
Hist.	Histoire, History
Hydrobiol.	Hydrobiologie
Imper.	Imperial, Impériale
Indust.	Industrial, Industrie
Informat.	Information
Inst.	Institut, Institute, Instituto
Instr.	Instruction
Internatl.	International
Jahrb.	Jahrbücher
Jahresber.	Jahresberichte
Jahresh.	Jahreshefte
Japan.	Japanese
Japon.	Japonenses
Jour.	Journal
Kaiserl.	Kaiserlichen

ABBREVIATION	FULL SPELLING
Kayserl.	Kayserlichen
Kiakht.	Kiakhtinskoe
Königl.	Königlichen
Koninkl.	Koninklijke
Lab.	Laboratory
Leopold.	Leopoldina
Linn.	Linnean, Linnéenne
livr.	livraison
Mag.	Magazine
Magas.	Magasin
Mater.	Materials
Mathemat.	Mathématique, Mathematisch
Med.	Medica, Medical
Meded.	Mededelingen
Meet.	Meeting
Mem.	Mémoires, Memoirs, Memorial
Mens.	Mensuel
Mex.	Mexico
Midl.	Midland
Milit.	Militaire, Military
Mineral.	Mineralogie
Misc.	Miscellaneous, Miscellany
Mitt.	Mitteilungen
Monogr.	Monographs
Morphol.	Morphology
Mus.	Musée, Museo, Museu, Museum
Nachr.	Nachrichten
Nat.	Naturae, Natural, Naturale, Naturalist, Naturelle
Natl.	National, Nationale
Naturforsch.	Naturforschenden, Naturforschender
Naturgesch.	Naturgeschichte
Naturhist.	Naturhistorische
Naturk.	Naturkunde
Naturwissensch.	Naturwissenschaften, Naturwissenschaftliche
Natuurkund.	Natuurkundig
Nederland.	Nederlandsch
Néerland.	Néerlandaises
Népal.	Népalais
Newsl.	Newsletter
no(s).	number(s)
Nomen.	Nomenclature
Not.	Notulae
Nouv.	Nouvelles
Novit.	Novitates
Obshtch.	Obshchestvo
Occas.	Occasional
Oceanogr.	Océanographique
Off.	Office
Opin.	Opinions
Organiz.	Organization
Otd.	Otdielenie
Paläontol.	Paläontologie
Pap.	Papers
Philipp.	Philippine
Philomath.	Philomathique
Philos.	Philosophical
Phys.	Physico, Physique
Print.	Printing, Printer
Proc.	Proceedings
Prof.	Professor
Progr.	Program
Promot.	Promotion
Prov.	Provincial
Przegl.	Przegląd
pt(s).	part(s)
Publ.	Publication, Publications, Publishing
Quart.	Quarterly
Rec.	Records
Rech.	Recherche
Rend.	Rendus
Rep.	Report
Res.	Research, Researches
Resour.	Resources
Rev.	Review
Roy.	Royal
Russ.	Russian
Samml.	Sammlung
Saurol.	Saurology
Schmetterl.	Schmetterlinge
Schrift.	Schriften
Sci.	Science, Sciences, Scientific, Scientifique, Scienze
Séanc.	Séances
Secr.	Secretary
sect.	section
Senckenb.	Senckenbergischen
ser.	series
Serv.	Service
Sitzungsber.	Sitzungsberichte
Soc.	Société, Society
Southwest.	Southwestern
Spec.	Special
Spol.	Spolia
Stor.	Storia
suppl.	supplement
Symp.	Symposium
Synops.	Synopsis
Syst.	Systematic, Systematik
T.F.H.	Tropical Fish Hobbyist
Tech.	Technique

ABBREVIATION	FULL SPELLING
Technol.	Technology
Terrar.	Terrarienkunde
Thätig.	Thätigkeit
Tijdschr.	Tijdschrift
Trans.	Transactions
Transl.	Translations
Trop.	Tropical
U.S.	United States of America
U.S.S.R., U.R.S.S.	Union of Soviet Socialist Republics
Ukrain.	Ukrainian, Ukrains'koi
Univ.	Universität, University
Vaterl.	Vaterlandischen
Ver.	Vereins
Verhand.	Verhandelingen
Verhandl.	Verhandlungen
vers.	version
Vertebr.	Vertebrata
Vestn.	Vestnik
vol.	volume
Vorgesch.	Vorgeschichte
Wetensch.	Wetenschappen
Wissensch.	Wissenschaften, Wissenschaftlichen
Wochenschr.	Wochenschrift
Y.M.C.A.	Young Men's Christian Association
Zeyl.	Zeylanica
Zool.	Zoologi, Zoologia, Zoologica, Zoologicæ, Zoological, Zoologicheskii, Zoologicum, Zoologiczny, Zoologique, Zoologische, Zoology
Zootaxon.	Zootaxonomica

Places of Publication

CITY	LOCATION
Agra	India
Alma Ata	Kazakhstan (former USSR)
Amsterdam	The Netherlands
Ann Arbor	Michigan, USA
Ashkhabad	Turkmenistan (former USSR)
Ashton	Maryland, USA
Atagawa	Japan
Athens	Ohio, USA
Augsburg	Germany
Augusta	West Virginia, USA
Baltimore	Maryland, USA
Bangkok	Thailand
Basel	Switzerland
Batavia	(now Djakarta), Indonesia
Beijing	China
[see footnote, page 19]	
Berkeley	California, USA
Berlin	Germany
Bern	Switzerland
Bishkek	(former Frunze), Kirgizstan (former USSR)
Bogor	Indonesia
Bombay	India
Boston	Massachusetts, USA
Braunschweig	Germany
Breda	The Netherlands
Brisbane	Australia
Brussels	Belgium
Budapest	Hungary
Calcutta	India
Cambridge	Massachusetts, USA
Canberra	Australia
Canton	(now Guangzhou), Guangdong, China
Carbondale	Illinois, USA
Chang-hai	(=Shanghai), China
Changchun	Jilin, China
Changsha	Hunan, China
Chengdu	Sichuan, China
Chicago	Illinois, USA
Chongqing	Sichuan, China
Cleveland	Ohio, USA
Codicote	England, UK
Cologne	Germany
Colombo	Ceylon, now Sri Lanka
Columbus	Ohio, USA
Cracow	Poland
Darjeeling	India
Dehra Dun	India
Dhaka	Bangladesh
Dresden	Germany
Dumaguete City	Philippines
Dushanbe	Tajikistan (former USSR)

CITY	LOCATION
Escondido	California, USA
Florence	Italy
Frankfurt am Main	Germany
Frankfurt am Oder	Germany
Frunze	(now Bishkek), Kirgizstan (former USSR)
Fuzhou	Fujian, China
Gainesville	Florida, USA
Garden City	New York, USA
Geneva, Genève	Switzerland
Genova	Italy
Gland	Switzerland
Göttingen	Germany
Graz	Austria
Great Neck	New York, USA
Guiyang	Guizhou, China
Haarlem	The Netherlands
Halle	Germany
Hamburg	Germany
Hangzhou	Zhejiang, China
Hanoi	Vietnam
Harbin	Heilongjiang, China
Hefei	Anhui, China
Heidelberg	Germany
Hengchun	Taiwan, China
Hiroshima	Japan
Hohhot	Nei Mongol, China
Hollywood	Florida, USA
Holmiæ	(now Stockholm), Sweden
Hong Kong	Territory of Hong Kong
Incheon	South Korea
Ithaca	New York, USA
Jacksonville	Florida, USA
Jena	Germany
Jerusalem	Israel
Kaifeng	Henan, China
Kathmandu	Nepal
Kendal	England, UK
Kensington	Australia
Kiev	(or Kyyir), Ukraine (former USSR)
Königsberg	(now Kaliningrad), Russia (former USSR)
Kota Kinabalu	Sabah, Malaysia
Kuala Lumpur	Malaysia
Kunming	Yunnan, China
Kyoto	Japan
Lahore	Pakistan
Lancaster	Pennsylvania, USA
Lanzhou	Gansu, China
Lashkar	India
Lawrence	Kansas, USA
Lehre	Germany
Leiden	The Netherlands
Leipzig	Germany
Leningrad	(now St. Petersburg), Russia (former USSR)
Lipsiae	(now Leipzig), Germany
Lisbon	Portugal
London	England, UK
Lugduni Batavorum	(now Leiden), The Netherlands
Lyon	France
Macau (Macao)	Territory of Macau (Macao)
Madras	India
Magdeburg	Germany
Malabar	Florida, USA
Manila	Philippines
Marburg/Lahn	Germany
Missão	Macao
Modena	Italy
Moscow	Russia (former USSR)
München	(=Munich), Germany
Nanchang	Jiangxi, China
Nanchong	Sichuan, China
Nanking	(=Nanjing), Jiangsu, China
Neptune	New Jersey, USA
Neuchâtel	Switzerland
New Delhi	India
New York	New York, USA
Nishihara	Okinawa, Ryukyus Islands, Japan
Nitta-gun	Japan
North Bennington	Vermont, USA
Northampton	Massachusetts, USA
Notre Dame	Indiana, USA
Offenbach am Main	Germany
Osaka	Japan
Ottawa	Canada
Oxford	England, UK
Oxford	Ohio, USA
Palermo	Sicily, Italy
Paris	France
Pasadena	California, USA
Patavii	(now Padua), Italy
Peiping	(now Beijing), China
Pekin, Peking	(=Beijing), China [see footnote, page 19]
Petrograd, Petropoli	(now St. Petersburg), Russia (former USSR)

City	Location
Philadelphia	Pennsylvania, USA
Pittsburgh	Pennsylvania, USA
Portishead	England, UK
Pyongyang	North Korea
Quanzhou	Fujian, China
Quezon City	Philippines
Richmond	Indiana, USA
San Francisco	California, USA
São Paulo	Brazil
Sapporo	Japan
Seoul	South Korea
Shanghai	China
Shenyang	Liaoning, China
Singapore	State of Singapore
Springfield	Illinois, USA
St. Petersburg	Russia (former USSR)
Stanford	California, USA
Stockholm	Sweden
Stuttgart	Germany
Sydney	Australia
Taichung	Taiwan, China
Taihoku	(now Taipei), Taiwan, China
Taipei	Taiwan, China
Tbilisi	Georgia (former USSR)
Tehran	Iran
Tien Tsin	(=Tianjin), China
Tiflis	(now Tbilisi), Georgia (former USSR)
Tiguri	(now Zürich), Switzerland
Tomsk	Russia (former USSR)
Torino	(=Turin), Italy
Toulouse	France
Traiecti ad Viadrum	(now Frankfurt am Oder), Germany
Tübingen	Germany
Upsaliæ	(now Uppsala), Sweden
Vaduz	Liechtenstein
Vienna	Austria
Vilna	(now Vilnius), Lithuania (former USSR)
Vindobonae	Vienna, Austria
Vladivostok	Russia (former USSR)
Vlissingen	The Netherlands
Warsaw	Poland
Washington	District of Columbia, USA
Weinheim	Germany
Weinstadt	Germany
West Covina	California, USA
Wien	(=Vienna), Austria
Wiesbaden	Germany
Wufeng	Taiwan, China
Württemberg	Germany
Xiamen	Fujian, China
Xi'an	Shaanxi, China
Xiang He	Hebei, China
Xining	Qinghai, China
Xinxiang	Henan, China
Yanbian	Jilin, China
Zunyi	Guizhou, China
Zürich	Switzerland

APPENDICES

Appendix 1

CHINESE GEOGRAPHICAL NAMES

A. ABBREVIATIONS FOR POLITICAL UNITS



THE FOLLOWING LIST GIVES THE PINYIN AND WADE-GILES NAMES for each province, autonomous region, municipality, and other major political unit in China. Hong Kong, Macao, and Taiwan are also included. The first two columns give the official abbreviation and the Pinyin form of the Chinese abbreviation. The latter is often used by Chinese-speaking people in everyday conversation, especially when confusion between similar provincial names might otherwise exist.

Official Abbreviation	Pinyin Form of Abbreviation	Pinyin Name for Political Unit	[Wade-Giles Spelling]
AH	Wan	Anhui Province	[Anhwei]
AM	Ao	Aomen	[Macao]
BJ	Jing	Beijing Municipality	[Peiping, Peking]
FJ	Min	Fujian Province	[Fukien]
GD	Yue	Guangdong Province	[Kwangtung]
GS	Gân	Gansu Province	[Kansu]
GX	Gui	Guangxi Zhuang Autonomous Region	[Kwangsi]
GZ	Qian	Guizhou Province	[Kweichow]
HA	Qiong	Hainan Province	[Hainan]
HB	E	Hubei Province	[Hupeh]
HEB	Jì	Hebei Province	[Hopeh]
HEN	Yu	Henan Province	[Honan]
HL	Hei	Heilongjiang Province	[Heilungkiang]
HN	Xiang	Hunan Province	[Hunan]
JL	Jí	Jilin Province	[Kirin]
JS	Su	Jiangsu Province	[Kiangsu]
JX	Gàn	Jiangxi Province	[Kiangsi]
LN	Liao	Liaoning Province	[Liaoning]
NM	Nei Mongol	Nei Mongol Autonomous Region	[Inner Mongolia]
NX	Ning	Ningxia Hui Autonomous Region	[Ningsia]
QH	Qing	Qinghai Province	[Tsinghai]
SC	Chuan or Shu	Sichuan Province	[Szechwan]
SD	Lu	Shandong Province	[Shantung]
SH	Hu	Shanghai Municipality	[Shanghai]
SN	Shaan	Shaanxi Province	[Shensi]
SX	Jìn	Shanxi Province	[Shansi]
TJ	Jîn	Tianjin Municipality	[Tientsin]
TW	Tai	Taiwan Province	[Taiwan]
XG	Gang	Xianggang	[Hong Kong]
XJ	Xin	Xinjiang Uygur Autonomous Region	[Sinkiang]
XZ	Zang	Xizang Autonomous Region	[Tibet]
YN	Yun or Dian	Yunnan Province	[Yünnan]
ZJ	Zhe	Zhejiang Province	[Chekiang]

B. PINYIN AND MINORITY LANGUAGE EQUIVALENTS FOR GEOGRAPHICAL TERMS

The following list provides many common Chinese terms that are used in geographical names together with their English equivalents.

CHINESE TERM	ENGLISH EQUIVALENT	EXAMPLE
Bandao	Peninsula	Leizhou Bandao, Guangdong
Cheng	City	Tacheng, northwest Xinjiang
Ci	Temple	Xixiang Ci, Emei Shan (=Mt. Omei), Sichuan
Co	Lake	Siling Co, Xizang (Tibet)
Cun, Cunzhuang	Village	Zhaocun, Beijing
Dao	Island	Lü Dao, southeast of Taiwan
Ding	Top of mountain	Jinding, top of Emei Shan (=Mt. Omei), Sichuan
Diqu	Prefecture	Yaan Prefecture, Sichuan
Feng	Peak of mountain	Qomolangma Feng, Xizang (Tibet)
Gang	Harbor, port	Lüshun Gang, Liaoning
Gaoyuan	Plateau	Yunnan-Guizhou Gaoyuan
Gobi	Gravel desert	Nanhu Gobi, south of Hami, Xinjiang
Gol	River	Edsin Gol, Nei Mongol (Inner Mongolia)
Guan	Pass	Shan Hai Guan, Hebei
Hai	Sea	Bo Hai, between Liaodong Peninsula and Shandong Peninsula
Haixia	Strait	Qiongzhou Haixia, between Hainan and Leizhou Peninsula
He	River	Huang He (Yellow River)
Hu	Lake	Qinghai Hu, Qinghai
Jiang	River	Chang Jiang (Yangtze River)
Jiǎo	Cape	Chengshan Jiao, Shandong Bandao
Jiāo	Reef	Zhenghe Qunjiao, Nansha Qundao, Hainan
Kou	Mouth	Shan kou (mountain pass), He kou (estuary)
Liedao	Island group	Penghu Liedao, Taiwan
Ling	Mountain, mountain ridge, or mountain range	Qin Ling, Shaanxi; Jianfeng Ling, Hainan
Linqu	Forest Region	(informal name for forested region)
Miao	Temple	Laojunmiao (=Yumen), Gansu
Nur	Lake	Gaxun Nur, Nei Mongol (Inner Mongolia)
Pendi	Basin	Tarim Pendi, southern Xinjiang
Pingyuan	Plain	Chengdu Pingyuan, Sichuan
Po	Lake	Jingpo Hu, Heilongjiang

Qi	(Political unit often named in Nei Mongol, equals Xian)	Ejin Qi, Nei Mongol (Inner Mongolia)
Qiao	Bridge	Luding Qiao, Sichuan
Qiuling	Hills	(topographical name)
Quan	Spring	Hudie Quan, Yunnan
Qundao	Islands	Xisha Qundao, in South China Sea
Shamo	Desert	Gurbantüngüt Shamo, northern Xinjiang
Shan	Mountain	Tian Shan, Xinjiang
Shandi	Hilly land, mountainous area	(topographical name)
Shanfeng	Peak, Mount	(topographical name)
Shankou	Pass	Kunlun Shankou
Shanmai	Mountain range, mountain chain	Hengduan Shanmai, Kunlun Shanmai
Sheng	Province	Anhui Sheng
Shi	City	Dujiangyan Shi, Sichuan
Shui	Water (here meaning river)	Ruo Shui, flows into Gaxun Nur, Nei Mongol (Inner Mongolia)
Shuiku (Sk.)	Reservoir	Nanfeng Shuiku, Hainan
Si	Temple	Da-e Si, Emei Shan (=Mt. Omei), Sichuan
Ula	Mountain	Tanggula Shan, Xizang (Tibet)
Wan	Gulf, Bay	Jiaozhou Wan, Shandong
Xi	Stream	Tao-hua Xi, in Huang Shan, Anhui
Xia, Xiagu	Gorge	San Xia, on Chang Jiang between western Hubei and eastern Sichuan
Xian	County	Yiwu Xian, Xinjiang; Pengxian, Sichuan
Xiang	Village	Xin-min Xiang, Jingdong, Yunnan
Yang	Ocean	Taiping Yang (=Pacific Ocean)
Yu	Small island	Lanyu, southeast of main island of Taiwan
Zhaoze	Swamp	(topographical name)
Zhen	Town	Tianhui Zhen, Chengdu, Sichuan
Zhixia Shi	Municipality	Shanghai Zhixia Shi
Zizhiqu	Autonomous Region (equals province)	Xizang Zizhiqu (Tibet)
Zizhixian	Autonomous County	Lijiang Naxizu Zizhixian, Yunnan
Zizhizhou	Autonomous Prefecture	Aba Zangzu Zizhizhou, Sichuan

CHINESE	ENGLISH	CHINESE	ENGLISH	CHINESE	ENGLISH
Dong	East	Qian	Front	Wai	Outer
Xi	West	Hou	Rear, back	Shang	Upper
Nan	South	Zuo	Left	Xia	Lower
Bei	North	You	Right	Da	Big
Zhong	Central	Nei	Inner	Xiao	Small

C. CURRENT NAMES AND LOCATIONS FOR LOCALITIES

The following list is not intended as a comprehensive gazetteer to all localities relevant to herpetology in China. It covers only those cases in which the localities mentioned in this book are referred to by a name used in the herpetological literature (listed in the first column of the chart that begins on the opposite page) that is not the name currently used in China. We have not included every variant spelling found and have omitted many of those variants that differ only by an umlaut, hyphen, apostrophe, or other diacritical mark.

The second column gives the current equivalent for the corresponding name in column one. Chu and Yamanaka (1973) have provided a very useful list of current equivalents for Taiwanese localities that had Japanese names during the period of occupation. In cases in which multiple equivalents are given, the first is the Pinyin spelling, followed by the minority-language or locally used name. In the case of Taiwan, the names are transcribed according to the Modified Wade-Giles System, and for Hong Kong, according to the Eitel/Dyer-Ball System. In some instances, the general location is also provided (in parentheses); for Taiwan, this is generally the county.

The third column gives the provincial location and the approximate latitude and longitude. In most instances, these coordinates were obtained from the gazetteers of the United States Board on Geographic Names (see the bibliography, page 408 under "United States") or from the "Provincial Atlas of People's Republic of China" (1977). If the word "near" is used, the exact latitude and longitude of the site listed in column one could not be determined and the coordinates of the more general location given in parentheses in column two is provided instead. The position of a river is generally fixed at the mouth of the river; these are sometimes not in China.

Despite our best efforts and those of several colleagues, we have been unable to determine the precise location or current name of several sites. In some instances, this results from the fact that names of localities written in non-Chinese languages often correspond only roughly to the Chinese names, since these are phonetic spellings recorded by collectors, which are then sometimes further altered in print. We hope that readers of this book will help us to fill in these gaps.

Over time, some towns, cities, and occasionally even large lakes have shifted their positions. For example, at the time of Przhevalsky's expedition in 1877, the location of the well-known Xinjiang lake—Lop Nur—was about 100 km southwest of its location today, a position that it has occupied since 1923. Thus, readers must be cautious in using the geographic coordinates given in the list below, which are based on current information, to interpret locations of localities mentioned in the older literature. (See also the note at the bottom of page 449.)

LITERATURE NAME (IDENTIFICATION)	MODERN EQUIVALENT (COUNTY OR LOCATION)	PROVINCE OR POLITICAL UNIT (MAP COORDINATES)
Akô	Yakou (Kaohsiung)	Taiwan (23°18'N, 120°55'E)
Aksayqin	Aksai Chin region	Xinjiang (35°00'N, 79°00'E)
Akssu	Aksu Xian	Xinjiang (41°09'N, 80°15'E)
Alashan (desert)	Tengger Shamo	Nei Mongol (Inner Mongolia) (40°00'N, 104°00'E)
Alashan (mountain)	Helan Shan	Ningxia (38°38'N, 105°50'E)
Alikang	Aliguan, near Chiahsien (Kaohsiung)	Taiwan (23°07'N, 120°37'E)
Altyn-Tagh (mountain)	Altun Shan	Xinjiang and Qinghai (38°00'N, 88°00'E)
A'mne Machin Range	A'nyêmaqên Shan	Qinghai (34°30'N, 100°00'E)
Amoy (city)	Xiamen Shi	Fujian (24°27'N, 118°05'E)
Amur River	Heilong Jiang	Heilongjiang (52°56'N, 141°10'E)
Anda	Anda Xian	Heilongjiang (46°30'N, 125°15'E)
Ang Mao, Ang-mao	Hongmao (Baisha Xian)	Hainan (19°13'N, 109°26'E)
Anhwei Province	Anhui Sheng [AH]	(32°00'N, 117°00'E)
Anlung (county)	Anlong Xian	Guizhou (25°06'N, 105°31'E)
Annyang Hsien	Anyang Shi	Henan (36°05'N, 114°21'E)
Antung	Dandong Shi	Liaoning (40°08'N, 124°24'E)
Anyangpa	Anyangba (between Kangding and Dongelo)	Sichuan (near 30°08'N, 102°02'E)
Araturuk, Aratürük	Yiwu Xian	Xinjiang (43°15'N, 94°35'E)
Argun (river)	Ergun He	Nei Mongol (Inner Mongolia) (53°20'N, 121°28'E)
Ari, Arisan, Arizan (mountain)	Ali Shan, Alishan	Taiwan (23°32'N, 120°48'E)
Arixang	Wenquan Xian	Xinjiang (44°59'N, 81°04'E)
Arizan (mountain)	Ali Shan, Alishan	Taiwan (23°32'N, 120°48'E)
Astin Tagh (mountain)	Altun Shan	Xinjiang and Qinghai (38°00'N, 88°00'E)
Badaojiang (river)	Hun Jiang	Northeastern China (40°52'N, 125°42'E)
Bagrax	Bohu Xian	Xinjiang (41°58'N, 86°29'E)
Baishuiho (river)	Baishui He (Peng Xian)	Sichuan (32°24'N, 105°46'E)
Balekun Gomi, Gomi	Kyikug	Qinghai (36°07'N, 101°00'E)
Balgantai gol (river)	Balguntay He	Xinjiang (42°45'N, 86°18'E)
Balihandién	Balihan (between Chengde and Chifeng)	Nei Mongol (Inner Mongolia) (41°28'N, 118°35'E)
Bangkimtsing	Chihshan, Wanluan (Pingtung)	Taiwan (22°35'N, 120°35'E)
Bankoro	Banko?, now Wan-hsing (central Taiwan)	Taiwan (23°35'N, 120°13'E; see Barbour 1908: 324 and 1909: 56)

Bao'an	Shenzhen Shi	Guangdong (22°32'N, 114°08'E)
Barkul, see Stadt Barkul		
Bay	Baicheng Xian	Xinjiang (41°46'N, 81°52'E)
Bayan Gol	Dengkou Xian	Nei Mongol (Inner Mongolia) (40°18'N, 106°59'E)
Borotala, Bortala	Bole Xian	Xinjiang (44°59'N, 81°57'E)
Botel Tobago (island)	Lanyu, Lan-yü (Taitung)	Taiwan (22°03'N, 121°32'E)
Bügür	Luntai Xian	Xinjiang (41°46'N, 84°10'E)
Bukai	Wuchie or Wuchieh (Nantou)	Taiwan (23°52'N, 121°04'E)
Bulun-Tochoi, Bulun Tokhoi, Bulun-Tschi	Fuhai Xian, Burultokay	Xinjiang (47°06'N, 87°23'E)
Bunzan-gori	Hsintien general area (Taipei)	Taiwan (24°57'N, 121°32'E)
Burultokay	Fuhai Xian	Xinjiang (47°06'N, 87°23'E)
Candidje, Candidius (lake)	Jihyuehtan, Riyuetan, "Sun Moon Lake" (Nantou)	Taiwan (23°51'N, 120°56'E)
Canton (city)	Guangzhou Shi	Guangdong (23°07'N, 113°15'E)
Canton River	Zhu Jiang (Guangzhou)	Guangdong (22°45'N, 113°37'E)
Cape Syng-moon, Syng-more (port)	Kap Shui Mun (Lantau Island)	Hong Kong (22°21'N, 114°03'E)
Cham-chu River	Tsachu Jiang? (upper portion of Yalong Jiang)	Sichuan (31°46'N, 100°00'E; see Zarevsky "1925" [1926]: 77)
Chamdo	Qamdo Xian	Xizang (Tibet) (31°10'N, 97°14'E)
Chami, Chami-Wüste	Hami Shi, Kumul	Xinjiang (42°48'N, 93°27'E)
Chang-Chia-K'ou	Zhangjiakou Shi	Hebei (40°50'N, 114°56'E)
Changhai	Shanghai Zhixia Shi [SH]	(31°14'N, 121°28'E)
Changhsien, Kosempo	Chiahsien (Kaohsiung)	Taiwan (23°07'N, 120°37'E)
Changshingkao (stream)	Changshenggou (Emei Shan)	Sichuan (29°32'N, 103°21'E)
Chanta, Sanda	Lianghe Xian	Yunnan (24°46'N, 98°20'E)
Chao'an	Chaozhou Shi	Guangdong (23°41'N, 116°38'E)
Chao-chiao, Chao-chüeh	Zhaojue Xian	Sichuan (28°02'N, 102°52'E)
Chaoyangchen	Huinan Xian	Jilin (42°40'N, 126°00'E)
Charkhalyk	Ruoqiang Xian, Qarkilik	Xinjiang (39°02'N, 88°00'E)
Cha-Tcheou	Dunhuang Xian	Gansu (40°10'N, 94°50'E)
Chayü (county)	Zayü Xian	Xizang (Tibet) (28°40'N, 97°31'E)
Cheefoo, Chefoo	Yantai Shi	Shandong (37°32'N, 121°24'E)
Chekiang Province	Zhejiang Sheng [ZJ]	(29°00'N, 120°00'E)
Chekou, "Checkon"	Ziko'u or Hsi-ku, now Zhugqu Xian	Gansu (33°46'N, 104°18'E)
Chengchow (city)	Zhengzhou Shi	Henan (34°45'N, 113°40'E)
Chengteh	Chengde Shi	Hebei (40°58'N, 117°53'E)
Cheng-ting-fu	Zhengding Xian	Hebei (38°08'N, 114°37'E)
Chengtu (city)	Chengdu Shi	Sichuan (30°40'N, 104°04'E)
Chenkiang	Zhenjiang Shi	Jiangsu (32°13'N, 119°26'E)
Chia-la, Jiala (village)	Jiaona (Luhuo Xian, Zhaggo)	Sichuan (near 31°32'N, 100°29'E)

Chien Fung Ling (mountain)	Jianfeng Ling	Hainan (near 18°42'N, 108°48'E)
Chienshan, Yuanshan	Qianshan	Jiangxi (28°08'N, 117°42'E)
Chihfeng, Chikfeng, Hata	Chifeng Shi, Ulanhad	Nei Mongol (Inner Mongolia) (42°17'N, 118°53'E)
Chihli	Hebei Sheng [HEB]	(39°00'N, 116°00'E)
Chihsiashan (mountain)	Qixia Shan (near Nanjing)	Jiangsu (near 37°17'N, 120°48'E)
Chikfeng, Chihfeng	Chifeng Shi, Ulanhad Shi	Nei Mongol (Inner Mongolia) (42°17'N, 118°53'E)
Chikiang Province	Zhejiang Sheng [ZJ]	(29°00'N, 120°00'E)
Chikushiko	Chutzuhu (Taipei)	Taiwan (25°10'N, 121°32'E)
Chili	Hebei Sheng [HEB]	(39°00'N, 116°00'E)
Chingan (mountain range)	Hinggan Ling	Northern Heilongjiang and northeastern Nei Mongol
Chingchengshan (mountain)	Qingcheng Shan (Guan Xian, now Dujiangyan Shi)	Sichuan (30°58'N, 103°31'E)
Chinghai Province	Qinghai Sheng [QH]	(36°00'N, 96°00'E)
Chingshui River	Qingshui He (flows into Chang Jiang at Wuhu)	Anhui (near 31°21'N, 118°22'E)
Ching-tung	Jingdong Xian	Yunnan (24°28'N, 100°54'E)
Chin-hai (county)	Zhenhai Xian	Zhejiang (29°57'N, 121°42'E)
Chinhsiu	Jinxiu Xian	Guangxi (24°07'N, 110°11'E)
Chining	Jining Shi	Nei Mongol (Inner Mongolia) (40°57'N, 113°02'E)
Chinkiang	Zhenjiang Shi	Jiangsu (32°13'N, 119°26'E)
Chinkouho	Jinkouhe (just east of Washan)	Sichuan (29°18'N, 103°04'E)
Chinting (peak)	Jinding (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Chintzu (temple)	Jinci (near Taiyuan Shi)	Shanxi (near 37°42'N, 112°26'E)
Chinwangtao	Qinhuangdao Shi	Hebei (39°56'N, 119°37'E)
Chira	Qira Xian	Xinjiang (37°02'N, 80°53'E)
Ch'i-t'ai	Qitai Xian	Xinjiang (44°01'N, 89°28'E)
Chitou	Hsitou (Nantou)	Taiwan (23°42'N, 120°47'E)
Chiu-chüan	Jiuquan Xian	Gansu (39°46'N, 98°34'E)
Chiuhuashan (mountain)	Jiuhua Shan (Qingyang Xian)	Anhui (30°27'N, 117°48'E)
Chiulung	Jiulong Xian, Gyaisi	Sichuan (28°59'N, 101°32'E)
Chomo	Yadong Xian	Xizang (Tibet) (27°29'N, 88°54'E)
Choni, on Tao River	Jonê Xian	Gansu (34°35'N, 103°32'E)
Chorgos	Huocheng Xian, Shuiding	Xinjiang (44°03'N, 80°49'E)
Chorgos (river)	Korgas He (flows into upper Ili He)	Xinjiang (near 44°13'N, 80°30'E; see Bedriaga 1898: 61, and "1905" [1906]: 222)
Choshu	Chaochou (Pingtung)	Taiwan (22°33'N, 120°32'E)
Chotan	Hotan Shi	Xinjiang (37°07'N, 79°55'E)
Chouchiakou	Zhoujiagou (southeast of Yibin)	Sichuan (near 28°45'N, 104°30'E)
Chou-chih	Zhouzhi Xian	Shaanxi (34°08'N, 108°14'E)

Chuan-che, Chuanche (river)	Bailong Jiang?	Gansu (32°42'N, 105°15'E; see Bedriaga 1907: 179, and 1909: 396, 419, 474)
Chuanchow	Quanzhou Shi	Fujian (24°54'N, 118°35'E)
Chuchow	Chuzhou Shi	Anhui (32°19'N, 118°17'E)
Chuguchak	Tacheng Xian	Xinjiang (46°45'N, 82°57'E)
Chuhsien	Chuzhou Shi	Anhui (32°19'N, 118°17'E)
Chukiang (river)	Zhu Jiang (Guangzhou Shi)	Guangdong (22°45'N, 113°37'E)
Chuldscha	Yining Shi, Gulja Shi	Xinjiang (43°54'N, 81°21'E)
Chung-an, Ch'ungan (county)	Chongan Xian	Fujian (27°46'N, 118°01'E)
Chungchow (county)	Zhong Xian	Sichuan (30°18'N, 108°02'E)
Chungking (city)	Chongqing Shi	Sichuan (29°34'N, 106°35'E)
Chungmingchieh	Jimingjie (Tongling Shi)	Anhui (30°58'N, 118°04'E)
Chungpa	Zhongba, now Jiangyou Xian	Sichuan (31°47'N, 104°45'E)
Chungsun	Zhongxin	Guangdong (24°12'N 114°48'E)
Chunshan Island	Junshan Dao (in Dongting Hu)	Hunan (29°23'N, 113°00'E)
Chusan Islands	Zhoushan Qundao	Zhejiang (30°00'N, 122°00'E)
Dabba	Daocheng Xian	Sichuan (29°03'N, 100°10'E)
Dabson Gobi, Dabsun-Gobi	Qaidam Pendi	Qinghai (37°00'N, 93°00'E)
Dah-ting-hsien, Ta-ting	Dading Xian	Guizhou (27°10'N, 105°39'E)
Daibuzan (mountain)	Tawushan (Pingtung)	Taiwan (22°38'N, 120°45'E)
Daijurin (mountain)	Tashulinshan (Pingtung)	Taiwan (22°25'N, 120°42'E)
Dairen (city)	Dalian Shi	Liaoning (38°55'N, 121°39'E)
Daitonzan (mountain)	Tatungshan (Taipei)	Taiwan (25°11'N, 121°31'E)
Dal (oasis)	Dole (Lop Xian)	Xinjiang (near 37°10'N, 80°20'E; see Bedriaga 1898: 51, 61)
Dalai Nor (lake)	Dalai Nur	Nei Mongol (Inner Mongolia) (43°18'N, 116°37'E)
Damqog Kanbab (river)	Maquan He	Xizang (Tibet) (29°36'N, 84°09'E)
Dangar-ho (river)	Huang Shui, tributary of upper Huang He	Qinghai (36°05'N, 103°20'E; see Zarevsky 1927: 304)
Dardo	Kangding Xian	Sichuan (30°03'N, 102°02'E)
Daudsen-lu, Ta-tsian-lu	Kangding Xian, Dardo	Sichuan (30°03'N, 102°02'E)
Dawukou	Shizuishan Shi	Nei Mongol (Inner Mongolia) (39°03'N, 106°24'E)
Deqin	Dêqên Xian	Yunnan (28°30'N, 98°52'E)
Di Chy (river)	Moron Us He and Tuotuo He? (upper Chang Jiang)	Qinghai (34°42'N, 94°50'E and 34°03'N, 93°06'E; see Bedriaga 1909: 471)
Ding-hu-shan, Ding-wu-shan, Tinghushan (mountain)	Dinghu Shan	Guangdong (near 23°11'N, 112°22'E)
Djurong	Jiulong Xian, Gyaisi Xian	Sichuan (28°59'N, 101°32'E)

Do Chu (river)	Tongtian He (upper Chang Jiang)	Qinghai (33°36'N, 96°39'E)
Dolon, Dolonnur	Duolun Xian	Nei Mongol (Inner Mongolia) (42°10'N, 116°25'E)
Dongliao	Liaoyuan Shi	Jilin (42°55'N, 125°09'E)
Donker	Tangar, now Huangyuan Xian	Qinghai (36°40'N, 101°12'E)
Dorbiljin	Emin Xian	Xinjiang (46°32'N, 83°39'E)
Drachenkopf (mountain)	Longtoushan (east of Siu-dsau or Qujiang)	Guangdong (near 25°00'N, 115°50'E; see Mell 1922: map)
Dsa-tshu River	Tsachu Jiang? (upper portion of Yalong Jiang)	Sichuan (31°46'N, 100°00'E; see Zarevsky 1925: 74)
Dschaudschou	Zhaotong Xian	Yunnan (27°19'N, 103°43'E)
Dschyn-cho	Jinghe Xian, Jing	Xinjiang (44°39'N, 82°50'E)
Dschungarei, Dshungarei	Junggar Pendi	Xinjiang (45°00'N, 88°00'E)
Dulan kit, Dulansi	Tianjun Xian	Qinghai (37°16'N, 98°52'E)
Dy-tschju, Dytschu (river)	Moron Us He and Tuotuo He? (upper Chang Jiang)	Qinghai (34°42'N, 94°50'E and 34°03'N, 93°06'E)
Dzungarian Basin	Junggar Pendi	Xinjiang (45°00'N, 88°00'E)
Dzungarian Gate (mountain pass)	Alataw Shankou	Xinjiang (45°25'N, 82°25'E)
Ebi-nor, Ebi-nur, See Ebi-nor (lake)	Ebinur Hu	Xinjiang (44°55'N, 82°55'E)
Edsin gol (river)	Ruo Shui	Nei Mongol and Gansu border (40°20N, 99°40'E)
Emerald Valley, Feitsui Valley	Feichui-ku (Taipei)	Taiwan (24°54'N, 121°37'E)
Erh Hai (lake)	Er Hai	Yunnan (25°48'N, 100°11'E)
Feitsui Valley, Emerald Valley	Feichui-ku (Taipei)	Taiwan (24°54'N, 121°37'E)
Five Finger Mountain	Wuzhi Shan	Hainan (18°54'N, 109°40'E)
Fokien Province	Fujian Sheng [FJ]	(26°00'N, 118°00'E)
Foochow, Fuchow (city)	Fuzhou Shi	Fujian (26°05'N, 119°18'E)
Formosa	Taiwan Sheng [TW]	(24°00'N, 121°00'E)
Four Sisters Islands	Sishuang Liedao	Zhejiang (26°41'N, 120°23'E)
Fuchow (county)	Fu Xian	Shaanxi (36°00'N, 109°20'E)
Fuhacho, Fuhosho (village)	Maobu, Wucheng (Nantou)	Taiwan (23°59'N, 120°52'E)
Fukien Province	Fujian Sheng [FJ]	(26°00'N, 118°00'E)
Fulin Hsien	Hanyuan Xian	Sichuan (29°21'N, 102°43'E)
Fung-hsien (county)	Feng Xian	Gansu (33°55'N, 106°32'E)
Funkiko	Fenchihu (Chiayi)	Taiwan (23°30'N, 120°41'E)
Fuqing (county)	Fuqing Xian	Fujian (25°43'N, 119°22'E)
Fu-tschau, Fu-tschou (city)	Fuzhou Shi	Fujian (26°05'N, 119°18'E)
Futsing (county)	Fuqing Xian	Fujian (25°43'N, 119°22'E)

Galmyn	Golmud Shi	Qinghai (near 36°22'N, 94°55'E)
Gaotaï	Gaotai Xian	Gansu (39°20'N, 99°58'E)
Gaoyao	Zhaoqing Shi	Guangdong (23°03'N, 112°27'E)
Gartar	Qianning Xian	Sichuan (30°30'N, 101°30'E)
Gaschun	Qitai Xian	Xinjiang (near 43°50'N, 89°55'E; see Bedriaga 1909: 311)
Gashun Nor (lake)	Gaxun Nur	Nei Mongol (Inner Mongolia) (42°25'N, 101°00'E)
Giran	Ilan (Ilan)	Taiwan (24°46'N, 121°45'E)
Gomi, Balekun Gomi	Kyikug	Qinghai (36°07'N, 101°00'E)
Gosainthan (peak)	Xixabangma Feng	Xizang (Tibet)(28°21'N, 85°47'E)
Grand Lac (lake)	Tai Hu	Jiangsu (31°15'N, 120°10'E)
Greater Khingan Range	Da Hinggan Ling	Nei Mongol (Inner Mongolia) (49°00'N, 122°00'E)
Green Island	Lutao, Lu Tao (Taitung)	Taiwan (22°40'N, 121°29'E)
Guan (county)	Dujiangyan Shi	Sichuan (near 31°01'N, 103°38'E)
Guang-dung Province	Guangdong Sheng [GD]	(23°00'N, 113°00'E)
Guang-hsi Province	Guangxi Zhuangzu Zizhiqu [GX]	(24°00'N, 109°00'E)
Guanghua	Laohekou Shi	Hubei (32°22'N, 111°40'E)
Guanyang	(a district of Wushan Xian)	Sichuan (near 31°25'N, 109°55'E)
Gucheng	Qitai Xian	Xinjiang (44°01'N, 89°28'E)
Guiduï, Stadt Gui Duï	Guide Xian	Qinghai (36°03'N, 101°28'E)
Gulf of Chihli	Bo Hai Wan	Between Liaoning and Shandong (38°30'N, 120°00'E)
Gulja	Yining Shi	Xinjiang (43°54'N, 81°21'E)
Guma	Pishan Xian	Xinjiang (37°38'N, 78°19'E)
Gutschen	Qitai Xian	Xinjiang (44°01'N, 89°28'E)
Gyaisi	Jiulong Xian	Sichuan (28°59'N, 101°32'E)
Gyantse	Chiang-tzu, Gyangzê Xian	Xizang (Tibet)(28°57'N, 89°38'E)
Gyigang	Zayü	Xizang (Tibet)(28°40'N, 97°31'E)
Hainan Strait	Qiongzhou Haixia	Between Guangdong and Hainan (20°10'N, 110°15'E)
Hangchow	Hangzhou Shi	Zhejiang (30°15'N, 120°10'E)
Hanjiang	Yangzhou Shi	Jiangsu (32°24'N, 119°26'E)
Hankow	Hankou (a part of Wuhan)	Hubei (30°35'N, 114°16'E)
Hata	Chifeng Shi, Ulanhad	Nei Mongol (Inner Mongolia) (42°17'N, 118°53'E)
Hattsukan	Patungkuan (Nantou)	Taiwan (23°29'N, 120°59'E)
Heichyô, Mt.	Benxihu Shan (Benxi Shi)	Liaoning (near 41°20'N, 123°40'E)
Heihe	Aihui Xian	Heilongjiang (50°16'N, 127°28'E)
Heilungkiang Province	Heilongjiang Sheng [HL]	(47°00'N, 128°00'E)
Hinokiyama (mountain)	Kueishan (Taipei)	Taiwan (24°45'N, 121°28'E)
Hobot Xar	Xianghuang Qi	Nei Mongol (Inner Mongolia) (42°21'N, 114°19'E)

Hochow, Hochuan, Hochwan	Hechuan Xian	Sichuan (30°02'N, 106°15'E)
Hohho	Kouhu (Yunling)	Taiwan (23°35'N, 120°11'E)
Ho-hsi	Hexi (Xichang Shi)	Sichuan (27°40'N, 102°14'E)
Hohuan (mountain)	Hohuanshan (Nantou)	Taiwan (24°09'N, 121°16'E)
Hoihow	Haikou Shi	Hainan (20°03'N, 110°19'E)
Hokang	Hegang Shi	Heilongjiang (47°24'N, 130°22'E)
Hok'ou, Hokow	Hekou or Yanshan Xian	Jiangxi (28°19'N, 117°41'E)
Hokow	Hekou Yaozu Zizhixian	Yunnan (22°36'N, 103°58'E)
Honan Province	Henan Sheng [HEN]	(34°00'N, 114°00'E)
Hong Kong	Xianggang [XG]	(22°15'N, 114°30'E)
Hongye	Hualien (Hualien)	Taiwan (23°31'N, 121°19'E)
Honkeiko (lake)	Benxi Hu	Liaoning (near 41°21'N, 123°45'E)
Hopachai (village)	Huobazhai (Li Xian)	Sichuan (31°28'N, 103°17'E)
Hopeh Province, Hopei	Hebei Sheng [HEB]	(39°00'N, 116°00'E)
Horisha	Puli (Nantou)	Taiwan (23°58'N, 120°57'E)
Ho-shi	Hexi (Xichang Shi)	Sichuan (27°40'N, 102°14E)
Hoshui	Heshui Xian	Gansu (35°43'N, 108°07'E)
Hotha	Husa (Longchuan Xian)	Yunnan (24°48'N, 98°05'E)
Hotha (valley)	Husa (Longchuan Xian)	Yunnan (near 24°48'N, 98°05'E)
Houai (river)	Huai He	Anhui and Jiangsu (33°12'N, 118°33'E)
Houang-p'ou (river)	Huangpu Jiang	Shanghai (31°24'N, 121°31'E)
Hountsinping (temple)	Hongchunping (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Hou-tseng-tze (village)	Houzhenzi (in Qinling, Zhouzhi Xian)	Shaanxi (33°51'N, 107°50'E)
Hsiaomienhsi (river)	Xiaomianxi (Hechuan Xian)	Sichuan (near 30°02'N, 106°15'E)
Hsiaotsun (village)	Xiaocun (south-southeast of Er Hai)	Yunnan (near 25°48'N, 100°11'E)
Hsiaoyangchi	Xiaoyangxi	Sichuan (29°05'N, 103°20'E)
Hsi-Ch'ing Shan (mountain)	Xiqing Shan	Border of Qinghai and Gansu (35°00'N, 102°00'E)
Hsienhsiangchih (temple)	Xixiangci (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Hsikang, see Sikang		
Hsi-ku	Zhugqu Xian	Gansu (33°46'N, 104°18'E)
Hsikwangshan, Sikwangshan (mountain)	Xikuang Shan	Hunan (27°47'N, 111°29'E)
Hsinchang	Xinchang (Ebian Xian)	Sichuan (near 29°15'N, 103°24'E)
Hsinglungshan, Hsin-lung-shan (mountain)	Xinglong Shan	Beijing (near 40°28'N, 117°28'E)
Hsinkaiszu (temple)	Xinkai Si (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Hsin-min-hsiang (village)	Xinmin Xiang (Jingdong Xian)	Yunnan (near 24°28'N, 100°54'E)
Hsishuangpanna	Xishuang Banna Daizu Zizhizhou	Yunnan (21°59'N, 100°49'E)

Hualienszu (temple)	Huayan Si (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Huangchiakou	Huangjiagou (southeast of Yibin)	Sichuan (near 28°46'N, 104°34'E)
Hua-ngo Shan (mountain)	Hua-e Shan (Wanyuan Xian)	Sichuan (near 32°04'N, 108°02'E)
Huang-tsiao-ling (village)	Huangcaoling (Jingdong Xian)	Yunnan (near 24°28'N, 100°54'E)
Huchow	Huzhou, Wuxing Xian	Zhejiang (30°52'N, 120°06'E)
Huhehot	Hohhot Shi	Nei Mongol (Inner Mongolia) (40°47'N, 111°37'E)
Hui-ting-sze (temple)	Huideng Si (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Huiyang	Huizhou	Guangdong (23°05N, 114°24'E)
Hululi	Huangluling? (Fenyang Xian)	Shanxi (near 37°24'N, 111°34'E)
Hulun	Hailar Shi	Nei Mongol (Inner Mongolia) (49°12'N, 119°42'E)
Hunan Province	Hunan Sheng [HN]	(27°00'N, 112°00'E)
Hungchuangping (temple)	Hongchunping (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Hupeh Province	Hubei Sheng [HB]	(31°00'N, 112°00'E)
Hwang Ho (river)	Huang He	Northern and eastern China (37°32'N, 118°19'E)
Hwangpu (river)	Huangpu Jiang	Shanghai (31°24'N, 121°31'E)
Hwangtsaopa	Xingyi Xian	Guizhou (25°03'N, 104°59'E)
Hweihsien	Hui Xian	Gansu (33°46'N, 106°06'E)
Ichang	Yichang Shi	Hubei (30°42'N, 111°17'E)
Ili (river)	Ili He	Xinjiang (45°24'N, 74°08'E)
Imen Hsien	Yimen Xian	Yunnan (24°40'N, 102°09'E)
I-mien-p'o, Imienpo	Yimianpo (Shangzhi Xian)	Heilongjiang (45°04'N, 128°03'E)
In-chuan (city)	Yinchuan Shi	Ningxia (38°28'N, 106°19'E)
In-chuan (river)	Xiaojin Chuan	Sichuan (30°52'N, 101°51'E)
Inkiapo	Yinjiapo (on Mt. Qinling)	Shaanxi (near 34°00'N, 108°00'E)
Inner Mongolia Autonomous Region	Nei Mongol Zizhiqu [NM]	(44°00'N, 112°00'E)
Ipin	Yibin Shi	Sichuan (28°46'N, 104°34'E)
Irtysh River	Ertix He	Xinjiang (47°52'N, 84°16'E)
Jagsamka	Luding Xian	Sichuan (29°56'N, 102°12'E)
Jangihissar	Yengisar Xian	Xinjiang (38°56'N, 76°09'E)
Jan-tse-Kiang, upper portion	Jinsha Jiang (upper Chang Jiang)	Sichuan and Yunnan (28°46'N, 104°38'E)
Jaring Nor (lake)	Gyaring Hu	Qinghai (34°55'N, 98°00'E)
Jarkand	Shache Xian, Yarkant	Xinjiang (38°24'N, 77°15'E)
Jehol	Province abolished in 1955, incorporated into Hebei, Liaoning, and Nei Mongol [Inner Mongolia]	(42°00'N, 119°00'E) For location, see map opposite page 288

Jeni-tan	Ju'nyunggoin (Sêrxü, on Kham Plateau)	Sichuan (32°56'N, 98°20'E; see Zarevsky 1925: 74)
Jihkatse	Xigazê Xian	Xizang (Tibet)(29°15'N, 88°53'E)
Jing	Jinghe Xian	Xinjiang (44°39'N, 82°50'E)
Jingko Ling (mountain)	Yingge Ling (Baisha Xian)	Hainan (near 18°31'N, 108°40'E)
Ju-tshang River	Yong Jiang	Guangxi (22°46'N, 108°52'E)
Jyekundo	Yushu Xian	Qinghai (33°01'N, 96°44'E)
Kaba	Habahe Xian	Xinjiang (47°53'N, 86°12'E)
Kachek	Qionghai Xian, Jiaji	Hainan (19°15'N, 110°26'E)
Kachek River	Jiaji He (Qionghai Xian)	Hainan (near 19°15'N, 110°26'E)
Kachgar	Kashi Shi	Xinjiang (39°29'N, 75°58'E)
Kagi district	Chiayi (Chiayi)	Taiwan (23°29'N, 120°27'E)
Kailas (peak)	Kangrinboqê Feng	Anhui (31°04'N, 116°18'E)
Kailas Range	Gangdisê Shan	Xizang (Tibet)(31°00'N, 82°00'E)
Kale Tsing Fou	Kutsing, now Quqing Xian	Yunnan (25°29'N, 103°46'E)
Kalgan	Zhangjiakou Shi	Hebei (40°50'N, 114°56'E)
Kanchuan	Ganquan Xian	Shaanxi (36°19'N, 109°19'E)
Kangting	Kangding Xian, Dardo	Sichuan (30°03'N, 102°02'E)
Kankau	Kankou (Taipei)	Taiwan (24°56'N, 121°37'E)
Kansego	(near "Ngo-la [=Ngolo] Pass," Na-kou Shanko)	Sichuan (near 31°47'N, 98°25'E; see Vogt 1924: 337, 340)
Kanshirei, Kwansirei	Kuantzuling (Tainan)	Taiwan (23°20'N, 120°30'E)
Kan-Sou Province, Kansu	Gansu Sheng [GS]	(35°00'N, 104°00'E)
Kanton (city)	Guangzhou Shi	Guangdong (23°07'N, 113°15'E)
Kantze	Garzê Xian	Sichuan (31°38'N, 100°01'E)
Kao-cha-hien, Kao-chia-yen	Gaojiayan (Yichang Shi)	Hubei (30°35'N, 110°04'E)
Kaoshun	Kaohsiung (Kaohsiung)	Taiwan (22°38'N, 120°17'E)
Karakax	Moyu Xian	Xinjiang (37°17'N, 79°42'E)
Karakoram Pass	Karakorum Shankou	Xinjiang (35°30'N, 77°50'E)
Karassai, Kara-sai	Karasay	Xinjiang (36°46'N, 83°48'E)
Karaxahar (river)	Kaidu He (flows into Bosten Hu)	Xinjiang (41°55'N, 86°38'E)
Karenko, Kwarenko	Hualien (Hualien)	Taiwan (23°59'N, 121°36'E)
Karghalyk, Kargilik	Yecheng Xian	Xinjiang (37°54'N, 77°26'E)
Kaschgar, Kashgar, Kasch, Kaschgarei	Kashi Shi	Xinjiang (39°29'N, 75°58'E)
Kashing	Jiaxing Shi	Zhejiang (30°49'N, 120°45'E)
Kashôtô (island)	Lü Tao, Lutao (Taitung)	Taiwan (22°40'N, 121°29'E)
Kau-Kong River	Gaogong He	Hainan (see Siebenrock 1906: 579)
Keelung, Kelung, Kiirun	Chilung or Keelung (Taipei)	Taiwan (25°08'N, 121°44'E)
Keria, Keriya	Yutian Xian	Xinjiang (36°52'N, 81°42'E)
Kerulen (river)	Herlen He (from Mongolia, flows into Hulun Nur)	Nei Mongol (48°48'N, 117°00'E)

Khan Tengri (peak)	Hantengri Feng	Xinjiang (42°03'N, 80°11'E)
Khara Khoto	Heicheng	Nei Mongol (Inner Mongolia) (41°42'N, 101°28'E)
Khinggan (mountains)	Hinggan Ling	Heilongjiang (see Strauch 1868: 296)
Khotan, Khoten	Hotan Xian	Xinjiang (37°07'N, 79°55'E)
Kiang hsi Province, Kiangsi, Kiansi	Jiangxi Sheng [JX]	(28°00'N, 116°00'E)
Kiangsu Province	Jiangsu Sheng [JS]	(33°00'N, 120°00'E)
Kiansi, see Kiang hsi		
Kiating	Leshan Shi	Sichuan (29°34'N, 103°44'E)
Kienning	Jianning Xian	Fujian (26°48'N, 116°50'E)
Kienyang	Jianyang Xian	Fujian (27°20'N, 118°07'E)
Kiirun, Keelung	Chilung or Keelung (Taipei)	Taiwan (25°08'N, 121°44'E)
Kingchow, Jingzhou	Jiangling Shi	Hubei (30°21'N, 112°11'E)
Kingyang	Qingyang Xian	Gansu (36°05'N, 107°40'E)
Kin Kiang (river)	Jin Jiang	Jiangxi (28°23'N, 115°48'E)
Kirin Province	Jilin Sheng [JL]	(43°30'N, 126°00'E)
Kiuhwashan (mountain)	Jiuhua Shan	Anhui (30°27'N, 117°48'E)
Kiukiang, Kiu Kiang	Jiujiang Shi	Jiangxi (29°44'N, 115°59'E)
Kiungchow	Haikou Shi	Hainan (20°03'N, 110°19'E)
Kiungshan	Qiongshan Xian	Hainan (20°00'N, 110°20'E)
Koeï Tchéou	Guizhou Sheng [GZ]	(27°00'N, 107°00'E)
Kok-Far	Kokyar (Pishan)	Xinjiang (37°25'N, 77°10'E; see Bedriaga 1898: 61)
Kö Kiu Wein	Gongjiawan (southwestern edge of Lanzhou Shi)	Gansu (near 36°03'N, 103°41'E; see Mocquard 1910: 151)
Kokonor (lake)	Qinghai Hu	Qinghai (37°00'N, 100°20'E)
Koktokay	Fuyun Xian	Xinjiang (47°13'N, 89°39'E)
Kokwangai	(near Taipei)	Taiwan (see Ôshima 1910: 201)
Kolan	Kelan Xian	Shanxi (38°43'N, 111°32'E)
Kosempo, Changhsien	Chiahsien (Kaohsiung)	Taiwan (23°07'N, 120°37'E)
Koshun	Hengchun (Pingtung)	Taiwan (22°00'N, 120°44'E)
Kôtôsho, Kôtôsyo (island)	Lanyu, Lan-yü (Pingtung)	Taiwan (22°03'N, 121°32'E)
Koutchar	Kuqa Xian	Xinjiang (41°43'N, 82°54'E)
Kowloon	Jiulong (Hong Kong)	Xianggang (22°20'N, 114°11'E)
Kuangtung Province	Guangdong Sheng [GD]	(23°00'N, 113°00'E)
Kuangwu (mountain)	Guangwu Shan (Nanjiang Xian)	Sichuan (near 32°21'N, 106°50'E)
Kuatun (village)	Guadun (Wuyi Shan, Chongan Xian)	Fujian (near 27°46'N, 118°01'E)
Kucha, Kuche	Kuqa Xian	Xinjiang (41°43'N, 82°54'E)
Kuchen (village)	Guchen (Yao Shan)	Guangxi (near 24°10'N, 110°11'E)
Kuei-te	Guide Xian	Qinghai (36°03'N, 101°28'E)
Kuenluen, Kuenlün (mountain)	Kunlun Shan	Xinjiang (36°00'N, 84°00'E)
Kufi	Kushui	Xinjiang (42°03'N, 94°36'E)

Kuku-choto, Kuku-khotun	Hohhot Shi	Nei Mongol (Inner Mongolia) (40°47'N, 111°37'E)
Kuku-noor, Kukunor (lake)	Qinghai Hu	Qinghai (37°00'N, 100°20'E)
Kuku-nor-Gebirge (mountain)	Qinghai Hu Shan	Qinghai (36°35'N, 100°00'E)
Kuku Shili Mountains	Hoh Xil Shan	Qinghai (35°20'N, 91°00'E)
Kuldja, Kuldscha, Kulja	Yining Shi, Gulja	Xinjiang (43°54'N, 81°21'E)
Kuliang (mountain)	Guling (Fuzhou)	Fujian (near 26°05'N, 119°18'E)
Kuling (mountain)	Guling (Fuzhou)	Fujian (near 26°05'N, 119°18'E)
Kuling (mountain)	Guling (Lu Shan)	Jiangxi (29°30'N, 115°55'E)
Kum kol (lake)	Ayakkum Hu	Xinjiang (37°30'N, 89°20'E)
Kumul	Hami Shi	Xinjiang (42°48'N, 93°27'E)
Künes	Xinyuan Xian	Xinjiang (43°24'N, 83°18'E)
Kungess (river)	Künes He (Tian Shan)	Xinjiang (43°32'N, 82°29'E)
Kungur (mountain)	Kongur Shan	Xinjiang (38°40'N, 75°21'E)
Kunshan	Kunshan Xian	Jiangsu (31°23'N, 120°57'E)
Künshan Island	Junshan Dao (Dongting Hu)	Hunan (near 29°18'N, 112°45'E)
Ku-pei K'ou	Gubeikou	Beijing (40°41'N, 117°09'E)
Kuraru	Kueitzuchiao (Pingtung)	Taiwan (21°58'N, 120°49'E)
Kurla	Korla Shi	Xinjiang (41°44'N, 86°09'E)
Kurlik, Kurlyk	Nomhon (Qaidam Pendi)	Qinghai (36°24'N, 96°01'E)
Kushan (mountain)	Gu Shan (close to Guling, Fuzhou)	Fujian (26°04'N, 119°25'E)
Kutchen	Guchen (Yao Shan)	Guangxi (near 24°10'N, 110°11'E)
Kutsing	Quqing Xian	Yunnan (25°29'N, 103°46'E)
Kwan, Kwanhsien	Guan Xian, now Dujiangyan Shi	Sichuan (31°00'N, 103°37'E)
Kwangsi Autonomous Region	Guangxi Zhuangzu Zizhiqu [GX]	(24°00'N, 109°00'E)
Kwangtung Province	Guangdong Sheng [GD]	(23°00'N, 113°00'E)
Kwannon (mountain)	Kuanyinshan, Kuanying Shan (Taipei)	Taiwan (25°08'N, 121°25'E)
Kwan-yang	Guanyang (Wushan Xian)	Sichuan (31°02'N, 109°56'E)
Kwarenko, Karenko	Hualien (Hualien)	Taiwan (23°59'N, 121°36'E)
Kweichow Province	Guizhou Sheng [GZ]	(27°00'N, 107°00'E)
Kweihua	Hohhot Shi	Nei Mongol (Inner Mongolia) (40°47'N, 111°37'E)
Kweilin	Guilin Shi	Guangxi (25°17'N, 110°17'E)
Kweisui	Hohhot Shi	Nei Mongol (Inner Mongolia) (40°47'N, 111°37'E)
Kweiyang	Guiyang Shi	Guizhou (26°35'N, 106°43'E)
Lac Kuku-nor (lake)	Qinghai Hu	Qinghai (37°00'N, 100°20'E)
Lanchi	Lanxi Xian	Zhejiang (29°13'N, 119°28'E)
Lanchow (city)	Lanzhou Shi	Gansu (36°03'N, 103°41'E)

Langmusi	Dagcanglhamo	Gansu (34°06'N, 102°35'E)
Langqên Kanbab (river)	Xiangquan He	Xizang (Tibet)(29°23'N, 71°02'E)
Lan-Tcheou	Lanzhou Shi	Gansu (36°03'N, 103°41'E)
Lanyu (island)	Lan-yü, Lanyu	Taiwan (22°03'N, 121°32'E)
Laochaitze (village)	Laozhaizi (Hechuan Xian)	Sichuan (near 30°02'N, 106°15'E)
Laojunmiao	Yumen Xian	Gansu (39°50'N, 97°44'E)
Leishan (county)	Leishan Xian	Guizhou (26°23'N, 108°04'E)
Leishan (mountain)	Lei Shan (Leishan Xian)	Guizhou (near 26°23'N, 108°04'E)
Lengtung	Luandong (Luocheng Mulaozu Zizhixian)	Guangxi (24°48'N, 108°34'E)
Lesser Khingan Range	Xiao Hinggan Ling	Heilongjiang (48°45'N, 127°00'E)
Liang Feng Kang	Liang Feng Gang (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Liang Ho Kou	Lianghekou (Meigu Xian)	Sichuan (28°20'N, 103°04'E)
Liang-tang (county)	Liangdang Xian	Gansu (33°56'N, 106°12'E)
Liaoning Province	Liaoning Sheng [LN]	(41°00'N, 123°00'E)
Lidjiang (county)	Lijiang Naxizu Zizhixian	Yunnan (26°48'N, 100°16'E)
Lien-ping (county)	Lianping Xian	Guangdong (24°22'N, 114°30'E)
Lienshan	Lianshan Zhuangzu Yaozu Zizhixian	Guangdong (24°37'N, 112°02'E)
Lifan, Li-fan-city, Lifanhsien	Li Xian	Sichuan (31°28'N, 103°17'E)
Likiang (county)	Lijiang Naxizu Zizhixian	Yunnan (26°48'N, 100°16'E)
Linghai, Linhai (county)	Linhai Xian	Zhejiang (28°51'N, 121°07'E)
Lingshihszu (monastery)	Lingshi Si (Fuqing Xian)	Fujian (near 25°43'N, 119°22'E)
Linping	Lianping Xian	Guangdong (24°22'N, 114°30'E)
Liuchow	Liuzhou Shi	Guangxi (24°19'N, 109°24'E)
Lob-nor, Lob Nor (lake)	Lop Nur	Xinjiang (40°30'N, 90°30'E)
Locheng	Luocheng Mulaozu Zizhixian	Guangxi (24°47'N, 108°54'E)
Lo-dan, Lo Dan (village)	Luodan (Jinxiu Yaozu Zizhixian)	Guangxi (23°55'N, 110°20'E)
Lofaoshan, Lofau, Lo-foo-shan, Lofou (mountain)	Luofu Shan	Guangdong (23°17'N, 114°03'E)
Lo Ho (river)	Luo He	Shaanxi (34°41'N, 110°06'E)
Lohshiang, Lohsiang (village)	Luoxiang (Jinxiu Xian)	Guangxi (near 24°10'N, 110°11'E)
Loi Mother Mountain	Limu Ling	Hainan (19°02'N, 109°43'E)
Lokchong	Lechang Xian	Guangdong (25°08'N, 113°20'E)
Lolokou	Jiafanggou (Zhaojue Xian)	Sichuan (near 28°02'N, 102°52'E)
Long-chu	Long-jie (Weining Xian)	Guizhou (near 27°24'N, 104°06'E)
Longdong River	Longdong He (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Long Tao Shan (mountain)	Longtou Shan (east of Siu-dsau or Qujiang)	Guangdong (near 25°00'N, 115°50'E)
Lopnor, Lopnur (county)	Yuli Xian	Xinjiang (36°59'N, 121°25'E)
Loshiang (village)	Luoxiang (Jinxiu Xian)	Guangxi (near 24°10'N, 110°11'E)
Loyang	Luoyang Shi	Henan (34°41'N, 112°28'E)

Luanshihkou	Luanshigou (near Wan Xian)	Sichuan (near 30°49'N, 108°21'E)
Luchuan	Luquan Xian	Yunnan (25°35'N, 102°30'E)
Luhohsien	Luhuo Xian, Zhaggo	Sichuan (31°24'N, 100°38'E)
Luichow Peninsula	Leizhou Bandao	Guangdong (20°40'N, 110°05'E)
Lük-tschun	Lukchun	Xinjiang (42°38'N, 89°44'E)
Luluping	Ebian Xian	Sichuan (29°15'N, 103°24'E)
Lungan	Pingwu Xian	Sichuan (32°25'N, 104°36'E)
Lungchow	Longzhou Xian	Guangxi (22°24'N, 106°50'E)
Lungchuan	Longquan Xian	Zhejiang (28°05'N, 119°07'E)
Lungchwan	Longchuan Xian	Yunnan (24°21'N, 97°56'E)
Lungling	Longling Xian	Yunnan (24°35'N, 98°41'E)
Lungsheng, Lung-shen-hsien	Longsheng Xian	Guangxi (25°48'N, 110°00'E)
Lung Tao Shan, Lungtou (mountain)	Longtou Shan (east of Shaoguan)	Guangdong (near 24°48'N, 113°35'E)
Lungtou (mountain)	Longtou Shan (Anlong Xian)	Guizhou (near 25°06'N, 105°31'E)
Lungtung (river)	Longdong He (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Lungtung	Longdong (Baoxing Xian)	Sichuan (near 30°23'N, 102°50'E)
Lun-ngan-fu	Pingwu Xian	Sichuan (32°25'N, 104°36'E)
Lu Tao, Lutao	Lü Dao (Taitung)	Taiwan (23°09'N, 120°29'E)
Luting Kiao (bridge)	Luding Qiao (Luding Xian)	Sichuan (29°54'N, 102°15'E)
Macao, Macau	Aomen [AM]	(22°10'N, 113°40'E)
Mai Tai Chao, Meteul	Tumd Zuoqi	Nei Mongol (Inner Mongolia) (40°42'N, 111°08'E)
Makazayazaya	Hsinmachia (Pingtung)	Taiwan (22°41'N, 120°40'E)
Manasarowar Lake	Mapam Yumco	Xizang (Tibet)(30°40'N, 81°25'E)
Mapien (county)	Mabian Xian	Sichuan (28°48'N, 103°39'E)
Maralwexi	Bachu Xian	Xinjiang (39°46'N, 78°15'E)
Maytag	Dushanzi	Xinjiang (44°20'N, 84°51'E)
Medo, Medog (county)	Mêdog Xian	Xizang (Tibet)(29°19'N, 95°19'E)
Mékong River, upper	Lancang Jiang	Yunnan and Xizang (Tibet) (10°15'N, 105°55'E)
Meng-hsien	Meng Xian	Henan (34°54'N, 112°47'E)
Menglien	Menglian Xian	Yunnan (22°21'N, 99°36'E)
Mengtsz	Mengzi Xian	Yunnan (23°22'N, 103°24'E)
Meteul, Mai Tai Chao	Tumd Zuoqi	Nei Mongol (Inner Mongolia) (40°42'N, 111°08'E)
Metschin-Ola (mountain)	Mieh-Ch'eng-O-La Shan (about 30 km northeast of Barkol)	Xinjiang (near 43°35'N, 92°51'E)
Mienning	Mianning Xian	Sichuan (28°35'N, 102°11'E)
Mientian, Mientien (mountain)	Mientianshan (Taipei)	Taiwan (25°11'N, 121°30'E)
Minya Konka (mountain)	Gongga Shan	Sichuan (29°34'N, 101°53'E)
Mokanshan (mountain)	Mogan Shan	Zhejiang (30°35'N, 119°51'E)

Momien	Tengchong Xian	Yunnan (25°02'N, 98°28'E)
Monggolküre	Zhaosu Xian	Xinjiang (43°10'N, 81°07'E)
Mons Lofau, Mons Lofou (mountain)	Luofu Shan	Guangdong (23°17'N, 114°03'E)
Moukden	Shenyang Shi	Liaoning (41°48'N, 123°27'E)
Moupin	Baoxing Xian	Sichuan (30°23'N, 102°50'E)
Muangla	Lianghe Xian	Yunnan (24°46'N, 98°20'E)
Mukden	Shenyang Shi	Liaoning (41°48'N, 123°27'E)
Mung Lun	Menglun (Jinghong Xian)	Yunnan (near 21°59'N, 100°49'E)
Muni Ula (mountain)	Yin Shan	Nei Mongol (Inner Mongolia) (41°30'N, 109°00'E)
Muping	Baoxing Xian	Sichuan (30°23'N, 102°50'E)
Mur Usu (river)	Moron Us He (between Tuotuo He and Tongtian He, upper Chang Jiang)	Qinghai (34°42'N, 94°50'E)
Musha	Wushe, now Jenai (Nantou)	Taiwan (24°02'N, 121°08'E)
Nagchu-Dzong	Nagqu Xian	Xizang (Tibet)(31°30'N, 92°00'E)
Namcha Barwa (peak)	Namjagbarwa Feng	Xizang (Tibet)(29°40'N, 95°10'E)
Namfong	Nanfeng (south of Nada, Zhan Xian)	Hainan (near 19°31'N, 109°33'E)
Namkao	Nangao (Baisha Xian)	Hainan (near 19°15'N, 109°30'E)
Namkong	Nangang (Guangzhou Shi)	Guangdong (23°10'N, 113°28'E)
Namting River	Nanding He	Yunnan (23°25'N, 98°41'E)
Nanhai	Foshan Shi	Guangdong (23°02'N, 113°07'E)
Nankiang (county)	Nanjiang Xian	Sichuan (32°21'N, 106°50'E)
Nanking (city)	Nanjing Shi	Jiangsu (32°03'N, 118°47'E)
Nan-Schan, Nan-shan (mountains)	Nanshan, Nan Shan	Border of Gansu and Qinghai (see Bedriaga 1905: 180 and Zarevsky 1927: 304)
Nanto, Nan-Tou Hsien (county)	Nantou (Nantou)	Taiwan (23°50'N, 120°40'E)
Nengkao Shan (mountain)	Nengkaoshan (Nantou)	Taiwan (24°00'N, 121°15'E)
Ngan-Hoei	Anhui Sheng [AH]	(32°00'N, 117°00'E)
Ngan-K'ing (city)	Anqing Shi	Anhui (30°32'N, 117°02'E)
Ngawa, Ngwa	Aba Xian	Sichuan (32°55'N, 101°42'E)
Ngo-la (pass)	Ngolo, Na-kou Shanko	Sichuan (near 31°47'N, 98°25'E; see Vogt 1924: 337, 340)
Niangtzekwan	Niangziguan, Niangzi Guan	Shanxi (37°57'N, 113°52'E)
Niitaka (mountain)	Yu Shan, Yushan (Chiayi)	Taiwan (23°28'N, 120°57'E)
Nija, Niya (oasis)	Minfeng Xian	Xinjiang (37°04'N, 82°46'E)
Ning-kouo-fou, Ningkwo (county)	Ningguo Xian	Anhui (30°38'N, 118°58'E)
Ningpo	Ningbo Shi	Zhejiang (29°53'N, 121°33'E)
Ningsia Autonomous Region	Ningxia Huizu Zizhiqu [NX]	(37°00'N, 106°00'E)

Ningteh (county)	Ningde Xian	Fujian (26°41'N, 119°32'E)
Ningtu (county)	Ningdu Xian	Jiangxi (26°22'N, 115°48'E)
Ningyuan, Ning Yuan Fu	Xichang Shi	Sichuan (27°53'N, 102°18'E)
Niya, Nija	Minfeng Xian	Xinjiang (37°04'N, 82°46'E)
Nodoa	Nada (Zhan Xian)	Hainan (19°31'N, 109°33'E)
Nogawa	Aba Xian, Ngawa	Sichuan (32°55'N, 101°42'E)
Nôkô, Nôkôsan, Nôkôzan (mountain)	Nengkaoshan (Nantou)	Taiwan (24°00'N, 121°15'E)
Nonni (river)	Nen Jiang	Northeastern China (45°26'N, 124°39'E)
Noritaka (mountain)	Nengkaoshan (Nantou)	Taiwan (24°00'N, 121°15'E)
Nyagquka (county)	Yajiang Xian	Sichuan (30°02'N, 101°02'E)
Nyagrong (county)	Xinlong Xian	Sichuan (30°58'N, 100°13'E)
Nyenchen Tanglha Range (mountains)	Nyainqêntanglha Shan	Xizang (Tibet)(30°10'N, 90°00'E)
Odon Tala, "Starry Sea" (salt marsh)	Xingxiu Hai (along western edge of Gyaring Hu)	Qinghai (near 34°54'N, 96°48'E)
Oiwake	Tsuifeng (Nantou)	Taiwan (24°07'N, 121°11'E)
O-ling Hu (lake)	Ngoring Hu	Qinghai (34°52'N, 97°30'E)
Omei (mountain)	Emei Shan (Emei Xian)	Sichuan (29°32'N, 103°21'E)
Omei-hsien (county)	Emei Xian	Sichuan (29°35'N, 103°31'E)
Opienhsien (county)	Ebian Xian	Sichuan (29°15'N, 103°24'E)
Orchid Island	Lanyu, Lan-yü (Taitung)	Taiwan (22°03'N, 121°32'E)
Oring Nor (lake)	Ngoring Hu	Qinghai (34°55'N, 98°00'E)
Öst-Dschungarien	Junggar Pendi	Xinjiang (45°00'N, 88°00'E)
Ouang-mao-tsaé, Wang mao tsai (village)	Wangmaozhai (Nancheng Xian)	Jiangxi (near 27°30'N, 116°40'E; see David 1875: 248–252 and Pope 1931: 500)
Ozero Khanka (lake)	Xingkai Hu	Border of Heilongjiang and Russia (45°00'N, 132°24'E)
Paise (county)	Bose Xian	Guangxi (23°54'N, 106°37'E)
Pangsi	Pengxi (Yingjiang Xian)	Yunnan (near 24°48'N, 98°05'E)
Panlungshan (mountain)	Panlong Shan (Dujiangyan Shi, formerly Guan Xian)	Sichuan (near 31°01'N, 103°38'E)
Panshi, P'an-shih (county)	Panshi Xian	Jilin (42°56'N, 125°58'E)
Paohing, Pao-hsing, Paohsinghsien (county)	Baoxing Xian	Sichuan (30°23'N, 102°50'E)
Pao-t'ou, Paotow, Paotowchen	Baotou Shi	Nei Mongol (Inner Mongolia) (40°36'N, 110°03'E)
Patachu (temples)	Badachu (Xi Shan)	Beijing (near 40°00'N, 116°00'E)
Patungguan	Patungkuan (Nantou)	Taiwan (23°29'N, 120°59'E)
Payzawat	Jiashi Xian	Xinjiang (39°29'N, 76°39'E)
Peak (The), (mountain)	Shan Teng	Hong Kong (22°16'N, 114°09'E)

Pearl River	Zhu Jiang	Guangdong (22°45'N, 113°37'E)
Peilinshan (mountain)	Bailing Shan (Yanyuan Xian)	Sichuan (near 27°25'N, 101°33'E)
Peiping	Beijing Zhixia Shi [BJ]	(40°15'N, 116°30'E)
Pekin, Peking, Pekingo	Beijing Zhixia Shi [BJ]	(40°15'N, 116°30'E)
Pen Hsien (county)	Peng Xian	Sichuan (30°59'N, 103°56'E)
Pescadores Islands	Penghu Liedao, Penghu Chün-tao	Taiwan (23°35'N, 119°35'E)
Pik Pobedy (peak)	Tomur Feng (Tian Shan)	Xinjiang (42°03'N, 80°11'E)
Pingshiang, Pingsiang	Pingxiang Shi	Jiangxi (27°37'N, 113°51'E)
Pinkiang (city)	Harbin Shi	Heilongjiang (45°45'N, 126°39'E)
Piqan (county)	Shanshan Xian	Xinjiang (42°52'N, 90°10'E)
Pobedy (peak)	Tomur Feng (Tian Shan)	Xinjiang (42°03'N, 80°11'E)
Polu	Pulu (south of Minfeng and Yutian)	Xinjiang (36°12'N, 81°30'E)
Ponsee	Pengxi (Yinjiang Xian)	Yunnan (near 24°48'N, 98°05'E)
Port Arthur	Lüshun (Dalian Shi)	Liaoning (38°48'N, 121°16'E)
Poskam	Zepu Xian	Xinjiang (38°12'N, 77°18'E)
Poyang Lake	Boyang Hu	Jiangxi (near 29°17'N, 115°59'E)
Pratas (islands)	Dongsha Qundao	Hainan (21°00'N, 116°00'E)
Pumansao (town)	Pumanshao (Baoshan Xian)	Yunnan (near 25°07'N, 99°09'E)
Punkiho	Fenchihu (Chiayi)	Taiwan (23°30'N, 120°41'E)
Pupiao (town)	Pupiao (Baoshan Xian)	Yunnan (23°40'N, 104°22'E)
Qagchêng (county)	Xiangcheng Xian	Sichuan (29°00'N, 99°46'E)
Qarkilik (county)	Ruoqiang Xian	Xinjiang (39°02'N, 88°00'E)
Qarqan (county)	Qiemo Xian	Xinjiang (38°08'N, 85°32'E)
Qinggil (county)	Qinghe Xian	Xinjiang (44°39'N, 82°50'E)
Qoqek (county)	Tacheng Xian	Xinjiang (46°45'N, 82°57'E)
Quqên (county)	Jinchuan Xian	Sichuan (31°30'N, 101°55'E)
Ramala Pass	Yamala (near Kangding Xian, Dardo)	Sichuan (near 30°03'N, 102°02'E)
Rongzhag (county)	Danba Xian	Sichuan (30°57'N, 101°55'E)
Sa-chou, Sachow	Dunhuang Xian	Gansu (40°10'N, 94°50'E)
Sagüs kul	(Kulun Shan range, northwestern Xizang [Tibet])	Xizang (Tibet) (near 35°10'N, 81°37'E; see Zugmayer 1909: 504)
Salween River (in Burma)	Nu Jiang	Yunnan and Xizang (Tibet) (16°30'N, 97°30'E)
Sampula (oasis)	(23 km east of Hotan Shi)	Xinjiang (near 37°07', 79°55'E; see Bedriaga 1898: 51, 61, and 1912: 515)
Sam-söi (county)	Sanshui Xian	Guangdong (23°09'N, 112°52'E)
San Chiang, Sanchiang (village)	Sangang (Wuyi Shan, Chongan Xian)	Fujian (27°45'N, 117°41'E)
Sanda, Chanta	Lianghe Xian	Yunnan (24°46'N, 98°20'E)

San-he-ba (village)	Part of Guanyang (Wushan Xian)	Sichuan (near 31°02'N, 109°56'E)
San Shi Ka	Shanshang (Tainan)	Taiwan (23°06'N, 120°21'E)
Santashan	Sandawan? (a few km northeast of Yanyuan Xian)	Sichuan (near 27°25'N, 101°33'E)
Saur (mountains)	(in the Tarbagatay range)	Xinjiang (near 47°00'N, 86°00'E)
Sênggê Zangbo (river)	Shiquan He	Xizang (Tibet)(32°28'N, 79°44'E)
Setchuan Province, Sé-Tchouen	Sichuan Sheng [SC]	(30°00'N, 103°00'E)
Shanhaikwan	Shanhaiguan	Hebei (40°01'N, 119°44'E)
Shanlin Chiti	Shanlin-chi (Nantou)	Taiwan (23°39'N, 120°47'E)
Shan-Marin (river)	Ulan Moron He (Ordos)	Nei Mongol (38°52'N, 110°29'E)
Shansi Province	Shanxi Sheng [SX]	(37°00'N, 112°00'E)
Shantung Province	Shandong Sheng [SD]	(36°00'N, 119°00'E)
Shan Xian	Sanmenxia	Henan (34°50'N, 111°05'E)
Sha Tau Kok	Sha Tou Jiao, Shatoujiao (Shenzhen Shi)	Guangdong (22°33'N, 114°13'E)
Shenchow	Yuanling Xian	Hunan (28°27'N, 110°23'E)
Shensi Province	Shaanxi Sheng [SN]	(36°00'N, 109°00'E)
Shigatse	Xigazê Xian	Xizang (Tibet)(29°15'N, 88°53'E)
Shihchuan	Shiquan Xian	Shaanxi (33°03'N, 108°17'E)
Shihwantashan (mountain)	Shiwandashan (Shangsi Xian)	Guangxi (21°43'N, 107°35'E)
Shinchiku	Hsinchu (Hsinchu)	Taiwan (24°48'N, 120°57'E)
Shin-kai-si (temple)	Xin-kai Si (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Shinkô	Shenkeng (Taipei)	Taiwan (25°00'N, 121°37'E)
Shiuchow	Shaoguan Shi	Guangdong (24°48'N, 113°35'E)
Shiu-djün	Qujing Xian	Yunnan (25°36'N, 103°49'E)
Shiuhing	Xinxing Xian	Guangdong (22°42'N, 112°13'E)
Shuga Gol, Shu-erh-khan Ho, Shurghan Gol (river)	Shu-erh-kan He or Shu-ka-kuo-lo He (tributary of Qaidam He, between Alag Hu and Donggi Cona lakes)	Qinghai (near 35°00'N, 95°00'E)
Shuishario, Suisharyo	Shuisheliao (Chiayi)	Taiwan (23°30'N, 120°39'E)
Shuiyuan Shan, Quellberg (mountain)	Shuiyuanshan (between Qüjian Xian and Wengyuan Xian, south of Shaoguan)	Guangdong (near 24°30'N, 114°00'E)
Sian (city)	Xi'an Shi	Shaanxi (34°16'N, 108°54'E)
Siangtan	Xiangtan Shi	Hunan (27°51'N, 112°54'E)
Sichang	Xichang Shi	Sichuan (27°53'N, 102°18'E)
Sien-Hien (county)	Xian Xian	Hebei (38°12'N, 116°07'E)
Sien-Shan-Tze (temple)	Xixiang Ci (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Sihu (lake)	Xi Hu (Hangzhou)	Zhejiang (30°15'N, 120°07'E)
Sikang, Hsikang	Province abolished in 1955, incorporated into Sichuan and Xizang (Tibet)	(31°00'N, 99°00'E) For location, see map opposite page 288
Si-Kiang River	Xi Jiang	Guangdong (22°48'N, 113°03'E)

Sikwangshan, Hsikwangshan (mountain)	Xikuang Shan (near Xinhua)	Hunan (27°47'N, 111°29'E)
Sinhwa (county)	Xinhua Xian	Hunan (27°45'N, 111°18'E)
Sining (city)	Xining Shi	Qinghai (36°37'N, 101°46'E)
Sinkiang Uighur Autonomous Region	Xinjiang Uygur Zizhiqu [XJ]	(42°00'N, 86°00'E)
Siu-dsau (county)	Qujiang Xian	Guangdong (24°41'N, 113°35'E)
Siu-hing	Zhaoqing Shi	Guangdong (23°03'N, 112°27'E)
Snow Mountain	Yulong Xueshan (Lijiang Xian)	Yunnan (27°09'N, 100°12'E)
Soochow, Sou-Tcheou (city)	Suzhou Shi	Jiangsu (31°18'N, 120°37'E)
Sou-Tcheou (county)	Jiuquan Xian	Gansu (39°46'N, 98°34'E)
Ssalburty, Sal-burty (mountain)	(in Tarbagatay range, west of Fuhai)	Xinjiang (near 47°00'N, 86°00'E; see Bedriaga 1907: 236 and 1912: 631)
Ssatschsheu (county or oasis)	Dunhuang Xian	Gansu (40°10'N, 94°50'E)
Ssu-tschou	Jiuquan Xian	Gansu (39°46'N, 98°34'E)
Stadt Barkul (county)	Barkol Xian	Xinjiang (43°35'N, 92°51'E)
Stadt Gui-Duï	Guide Xian	Qinghai (36°03'N, 101°28'E)
Suchow (city)	Suzhou Shi	Jiangsu (31°18'N, 120°37'E)
Süchow (city)	Yibin Shi	Sichuan (28°46'N, 104°34'E)
Suchow (county)	Jiuquan Xian	Gansu (39°46'N, 98°34'E)
Sui-fu, Suifu	Yibin Shi	Sichuan (28°46'N, 104°34'E)
Suishako	Shuishe (Nantou)	Taiwan (23°50'N, 120°53'E)
Suishario, Shuishario	Shuisheliao (Chiayi)	Taiwan (23°30'N, 120°39'E)
Su-liu-gun, Suliukuan (monastery)	Shiliuguan (Luofu Shan)	Guangdong (near 23°40'N, 114°36'E)
Sungan River, Sungari River	Songhua Jiang	Northeastern China (47°42'N, 132°30'E)
Sung-pan, Sungqu (county)	Songpan Xian	Sichuan (32°36'N, 103°36'E)
Sutschschou	Jiuquan Xian	Gansu (39°46'N, 98°34'E)
Suwoo	Suao (Ilan)	Taiwan (24°36'N, 121°51'E)
Swatow	Shantou Shi	Guangdong (23°22'N, 116°40'E)
Szechuan Province, Sze-chuen, Szechwan	Sichuan Sheng [SC]	(30°00'N, 103°00'E)
Szekuaipa (village)	Sikuaiba (Zhaojue Xian)	Sichuan (near 28°02'N, 102°52'E)
Szewui (county)	Sihui Xian	Guangdong (23°20'N, 112°41'E)
Szuchiping	Shiziping (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Tachienlu (county)	Kangding Xian	Sichuan (30°03'N, 102°02'E)
Ta Han	Da'an	Hainan (near 18°40'N, 109°10'E; see Gressitt 1938: 129)
Taichow (county)	Linhai Xian	Zhejiang (28°51'N, 121°07'E)

Taichu, Taichushu	Taichung (Taichung)	Taiwan (24°09'N, 120°41'E)
Taiheizan (mountain)	Tapingshan (Ilan)	Taiwan (24°30'N, 120°32'E)
Taihoko, Taihoku	Taipei	Taiwan (25°03'N, 121°32'E)
Taihoku-shiu	Taipei Hsien (county)	Taiwan (25°00'N, 121°35'E)
Taihorin, Taihorinsô, Tairin	Talin (Chiayi)	Taiwan (23°36'N, 120°27'E)
Taiko (mountain)	Takengshan (Chiayi)	Taiwan (23°30'N, 120°36'E)
Taiku (county)	Taigu Xian	Shanxi (37°23'N, 112°34'E)
Tailuko	Tailuge, Tailuko (Hualien)	Taiwan (24°10'N, 121°33'E)
Taipa, Taipeh (county)	Taipei (Taipei)	Taiwan (25°03'N, 121°32'E)
Tairin, Taihorin	Talin (Chiayi)	Taiwan (23°36'N, 120°27'E)
Taitong (county)	Taitung (Taitung)	Taiwan (22°45'N, 121°08'E)
Taiwan foo, Taiwan-fu	Tainan Shi (Tainan)	Taiwan (23°00'N, 120°11'E)
Tai-yong	Dayang (Jiexi Xian)	Guangdong (near 23°38'N, 115°50'E)
Takao, Takau	Kaohsiung (Kaohsiung)	Taiwan (22°38'N, 120°17'E)
Takla Makan Desert	Taklimakan Shamo	Xinjiang (39°00'N, 83°00'E)
Takou	Kaohsiung (Kaohsiung)	Taiwan (22°38'N, 120°17'E)
Tali, Talifu (county)	Dali Xian	Yunnan (25°42'N, 100°11'E)
Talien	Dalian Shi	Liaoning (38°55'N, 121°39'E)
Tamsui, Tamsuy	Tanshui (Taipei)	Taiwan (25°10'N, 121°26'E)
Ta-nge-sze (temple)	Da-e Si (Emei Shan)	Sichuan (near 29°32'N, 103°21'E)
Tang La, Tanglha Range (mountains)	Tanggula Shan, Dangla Shan	Border of Qinghai and Xizang (Tibet) (33°00'N, 92°00'E)
Tanshi River	Tanshui River (Taipei)	Taiwan (25°11'N, 121°25'E)
Tanshui	Danshui	Taiwan (25°10'N, 121°26'E)
Tao River	Tao He, Lu Qu	Gansu (35°50'N, 103°20'E)
Tarbagatai, Tarbagatay (county)	Tacheng Xian	Xinjiang (46°45'N, 82°57'E)
Tarim Basin	Tarim Pendi	Xinjiang (41°00'N, 84°00'E)
Taroko, Toroku	Tailuko or Tailuge (Hualien)	Taiwan (24°10'N, 121°33'E)
Ta-tsian-lu, Tatsienlu, Ta-tsien-lu	Kangding Xian, Dardo Xian	Sichuan (30°03'N, 102°02'E)
Tatung (town)	Datong (Tongling Shi)	Anhui (30°48'N, 117°44'E)
Tatung Shan (mountain)	Tatungshan (Taipei)	Taiwan (25°11'N, 121°31'E)
Tau-hua-qu (stream)	Taohuaxi (Huang Shan)	Anhui (near 30°10'N, 118°07'E)
Tawu Shan (mountain)	Tatungshan (Pingtung)	Taiwan (22°33'N, 120°45'E)
Tch'ao (lake)	Chao Hu	Anhui (31°31'N, 117°33'E)
Tcharchalyk	Ruoqiang Xian, Qarkilik	Xinjiang (39°02'N, 88°00'E)
Tchékiang Province	Zhejiang Sheng [ZJ]	(29°00'N, 120°00'E)
Tchong-pa	Zhongba, now Jiangyou Xian	Sichuan (31°47'N, 104°45'E)
Teeberg	Chayuanshan (east of Siu-dsau or Qujiang)	Guangdong (near 25°00'N, 115°30'E; see Mell 1922: map)
Tengk'ou	Dengkou Xian	Nei Mongol (Inner Mongolia) (40°18'N, 106°59'E)
Tengyuechow, Tengyueh	Tengchong Xian	Yunnan (25°02'N, 98°28'E)

Tibet Autonomous Region, Thibet	Xizang Zizhiqu [Tibet][XZ]	(32°00'N, 90°00'E)
Tientai (county)	Tiantai Xian	Zhejiang (29°09'N, 121°02'E)
Tientsin	Tianjin Zhixia Shi [TJ]	(39°08'N, 117°12'E)
Tiger River, Tigerflusse	Xi Jiang? (near Aomen Island [Macao])	Guangdong (near 22°10'N, 113°40'E; see Wiegmann 1834: 195)
Tingan (county)	Dingan Xian	Hainan (19°42'N, 110°18'E)
Tinghushan, Ding-hu-shan, Ding-wu-shan (mountain)	Dinghu Shan	Guangdong (near 23°11'N, 112°22'E)
Tingri (county)	Tingri Xian, Xêgar	Xizang (Tibet)(28°34'N, 86°38'E)
Ting-yüan-ying	Dingyuanying, Alxa Zuoqi	Nei Mongol (38°50'N, 105°32'E)
Titao	Lintao Xian	Gansu (35°20'N, 104°00'E)
Tjan-schan (mountains)	Tian Shan	Xinjiang (42°00'N, 80°00'E)
Tjionra	(on Nu Jiang)	Northwestern Yunnan? (see Werner 1922: 221 and page 217, *Sphenomorphus indicus* [Note])
Tokkuztara (county)	Gongliu Xian	Xinjiang (43°30'N, 82°15'E)
Toksu	Xinhe Xian	Xinjiang (41°34'N, 82°38'E)
Tong Chuan Fu	Dongchuan Shi	Yunnan (26°10'N, 103°02'E)
Tong-lieou (lakes)	Dongliu (Dongzhi Xian)	Anhui (30°12'N, 116°55'E)
Tongngolo	Dong-e-lo (near Kangding Xian)	Sichuan (near 30°03'N, 102°02'E)
Tongshan	Xuzhou Shi	Jiangsu (34°16'N, 117°11'E)
Tong-so-lo	Dong-e-lo (near Kangding Xian)	Sichuan (near 30°03'N, 102°02'E)
Toroku, Taroko	Tailuge or Tailuko	Taiwan (24°10'N, 121°33'E)
Tsangchow	Cangzhou Shi	Hebei (38°19'N, 116°52'E)
Tsangpo (river)	Yarlung Zangbo Jiang	Xizang (Tibet)(24°02'N, 90°59'E)
Tsangshan (mountain)	Cang Shan (Dali Xian)	Yunnan (25°42'N, 100°11'E)
Tscharchalyk (oasis)	Ruoqiang Xian, Qarkilik Xian	Xinjiang (39°02'N, 88°00'E
Tschertschen	Qiemo Xian, Qarqan Xian	Xinjiang (38°08'N, 85°32'E)
Tschifu	Yantai Shi	Shandong (37°32'N, 121°24'E)
Tschik-Tym	Qiktim	Xinjiang (43°00'N, 90°36'E)
Tsékou, Tseku	Tsu-kou? (in the valley of Lancang Jiang)	Yunnan (28°00'N, 98°52'E; see Mocquard 1897: 215)
Tshungaria orientalis, Tschungarei	Junggar Pendi	Xinjiang (45°00'N, 88°00'E)
Tsinan	Jinan Shi	Shandong (36°40'N, 117°00'E)
Tsinghai Province	Qinghai Sheng [QH]	(36°00'N, 96°00'E)
Tsinglo	Jingle Xian	Shanxi (38°24'N, 111°54'E)
Tsingtao, Tsingtau, Tsintao	Qingdao Shi	Shandong (36°04'N, 120°19'E)
Tsingyun	Qingyuan Xian	Guangdong (23°42'N, 113°02'E)
Tsining	Jining Shi	Nei Mongol (Inner Mongolia) (40°57'N, 113°02'E)

Tsinling Mountains	Qin Ling	Shaanxi (34°00'N, 108°00'E)
Tsitou	Xitou (Wuyuan Xian)	Jiangxi (near 29°25'N, 118°03'E)
Tsitsihar	Qiqihar Shi	Heilongjiang (47°22'N, 123°57'E)
Tsungfa	Conghua Xian	Guangdong (23°33'N, 113°34'E)
Tumangu (river)	Tumen Jiang	Jilin (42°18'N, 130°41'E)
Tungchwan	Dongchuan Shi	Yunnan (26°10'N, 103°02'E)
Tung Kiang (river)	Dong Jiang	Guangdong (23°02'N, 113°31'E)
Tunglan	Donglan Xian	Guangxi (24°31'N, 107°22'E)
Tunglu	Tonglu Xian	Zhejiang (29°49'N, 119°40'E)
Tungngolo, Tung-o-lo, Tung-so-lo	Dong-e-lo (Kangding Xian)	Sichuan (near 30°03'N, 102°02'E)
Tung River	Dadu He	Sichuan (29°32'N, 103°44'E)
Tungting Lake	Dongting Hu	Hunan (29°18'N, 112°45'E)
Tun-huang (county)	Dunhuang Xian	Gansu (40°10'N, 94°50'E)
Tuo-luo-he of Long-chu	Tuo-luo-he of Long-jie (Weining Xian)	Guizhou (26°51'N, 104°14'E)
Turfan	Turpan Xian	Xinjiang (42°56'N, 89°10'E)
Turfan Depression	Turpan Pendi	Xinjiang (42°30'N, 89°30'E)
Turkestan, Eastern	Southern Xinjiang	Xinjiang (40°00'N, 83°00'E)
Ulanhad	Chifeng Shi	Nei Mongol (Inner Mongolia) (42°17'N, 118°53'E)
Ulan-Morin (river)	Ulan Moron He (Ordos)	Nei Mongol (38°52'N, 110°29'E)
Uljungur River	Ulungur	Xinjiang (46°58'N, 87°28'E)
Ulugqat	Wuqia Xian	Xinjiang (39°40'N, 75°07'E)
Ulungur Nor (lake)	Ulungur Hu	Xinjiang (47°20'N, 87°10'E)
Uqturpan	Wushi Xian	Xinjiang (41°10'N, 79°16'E)
Urai	Wulai (Taipei)	Taiwan (24°52'N, 121°33'E)
Urumchi (city)	Ürümqi Shi	Xinjiang (43°48'N, 87°35'E)
Urungu, Ulungur River	Ulungur He	Xinjiang (46°58'N, 87°28'E)
Ussuri (river)	Wusuli Jiang	Heilongjiang (48°28'N, 135°02'E)
Utu	Miao'ergou	Xinjiang (45°31'N, 83°45'E)
Wangwanshan (mountain)	Yangdaishan	Anhui (near 30°38'N, 119°29'E)
Wanhsien, Wanshien (county)	Wan Xian	Sichuan (30°49'N, 108°21'E)
Wanszushan (mountain)	Huashishan (Ruyuan Yaozu Zizhixian and Yingde Xian)	Guangdong (24°36'N, 113°48'E)
Washan (mountain)	Wa Shan (Ebian Xian)	Sichuan (29°20'N, 103°05'E)
Wassu State, Yin tsin wan	Yin Xiu Wan, Yingxiuwan (Wenchuan Xian)	Sichuan (near 31°20'N, 103°20'E)
Wawushan, Mahn tsi shan (mountain)	Wawu Shan (Hongya Xian and Yingjing Xian)	Sichuan (near 29°56'N, 103°25'E)
Weihsien (city)	Weifang Shi	Shandong (36°43'N, 119°06'E)
Wenchow (city)	Wenzhou Shi	Zhejiang (28°01'N, 120°39'E)

Wenchwan (county)	Wenchuan Xian	Sichuan (31°28'N, 103°35'E)
Wenhsien, Wenxian (county)	Wen Xian	Gansu (32°52'N, 104°40'E)
Western Hills	Xi Shan	Beijing (40°00'N, 116°00'E)
Whampoa	Huangpu (Guangzhou Shi)	Guangdong (23°05'N, 113°25'E)
Wuchi, Wuchih (mountain)	Wuzhi Shan	Hainan (18°54'N, 109°40'E)
Wuchie, Bukai	Wuchie, Wuchieh (Nantou)	Taiwan (23°52'N, 121°04'E)
Wuchow (city)	Wuzhou Shi	Guangxi (23°29'N, 111°19'E)
Wukang (county)	Wugang Xian	Hunan (26°44'N, 110°38'E)
Wusih (city)	Wuxi Shi	Jiangsu (31°35'N, 120°18'E)
Wüste Chami	Hami Shi, Kumul	Xinjiang (42°48'N, 93°27'E)
Wusüeh	Wuxue, Guangji Xian	Hubei (29°51'N, 115°33'E)
Wuting, Wutingchow, Wuting Chu	Wuding Xian	Yunnan (25°33'N, 102°26'E)
Wuxing	Huzhou Shi	Zhejiang (30°52'N, 120°06'E)
Xiangyang	Xiangfan Shi	Hubei (32°03'N, 112°05'E)
Xin-min Siang, Xin-min-Ziang (village)	Xin-min Xiang (Jindong Xian)	Yunnan (near 24°28'N, 100°54'E)
Xulun Hobot Qaqan	Zhengxiangbai Qi	Nei Mongol (Inner Mongolia) (42°24'N, 115°10'E)
Xulun Hoh	Zhenglan Qi	Nei Mongol (Inner Mongolia) (42°12'N, 115°48'E)
Yachow	Yaan Shi, Yaan Prefecture	Sichuan (29°59'N, 103°05'E)
Yalung River	Yalong Jiang	Sichuan (26°37'N, 101°48'E)
Yamdrok Lake	Yamzho Yumco	Xizang (Tibet)(29°00'N, 90°40'E)
Yangihissar	Yengisar Xian	Xinjiang (38°56'N, 76°09'E)
Yangtse, Yangtzékiang, Yangtze, Yantsze River	Chang Jiang	Central and eastern China (31°48'N, 121°10'E)
Yao-Schan (mountain)	Yulong Xueshan, Yulongxue Shan (Lijiang Xian)	Yunnan (27°09'N, 100°12'E)
Yaoshan (mountain)	Dayao Shan, Da Yaoshan	Guangxi (24°00'N, 110°09'E; see Fan 1931: 2, 13)
Yarkand, Yarkant	Shache Xian	Xinjiang (38°24'N, 77°15'E)
Yellow River	Huang He	Northern and eastern China (37°32'N, 118°19'E)
Yenchinghsi	Yanjingxi (Ebian Xian)	Sichuan (near 29°15'N, 103°24'E)
Yenchingkao	Yanjinggou (Wan Xian)	Sichuan (near 30°49'N, 108°21'E)
Yenping,Yen-ping-fu	Nanping Shi	Fujian (26°38'N, 118°10'E)
Yen-wo-tung	Yan-wo-tang (Zhaojue Xian)	Sichuan (near 28°02'N, 102°52'E)
Yenyuan-hsien	Yanyuan Xian	Sichuan (27°25'N, 101°33'E)
Yihke Tsaidamyn Nor (lake)	Dabsan Hu	Qinghai (36°58'N, 95°00'E)
Yihsing (county)	Yixing Xian	Jiangsu (31°22'N, 119°50'E)
Yinkuanchai	Yinguanzhai (about 50 km west of Kangding)	Sichuan (near 30°03'N, 102°02'E)

Yin tsin wau, Wassu State	Yin Xiu Wan, Yingxiuwan (Wenchuan Xian)	Sichuan (near 31°20'N, 103°20'E)
Yin Xian	Ningbo Shi	Zhejiang (29°53'N, 121°33'E)
Yochow	Yueyang Shi	Hunan (29°23'N, 113°06'E)
Yohlushan (mountain)	Yuelu Shan (Changsha Shi)	Hunan (28°11'N, 112°56'E)
Yuanjiang (county)	Yuanjiang Xian	Yunnan (23°34'N, 102°00'E)
Yuan Kiang	Yuanjiang Xian	Yunnan (23°34'N, 102°00'E)
Yuanshan, Chienshan	Qianshan	Jiangxi (28°08'N, 117°42'E)
Yuexi (county)	Yuexi Xian	Sichuan (28°36'N, 102°35'E)
Yugakujo	Xiongyue Xian	Liaoning (40°10'N, 122°08'E)
Yulunghsi (stream)	Yulongxi (about 32 km southwest of Kangding)	Sichuan (near 30°03'N, 102°02'E)
Yulungkung	Yulingong (Kangding Xian)	Sichuan (near 30°03'N, 101°58'E)
Yungchang	Baoshan Xian	Yunnan (25°07'N, 99°09'E)
Yungchun	Yongchun Xian	Fujian (25°19'N, 118°17'E)
Yungpeh	Yongsheng Xian	Yunnan (26°42'N, 100°45'E)
Yungping	Yongping Xian	Yunnan (25°24'N, 99°36'E)
Yunnan Fou, Yunnanfu	Kunming Shi	Yunnan (25°04'N, 102°41'E)
Yunnan Province	Yunnan Sheng [YN]	(25°00'N, 102°00'E)
Yünschan	Yun Shan (about 10 km south of Wugang Xian)	Hunan (near 26°44'N, 110°38'E)
Zagunao	Li Xian	Sichuan (31°28'N, 103°17'E)
Zaidam, Provinz	Qaidam Pendi [basin]	Qinghai (37°00'N, 93°00'E)
Zainlha	Xiaojin Xian	Sichuan (31°01'N, 102°23'E)
Zhaggo	Luhuo Xian	Sichuan (31°24'N, 100°38'E)
Zhangdian	Zibo Shi	Shandong (36°48'N, 118°03'E)
Zhi Qu (river)	Tongtian He (upper Chang Jiang)	Qinghai (33°36'N, 96°39'E)
Zi-Ka-Wei, Siccawei	Xujiahui (Shanghai Zhixia Shi)	Shanghai (near 31°14'N, 121°28'E)
Zik'ou	Zhugqu Xian	Gansu (33°46'N, 104°18'E)
Zsaj-jan-chaj (lake)	Gaxun Nur	Nei Mongol (Inner Mongolia) (42°25'N, 101°00'E)

NOTE: The routes of the major Chinese expeditions undertaken by foreign explorers are mapped in detail on the topographic maps prepared by the United States Army Map Service, Corps of Engineers, Washington (edition 2, 1952).

Appendix 2

COLLECTING AND PRESERVING AMPHIBIANS AND REPTILES

by John E. Simmons*

GUIDE

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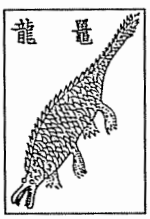

GOOD, WELL-PREPARED SPECIMENS OF AMPHIBIANS AND REPTILES with accurate locality data from many areas of China are needed for museum and university reference collections. This section is intended for people who have limited experience in collecting and preserving amphibians and reptiles, but who might have an opportunity to obtain specimens. For more detailed collecting and preserving information, please refer to the publications by Pisani (1973) and Simmons (1987) that are listed in the bibliography of this appendix.

How to Find Amphibians and Reptiles

Do not let preconceptions about where amphibians and reptiles should be found limit your collecting activities. Approach collecting with an open mind. Sometimes the rarest specimens are found by beginners. Typical habitats for a number of Chinese species are illustrated on color plates 45–48.

By day, turn over rocks, logs, fallen trees, and debris lying on the ground. Check holes in walls, fences, and in the ground. Search bushes and low branches of trees for snakes and lizards. Many arboreal snakes, such as *Ahaetulla* and *Boiga*, are rarely found on the ground.

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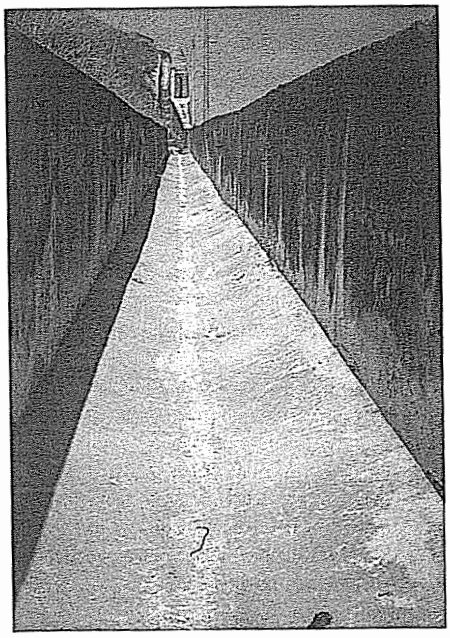

FIGURE 39. Amphibians and reptiles are often trapped in culverts or other drainage gutters into which they crawl or fall, but cannot escape. A trapped specimen of a blind snake (*Ramphotyphlops braminus*) can be seen in the foreground of this culvert near Ka-Ho Village on Coloane Island, Macao. (Photograph by Emmett R. Easton.)

By night, walk slowly with a focused light. Check the edges of ponds, bays, swamps, streams, and irrigated agricultural areas. Many animals that are difficult to collect during the day can be easily found at night. The semi-aquatic snakes of the genus *Opisthotropis*, for example, conceal themselves beneath rocks and decaying vegetation near stream beds by day, but move about at night.

Many snakes are active after dark, except when nights are very cool. The sand boas (*Eryx*) and *Psammophis lineolatus*, a colubrid snake, burrow beneath the sand or under rocks by day, but are active at night.

Animals often are more plentiful at the edges of disturbed situations than they are in pristine or undisturbed habitats. Hunting along roads, fence rows, oases, irrigated fields, and rice paddies, and around human habitations, trash dumps, wells, drainage gutters, and irrigation ditches is often successful (Figure 39). Water snakes of the genus *Amphiesma* frequent moist terraces and flooded fields. Cobras (*Naja*) may be found in rodent burrows or termite mounds. Many water-dwelling snakes, such as *Acrochordus* and *Enhydris*, may be found in both fresh and brackish water.

Amphibians are usually found in damp areas or near water. By day, frogs, toads, salamanders, and caecilians may be captured on damp ground under rocks, logs, and debris. They may also be found in hollow logs and beneath houses, as well as swimming or submerged in ponds or streams, irrigation ditches, wells, or cisterns. Amphibians may hide in cavities that are created when a stream undercuts the bank or beneath rocks in the stream bed. Amphibian larvae blend in well with stream bottoms and hide among the gravel and detritus. Some clasp to the undersides of rocks with their mouths. Caecilians may be found by digging in damp ground near streams and other bodies of water.

During the night, amphibians are much easier to find in water, on the ground, or on vegetation near water. Shine a directed light source such as a flashlight (torch) or headlamp into their eyes. They will remain motionless for a few moments, and may be picked up by hand.

Be alert for amphibians and reptiles even in areas that appear inhospitable. One colubrid snake, *Thermophis baileyi*, is found in hot springs in Xizang (Tibet) up to 4,400 meters; a pit viper, *Agkistrodon strauchi*, has been found in high-altitude mountains as high as 4,300 meters. Lizards may be found on nearly sterile sand dunes.

Reptiles occupy a great variety of habitats. With a good light, cruise roads at slow speeds by automobile, bicycle, or simply by walking, starting at dusk to find specimens that crawl out on the roadway for warmth. Use a flashlight to locate desert-dwelling lizards and snakes in rocky outcrops or those that move about at night. By day, turn over rocks and debris, and search cracks in boulders and between rocks. The rat snake, *Zaocys dhumnades*, may be found by day coiled on stream banks. On fine-textured soils, snake and lizard tracks can be followed to locate animals. Some reptiles are able to move quickly across loose sand, in which they leave tell-tale marks. These often can be followed to where the animal has buried itself beneath the surface. Nesting turtles leave easy-to-follow trails.

Some snakes and lizards (such as species of *Eryx* and *Phrynocephalus*) may bury themselves completely beneath loose sand, or leave just their eyes protruding. Rake through loose sand with a stick or pole, but not with your hands—some venomous snakes hide this way.

Many kinds of amphibians and reptiles are sold in China as food items or for medicinal use. Always check local shops and markets where animals are sold to find unusual specimens and to get leads to collecting sites.

How to Catch Amphibians and Reptiles

Before catching any amphibians or reptiles, find out if collecting permits are needed. Most countries require some sort of permit or license to collect and possess wildlife. If you intend to export living or preserved specimens to another country, find out what kind of export and import permits will be required.

Be sure to collect eggs, larvae (tadpoles), and juveniles, as well as adults. These life stages are not commonly found in museum collections, but they are important.

Most amphibians can be safely picked up by hand, but be careful handling large caecilians—they may bite. Whenever possible, wash your hands after handling amphibians, as all of them produce glandular secretions that may irritate your skin or eyes. Captured amphibians should be kept in clean plastic bags with a small amount of damp vegetation or a damp paper towel inside. They may also be kept in cloth bags if the bags are kept damp.

Amphibian eggs and larvae may be removed from the water with a small net or tea strainer. Use a teaspoon to pick up larvae and eggs from the net to avoid damaging delicate membranes.

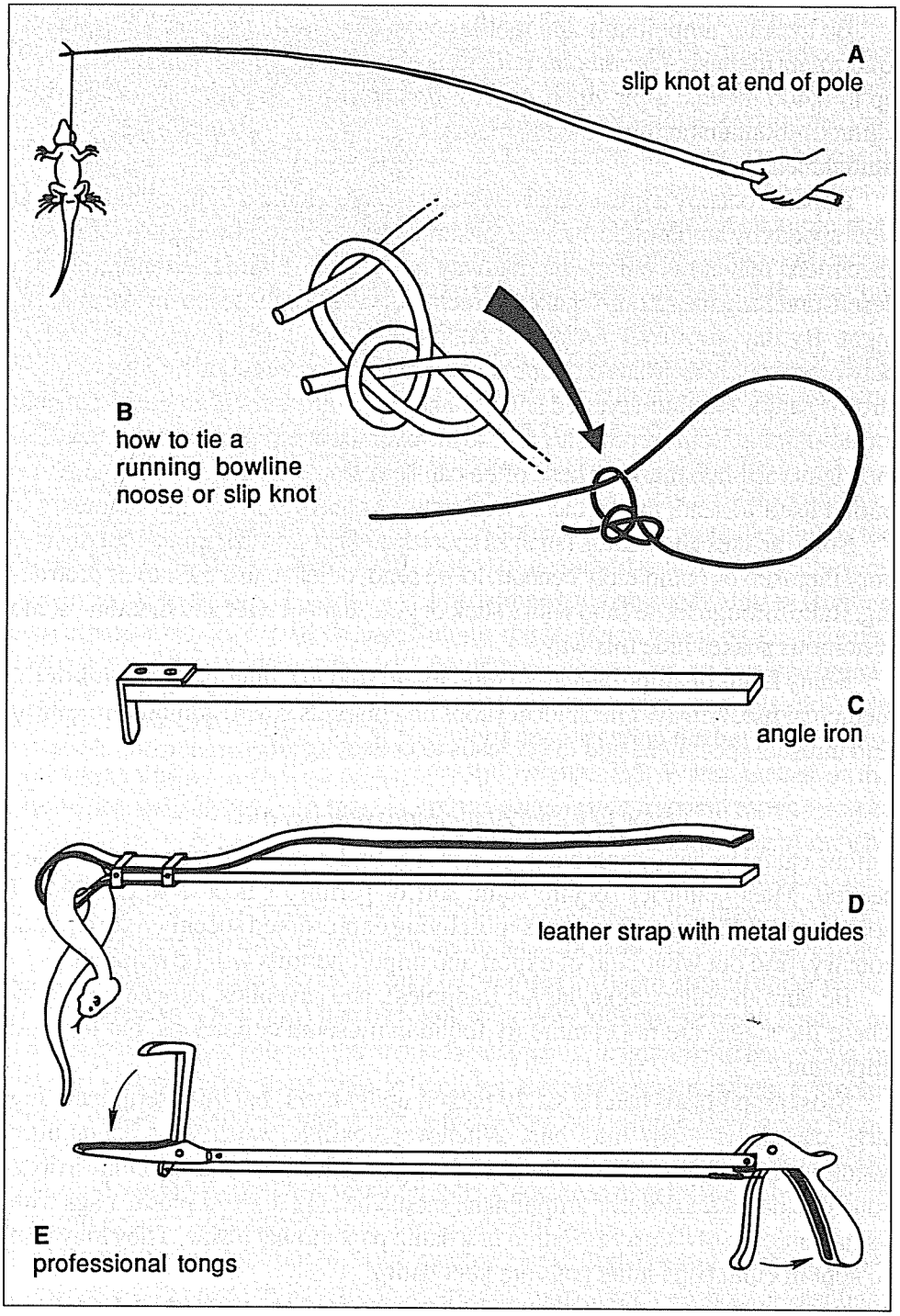

FIGURE 40. Varieties of poles, sticks, and tongs used to capture lizards and snakes. See adjacent text for further details. (Illustrations by David M. Dennis.)

Try to hatch amphibian eggs and raise the larvae through metamorphosis. Preserve a few specimens at intervals of several days. Such developmental series aid in later identification of larvae. Feed growing larvae vegetation and detritus from the pond or stream where they were captured, or bits of chopped and macerated vegetable matter.

Reptiles must be handled with more care than amphibians. Even fairly small lizards often have sharp claws and can bite. There are no venomous lizards in China. Thick gloves may be used for handling larger lizards. Do not wear gloves when handling a snake or small lizard, however, as you will not have good control over the animal.

Lizards may be caught with a noose (Figure 40A). Attach a length of fishing line or waxed thread to one end of a pole; a flexible bamboo stick or fishing pole is ideal. Make a loop with a slip knot or running bowline (Figure 40B). Lower the loop over the head of a basking lizard and then jerk it tight. Lizards may also be stunned momentarily with a very large rubber band (or two rubber bands tied together) or a sling shot.

Most snakes will bite when first handled. Never pick up a snake that you do not easily recognize, since there are several venomous species in China. One species of highly venomous krait (*Bungarus fasciatus*), for example, is common around human habitation in some areas. It is docile by day, but becomes aggressive at night when it forages for food. Some non-venomous or mildly venomous species mimic venomous ones in morphology, coloration, and behavior. The keelback water snakes (genera *Xenochrophis* and *Rhabdophis*) flatten their necks somewhat like *Naja*. It is a good precaution to capture snakes with a snake stick (Figure 40C–E). The best kind is a pair of lightweight metal tongs designed for snake capture. You may also use a pole with a leather strap attached to one end and running through a couple of brackets (Figure 40D). This forms a loop that is tightened around the snake's neck. In an emergency, you can use a short pole with an L-shaped end (Figure 40C). Pin the snake down by placing the flat end on the back of the snake's head. Carefully grasp the snake's head with the thumb and fingers. This method of picking up snakes is somewhat risky. Practice on non-venomous species first.

Once captured, carefully drop the snake into a deep cloth bag. Use caution when closing the bag, as the snake may try to escape. Place the bag on a flat surface. Press a collecting stick across the bag to keep the snake in the bottom, and tie the top of the bag in a tight knot. Alternatively, twirl the bag until it is twisted too tightly for the snake to crawl out, and then tie a knot in the top. Always handle the bag by its knotted end. To prepare to remove the snake, keep it in the bottom of the bag with pressure from the collecting stick while untying the knot.

Use extreme caution when handling venomous snakes. Snakes strike very

quickly and can twist around to bite even when held tightly. Any unrecognized snake should be treated as if it were venomous.

Some reptiles require special equipment to catch. Sea snakes can sometimes be caught by dip net near the shore where they search burrows for fish, but are more often caught in fishing nets. Freshwater turtles can be caught in wire mesh baited traps with trapdoor entrances.

Reptiles may be kept alive in cloth bags. Never leave bags containing amphibians or reptiles in direct sunlight. Heat stress will kill these animals very quickly, and rigor mortis will render them less valuable as preserved specimens.

What to Collect

Almost any specimen from areas where the herpetofauna is not well known is valuable. This is generally true throughout China, including well-studied places such as Hong Kong, where important new discoveries are still being made. Even specimens of common species can provide valuable information on distribution, variation, and ecology. Animals killed on the road or by predators still may be usable specimens. Always try to preserve the entire specimen. If a specimen is too damaged or decayed for preservation, try to obtain the skeleton, especially the skull. If possible, photograph specimens you cannot preserve. Photography is a good method to record coloration even for animals that are preserved.

Very large specimens may be skinned to reduce their bulk. Save the skin with the head and tail intact, plus the stomach contents, and all or part of the skeleton.

A balance must be achieved between the number of specimens collected and the time available for their preparation. As a general rule, it will take at least 10 minutes per specimen for note taking, killing, and preserving; sometimes it takes much longer.

It is ESSENTIAL to record the location where the specimen was collected or photographed (see "Field Notes," page 461). Specimens without such information are of little scientific value.

Preparing Specimens

Preparing a specimen is a three-step process of killing, fixing, and preserving. Specimens should be killed quickly and humanely by a method that leaves the body relaxed. Fixing should begin as soon after killing as possible. Once the fixed specimen is hardened, the preservative should be allowed to saturate the tissues.

Preservation means keeping the specimen in as close to its natural (living) condition as is possible. This is accomplished by preventing organic decay and blocking outside agents of deterioration. There is no perfect method of preservation.

In this section, a description of the best techniques and materials known for preparing scientific specimens is given first. Some alternative methods and materials are described next, which may be used when the others are not available.

The amount of care put into the initial preparation of a specimen often determines how useful the specimen will be.

PREFERRED METHODS OF KILLING

Reptiles may be killed using Nembutal (aqueous sodium pentobarbital), diluted with water in ratios of 1:5 to 1:10, by injection in the region of the heart. The proper lethal dose depends on how big the specimen is, but more than a few cubic centimeters (cc) are rarely needed. Reptiles may also be killed with a 10% solution of procaine hydrochloride, chloroform, or ether. Venomous snakes may be injected with the killing solution while they are in a cloth bag. Use caution—most snakes can bite through cloth bags.

Amphibians may be killed in a Chloretone (hydrous chlorobutanol) solution. A saturated solution is prepared by dissolving Chloretone in 95% ethyl alcohol. A few milliliters (ml) of this mixture is added to 0.5 liter of water to make the killing solution in which the specimens are submerged and drowned. It is necessary to keep the killing solution tightly sealed when it is not in use, and it must be strengthened by the addition of more saturated solution from time to time.

ALTERNATIVE METHODS OF KILLING

Both amphibians and reptiles may be drowned in warm water. Venomous snakes may be drowned in the cloth collecting bag. Most amphibians and many small reptiles may be killed by applying a small amount of over-the-counter toothache medication containing benzocaine to the animal's head. Formalin or alcohol can be injected into the brain to kill specimens, but this may ruin the skull for future study.

Specimens may also be killed by freezing. This method is not very satisfactory. Death is not quick, freezing dehydrates tissues and ruptures cell membranes, and decay begins as the specimen thaws, but before a fluid fixative can penetrate and do its job.

PREFERRED FIXATIVE

The preferred fixative for fixing and hardening amphibians and reptiles is 10% formalin, which is made by mixing one part of commercial-grade formaldehyde with nine parts of water. (Formaldehyde is sold as a 37% mixture of formaldehyde gas in water with a trace of methyl alcohol.)

Formaldehyde fixes specimens by denaturing protein. Cross-links are formed between adjacent protein chains, which stops autolysis and coagulation of

proteins, preventing further deterioration of the tissue. Formaldehyde also hardens specimens in the best position for storage and later study.

The formalin mixture should be buffered or neutralized. This may be done by adding three teaspoons of calcium carbonate to a liter of 10% formalin. A precipitate will remain in the bottom of the container.

Although borax is the traditional buffer for formalin, it should be used only if no other buffer is available. After its initial buffering action, borax accelerates the formation of an acidic formalin solution.

If you have no other choice, buffer formalin with borax or use it unbuffered. In either case, transfer the specimens from the formalin solution to a stable, buffered solution or suitable preservative as soon as possible.

Alternative Fixatives

When formaldehyde is not available, the next best choice is paraformaldehyde, which can be mixed with water to obtain a solution of formalin. Sodium hydroxide pellets should be used as a catalyst to synergize the passage of paraformaldehyde into solution.

A 4% mixture of gluteraldehyde and water may also be substituted for formaldehyde, although it discolors specimens.

Alcohols do not act as do other fixatives, but some alcohols may be used to harden specimens. If ethyl alcohol (grain alcohol) is available, use 65% for amphibians and 75–80% for reptiles. The next best choice is to use 40% isopropyl alcohol (rubbing alcohol). Ethyl alcohol is a better preservative than isopropyl alcohol because it causes less shrinkage of tissue. Do not use methyl alcohol (wood alcohol).

In the absence of laboratory-grade alcohol, beverage or drinking alcohol may be used. Try to use a clear liquor that is as close to 140 proof as possible. "Proof" is an expression of the alcohol content of liquor, so that 140 proof = 70% ethyl alcohol. Even colored alcohol of low proof may preserve a specimen if nothing else is at hand.

Phenoxetol, a commercially available phenol compound, may also be used as a temporary preservative. It should not be used for long-term storage of specimens, and should not be used if fixatives or other preservatives are available.

Preparing the Hardening Tray

Use a flat-bottomed plastic dish with a tightly fitting lid. Line the bottom with cloth or paper towels moistened with the fixative solution. A metal tray may be used, but should be checked frequently for signs of oxidation by the fixative. If a tray is not available, any flat container, such as a frying pan or baking dish, may be used if it can be covered to reduce the evaporation of the fixative. If no preserving tray

is at hand, animals may be fixed and hardened in plastic bags. An emergency hardening tray for very large specimens can be fashioned from a large sheet of plastic, using boards or bricks to hold the sides up, or by lining a pit in the ground with a plastic sheet.

PREPARING SPECIMENS FOR HARDENING IN A FIXATIVE

Specimens should be positioned for hardening in a way that allows them to be placed in a jar or packed for shipping without damage to digits or tails (see Figure 41 on page 460). If a 10% formalin fixative is used, it should be injected into the body cavity of reptiles and large amphibians, especially turtles, alligators, and heavy-bodied species. Inject the preservative in small amounts and in several places so that the animal will not become bloated (Figure 41).

Amphibians: Spread the fingers and toes slightly apart to show webbing (Figure 41A, C). Coil caecilians flat in the preserving tray with the head to the outside, like snakes. Larger specimens should be coiled inside a wide-mouth container with the head on top. Amphibian larvae and eggs should be put in a vial or small jar of fixative. In cases in which amphibian eggs adhere to leaves or twigs, include a piece of the vegetation. Containers of larvae should then be capped and placed on their side so that the specimens are hardened in a flat position.

Reptiles: Inject the limbs as well as the body of large reptiles, and inject snakes along the length of the body (Figure 41D). One of the pair of hemipenes of male reptiles should be everted by injecting the fixative into one side of the base of the tail or by applying pressure at the base (Figure 41E). When fully everted, tie a piece of string around the base of the hemipenis so that it remains extended. On the underside of the tail, make a series of perforations with a large diameter needle, or slit the skin from base to tip with a sharp blade or small scissors.

Lizards and small alligators are positioned with limbs flexed in a natural manner, with toes and fingers straightened and the tail curved around the body of the animal (Figure 41F).

Small snakes can be placed in a flattened coil. Larger specimens need to be coiled up the inside of a container.

Extend the head and neck of turtles away from the shell. Inject or slit the neck, limbs, and tail (Figure 41B). Inject fixative deep into the body cavity and lungs to keep the specimen from floating. Position the turtle with the neck, limbs, and tail extended from the shell. Prop the mouth open with a small piece of plastic or wood. In order to keep the neck properly extended, it is sometimes necessary to suspend the turtle by the head for several hours after injecting it until the initial hardening takes place.

Reptile eggs: Eggs may be put directly into a container of the fixative solution. Large eggs or thick-shelled turtle eggs should be injected.

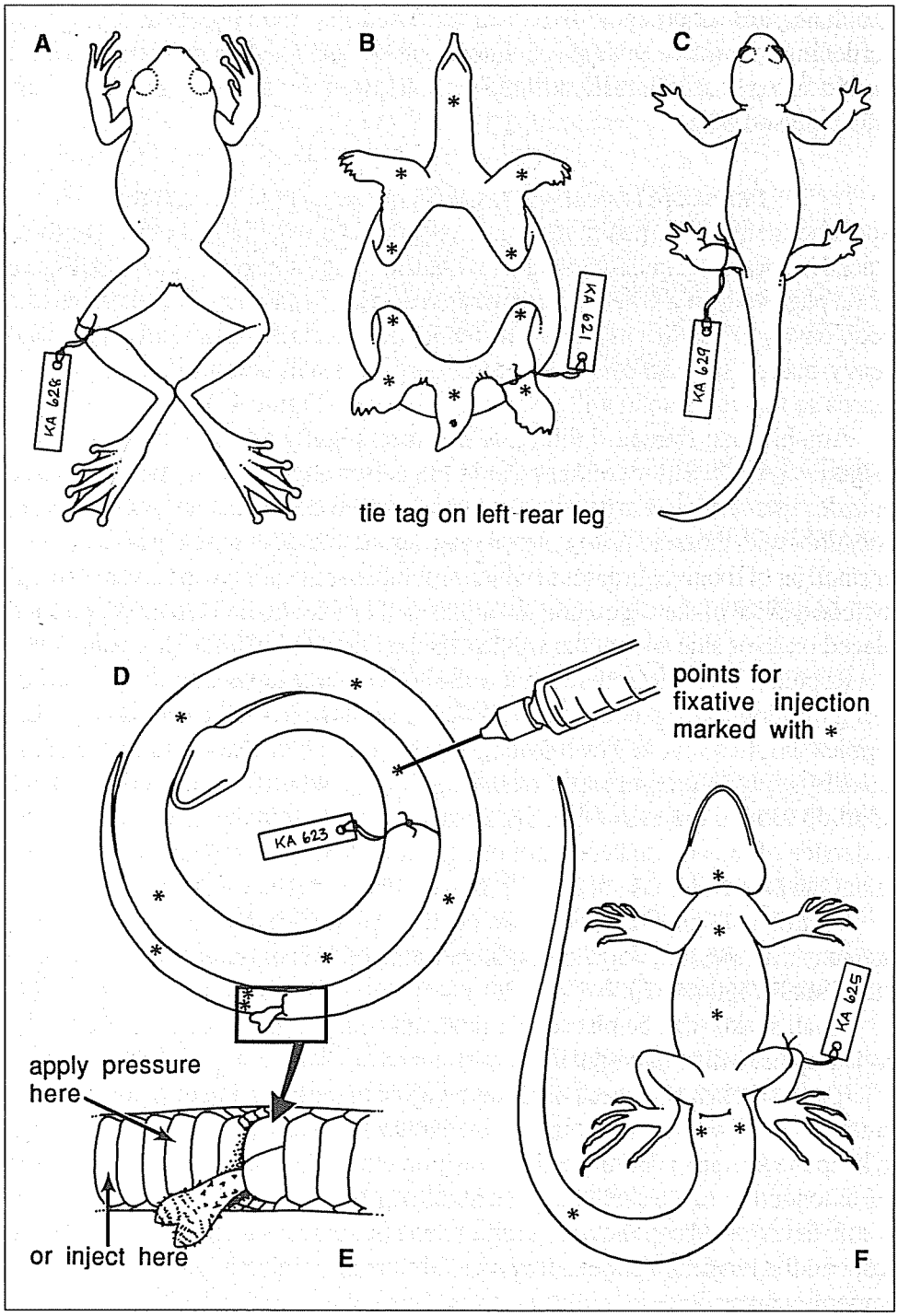

FIGURE 41. Positions for fixing specimens in the hardening tray and techniques for everting hemipenes. See adjacent text for details. (Illustrations by David M. Dennis.)

PREPARING SPECIMENS FOR HARDENING IN ALCOHOL

Alcohol does not penetrate tissue as readily as formaldehyde. If ethyl or isopropyl alcohol are used in place of a fixative, the body cavity of all specimens should be carefully slit open with a sharp blade or scissors, and slits should be made in the limbs of larger specimens.

HARDENING THE SPECIMENS

Once specimens are positioned in a hardening tray, cover them with a layer of towels. Pour in the fixative or hardening solution to a depth of several millimeters. Cover the tray tightly. For larger specimens coiled in containers, pour in enough preserving solution to cover the specimens.

Small amphibians will harden in a few hours, but larger amphibians and most reptiles usually require a longer period to harden, such as overnight.

TAGGING

Individual specimens are tagged with a unique number that corresponds to information in the field notes. Tags should be written or typewritten on good paper and tied to the specimen with cotton thread (Figure 41). Tags are tied on the specimen's left hind limb, or tied around or sewn through the neck of snakes. Tag specimens AS SOON AS POSSIBLE to be sure each specimen receives the correct tag; the importance of doing this cannot be overemphasized.

PRESERVING

After the specimens are hardened and tagged, they should be covered by fixative in a container and sealed tightly. Plastic containers are preferable if they can be closed tightly. Glass containers are difficult to transport and the fixative may oxidize metal containers.

Do not pack specimens together too tightly. Leave them in the solution for 10 to 12 days to insure that most of the body tissue has been penetrated by the fixative.

Field Notes

A collection of preserved specimens is of little value without good field notes to accompany it. Field notes should be written in permanent ink on good quality paper. Acid-free paper is preferable. Never trust your field notes to a tape recording or computer disk. These are too susceptible to data loss and are not as reliable as written records. NEVER, NEVER TRUST FIELD NOTES ONLY TO YOUR MEMORY.

Photographs of both specimens and habitat are useful additions to written field notes.

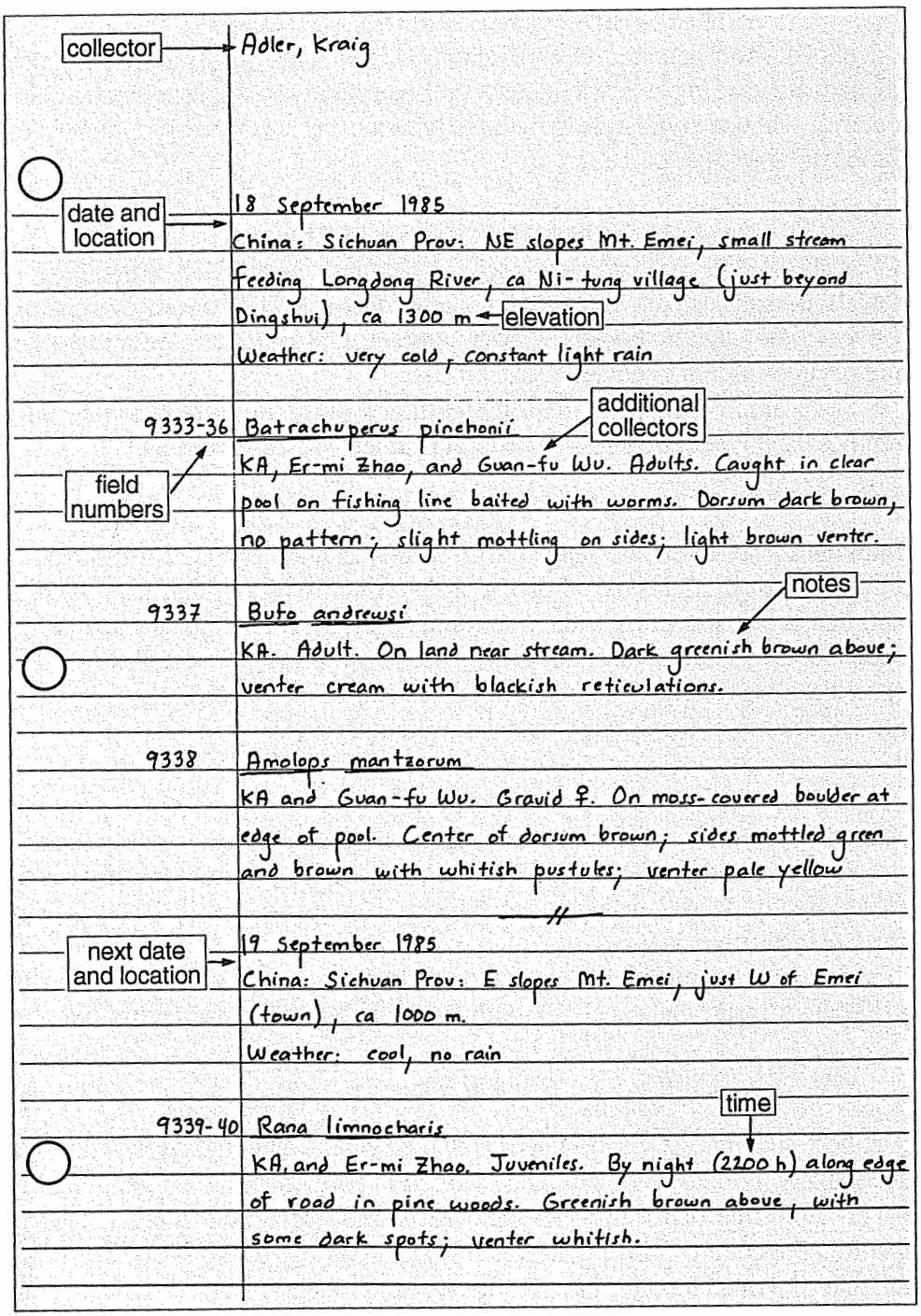

FIGURE 42. Standard format for field notes. Field notes must include the locality, date, and field number of each specimen. Include a short description of the specimen and other information if possible. See adjacent text for further details.

WHAT TO WRITE DOWN

Essential data: Field notes must include the location where each specimen was collected, described so that it can be located on a map; the date and time of collection; and the collector(s) of the specimen.

Other useful data: Try to include a detailed description of the specimen (especially features such as colors that will be altered by the preservation process), habitat, behavior, and climate.

FORMAT OF FIELD NOTES

Using a standard format, the above information can be recorded quickly and efficiently in the following manner (see Figure 42).

Location. Give the location in order from the largest geographic unit to the smallest—country: province or autonomous region: xx kilometers from (name of town), and xxx meters (altitude).

Date. The date should be written as day-month-year, as in "24 June 1978."

Time. Time should be given as 24-hour time (for example, 10:30 a.m = 1030 hours; 4:42 p.m. = 1642 hours).

Field Number. Each preserved animal should be tagged with a unique field number for identification purposes. The field number is recorded in the field book. Larvae or eggs collected together are usually assigned just one field number.

Collectors. The names of the collectors can be listed at the beginning of your field notes so that they can be referred to subsequently by their initials only.

Other Notes. It is always better to record too much information instead of too little. If time permits, record what the animal was doing when it was collected, observations of the weather and climate, and detailed descriptions of the habitat of animals collected. Information on behavior and ecology is often of great value and should be recorded in as much detail as time allows.

Storing, Packing, and Shipping Specimens

The main concerns in storing, packing, and shipping preserved specimens are protection from light, heat, evaporation, and degradation of fluid preservative.

Specimens should not be stored in the fixative for more than a few weeks unless no other preservative is available. The one exception is amphibian larvae and eggs, which are stored in the fixative solution and are not transferred to another preservative.

Specimens may be packed and shipped in the fixative solution, or may be first transferred to a preservative.

PRESERVATIVE SOLUTIONS

The best long-term preservative is a 70% solution of ethyl alcohol and water (diluted with distilled water, if available). A 40% solution of isopropyl alcohol

and water may be used, but it will cause significant shrinkage of specimens. Phenoxetol is an adequate preservative in the short term, but not for long-term storage.

Specimens ready for storage should be put into glass or plastic containers with tightly sealed lids. Store them in an area protected from light and heat. Monitor their condition regularly to detect signs of fluid degradation or evaporation.

Packing and Shipping

Fluid-preserved specimens are easy to pack and ship. Wrap specimens in cheesecloth, gauze, or other thin, absorbent fabric, and moisten it with the preserving fluid. Protect structures such as the long fleshy snouts of trionychid turtles, or those of some snakes, for example, *Deinagkistrodon acutus* and *Rhynchophis boulengeri*, from damage with extra wrappings of cloth or cotton batting.

Seal the wrapped specimens in plastic bags, but do not leave more preservative in the bag than the packing material will absorb.

Do not wrap too many specimens in each plastic bag. Smaller packages are easier to pack and will reduce the loss should a plastic bag leak. Double-bag each package. Pack the plastic bags in a shipping container and label properly. Include an extra address label inside the package in case the outside label is damaged or lost.

Ship by the fastest means possible. Surface mail may take months to reach its destination, and the specimens may dehydrate.

Customs forms should read "Preserved Specimens For Scientific Study, No Commercial Value." Attach any necessary permits to the outside of the shipping container.

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Appendix 3

CHINESE HERPETOLOGICAL JOURNALS

MATERIALS FOR HERPETOLOGICAL RESEARCH

(Liang Qi Pa Xing Dong Wu Yan Jiu Zi Liao) 两栖爬行动物研究资料
Published by Sichuan Biological Research Institute, Chengdu, Sichuan (volumes 1–3); Chengdu Institute of Biology, Chengdu, Sichuan (volume 4).
Edited by Er-mi Zhao.

[Volume 1], pages (1), (1), 1–60, (1); uncolored plates I–VI; March 1972.
2, pages (1), 1–84; December 1974.
3, pages (1), 1–104, (1); 1976.
4, pages (1), 1–65; October 1978.

ACTA HERPETOLOGICA SINICA (OLD SERIES)

(Liang Qi Pa Xing Dong Wu Yan Jiu) 两栖爬行动物研究
Published by Chengdu Institute of Biology, Chengdu, Sichuan.
Edited by Er-mi Zhao.

"Series" (=Volume) 1, number 1, pages 1–8; August 1, 1979.
number 2, pages 1–12; October 21, 1979.
number 3, pages 1–8; November 16, 1979.
number 4, pages 1–24; February 1, 1980.
number 5, pages 1–6; April 5, 1980.
Volume 2, number 1, pages 1–24; October 11, 1979.
number 2, pages 1–8; December 20, 1979.
Volume 3, number 1, pages 1–16; October 20, 1980.
Volume 4, number 1, pages 1–4; October 20, 1980.
number 2, pages 1–12; October 20, 1980.
catalogue of publications, pages 1–31; October 20, 1980.
Volume 5, number 1, pages 1–4; May 10, 1981.
number 2, pages 5–10; May 10, 1981.
number 3, pages 11–18; May 10, 1981.
number 4, pages 19–28; July 10, 1981.
number 5, pages 29–44; July 10, 1981.
number 6, pages 45–52; uncolored plates I–[VI]; July 10, 1981.
number 7, pages 53–58; colored plate I, July 10, 1981.
number 8, pages 59–64; July 10, 1981.
number 9, pages 65–68; August 29, 1981.
number 10, pages 69–70; August 29, 1981.
number 11, pages 71–76; August 29, 1981.
number 12, pages 77–80, uncolored plates I–IV; August 29, 1981.
number 13, pages 81–86; August 29, 1981.

Volume 5, number 14, pages 87–94; August 29, 1981.
number 15, pages 95–98; October 5, 1981.
number 16, pages 99–110; October 5, 1981.
number 17, pages 111–120; October 9, 1981.
number 18, pages 121–122; October 9, 1981.
number 19, pages 123–126; October 30, 1981.
number 20, pages 127–130; October 30, 1981.
number 21, pages 131–138; December 10, 1981.
number 22, pages 139–142; December 10, 1981.
Volume 6, pages (3), (x), 1–143; uncolored plates I–IV; June 1982.

ACTA HERPETOLOGICA SINICA (NEW SERIES)

(Liang Qi Pa Xing Dong Wu Xue Bao) 两栖爬行动物学报
Published by Chengdu Institute of Biology, Chengdu, Sichuan (volumes 1–5); Science Press, Beijing (volumes 6 and 1988).
Edited by Er-mi Zhao.

Volume 1, number 1, pages 1–91; uncolored plates I, I–VII, I–III, I; September 1982.
Volume 2, number 1, pages 1–80; uncolored plates I–III, I–III, I; March 1983.
number 2, pages 1–80; uncolored plates I–VII; June 1983.
number 3, pages 1–80; uncolored plates I–VIII; September 1983.
number 4, pages 1–80; uncolored plates I–VI; December 1983.
Volume 3, number 1, pages 1–86; uncolored plates I–X; March 1984.
number 2, pages 1–80; uncolored plates I–VI; June 1984.
number 3, pages 1–80; uncolored plates I–VI; September 1984.
number 4, pages 1–80; uncolored plates I–VIII; December 1984.
Volume 4, number 1, pages 1–80; uncolored plates I–II; March 5, 1985.
number 2, pages 81–162; uncolored plates III–VIII; June 5, 1985.
number 3, pages 163–256; uncolored plates IX–XVIII; "September 1985."
number 4, pages 257–356; uncolored plates XIX–XXVIII; "December 1985."
(NOTE: Numbers 3 and 4 were issued together in a special double number, on August 25, 1985, at the Sino-Japanese Herpetological Symposium in Guangzhou.)
Volume 5, number 1, pages 1–80; uncolored plates I–IV; February 5, 1986.
number 2, pages 81–160, uncolored plates I–X; May 5, 1986.
number 3, pages 161–240; uncolored plates I–X; August 5, 1986.
number 4, pages 241–320; uncolored plates I–VI; November 5, 1986.
Volume 6, number 1, pages 1–80, (4); uncolored plates I–VIII; February 1987.
number 2, pages 1–80, (5); uncolored plates I–VI; May 1987.
number 3, pages (1), 1–80; August 1987. (English date "1987 Feb." on rear cover is in error).
number 4, pages (2), 1–78, (8); uncolored plates I–IV; November 1987.
Vol. 1988, number 1, pages 1–74, (3); uncolored plates I–IV; March 1988.
number 2, pages 75–154, (1); uncolored plates I–V; June 1988 (English date "1988 Feb." on rear cover is in error).

CHINESE HERPETOLOGICAL RESEARCH

(Zhong Guo She Wa Yan Jiu) 蛇蛙研究

Published by Chongqing Branch, Scientific and Technological Literature Press, Chongqing, Sichuan (volume 1); Chinese Society for the Study of Amphibians and Reptiles, Chengdu, Sichuan (volume 2).

Edited by Er-mi Zhao.

Volume "1987" (=1), pages (2), 1–63; uncolored plates I–V; October 1987.
Volume 2, number 1, pages 1–14; May 1988.
number 2, pages 15–72; April 1989.

ASIATIC HERPETOLOGICAL RESEARCH

(Formerly *Chinese Herpetological Research*)

Published by Asiatic Herpetological Research Society, Berkeley, California, USA, and the Chinese Society for the Study of Amphibians and Reptiles, Chengdu, Sichuan.

Edited by Er-mi Zhao, J. Robert Macey, and Theodore J. Papenfuss.

Volume 3, pages 1–140; colored plates 1–3; April 1990.
Volume 4, pages 1–161; colored plate 1; February 1992.

INDICES

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Page numbers that are underlined refer to portraits or other photographs: for example, 64. Numbers that are followed by letters (A, B, etc.) and are enclosed in parentheses refer to color plate captions: (12A). Names in quotes indicate misspellings or other errors in the original literature: "Qin, Jiang-qiang."

For Chinese authors, the main entry is written according to the form of the name (Wade-Giles transliteration or Pinyin) used in the author's own publications. In cases in which both forms of the name have been used by the same author at different times, entries are given in both forms and are cross-referenced; the main entry is in the form used most frequently by the author.

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Names in boldface italic type (for example, ***Acalyptophis peronii***) represent the Chinese taxa that are currently recognized. Other names, in lightface italic type (such as *Ablabes chinensis*), are either original names, synonyms, or valid taxa that are not native to China. In this index only, varieties ("var.") are equivalent to subspecies and are alphabetized accordingly.

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Index, 44 p., $2.00.

Complete set: 18 parts plus Index and both Tables of Contents, in parts as issued, $55.00.

BULLETIN OF THE ANTIVENIN INSTITUTE OF AMERICA. Volumes 1–5, 1927–1932. Introduction by Sherman A. Minton. 575 p., 163 photographs, maps, index. Out-of-print.

CAMP, C. L. 1923. *Classification of the Lizards.* The foundation of modern lizard systematics. New preface by the author and an introduction by Garth Underwood. 220 p., 112 figures, index. Out-of-print.

CHANG, M. L. Y. 1936. *Amphibiens Urodèles de la Chine.* The classic work on Chinese salamanders, with a new checklist by Arden H. Brame. 168 p., illus., 5 plates. Out-of-print.

COPE, E. D. 1864. *Papers on the Higher Classification of Frogs.* Reprinted from Proceedings of the Academy of Natural Sciences of Philadelphia and Natural History Review. 32 p. Paperbound $3.00.

COPE, E. D. 1871. *Catalogue of Batrachia and Reptilia Obtained by McNiel in Nicaragua; Catalogue of Reptilia and Batrachia Obtained by Maynard in Florida.* 8 p. Paperbound $1.00.

COPE, E. D. 1892. *The Osteology of the Lacertilia.* An important contribution to lizard anatomy, reprinted from Proceedings of the American Philosophical Society. 44 p., 6 plates. Paperbound $4.00.

COWLES, R. B., and C. M. BOGERT. 1944. *A Preliminary Study of the Thermal Requirements of Desert Reptiles.* The foundation of thermoregulation biology, with extensive review of recent studies by F. Harvey Pough. Reprinted from Bulletin of American Museum of Natural History. 52 p., 11 plates. Paperbound $5.00.

DUNN, E. R. 1926. *Salamanders of the Family Plethodontidae.* A recognized classic treatment of the plethodontid salamanders, including tropical and European species. Introductions by David B. Wake and Arden H. Brame. 480 p., illus., 3 plates, 86 maps, index. Out-of-print.

ESCHSCHOLTZ, F. 1829–1833. *Zoologischer Atlas* (herpetological sections). Descriptions of new reptiles and amphibians from California and the Pacific. Introduction by Kraig Adler. 32 p., 4 plates (measuring 8½ x 11 inches). Paperbound $3.00.

ESPADA, M. JIMÉNEZ DE LA. 1875. *Vertebrados del Viaje al Pacifico: Batracios.* Major taxonomic work on South American frogs. Introduction by Jay M. Savage. 208 p., 6 plates, maps. Clothbound $20.00.

FAUVEL, A.-A. 1879. *Alligators in China.* Original description of *Alligator sinensis*, including classical and natural history. 42 p., 3 plates. Paperbound $5.00.

FITZINGER, L. J. 1843. *Systema Reptilium.* An important nomenclatural landmark for herpetology, including Amphibia as well as reptiles; world-wide in scope. Introduction by Robert Mertens. 128 p., index. Paperbound $15.00.

GLOYD, H. K. 1940. *The Rattlesnakes, Genera* Sistrurus *and* Crotalus. Introduction and new checklist by Hobart M. Smith and Herbert M. Harris. 300 p., plus 31 plates of photographs, index. Out-of-print.

GRAY, J. E. 1825. *A Synopsis of the Genera of Reptiles and Amphibia.* Reprinted from Annals of Philosophy. 32 p. Paperbound $3.00.

GRAY, J. E. 1831–1844. *Zoological Miscellany.* A privately printed journal, devoted mostly to descriptions of amphibians, reptiles, and birds from throughout the world. Introduction by Arnold G. Kluge. 86 p., 4 plates. Paperbound $6.00, clothbound $10.00.

GÜNTHER, A. 1885–1902. *Biologia Centrali-Americana. Reptilia and Batrachia.* The standard work on Middle American herpetology with 76 full-page plates measuring 8½ x 11 inches (12 in color). Introductions by Hobart M. Smith, A. E. Gunther, and Kraig Adler. 575 p., photographs, maps. Clothbound $50.00; separate set of the 12 color plates, in protective wrapper $18.00.

HOLBROOK, J. E. 1842. *North American Herpetology.* Five volumes bound in one. The classic work by the father of North American herpetology. Exact facsimile of the definitive second edition, including all 147 plates, measuring 8½ x 11 inches (20 reproduced in full color). Introduction and checklists by Richard and Patricia Worthington and by Kraig Adler. 1032 p. Leatherbound patron's edition, out-of-print; regular edition, clothbound $60.00.

JUNIOR SOCIETY OF NATURAL SCIENCES (CINCINNATI, OHIO). 1930–1932. Herpetological papers from the society's Proceedings, with articles by Weller, Walker, Dury, and others. 56 p. Paperbound $3.00.

KIRTLAND, J. P. 1838. *Zoology of Ohio* (herpetological portion). 8 p. Paperbound $1.00.

LeCONTE, J. E. 1824–1828. *Three Papers on Amphibians*, from the Annals of the Lyceum of Natural History, New York. 16 p. Paperbound $2.00.

LINNAEUS, C. 1766–1771. *Systema Naturae* (ed. 12) and *Mantissa Plantarum* (herpetological portions from both). 56 p. Introduction by Kraig Adler. Out-of-print.

LOVERIDGE, A. 1946. *Reptiles [and Amphibians] of the Pacific.* The standard review of the herpetofauna of the Pacific region including Australia and extending from Indonesia to Hawaii and the Galápagos Islands. 271 p., 7 plates, 1 double-page map, index. Out-of-print.

McILHENNY, E. A. 1935. *The Alligator's Life History.* The most complete natural history of the American alligator. Introduction by Archie Carr and a review of recent literature by Jeffrey W. Lang. 125 p., 18 photographs and a portrait. Clothbound $20.00.

McLAIN, R. B. 1899. *Contributions to North American Herpetology.* Three privately printed papers containing important distributional records and the description of a new form. 28 p., index. Paperbound $2.00.

ORBIGNY, A. D' [and G. BIBRON]. 1847. *Voyage dans l'Amérique Méridionale.* This extract comprises the complete section on reptiles and amphibians from this voyage to South America. 14 p., 9 plates measuring 8 1/2 x 11 inches. $3.00.

RAFINESQUE, C. S. 1820. *Annals of Nature* (herpetological and ichthyological sections), 4 p. Paperbound $1.00.

RAFINESQUE, C. S. 1822. *On Two New Salamanders of Kentucky.* 2 p. Paperbound $1.00.

RAFINESQUE, C. S. 1832–1833. *Five Herpetological Papers from the Atlantic Journal.* 4 p. Paperbound $1.00.

SOWERBY, J. DeC., E. LEAR, and J. E. GRAY. 1872. *Tortoises, Terrapins, and Turtles Drawn From Life.* The finest atlas of turtle illustrations ever produced. Introduction by Ernest E. Williams. 26 p., 61 full-page plates (measuring 8 1/2 x 11 inches). Clothbound $25.00.

SPIX, J. B. von, and J. G. WAGLER. 1824–1825. *Herpetology of Brazil.* The most comprehensive and important early survey of Brazilian herpetology. Introduction by P. E. Vanzolini. 400 p., 98 plates, one in color (each measuring 8 1/2 x 11 inches), map. Clothbound $36.00.

TROSCHEL, F. H. 1850 [1852]. Cophosaurus texanus, *neue Eidechsengattung aus Texas.* 8 p. Paperbound $1.00.

TSCHUDI, J. J. von. 1838. *Classification der Batrachier.* A major work in systematic herpetology, with introduction by Robert Mertens. 118 p., 6 plates. Paperbound $18.00.

TSCHUDI, J. J. von. 1845. *Reptilium Conspectus.* Descriptions of new reptiles and amphibians from Peru. 24 p. Paperbound $2.00.

VanDENBURGH, J. 1895–1896. *Herpetology of Lower California.* Herpetology of Baja California, Mexico (collected papers). 101 p., 11 plates, index. Paperbound $8.00.

WAITE, E. R. 1929. *The Reptiles and Amphibians of South Australia.* Introduction by Michael J. Tyler and Mark Hutchinson. 282 p., color plate, portrait, 192 text figures including numerous photographs. Clothbound $35.00.

WIEGMANN, A. F. A. 1834. *Herpetologia Mexicana.* Introduction by Edward H. Taylor. 66 p., 10 plates (folio, measuring 10 x 14 inches). Out-of-print.

WILCOX, E. V. 1891. *Notes on Ohio Batrachians.* 3 p. Paperbound $1.00.

WILLISTON, S. W. 1925. *Osteology of the Reptiles.* Covers living and extinct forms, with introduction by Claude W. Hibbard. 304 p., 191 text figures, index. Out-of-print.

WRIGHT, A. H., and A. A. WRIGHT. 1962. *Handbook of Snakes of the United States and Canada, Volume 3, Bibliography.* Out-of-print since about 1969, this cross-indexed bibliography is a necessary companion to Volumes 1 and 2. 187 p. Clothbound $18.00.

HERPETOLOGICAL REVIEW AND H.I.S.S. PUBLICATIONS

The Society's official newsletter, international in coverage. In addition to news notes and feature articles, regular departments include regional societies, techniques, husbandry, life history, geographic distribution, and book reviews. Issued quarterly as part of Society membership or separately by subscription. All numbers are paperbound as issued and measure 8 1/2 x 11 inches. In 1973, publications of the Herpetological Information Search Systems (*News-Journal* and *Titles and Reviews*) were substituted for *Herpetological Review*; content and format are the same.

Volume 1 (1967–1969), numbers 1–9, $4.00 per number.

Volumes 2–24 (1970–1993), four numbers in each volume (except volumes 3–4, with 6 numbers each), $4.00 per number.

The following numbers are out-of-print and *no longer available*: Volume 1 (number 7), 3(2, 6), 4(1), 5(1, 2), 6(1, 2, 4), 7(3, 4), and 10(2).

Cumulative Index for Volumes 1–7 (1967–1976), 60 pages, $4.00.

Cumulative Index for Volumes 1–17 (1967–1986), 90 pages, $7.00.

H.I.S.S. Publications: News-Journal, volume 1, numbers 1–6, and Titles and Reviews, volume 1, numbers 1–2 (all of 1973–1974), complete set, $10.00.

Index to Geographic Distribution Records for Volumes 1–17 (1967–1986), including H.I.S.S. publications, 44 pages, $5.00.

CATALOGUE OF AMERICAN AMPHIBIANS AND REPTILES

Loose-leaf accounts of taxa prepared by specialists, including synonymy, definition, description, distribution map, and comprehensive list of literature for each taxon. Covers amphibians and reptiles of the entire Western Hemisphere. Issued by subscription. Individual accounts are not sold separately.

CATALOGUE ACCOUNTS:
Complete set: Numbers 1–555, $220.00.
Partial sets: Numbers 1–190, $60.00.
Numbers 191–410, $70.00.
Numbers 411–555, $90.00.

INDEX TO ACCOUNTS 1–400: Cross-referenced, 64 pages, $5.00.

IMPRINTED POST BINDER: $25.00. (Note: One binder holds about 200 accounts.)

SYSTEMATIC TABS: Ten printed tabs for binder, such as "Class Amphibia," "Order Caudata," etc., $5.00 per set.

JOURNAL OF HERPETOLOGY

The Society's official scientific journal, international in scope. Issued quarterly as part of Society membership. All numbers are paperbound as issued, measuring 7 x 10 inches.

Volume 1 (1968), numbers 1–4 combined.

Volumes 2–5 (1968–1971), numbers 1–2 and 3–4 combined, $6.00 per double number.

Volume 6 (1972), numbers 1, 2, and double number 3–4.

Volumes 7–27 (1973–1993), four numbers in each volume, $6.00 per single number.

The following volumes and numbers are out-of-print and are *no longer available*: Volume 1, 2, 3, 4, 5(3, 4), 6, 7(1), 8(1), 9(1, 2, 4), 11(4), and 12(1, 2).

Cumulative Index for Volumes 1–10 (1968–1976), 72 pages, $7.00.

HERPETOLOGICAL CIRCULARS

Miscellaneous publications of general interest to the herpetological community. All numbers are paperbound, as issued. Prepublication discount to Society members.

No. 1. *A Guide to Preservation Techniques for Amphibians and Reptiles* by George R. Pisani. 1973. 22 p., illus. $3.00.

No. 2. *Guía de Técnicas de Preservación de Anfibios y Reptiles* por George R. Pisani y Jaime Villa. 1974. 28 p., illus. $3.00.

No. 3. *Collections of Preserved Amphibians and Reptiles in the United States* compiled by David B. Wake (chair) and the Committee on Resources in Herpetology. 1975. 22 p. Out-of-print.

No. 4. *A Brief Outline of Suggested Treatments for Diseases of Captive Reptiles* by James B. Murphy. 1975. 13 p. $3.00.

No. 5. *Endangered and Threatened Amphibians and Reptiles in the United States* compiled by Ray E. Ashton, Jr. (chair) and 1973–74 SSAR Regional Herpetological Societies Liaison Committee. 1976. 65 p. Out-of-print.

No. 6. *Longevity of Reptiles and Amphibians in North American Collections* by J. Kevin Bowler. 1977. 32 p. $3.00. (See also number 21.)

No. 7. *Standard Common and Current Scientific Names for North American Amphibians and Reptiles* (1st ed.) by Joseph T. Collins, James E. Huheey, James L. Knight, and Hobart M. Smith. 1978. 36 p. $3.00. (See also numbers 12 and 19.)

No. 8. *A Brief History of Herpetology in North America Before 1900* by Kraig Adler. 1979. 40 p., 24 photographs, 1 map. $3.00.

No. 9. *A Review of Marking Techniques for Amphibians and Reptiles* by John W. Ferner. 1979. 42 p., illus. $3.00.

No. 10. *Vernacular Names of South American Turtles* by Russell A. Mittermeier, Federico Medem and Anders G. J. Rhodin. 1980. 44 p. $3.00.

No. 11. *Recent Instances of Albinism in North American Amphibians and Reptiles* by Stanley Dyrkacz. 1981. 36 p. $3.00.

No. 12. *Standard Common and Current Scientific Names for North American Amphibians and Reptiles* (2nd ed.) by Joseph T. Collins, Roger Conant, James E. Huheey, James L. Knight, Eric M. Rundquist, and Hobart M. Smith. 1982. 32 p. $3.00. (See also numbers 7 and 19.)

No. 13. *Silver Anniversary Membership Directory*, including addresses of all SSAR members, addresses and publications of the herpetological societies of the world, and a brief history of the Society. 1983. 56 p., 4 photographs. $3.00.

No. 14. *Checklist of the Turtles of the World with English Common Names* by John Iverson. 1985. 14 p. $3.00.

No. 15. *Cannibalism in Reptiles: A World-Wide Review* by Joseph C. Mitchell. 1986. 37 p. $4.00.

No. 16. *Herpetological Collecting and Collections Management* by John E. Simmons. 1987. 72 p., 6 photographs. $6.00.

No. 17. *An Annotated List and Guide to the Amphibians and Reptiles of Monteverde, Costa Rica* by Marc P. Hayes, J. Alan Pounds, and Walter W. Timmerman. 1989. 70 p., 32 figures. $5.00.

No. 18. *Type Catalogues of Herpetological Collections: An Annotated List of Lists* by Charles R. Crumly. 1990. 50 p. $5.00.

No. 19. *Standard Common and Current Scientific Names for North American Amphibians and Reptiles* (3rd ed.) compiled by Joseph T. Collins (coordinator for SSAR Common and Scientific Names List). 1990. 45 p. $5.00. (See also numbers 7 and 12.)

No. 20. *Age Determination in Turtles* by George R. Zug. 1991. 32 p., 6 figures. $5.00.

No. 21. *Longevity of Reptiles and Amphibians in North American Collections* (2nd ed.) by Andrew T. Snider and J. Kevin Bowler. 1992. 44 p. $5.00. (See also number 6.)

No. 22. *Biology, Status, and Management of the Timber Rattlesnake* (Crotalus horridus): *A Guide for Conservation* by William S. Brown. 1993. 84 p., 16 color photographs. $8.00.

PUBLICATIONS OF THE OHIO HERPETOLOGICAL SOCIETY

OHS was the predecessor to the Society for the Study of Amphibians and Reptiles. All publications international in scope. Paperbound as issued.

Volume 1 numbers 1–4, plus Special Publications 1–2 (all 1958), facsimile reprint, out-of-print.

Volume 2 (1959–1960), four numbers, $2.00 per number; numbers 3 and 4 out-of-print.

Volume 3 (1961–1962), four numbers, $1.00 per number; numbers 1 and 3 out-of-print.

Volume 4 (1963–1964), four numbers; double number 1–2, $4.00, numbers 3 and 4 $2.00 each.

Volume 5 (1965–1966), four numbers, $2.00 per number.

Special Publications 3–4 (1961–1962), $2.00 per number; number 3 out-of-print.

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HERPETOLOGY AS A CAREER, by Henri C. Seibert, Ralph W. Axtell, Neil B. Ford, and Martin J. Rosenberg. 1985. Brochure developed as an aid to students and counselors. 4 p. Single copies free of charge; additional copies $0.25 each.

GUIDELINES FOR THE USE OF LIVE AMPHIBIANS AND REPTILES IN FIELD RESEARCH, by George R. Pisani, Stephen D. Busack, Herbert C. Dessauer, and Victor H. Hutchison, representing a joint committee of ASIH, HL, and SSAR. 1987. Brochure covers animal care, regulations, collecting, restraint and handling, marking, housing and maintenance in field, and final disposition of specimens. 16 p. $4.00 ($3.00 each in quantities of five or more copies).

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PLATE 1

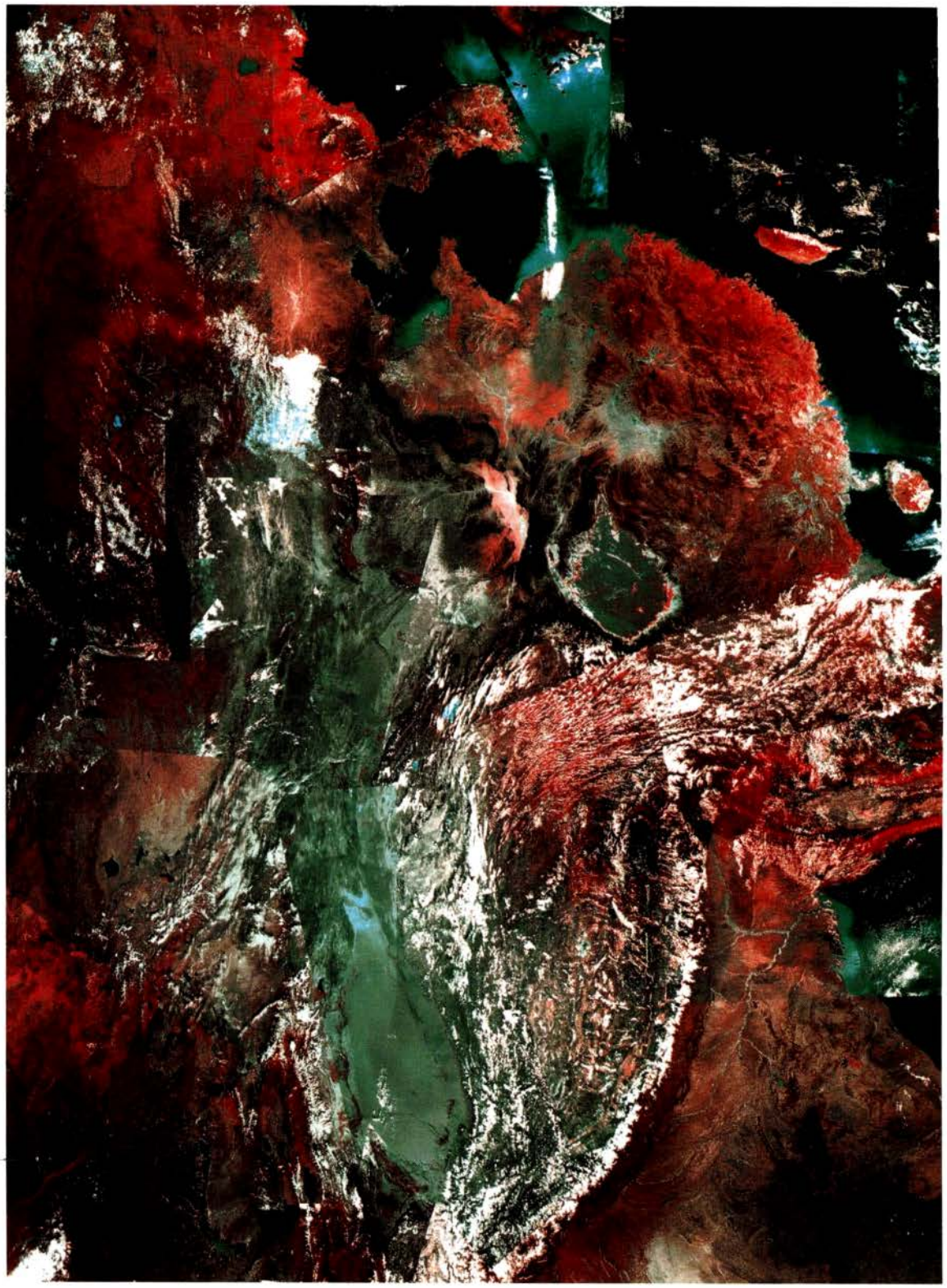


PLATE 2

ICHTHYOPHIIDAE AND HYNOBIIDAE I

Family Ichthyophiidae

Ichthyophis bannanicus (Text, page 105)

A: Adult from Dinghushan, near Dinghu, Guangdong Province, China. Photograph by Martin C. Michener, courtesy James D. Lazell and The Conservation Agency. The whitish-colored tentacle can be seen, in profile, on the right side of the head; the eye is just posterior to it.

Family Hynobiidae

Batrachuperus pinchonii (Text, page 105)

B: Adult from Zhegushan, 36.1 km north (by road) of Miyaluo, Sichuan Province, China; 3,450 meters. Photograph by J. Robert Macey. For habitat, see Plate 47A.

Batrachuperus tibetanus (Text, page 106)

C: Adult from approximately 40 km northwest of Xichang, Liangshan Yi Autonomous Prefecture, Sichuan Province, China. Photograph by J. Robert Macey.

Batrachuperus yenyuanensis (Text, page 106)

D: Adult from 53.2 km north (by road) of Hanyuan, along the Ya'an-to-Hanyuan road, Nibashan, Ya'an Prefecture, Sichuan Province, China; 2,270 meters. Photograph by J. Robert Macey.

Hynobius amjiensis (Text, page 106)

E: Adult from about 11 km south-southeast of Zhangcun, Jiaxing Prefecture, Zhejiang Province, China. Photograph by J. Robert Macey.

Hynobius chinensis (Text, page 106)

F: Adult from Zhoushan Island, Ningbo Prefecture, Zhejiang Province, China. Photograph by J. Robert Macey.

Hynobius sonani (Text, page 107)

G: Adult from Nan-Kon region, Nantou County, Taiwan Province, China; 2,500 meters. Photograph by Kuang-yang Lue.

Hynobius formosanus (Text, page 106)

H: Adult from Alishan, Chiayi County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Liua shihi (Text, page 107)

I: Adult from Sanheba, Guanyang, Wushan County, Sichuan Province, China. Photograph by Qi-xiong Hu. For habitat, see Plate 48B.

PLATE 2



A



B



C



D



E





F- G



H



I

PLATE 3

HYNOBIIDAE II, CRYPTOBRANCHIDAE, AND SALAMANDRIDAE I

Family Hynobiidae

Onychodactylus fischeri (Text, page 108)

A: Adult from Jangdan, north of Seoul, South Korea. Photograph by Kenji Numata, courtesy Mitsuru Kuramoto.

Pachyhynobius shangchengensis (Text, page 108)

B: Adult from 20 km west-southwest of Manshuihe, Lu'an Prefecture, Anhui Province, China. Photograph by J. Robert Macey.

Ranodon sibiricus (Text, page 108)

C: Adult from region of the Karatal River, Dzhungarski Alatau Mountains, just east of Taldy-Kurgan, southeastern Kazakhstan. Photograph by Fritz-Jürgen Obst.

Ranodon tsinpaensis (Text, page 109)

D: Adult from Lichuan County, Hubei Province, China. Photograph by Guan-fu Wu.

Salamandrella keyserlingii (Text, page 109)

E: Adult from Ulan Bator, Central Province, Mongolia. Photograph by J. Robert Macey.

Family Cryptobranchidae

Andrias davidianus (Text, page 110)

F: Adult from Hongya County, Sichuan Province, China; about 700 meters. Photograph by Guan-fu Wu.

Family Salamandridae

Cynops orientalis (Text, page 111)

G: Adult from Zhenhai County, Zhejiang Province, China. Photograph by Er-mi Zhao. This individual has been photographed underwater.

Echinotriton andersoni (Text, page 111)

H: Adult from Amami Island, northern Ryukyu Islands, Japan. Photograph by Norio Maeda, courtesy Mitsuru Kuramoto.

PLATE 3

A 

 B

C 

 D

E 

 F

G 

 H

PLATE 4

SALAMANDRIDAE II

Family Salamandridae

Echinotriton chinhaiensis (Text, page 112)

A: Adult from Rui Yan Si, Zhenhai County, Zhejiang Province, China. Photograph by Chunmo Cai.

Pachytriton brevipes (Text, page 112)

B: Adult from Huanganshan, Wuyi Mountain Preserve, western Fujian Province, China. Photograph by Ray E. Ashton, Jr. For habitat, see Plate 48A.

Pachytriton labiatus (Text, page 113)

C: Adult from Zhenhai County, Zhejiang Province, China. Photograph by Er-mi Zhao. This individual has been photographed underwater. For habitat, see Plate 47F.

Paramesotriton caudopunctatus (Text, page 113)

D: Adult from Leishan County, Guizhou Province, China. Photograph by Er-mi Zhao. This individual has been photographed underwater.

Paramesotriton chinensis (Text, page 113)

E: Adult from Hexian County, Guangxi Zhuang Autonomous Region, China; about 1,700 meters. Photograph by Er-mi Zhao.

Tylototriton kweichowensis (Text, page 114)

F: Adult from Weining County, Guizhou Province, China; about 1,730 meters. Photograph by Er-mi Zhao.

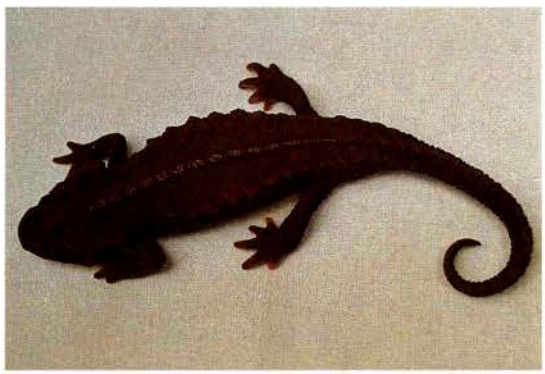
Tylototriton taliangensis (Text, page 114)

G: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey.

Tylototriton verrucosus (Text, page 114)

H: Adult from Caizidi, Longling County, Yunnan Province, China. Photograph by Er-mi Zhao.

PLATE 4



A



B



C



D



E



F



G



H

PLATE 5

DISCOGLOSSIDAE AND PELOBATIDAE I

Family Discoglossidae

Bombina maxima (Text, page 115)

A: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey. For habitat, see Plate 47C.

Bombina orientalis (Text, page 115)

B: Adult from Qingdao, Shandong Province, China. Photograph by Long-xiao Chen, courtesy Yu Zong.

Family Pelobatidae

Atympanophrys shapingensis (Text, page 115)

C: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey.

Brachytarsophrys carinensis (Text, page 116)

D: Adult male from Miyi County, Sichuan Province, China. Photograph by Guan-fu Wu.

Leptobrachium chapaense (Text, page 116)

E: Adult male from Tengchong, western Yunnan Province, China; 2,100 meters. Photograph by Da-tong Yang.

Leptobrachium hasseltii (Text, page 116)

F: Adult from Kanchanaburi, Kanchanaburi Province, western Thailand. Photograph by Nabhitabhata Jarujin.

Leptolalax pelodytoides pelodytoides (Text, page 117)

G: Adult male from Tai Po Kau Nature Reserve, New Territories, Hong Kong, China. Photograph by Michael Lau. For habitat, see Plate 48A.

Megophrys brachykolos (Text, page 118)

H: Adult from above Shui Hau, Lantau Island, Hong Kong, China; 100 meters. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency. For habitat, see Plate 48D.

PLATE 5



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PLATE 6

PELOBATIDAE II

Family Pelobatidae

Megophrys minor (Text, page 119)

A: Adult male from Maowen County, Sichuan Province, China. Photograph by Guan-fu Wu.

Megophrys omeimontis omeimontis (Text, page 119)

B: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Ophryophryne pachyproctus (Text, page 121)

C: Adult from Zhushihe, Mengla County, Yunnan Province, China; about 1,000 meters. Photograph by Zhi-tong Kou. The animal is sitting on the palm of a person's hand.

Oreolalax major (Text, page 121)

D: Adult male from Emeishan, Emei County, Sichuan Province, China. Photograph by Guan-fu Wu.

Oreolalax omeimontis (Text, page 122)

E: Adult from Hongya County, Sichuan Province, China. Photograph by Guan-fu Wu.

Oreolalax popei (Text, page 122)

F: Adult from Hongya County, Sichuan Province, China. Photograph by Guan-fu Wu.

Oreolalax rhodostigmatus (Text, page 122)

G: Adult female from Lichuan County, Hubei Province, China. Photograph by Guan-fu Wu.

Oreolalax rugosus (Text, page 122)

H: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey. For habitat, see Plate 47C.

PLATE 6



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PLATE 7

PELOBATIDAE III AND BUFONIDAE I

Family Pelobatidae

Scutiger boulengeri (Text, page 123)

A: Adults in natural habitat, the hot springs at Wenquan, Hainan Zang Autonomous Prefecture, Qinghai Province, China; 3,710 meters. Photograph by J. Robert Macey. For surrounding habitat, see Plate 46G.

Scutiger mammatus (Text, page 124)

B: Adult male from Kangding County, Sichuan Province, China. Photograph by Guan-fu Wu.

Scutiger ruginosus (Text, page 125)

C: Adult male from Kangding County, Sichuan Province, China. Photograph by Guan-fu Wu.

Vibrissaphora ailaonica (Text, page 125)

D: Adult male from Ailaoshan, Chuxiong County, Yunnan Province, China. Photograph by Guan-fu Wu. During the breeding season spines form on the pustules on the upper lip; see note below under (E).

Vibrissaphora boringii (Text, page 126)

E: Adult male from Emeishan, Emei County, Sichuan Province, China. Photograph by Er-mi Zhao. The black, cornified spines on the upper lip are present in males of the genus *Vibrissaphora* and then only during the breeding season. Females have no spines but there are spots on the lip corresponding to the positions of the spines in males. For habitat, see Plate 47D.

Family Bufonidae

Bufo andrewsi (Text, page 127)

F: Adult from near Tuowu, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 2,400 meters. Photograph by J. Robert Macey. For habitat, see Plate 47C-D.

Bufo bankorensis (Text, page 127)

G: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Bufo danatensis (Text, page 127)

H: Adult from the sand dunes about 12 km northeast of Koumenzi, Hami (Kumul) Prefecture, Xinjiang Uygur Autonomous Region, China; 2,090 meters. Photograph by J. Robert Macey. This individual is tentatively referred to *Bufo danatensis*, based on its size, morphology, and provenance; its chromosomal ploidy level has not been determined (also see text, page 127).

PLATE 7

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PLATE 8

BUFONIDAE II AND HYLIDAE

Family Bufonidae

Bufo gargarizans (Text, page 128)

A: Adult from 26 km south of Baoji, Shaanxi Province, China. Photograph by J. Robert Macey. For habitats, see Plates 45B and 47F.

Bufo himalayanus (Text, page 128)

B: Adult from near Zhangmu, Nyalam Region, Xizang (Tibet) Autonomous Region, China, on the Nepalese border; 2,800 meters. Photograph by J. Robert Macey. For habitat, see Plate 47E.

Bufo raddei (Text, page 128)

C: Adult from Lanzhou, Gansu Province, China. Photograph by J. Robert Macey. For habitats, see Plates 45B-C, 45E, and 46F.

Pelophryne scalpta (Text, page 130)

D: Adult male (holotype) from Xin-min Xiang (village), Wuzhishan, Hainan Island, Hainan Province, China; 750 meters. Drawing reproduced from Liu, Hu, Fei, and Huang, 1973, plate 1. Yi-sheng Wang, artist.

Family Hylidae

Hyla chinensis (Text, page 131)

E: Adult male from Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Hyla japonica (Text, page 131)

F: Adult from Xingkai Hu (Khanka Lake), on the eastern border of Heilongjiang Province, China, and southern Primorsky Territory, Russia. Photograph by Nikolai L. Orlov.

Hyla sanchiangensis (Text, page 132)

G: Adult from Leishan County, Guizhou Province, China. Photograph by Guan-fu Wu.

Hyla simplex (Text, page 132)

H: Adult male from Leishan County, Guizhou Province, China. Photograph by Guan-fu Wu.

PLATE 8

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PLATE 9

RANIDAE I

Family Ranidae

Altirana parkeri (Text, page 132)

A: Adult from Lhasa, Xizang (Tibet) Autonomous Region, China; about 3,800 meters. Photograph by Er-mi Zhao. For habitat, see Plate 46H.

Amolops chunganensis (Text, page 133)

B: Adults from Anxian County, Sichuan Province, China. Photograph by Guan-fu Wu.

Amolops kangtingensis (Text, page 134)

C: Adult from Kangding County, Sichuan Province, China. Photograph by Guan-fu Wu.

Amolops liangshanensis (Text, page 134)

D: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey.

Amolops mantzorum (Text, page 135)

E: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao. For habitats, see Plate 47C-D.

Amolops ricketti (Text, page 135)

F: Adult from Hejiang County, Sichuan Province, China. Photograph by Er-mi Zhao.

Amolops viridimaculatus (Text, page 135)

G: Adult from Dahaoping, Tengchong County, Yunnan Province, China. Photograph by Er-mi Zhao.

Micrixalus xizangensis (Text, page 136)

H: Adult male (preserved specimen) from near marker "62 km" along the Bomi-Medog road, Xizang (Tibet) Autonomous Region, China; 2,700 meters. Photograph by Chang-ping Jin (Chengdu Institute of Biology, unnumbered).

I: Adult male (holotype) from Yi'ong, Bomi County, Xizang (Tibet) Autonomous Region, China; 2,300 meters. Drawing reproduced from S.-Q. Hu, *in* Sichuan Biological Research Institute, 1977, plate 1. Yi-sheng Wang, artist.

PLATE 9

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PLATE 10

RANIDAE II

Family Ranidae

Nanorana pleskei (Text, page 137)

A: Adult from Waqên, 42 km north of Hongyuan County, Sichuan Province, China. Photograph by Robert W. Murphy.

Occidozyga lima (Text, page 137)

B: Adult from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Guan-fu Wu. For habitats, see Plate 48A, 48C, and 48E.

Occidozyga martensii (Text, page 138)

C: Adult from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Xiao-mao Zhen, courtesy Guan-fu Wu. For habitat, see Plate 48E.

Rana adenopleura (Text, page 138)

D: Young male from Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Rana boulengeri (Text, page 140)

E: Adult male from Leishan County, Guizhou Province, China. Photograph by Guan-fu Wu.

Rana cancrivora (Text, page 140)

F: Adult male from a mangrove swamp at Deng Xai Gang, east of Haikou, Hainan Island, Hainan Province, China. Photograph by Frank Layton, courtesy James D. Lazell and The Conservation Agency.

Rana chaochiaoensis (Text, page 140)

G: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey.

Rana chensinensis (Text, page 140)

H: Adult in natural habitat at Shapotou, Yinnan Prefecture, Ningxia Hui Autonomous Region, China. Photograph by J. Robert Macey. For habitats, see Plates 45B-C, 45E, and 46F.

PLATE 10



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PLATE 11

RANIDAE III

Family Ranidae

Rana daunchina (Text, page 141)

A: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Rana exilispinosa (Text, page 141)

B: Adult male from Tai Mo Shan, New Territories, Hong Kong, China. Photograph by Michael Lau. For habitat, see Plate 48D.

Rana guentheri (Text, page 142)

C: Adult from Shui Hau, Lantau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency.

Rana kuhlii (Text, page 143)

D: Adult from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Guan-fu Wu. For habitats, see Plate 48E and 48G.

Rana limnocharis (Text, page 144)

E: Adult from Huangshan City (Tunxi), Huizhou Prefecture, Anhui Province, China. Photograph by J. Robert Macey. For habitats, see Plate 48C and 48E.

Rana livida (Text, page 144)

F: Adult from Hejiang County, Sichuan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48D.

Rana longicrus (Text, page 145)

G: Adult female from Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Rana macrodactyla (Text, page 145)

H: Adult from Shek Kwu Chau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency.

PLATE 11



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PLATE 12

RANIDAE IV

Family Ranidae

Rana margaretae (Text, page 145)

A: Adult female from Hongya County, Sichuan Province, China. Photograph by Guan-fu Wu.

Rana nigrolineata (Text, page 145)

B: Adult from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Xiao-mao Zhen, courtesy Guan-fu Wu.

Rana nigromaculata (Text, page 146)

C: Adult from Dalian, Liaoning Province, China. Photograph by Er-mi Zhao.

Rana plancyi fukienensis (Text, page 146)

D: Adult in natural habitat in Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Rana plancyi plancyi (Text, page 147)

E: Adult from Lichuan County, Hubei Province, China. Photograph by Guan-fu Wu. This individual is from a population previously referred to as "*Rana hubeiensis,*" which is now considered to be a synonym of *R. plancyi plancyi*.

Rana quadranus (Text, page 147)

F: Juvenile from 20 km west-southwest of Manshuihe, Lu'an Prefecture, Anhui Province, China. Photograph by J. Robert Macey.

Rana rugulosa (Text, page 148)

G: Adult from Lu Dao (Green Island), Taitung County, Taiwan Province, China. Photograph by Hon-tsen Yu. Previously, the Chinese populations of this species were known as "*Rana tigerina rugulosa*" or "*R. tigrina rugulosa*"; see text page 148 for further comments. For habitat, see Plate 48C.

Rana sauteri (Text, page 148)

H: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

PLATE 12

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PLATE 13

RANIDAE V

Family Ranidae

Rana schmackeri (Text, page 149)

A: Adult from Huangshan City (Tunxi), Huizhou Prefecture, Anhui Province, China. Photograph by J. Robert Macey.

Rana shini (Text, page 149)

B: Adult male from Hejiang County, Sichuan Province, China. Photograph by Er-mi Zhao.

Rana swinhoana (Text, page 150)

C: Adult male from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Rana taipehensis (Text, page 150)

D: Adult male from Danshui, Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Rana tenggerensis (Text, page 150)

E: Adult from the western edge of Zhongwei, Yinnan Prefecture, Ningxia Hui Autonomous Region, China. Photograph by J. Robert Macey. For habitat, see Plate 45E.

Rana tiannanensis (Text, page 150)

F: Adult from Bawangling, Hainan Island, Hainan Province, China. Photograph by Guan-fu Wu.

Rana tientaiensis (Text, page 150)

G: Adult from Huangshan City (Tunxi), Huizhou Prefecture, Anhui Province, China. Photograph by J. Robert Macey.

Rana yunnanensis (Text, page 151)

H: Adult female from Miyi County, Sichuan Province, China. Photograph by Guan-fu Wu. For habitat, see Plate 47C.

PLATE 13

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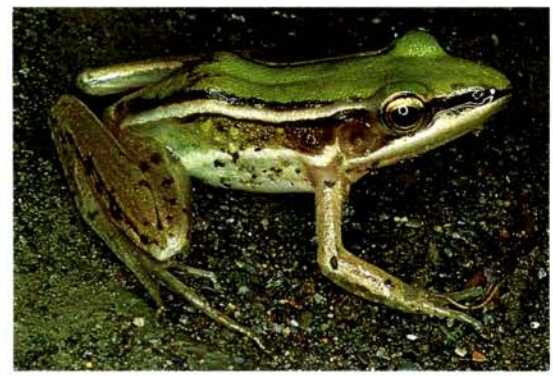
C   D

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PLATE 14

RHACOPHORIDAE I

Family Rhacophoridae

Buergeria japonica (Text, page 152)

A: Adults from Taichung County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Buergeria robusta (Text, page 152)

B: Adult male from Taichung County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48G.

Chirixalus doriae (Text, page 152)

C: Adult female from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Xiao-mao Zhen, courtesy Guan-fu Wu.

Chirixalus eiffingeri (Text, page 152)

D: Adult male from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Chirixalus idiootocus (Text, page 153)

E: Adult male from Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Philautus romeri (Text, page 155)

F: Adult male from Chek Lap Kok Island, Hong Kong, China; 10 meters. Photograph by Michael Lau.

Polypedates chenfui (Text, page 155)

G: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Polypedates dugritei (Text, page 155)

H: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey. For habitat, see Plate 47C.

PLATE 14



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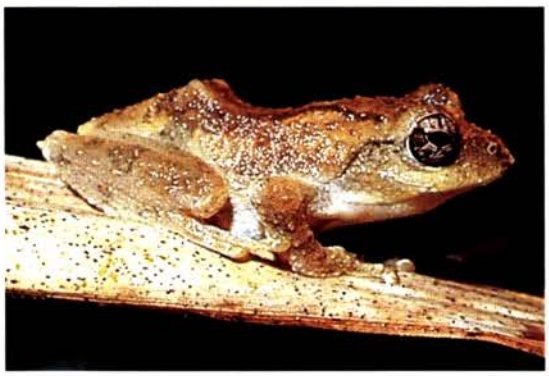

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PLATE 15

RHACOPHORIDAE II

Family Rhacophoridae

Polypedates megacephalus (Text, page 156)

A: Adult from Hejiang County, Sichuan Province, China. Photograph by Er-mi Zhao. This species has long been known in China as "*Rhacophorus leucomystax*" or "*Polypedates leucomystax*"; see text page 156 for comment. For habitats, see Plate 48D-E.

Polypedates mutus (Text, page 156)

B: Adult from Bawangling, Hainan Island, Hainan Province, China. Photograph by Guan-fu Wu.

Polypedates omeimontis (Text, page 157)

C: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Rhacophorus reinwardtii (Text, page 158)

D: Adult from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Xiao-mao Zhen, courtesy Guan-fu Wu.

Rhacophorus rhodopus (Text, page 158)

E: Adult from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Guan-fu Wu.

Rhacophorus taipeianus (Text, page 158)

F: Adult female from Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Theloderma asperum (Text, page 159)

G: Adult from Uthai Thani Province, western Thailand. Photograph by Nabhitabhata Jarujin. The asymmetric whitish markings of the dorsal color pattern in this species bear a striking resemblance to bird droppings.

Theloderma leporosa kwangsiensis (Text, page 159)

H: Adult male (holotype) from Yang-liu-chong, Dayao Shan, Guangxi Zhuang Autonomous Region, China; 1,350 meters. Drawing reproduced from Liu and Hu, 1962, figure 8a. Yi-sheng Wang, artist.

PLATE 15

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PLATE 16

MICROHYLIDAE

Family Microhylidae

Calluella yunnanensis (Text, page 160)

A: Adult female from Zhaojue County, Sichuan Province, China. Photograph by Guan-fu Wu.

Kalophrynus pleurostigma interlineatus (Text, page 160)

B: Adult from Fanling, New Territories, Hong Kong, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Kaloula pulchra pulchra (Text, page 161)

C: Adult male from Jinghong County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Xiao-mao Zhen, courtesy Guan-fu Wu.

Kaloula rugifera (Text, page 161)

D: Adults from Anxian County, Sichuan Province, China. Photograph by Guan-fu Wu.

Microhyla butleri (Text, page 162)

E: Adult male from Mengla County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Guan-fu Wu.

Microhyla inornata (Text, page 163)

F: Adult from Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Microhyla ornata (Text, page 163)

G: Adult male from Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48E.

Microhyla pulchra (Text, page 163)

H: Adult from Shek Kong, New Territories, Hong Kong, China. Photograph by A. J. Brandt. For habitat, see Plate 48E.

PLATE 16



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PLATE 17

PLATYSTERNIDAE AND EMYDIDAE I

Family Platysternidae

Platysternon megacephalum (Text, page 164)

A: Adult from Shing Mun (stream), New Territories, Hong Kong, China. Photograph by Michael Lau.

Family Emydidae

Chinemys nigricans (Text, page 165)

B: Adult female from Zhanjiang, Guangdong Province, China. Photograph by William P. McCord.

Chinemys reevesii (Text, page 165)

C: Adult from Taipei, Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Cistoclemmys flavomarginata (Text, page 165)

D: Adult from vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Er-mi Zhao.

Cistoclemmys galbinifrons (Text, page 166)

E: Young female from Tainhfien, 100 km east of Dongfang, central Hainan Province, China. Photograph by William P. McCord. This individual is from a population recently described as "*Cuora galbinifrons serrata*."

Cuora aurocapitata (Text, page 166)

F: Adult female from Tongling, Anhui Province, China. Photograph by William P. McCord.

Cuora mccordi (Text, page 166)

G: Adult females from extreme southeastern Yunnan Province, just west of Bose County, Guangxi Zhuang Autonomous Region, China. Photograph by William P. McCord.

Cuora pani (Text, page 167)

H: Adult male from Ta Lau Shan, south of Kunming, southeastern Yunnan Province, China. Photograph by William P. McCord. This individual is from a population recently described as "*Cuora chriskarannarum*."

PLATE 17

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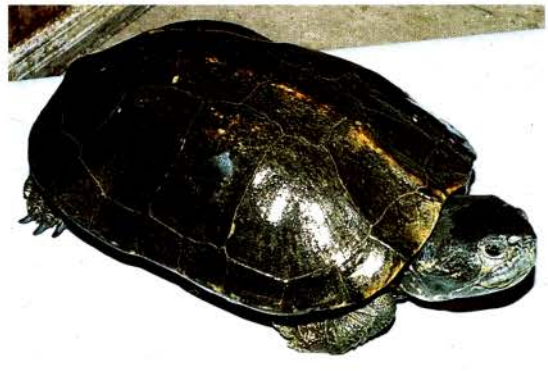 B

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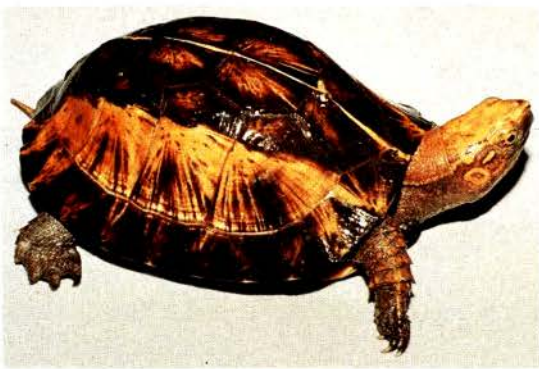
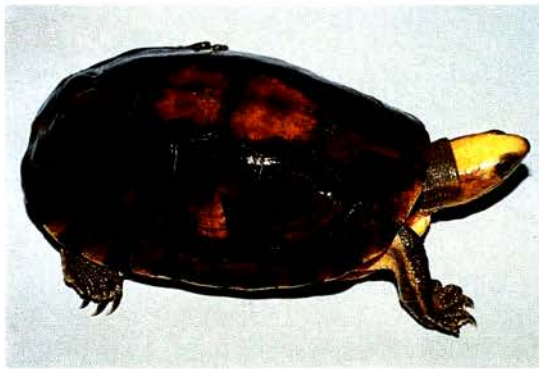
E 

 F

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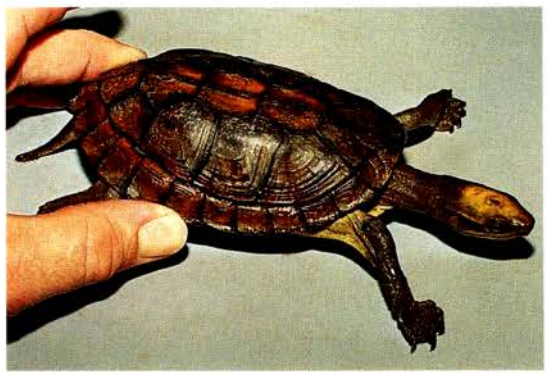 H

PLATE 18

EMYDIDAE II

Family Emydidae

Cuora trifasciata (Text, page 167)

A: Adult from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Cyclemys dentata (Text, page 167)

B: Adult females from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by William P. McCord.

Geoemyda spengleri (Text, page 168)

C: Adult female from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Er-mi Zhao.

Mauremys iversoni (Text, page 169)

D: Juvenile from the vicinity of Nanping, central Fujian Province, China; about 500 meters. Photograph by John B. Iverson.

Mauremys mutica (Text, page 169)

E: Young female from the vicinity of Guangzhou, Guangdong Province, China. Photograph by William P. McCord.

Ocadia philippeni (Text, page 169)

F: Adult female from near Gancheng, 48 km south of Dongfang, western Hainan Island, Hainan Province, China. Photograph by John B. Iverson.

Ocadia sinensis (Text, page 169)

G: Adult male from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Er-mi Zhao.

Pyxidea mouhotii (Text, page 170)

H: Adult from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Er-mi Zhao.

PLATE 18

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PLATE 19

EMYDIDAE III, TESTUDINIDAE, AND CHELONIIDAE I

Family Emydidae

Sacalia bealei (Text, page 170)

A: Adult female from Guangdong Province, in the region immediately opposite Hainan Island, China. Photograph by John B. Iverson.

Sacalia pseudocellata (Text, page 170)

B: Juvenile from between Dongfang and Gancheng, western Hainan Island, Hainan Province, China. Photograph by John B. Iverson.

Sacalia quadriocellata (Text, page 171)

C: Adult male from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Er-mi Zhao.

Family Testudinidae

Indotestudo elongata (Text, page 171)

D: Adult from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Er-mi Zhao.

Manouria impressa (Text, page 171)

E: Adult from the vicinity of Haikou, Hainan Island, Hainan Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Testudo horsfieldii (Text, page 172)

F: Adult from near Huocheng, northwestern Xinjiang Uygur Autonomous Region, China. Photograph by Mo-yuan Cao, courtesy Yu Zong. For habitat, see Plate 46E.

Family Cheloniidae

Caretta caretta (Text, page 172)

G: Adult from Shanghai, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Chelonia mydas (Text, page 173)

H: Adult female from Hong Kong (probably Lamma Island), China. Photograph by Ping-kwong Chan, courtesy Anthony Bogadek. For nesting area, see Plate 48F.

PLATE 19



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PLATE 20

CHELONIIDAE II, DERMOCHELYIDAE, AND TRIONYCHIDAE

Family Cheloniidae

Eretmochelys imbricata (Text, page 173)

A: Adult from the Xisha Islands (Paracel Islands), South China Sea, Hainan Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Lepidochelys olivacea (Text, page 173)

B: Adult from the Zhoushan Islands, Zhejiang Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Family Dermochelyidae

Dermochelys coriacea (Text, page 174)

C: Adult from Qidong (Huilongzhen), southeastern Jiangsu Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Family Trionychidae

Palea steindachneri (Text, page 174)

D: Adult from the vicinity of Wuzhou, eastern Guangxi Zhuang Autonomous Region, China. Photograph by Michael Lau.

Pelochelys bibroni (Text, page 174)

E: Young specimen from Fuzhou, Fujian Province, China. Photograph by William P. McCord.

Pelodiscus sinensis (Text, page 175)

F: Adult from Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao.

G: Adult from Wusuli (Ussuri) River, eastern border of Heilongjiang Province, China, and Primorsky Territory, Russia. Photograph by Nikolai L. Orlov. In this photograph, all but the top of the head and snout is underwater. This individual is from a population that is sometimes referred to as "*Trionyx maackii*"; see note on page 176.

Rafetus swinhoei (Text, page 177)

H-I: Adult from Gejiu, southeastern Yunnan Province, China. Photograph of head (H) by Zu-yi Zhou; photograph of animal underwater (I) by Mo-yuan Cao, courtesy Yu Zong.

PLATE 20

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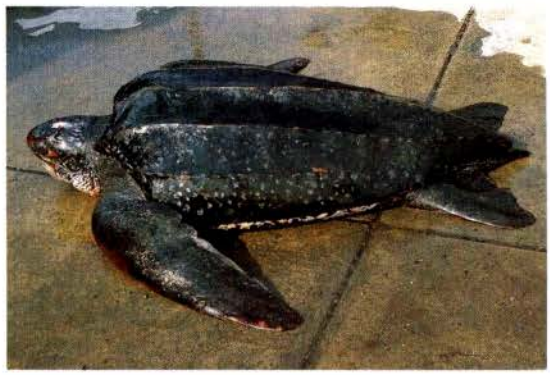
C 

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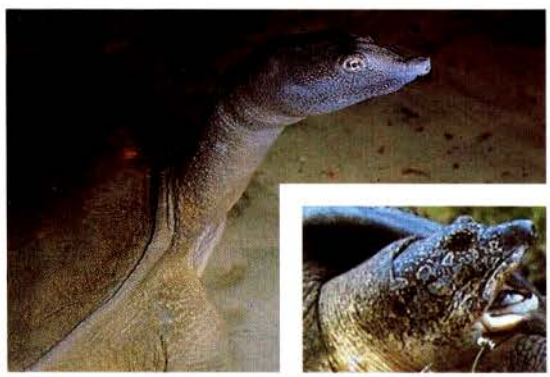
G-H 

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PLATE 21

GEKKONIDAE I

Family Gekkonidae

Alsophylax przewalskii (Text, page 178)

A: Adult from Hami, northeastern Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey.

Cosymbotus platyurus (Text, page 178)

B: Adult from Bangkok, Krung Thep Maha Nakhan Province, Thailand. Photograph by Nabhitabhata Jarujin.

Cyrtodactylus elongatus (Text, page 179)

C: Adult from Ma Chang Dadu District, Shanshan, Turpan Prefecture, Xinjiang Uygur Autonomous Region, China; 470 meters. Photograph by J. Robert Macey. For habitats, see Plate 46A and 46C-D.

Cyrtodactylus russowii (Text, page 179)

D: Adult from Karamay, Junggar Depression, Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey. For habitat, see Plate 46D.

Cyrtodactylus tibetanus (Text, page 180)

E: Adult from Lhasa, Xizang (Tibet) Autonomous Region, China. Photograph by J. Robert Macey. For habitat, see Plate 47A.

Gehyra mutilata (Text, page 180)

F: Adult from Yaxian County, Hainan Island, Hainan Province, China. Photograph by Er-mi Zhao.

Gekko chinensis (Text, page 180)

G: Adult from Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48D.

Gekko gecko (Text, page 181)

H: Adult from Hanoi, northern Vietnam. Photograph by Nikolai L. Orlov.

PLATE 21

A 

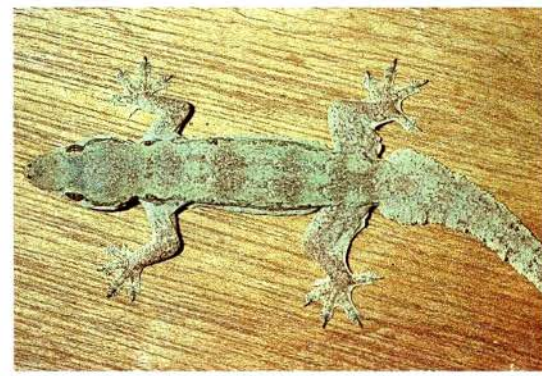 B

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PLATE 22

GEKKONIDAE II

Family Gekkonidae

Gekko hokouensis (Text, page 181)

A: Adult male in natural habitat in a house, from Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Gekko subpalmatus (Text, page 182)

B: Adult from Hanyuan, Ya'an Prefecture, Sichuan Province, China; 860 meters. Photograph by J. Robert Macey.

Goniurosaurus lichtenfelderi hainanensis (Text, page 182)

C: Adult female from west of Wuzhishan (Five Finger Mountain), Hainan Island, Hainan Province, China. Photograph by Richard C. Goris. Note that the tip of the tail has been regenerated in this individual.

Hemidactylus bowringii (Text, page 183)

D: Adult from Yaxian County, Hainan Island, Hainan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48E.

Hemidactylus frenatus (Text, page 184)

E: Adult from Yaxian County, Hainan Island, Hainan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48E.

Hemiphyllodactylus typus (Text, page 184)

F: Adult from Manchou, Kenting National Park, Pingtung County, Taiwan Province, China. Photograph by Kuang-yang Lue.

Lepidodactylus lugubris (Text, page 185)

G: Adult female from near Nanryo, Lutao (Green Island), Taitung County, Taiwan Province, China. Photograph by Hidetoshi Ota.

Lepidodactylus yami (Text, page 185)

H: Adult female from near Imoru, Lanyu Island, Taitung County, Taiwan Province, China. Photograph by Hidetoshi Ota. This individual is in the process of shedding its skin.

PLATE 22

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PLATE 23

GEKKONIDAE III AND AGAMIDAE I

Family Gekkonidae

Teratoscincus przewalskii (Text, page 185)

A: Adult from the sand dunes 5 km south of Dunhuang, Gansu Province, China. Photograph by J. Robert Macey. For habitat, see Plate 46A.

Teratoscincus scincus (Text, page 186)

B: Adult from Ma Chang Dadu District, Shanshan, Turpan Prefecture, Xinjiang Uygur Autonomous Region, China; 470 meters. Photograph by J. Robert Macey. For habitat, see Plate 46C.

Family Agamidae

Acanthosaura lepidogaster (Text, page 186)

C: Adult from Jinggangshan, Jiangxi Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Agama sacra (Text, page 187)

D: Adult from 52.4 km south (by road) of Yangbajain, Xizang (Tibet) Autonomous Region, China; 3,990 meters. Photograph by J. Robert Macey. For habitat, see Plate 47A.

Agama sanguinolenta (Text, page 187)

E: Adult from Repetek Desert Reserve Station, Repetek, Chardjou Region, Turkmenistan. Photograph by J. Robert Macey.

Agama stoliczkana (Text, page 187)

F: Adult from Hami, northeastern Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey.

Calotes jerdoni (Text, page 188)

G: Adult from near Zhangmu, Nyalam Region, Xizang (Tibet) Autonomous Region, China, on the Nepalese border; 2,800 meters. Photograph by J. Robert Macey. For habitat, see Plate 47E.

PLATE 23

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PLATE 24

AGAMIDAE II

Family Agamidae

Calotes versicolor (Text, page 189)

A: Adult male in natural habitat at Ngau Tam Mei, New Territories, Hong Kong, China. Photograph by Michael Lau. This individual has been photographed basking in a sun-lighted spot in thick vegetation.

Draco maculatus (Frontispiece; text, page 190)

B: Adult from Buoenloy, southern Vietnam. Photograph by Ilya S. Darevsky.

C: Adult male (ventral surface) from northern slope of Tong Tian Ling (Tong Tian Luo), Xinglong, Hainan Island, Hainan Province, China; 90 meters. Photograph by Frank Layton, courtesy James D. Lazell and The Conservation Agency.

Japalura flaviceps (Text, page 190)

D: Adult from Luding County, Sichuan Province, China. Photograph by Guan-fu Wu.

Japalura makii (Text, page 191)

E: Adult male from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Japalura splendida (Text, page 191)

F: Adult from 4.3 km north-northeast of Caluo (Chaluo), Shimian County, Ya'an Prefecture, Sichuan Province, China. Photograph by J. Robert Macey.

Japalura swinhonis (Text, page 192)

G: Adult male in natural habitat, Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu.

PLATE 24

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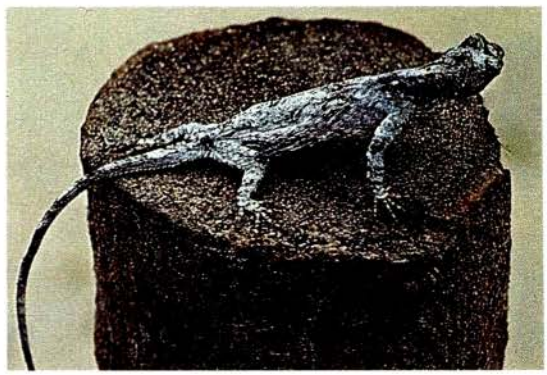 B

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PLATE 25

AGAMIDAE III

Family Agamidae

Japalura yunnanensis (Text, page 192)

A: Adult from Caizidi, Longling County, Yunnan Province, China. Photograph by Er-mi Zhao.

Leiolepis reevesii (Text, page 192)

B: Adult from Hainan Island, Hainan Province, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Oriocalotes paulus (Text, page 193)

C: Adult female (preserved specimen) from Khasi Hills, Meghalaya, northeastern India. Photograph by Kraig Adler (British Museum [Nat. Hist.] number 70.11.29.43A). In life, adults are pale brownish olive dorsally, with dark brown spots; the ventral surface is light brown with dark transverse streaks on the throat (M. Smith, 1935: 167).

Phrynocephalus axillaris (Text, page 194)

D: Adult from the sand dunes 5 km south of Dunhuang, Gansu Province, China. Photograph by J. Robert Macey. For habitat, see Plate 46A.

Phrynocephalus hongyuanensis (Text, page 196)

E: Adult from 7 km north of Waqên, Hongyuan County, Sichuan Province, China. Photograph by J. Robert Macey.

Phrynocephalus mystaceus (Text, page 196)

F: Adult female from the eastern Kara-kum Desert, Turkmenistan. Photograph by Nikolai L. Orlov. Note that the tail can be curled over the back, as is typical for all *Phrynocephalus*. This display is normally conducted while sitting on an elevated place. It involves curling the tail up and over the back, then uncurling it almost completely (as in Plate 26A). The sequence is repeated in rapid succession, as a challenge signal to other individuals. The tip of the tail is usually black.

Phrynocephalus przewalskii (Text, page 196)

G: Adult from Shapotou, Yinnan Prefecture, Ningxia Hui Autonomous Region, China. Photograph by J. Robert Macey. For habitat, see Plate 45E.

Phrynocephalus theobaldi (Text, page 197)

H: Adult from 52.4 km south (by road) of Yangbajain, Xizang (Tibet) Autonomous Region, China; 3,990 meters. Photograph by J. Robert Macey. For habitat, see Plate 47A.

PLATE 25



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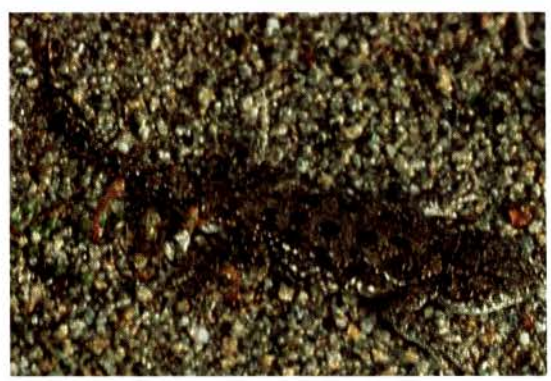

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PLATE 26

AGAMIDAE IV AND ANGUIDAE

Family Agamidae

Phrynocephalus versicolor (Text, page 197)

A: Adult from Karamay, Xinjiang Uygur Autonomous Region, China; 390 meters. Photograph by J. Robert Macey. For comment on tail curling behavior, see caption to Plate 25F. For habitat, see Plate 46C.

Phrynocephalus vlangalii (Text, page 197)

B: Adult (sand dune color phase) from the east side of Qinghai Lake, Qinghai Province, China. Photograph by J. Robert Macey.

C: Adult (grassland color phase) from 5.2 km east of Heimahe, Qinghai Lake Basin, Qinghai Province, China. Photograph by J. Robert Macey.

Ptyctolaemus gularis (Text, page 199)

D-E: Adult male (preserved specimen) from Margkerita, Patkai Mountains, Upper Assam, northeastern India. Photograph by Ulrich Manthey (Museum für Naturkunde, Berlin, number 31134). In life, adults are olive brown dorsally, with darker bars or spots; between the eyes are two curved dark brown cross bars, and typically there is a dark stripe from the angle of the mouth to below the eye. The ventral surface is yellowish white and the throat region is often bluish; the U-shaped folds on the throat are dark blue (M. Smith, 1935: 150).

Physignathus cocincinus (Text, page 198)

F: Adult male from the border region of Guangxi Zhuang Autonomous Region, China, and northern Vietnam. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Family Anguidae

Ophisaurus formosensis (Text, page 199)

G: Adult from Yangmingshan, Taipei County, Taiwan Province, China. Photograph by Yu-shen Cheng, courtesy Kuang-yang Lue.

Ophisaurus harti (Text, page 200)

H: Adult from Chisang, Taitung County, Taiwan Province, China. Photograph by Kuang-yang Lue.

PLATE 26



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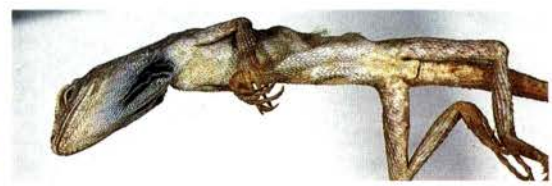

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PLATE 27

SHINISAURIDAE, VARANIDAE, DIBAMIDAE, AND LACERTIDAE I

Family Shinisauridae

Shinisaurus crocodilurus (Text, page 200)

A-B: Adult males (A) and newborn individual (B) from Guangxi Zhuang Autonomous Region, China; no locality data. Photograph by Helmut Mägdefrau.

Family Varanidae

Varanus salvator (Text, page 201)

C: Adult from Chapa (Cha Pa), northwest of Hanoi, northern Vietnam. Photograph by Ilya S. Darevsky. For habitat, see Plate 48E.

D: Adult from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Long-xiao Chen, courtesy Yu Zong. For habitat, see Plate 48E.

Family Dibamidae

Dibamus bogadeki (Text, page 201)

E: Adult female from Shek Kwu Chau Island, Hong Kong, China. Photograph by Martin Williams, courtesy James D. Lazell and Anthony Bogadek.

F-G: Head and vent region of adult male (preserved specimen [holotype]), from Hei Ling Chau Island, Hong Kong, China. Anterior is at the top. Photographs by Tat-chuen Yan, courtesy Anthony Bogadek. The vestigial, flap-like hind limbs adjacent to the vent (visible in G) are absent in females.

Family Lacertidae

Eremias argus (Text, page 202)

H: Adult from Guanting Reservoir, Beijing Municipality, China. Photograph by J. Robert Macey. For habitats, see Plate 45B-D.

Eremias multiocellata multiocellata (Text, page 203)

I: Adult from Baotou, Nei Mongol Autonomous Region, China. Photograph by Er-mi Zhao. For habitats, see Plates 45C and 46B.

PLATE 27



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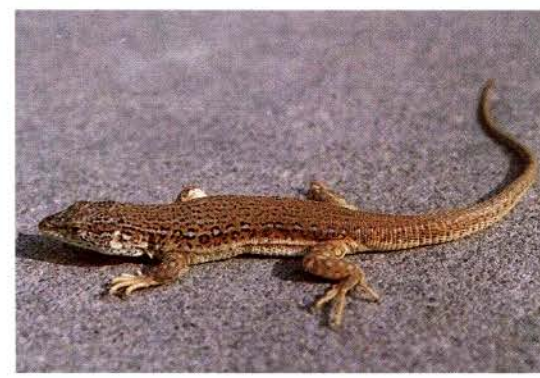

I

PLATE 28

LACERTIDAE II

Family Lacertidae

Eremias przewalskii (Text, page 203)

A: Adult from Dalandzadgad, South Gobi Province, Gobi (desert), southern Mongolia. Photograph by Nikolai L. Orlov. For habitat, see Plate 45E.

Eremias vermiculata (Text, page 204)

B: Adult from the sand dunes 5 km south of Dunhuang, Gansu Province, China. Photograph by J. Robert Macey. For habitat, see Plate 46A.

Lacerta agilis exigua (Text, page 205)

C: Adult male and female from Nilka, northwestern Xinjiang Uygur Autonomous Region, China. Photograph by Long-xiao Chen, courtesy Yu Zong. Males are green, often an intense green during the breeding season, whereas females are gray or brown.

Lacerta vivipara (Text, page 205)

D: Adult from Barnaul, Altay Region, Russia, north of the northernmost border of Xinjiang Uygur Autonomous Region, China. Photograph by Ilya S. Darevsky.

Platyplacopus kuehnei (Text, page 205)

E: Adult from Tungpu, Yushan National Park, Chiayi County, Taiwan Province, China. Photograph by Kuang-yang Lue.

Takydromus amurensis (Text, page 206)

F: Adult male from the Ussuriysk Preserve, near Ussuriysk, about 100 km north of Vladivostok, Russia, near eastern border of Heilongjiang Province, China. Photograph by Sen Takenaka.

Takydromus sauteri (Text, page 207)

G: Adult in natural habitat in Pingtung County, Taiwan Province, China. Photograph by Hontsen Yu.

Takydromus septentrionalis (Text, page 207)

H: Adult from Anxian County, Sichuan Province, China. Photograph by Guan-fu Wu.

PLATE 28



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PLATE 29

LACERTIDAE III AND SCINCIDAE I

Family Lacertidae

Takydromus sexlineatus ocellatus (Text, page 207)

A: Adult from Kukfiong, northern Vietnam. Photograph by Ilya S. Darevsky.

Takydromus stejnegeri (Text, page 208)

B: Adult in natural habitat in Taipei, Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Family Scincidae

Asymblepharus alaicus kucenkoi (Text, page 208)

C: Adult from the vicinity of Bishkek (formerly Frunze), Kirgizstan. Photograph by Michihisa Toriba.

Ateuchosaurus chinensis (Text, page 208)

D: Adult from Tai Po Kau Forest Nature Reserve, New Territories, Hong Kong, China; 150 meters. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek. For habitat, see Plate 48D.

Emoia atrocostata (Text, page 209)

E: Adult from Kenting National Park, Pingtung County, Taiwan Province, China. Photograph by Kuang-yang Lue.

Eumeces chinensis formosensis (Text, page 210)

F: Adult from Taipei, Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Eumeces elegans (Text, page 210)

G: Juvenile from Grassy Hill, New Territories, Hong Kong, China. Photograph by Michael Lau.

Eumeces tunganus (Text, page 211)

H: Adult from Luding County, Sichuan Province, China. Photograph by Guan-fu Wu.

PLATE 29



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PLATE 30

SCINCIDAE II

Family Scincidae

Mabuya longicaudata (Text, page 211)

A: Adult from Shing Mun, New Territories, Hong Kong, China; 200 meters. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Riopa bowringii (Text, page 212)

B: Adult from Hab Ta Put, Rayong Province, southeastern Thailand. Photograph by Nabhitabhata Jarujin.

Scincella monticola (Text, page 215)

C: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Scincella reevesii (Text, page 215)

D: Adult from Dinghushan, near Dinghu, Guangdong Province, China. Photograph by Jan Lund, courtesy James D. Lazell and The Conservation Agency. For habitat, see Plate 48D.

Scincella tsinlingensis (Text, page 216)

E: Adult from 7 km north of Waqên, Hongyuan County, Sichuan Province, China. Photograph by J. Robert Macey.

Sphenomorphus indicus (Text, page 216)

F: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48G.

Tropidophorus sinicus (Text, page 218)

G: Adult from Hatton Road (stream), The Peak (Shan Teng), Hong Kong Island, Hong Kong, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek. For habitat, see Plate 48D.

PLATE 30



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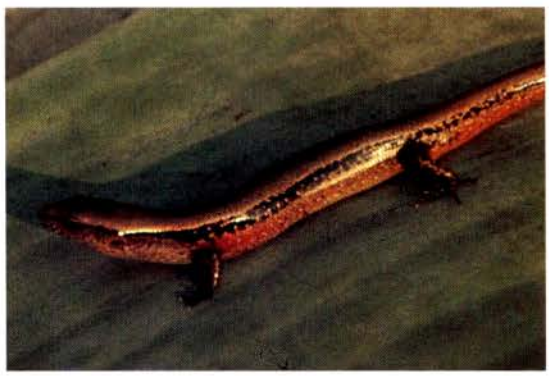

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PLATE 31

TYPHLOPIDAE, ACROCHORDIDAE, XENOPELTIDAE, UROPELTIDAE, AND BOIDAE

Family Typhlopidae

Ramphotyphlops albiceps (Text, page 218)

A: Adult from a wooded area at the base of High West (Sai Ko Shan), a peak west of The Peak (Shan Teng), Hong Kong Island, Hong Kong, China; about 100 meters. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek. For habitat, see Plate 48D.

Ramphotyphlops braminus (Text, page 218)

B: Adult from Wulai, Taipei County, Taiwan Province, China. Photograph by Kuang-yang Lue. For habitat, see Plate 48D; see also Figure 39 on text page 452.

Typhlops diardii (Text, page 219)

C: Adult female (preserved specimen) from Lushui County, Yunnan Province, China; 850 meters. Photograph by Chang-ping Jin (Chengdu Institute of Biology number II083). The constriction just posterior to the neck is an artifact of tag removal.

D: Adult from Bardia National Park, western Nepal. Photograph by Mark T. O'Shea.

Family Acrochordidae

Acrochordus granulatus (Text, page 220)

E: Adult from Kota Kinabalu, Sabah (North Borneo), Malaysia. Photograph by Robert Stuebing.

Family Xenopeltidae

Xenopeltis unicolor (Text, page 220)

F: Adult from Ban Mak Yang, Bueng Bun District, Sisaket Province, northeastern Thailand. Photograph by Wolfgang Wüster. Juveniles of this species have white collars.

Family Uropeltidae

Cylindrophis ruffus (Text, page 221)

G: Adult from Ban Mak Yang, Bueng Bun District, Sisaket Province, northeastern Thailand. Photograph by Wolfgang Wüster. This individual exhibits a characteristic defense behavior of the species in which the short tail is raised to display the bright ventral coloration.

Family Boidae

Eryx tataricus (Text, page 222)

H: Adult from 8 km north-northeast of Wujiaqu, Changji Hui Autonomous Prefecture, Junggar Depression, Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey.

Python molurus bivittatus (Text, page 222)

I: Adult from Hong Kong, China; no locality data. Photograph by Ping-kwong Chan, courtesy Anthony Bogadek. For habitat, see Plate 48E.

PLATE 31



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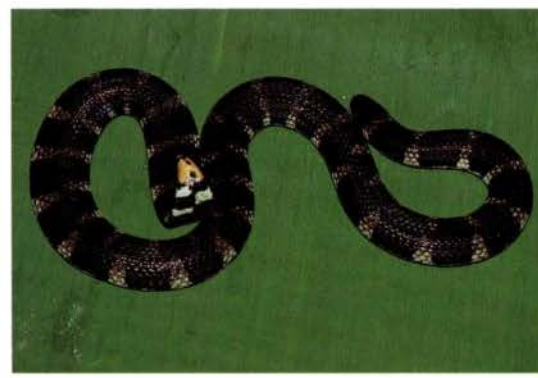

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PLATE 32

COLUBRIDAE I

Family Colubridae

Achalinus meiguensis (Text, page 223)

A: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Ahaetulla prasina (Text, page 225)

B: Adult from the vicinity of Hanoi, northern Vietnam. Photograph by Nikolai L. Orlov.

Amphiesma miyajimae (Text, page 226)

C: Adult from Shihting, Taipei County, Taiwan Province, China. Photograph by Kuang-yang Lue.

Amphiesma stolata (Text, page 228)

D: Adult from Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48C.

Amphiesmoides ornaticeps (Text, page 229)

E: Adult female (preserved specimen) from the mountains south of Nada, Zhan County, Hainan Island, Hainan Province, China. Photograph by Kraig Adler (American Museum of Natural History number 28255, holotype of *Natrix andrewsi*). In life, the head is brown, with vertical, black-bordered white bars on the sides. The body is brown, with black in the neck region, whitish spots at midbody, and a grayish-black dorsal stripe on the posterior two-thirds of the body. The belly is whitish in color (Pope, 1935: 115).

Atretium yunnanensis (Text, page 229)

F: Adult male (preserved specimen) from Manglang, Yingjiang County, Yunnan Province; 800 meters. Photograph by Chang-ping Jin (Chengdu Institute of Biology number 765310). The extreme neck constriction is an artifact of tag removal. In life, the dorsum is a uniform olive brown and the venter is yellow (J. Anderson, "1878" [1879]: 823).

Blythia reticulata (Text, page 230)

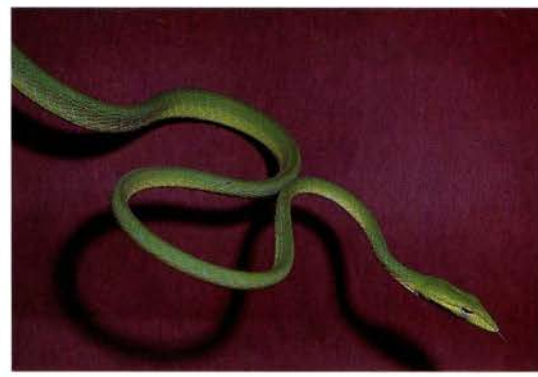
G: Adult male (preserved specimen) from Sirpo Valley, Abor Country, Xizang (Tibet) Autonomous Region, China (in territory occupied by India). Photograph by Kraig Adler (British Museum [Nat. Hist.] number 1940.3.4.5). In life, the dorsum is an iridescent olive to blackish, often with light spots or borders on the scales. The young usually have a white collar, which is interrupted at the dorsal midline (M. Smith, 1943: 339–400).

Boiga nigriceps (Text, page 231)

H: Adult male from Nakhon Si Thammarat Province, peninsular Thailand. Photograph by Gernot Vogel.

PLATE 32

A 

 B

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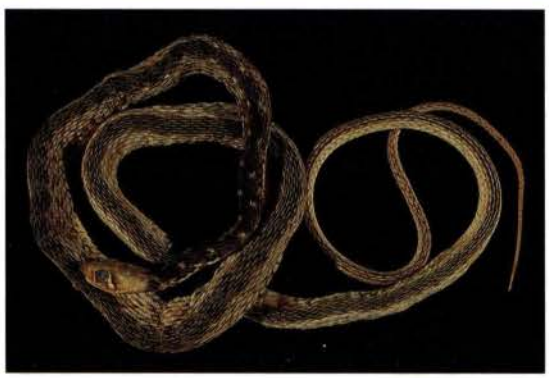
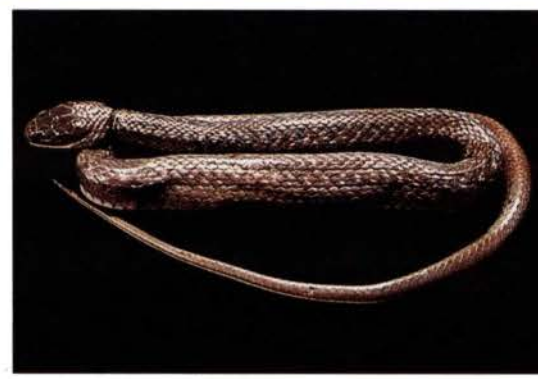
E 

 F

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 H

PLATE 33

COLUBRIDAE II

Family Colubridae

Boiga multomaculata (Text, page 231)

A: Adult from Shek Kong, New Territories, Hong Kong, China. Photograph by Michael Lau.

Calamaria septentrionalis (Text, page 232)

B: Adult from Clear Water Bay, at 11-1/2 milestone, Kowloon, Hong Kong, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek. Note that the tan-colored spots on the neck are repeated at a corresponding position on the blunt-tipped tail (at the lower left corner of the photograph). If the head is held with one's fingers, the tip of the tail is repeatedly pressed or struck against them; thus, the tail not only resembles the head in form and color pattern, but in behavior as well (Pope, 1935: 308). For these reasons, Chinese have long referred to the earthworm-sized snakes of the genus *Calamaria* as two-headed snakes (see also Figure 3 on text page 17).

Chrysopelea ornata (Text, page 232)

C: Adult from Aow Noi Beach, Prachuap Khiri Khan Province, peninsular Thailand. Photograph by Wolfgang Grossmann.

Coluber ravergieri (Text, page 232)

D: Adult from Korla, Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey.

Coluber spinalis (Text, page 233)

E: Adult from the vicinity of the Guanting Reservoir, Beijing Municipality, China. Photograph by J. Robert Macey. For habitats, see Plate 45B-E.

Cyclophiops major (Text, page 233)

F: Adult from Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48G.

Dendrelaphis pictus pictus (Text, page 234)

G: Young individual from just west of Wuzhishan (Five Finger Mountain), Bawangling, Hainan Island, Hainan Province, China. Photograph by Kraig Adler.

PLATE 33

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PLATE 34

COLUBRIDAE III

Family Colubridae

Dinodon flavozonatum (Text, page 234)

A: Adult from Jinggangshan, Jiangxi Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong.

Dinodon rufozonatum (Text, page 235)

B: Adult from Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao.

Elaphe bimaculata (Text, page 236)

C: Adult male from Jiangxi Province, China; no locality data. Photograph by Klaus-Dieter Schulz.

Elaphe carinata (Text, page 236)

D: Adult from Huanganshan, Wuyi Mountain Preserve, western Fujian Province, China. Photograph by Ray E. Ashton, Jr. For habitat, see Plate 48A.

Elaphe dione (Text, page 236)

E: Adult from just west of Karamay, northwestern Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey. For habitats, see Plate 45D-E.

Elaphe frenata (Text, page 237)

F: Adult from Huangcao Xiang, Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao.

Elaphe mandarinus (Text, page 237)

G: Adult from Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao.

Elaphe moellendorffi (Text, page 237)

H: Adult from the vicinity of Nanning, Guangxi Zhuang Autonomous Region, China. Photograph by Klaus-Dieter Schulz.

PLATE 34



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PLATE 35

COLUBRIDAE IV

Family Colubridae

Elaphe porphyracea porphyracea (Text, page 238)

A: Adult from Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao.

Elaphe radiata (Text, page 238)

B: Young adult from the vicinity of Guangzhou, Guangdong Province, China. Photograph by Klaus-Dieter Schulz.

Elaphe rufodorsata (Text, page 239)

C: Adult from Jiangsu Province, China; no locality data. Photograph by Klaus-Dieter Schulz.

Elaphe schrenckii anomala (Text, page 239)

D: Adult female from Jiangsu Province, China; no locality data. Photograph by Klaus-Dieter Schulz.

Enhydris bennettii (Text, page 240)

E: Adult from Mai Po Marshes Nature Reserve, New Territories, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency.

Enhydris chinensis (Text, page 240)

F: Adult from the paddy fields of Lam Tsuen Valley, New Territories, Hong Kong, China. Photograph by Michael Lau.

Enhydris plumbea (Text, page 241)

G: Adult from Ban Mak Yang, Bueng Bun District, Sisaket Province, eastern Thailand. Photograph by Wolfgang Wüster.

Liopeltis frenatus (Text, page 241)

H: Adult female (preserved specimen) from Htingnan, "The Triangle" area, northern Burma. Photograph by Kraig Adler (British Museum [Nat. Hist.] number 1974.876). In life, the dorsum is olive with scales edged in black and, sometimes, in white, which form stripes on the anterior part of the body. The stripe through the eye is black. The belly is white, as are the lips (M. Smith, 1943: 182–183).

PLATE 35



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PLATE 36

COLUBRIDAE V

Family Colubridae

Macropisthodon rudis rudis (Text, page 241)

A: Juvenile from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Natrix tessellata (Text, page 242)

B: Adult from Wensu County, northwestern Xinjiang Uygur Autonomous Region, China. Photograph by Zi-xing Zong, courtesy Yu Zong.

Oligodon cyclurus (Text, page 243)

C: Adult male (striped phase) from 30 km north of Chiang Mai, Chiang Mai Province, northwestern Thailand. Photograph by Wolfgang Grossmann. For habitat, see Plate 48E.

D: Juvenile males (9.5 months old), both from the same clutch of a female collected at Thung Wua Lean Beach, Chumphon Province, peninsular Thailand. Photograph by Wolfgang Grossmann. For habitat, see Plate 48E.

Oligodon formosanus (Text, page 244)

E: Adult from Tung Chung, Lantau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency.

Ophites aulicus (Text, page 246)

F: Adult from Tai Wan, Po Toi Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency.

Ophites laoensis (Text, page 246)

G: Adult from the vicinity of Ban Hup Bon, Chon Buri Province, southeastern Thailand. Photograph by Wolfgang Wüster.

Ophites ruhstrati (Text, page 247)

H: Adult from Shek Kong, New Territories, Hong Kong, China. Photograph by Michael Lau. This species has frequently been called "*Dinodon septentrionalis*" in Taiwan and Japan.

PLATE 36



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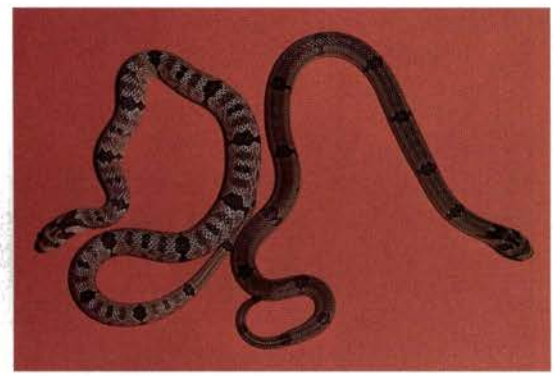

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PLATE 37

COLUBRIDAE VI

Family Colubridae

Ophites subcinctus (Text, page 247)

A: Adult from Jinghong County, Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, China. Photograph by Zhi-tong Kou.

Opisthotropis balteata (Text, page 247)

B: Adult from Hainan Island, Hainan Province, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Opisthotropis kuatunensis (Text, page 248)

C: Adult from Shing Mun (stream), New Territories, Hong Kong, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Opisthotropis lateralis (Text, page 248)

D: Adult female with eggs, from Shing Mun (stream), New Territories, Hong Kong, China. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Pareas carinatus (Text, page 249)

E: Adult from Nam Nao National Park, Nam Nao District, Phetchabun Province, central Thailand. Photograph by Wolfgang Wüster.

Pareas chinensis (Text, page 249)

F: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

Pareas margaritophorus (Text, page 250)

G: Adult from Keung Shan, Lantau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency. For habitat, see Plate 48D.

Plagiopholis styani (Text, page 251)

H: Adult from Washan, Hongya County, Sichuan Province, China. Photograph by Er-mi Zhao.

PLATE 37



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PLATE 38

COLUBRIDAE VII

Family Colubridae

Psammodynastes pulverulentus (Text, page 252)

A: Adult from Keung Shan, Lantau Island, Hong Kong, China. Photograph by Michael Lau.

Psammophis lineolatus (Text, page 252)

B: Adult from the vicinity of Jimsar, Junggar Depression, northern Xinjiang Uygur Autonomous Region, China. Photograph by J. Robert Macey. For habitats, see Plate 46C-D.

Pseudoxenodon bambusicola (Text, page 253)

C: Young individual from Tam Dao, north of Hanoi, northern Vietnam, near the border of Guangxi Zhuang Autonomous Region, China. Photograph by Klaus-Dieter Schulz.

Pseudoxenodon stejnegeri stejnegeri (Text, page 255)

D: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Ptyas korros (Text, page 255)

E: Adult from Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48E.

Ptyas mucosus (Text, page 256)

F: Adult from Hualien County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48D.

Rhabdophis nuchalis nuchalis (Text, page 257)

G: Adult from Nanjiang County, Sichuan Province, China. Photograph by Guan-fu Wu.

Rhabdophis subminiatus helleri (Text, page 257)

H: Adult from Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao. Note the arched neck and the exposed nuchal glands in this specimen; secretions from these glands can cause extreme irritation to a predator's mucous membranes. This individual is in the process of shedding its skin. For habitat, see Plate 48E.

PLATE 38

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PLATE 39

COLUBRIDAE VIII

Family Colubridae

Rhabdophis swinhonis (Text, page 258)

A: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Rhabdophis tigrinus lateralis (Text, page 258)

B: Adult from Shapotou, Yinnan Prefecture, Ningxia Hui Autonomous Region, China. Photograph by J. Robert Macey. For habitat, see Plate 45E. The bulge at midbody is due to a recent meal.

Rhabdops bicolor (Text, page 259)

C: Adult female (preserved specimen) from Shillong, Meghalaya, northeastern India. Photograph by Kraig Adler (British Museum [Nat. Hist.] number 1911.11.30.4). In life, the dorsum is black or dark brown and the belly yellowish white; the division between them (on scale rows 2 or 3) is usually quite pronounced. The venter of the tail sometimes has black spots. Young individuals often have the dorsal scales edged with black, which form longitudinal lines (M. Smith, 1943: 329).

Rhynchophis boulengeri (Text, page 259)

D: Adult, probably from northern Vietnam. Photograph by Wolfgang Wüster.

Sibynophis chinensis chinensis (Text, page 259)

E: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat, see Plate 48D.

Sinonatrix annularis (Text, page 261)

F: Adult from Zhejiang Province, China; no locality data. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek.

Sinonatrix percarinata suriki (Text, page 261)

G: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Thermophis baileyi (Text, page 261)

H: Adult from 23.9 km (by road) southwest of Yangbajain, Xizang (Tibet) Autonomous Region, China; 4,410 meters. Photograph by J. Robert Macey. For habitat, see Plate 46H.

PLATE 39

A 

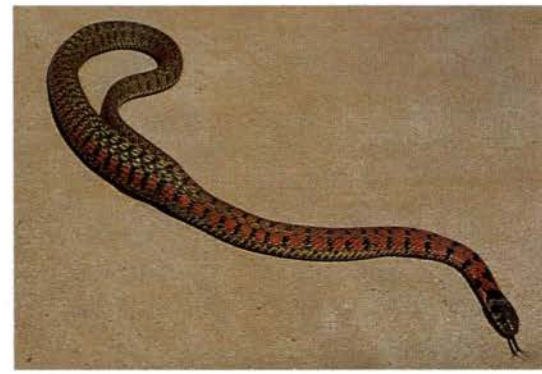 B

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PLATE 40

COLUBRIDAE IX AND ELAPIDAE I

Family Colubridae

Trachischium monticola (Text, page 262)

A: Adult male (preserved specimen) from the Abor Country, Xizang (Tibet) Autonomous Region, China (in territory occupied by India). Photograph by Kraig Adler (British Museum [Nat. Hist.] number 1940.3.4.14). In life, the dorsum is light to dark brown with blackish longitudinal lines and two reddish dorsolateral stripes; there is often a pair of yellow spots on the neck. The belly is yellowish in color (M. Smith, 1943: 322).

Trachischium tenuiceps (Text, page 262)

B: Adult male (preserved specimen) from near Darjeeling, West Bengal, northeastern India. Photograph by Kraig Adler (Museum of Comparative Zoology, Harvard University, number 22388). In life, the dorsum is dark brown or black and the belly is bright yellow or orange. The tail is mottled with brown below and has a brown median line (M. Smith, 1943: 324).

Xenochrophis piscator (Text, page 262)

C: Adult from Keung Shan, Lantau Island, Hong Kong, China. Photograph by Michael Lau. For habitats, see Plate 48C and 48E.

Zaocys dhumnades (Text, page 263)

D: Adult from Nantou County, Taiwan Province, China. Photograph by Hon-tsen Yu.

Family Elapidae

Acalyptophis peronii (Text, page 263)

E: Adult from Ashmore Reef, between Timor Island, Indonesia, and Western Australia (about 12°15′S, 123°05′E). Photograph by William A. Dunson. This individual has been photographed in shallow water.

Astrotia stokesii (Text, page 264)

F: Adult from near Horsburgh Lighthouse, Serangoon, Singapore (about 1°20′N, 103°50′E). Photograph by Harold K. Voris.

Bungarus fasciatus (Text, page 264)

G: Adult from the vicinity of Hanoi, northern Vietnam. Photograph by Nikolai L. Orlov. For habitat, see Plate 48E.

Bungarus multicinctus multicinctus (Text, page 265)

H: Young individual from Lantau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency. The white markings on the head disappear with age. For habitat, see Plate 48C.

Calliophis macclellandi (Text, page 265)

I: Adult from Kuanyinshan, north of Taipei, Taipei County, Taiwan Province, China. Photograph by Hon-tsen Yu. In this photograph, small stones adhere to the snake's back.

PLATE 40

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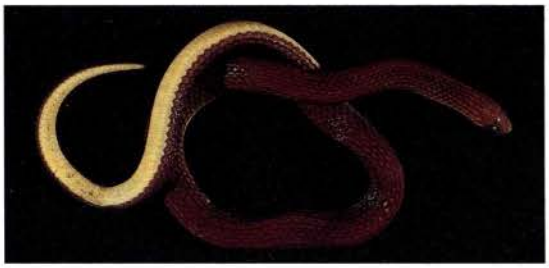

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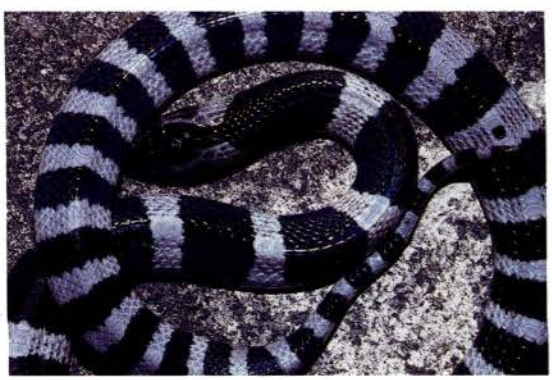

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PLATE 41

ELAPIDAE II

Family Elapidae

Emydocephalus ijimae (Text, page 266)

A: Adult female from the East China Sea, Okinawa Island, Ryukyu Islands, Japan. Photograph by Shinshu Miyagi, courtesy Michihisa Toriba. As indicated in the photograph, this species is viviparous.

Hydrophis cyanocinctus (Text, page 267)

B: Adult from Hong Kong territorial waters, South China Sea. Photograph by Tat-chuen Yan, courtesy Anthony Bogadek. For habitat, see Plate 48F.

Kerilia jerdonii (Text, page 268)

C: Adult from Luzon Strait, South China Sea, near the southern tip of Taiwan Province, China. Photograph by Anthony T. Tu. The head is at the top of the photograph. Scale can be estimated from the blue pen next to the animal.

Lapemis curtus (Text, page 269)

D: Adult from Dongfang County, Hainan Island, Hainan Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong. The spines on the body scales are especially well developed in males of this species. For habitat, see Plate 48F.

Laticauda colubrina (Text, page 269)

E: Adult from near Imoru, Lanyu Island, Taitung County, Taiwan Province, China. Photograph by Tsutomu Hikida, courtesy Hidetoshi Ota.

Laticauda laticaudata (Text, page 269)

F: Adult from Chengkong, near Taitung, Taitung County, Taiwan Province, China. Photograph by Ming-chang Tu, courtesy Kuang-yang Lue.

Naja naja atra (Text, page 270)

G: Adult in natural habitat on Chek Lap Kok Island, northwest of Lantau Island, Hong Kong, China. Photograph by Martin Williams, courtesy James D. Lazell and The Conservation Agency.

Naja naja kaouthia (Text, page 270)

H: Adult from the Anning River Valley, Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48E.

PLATE 41

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PLATE 42

ELAPIDAE III AND VIPERIDAE I

Family Elapidae

Ophiophagus hannah (Text, page 271)

A: Adult from Caochang Xiang, Anning River Valley, Miyi County, Sichuan Province, China. Photograph by Er-mi Zhao. For habitat, see Plate 48E.

B: Newborn individual from Keung Shan, Lantau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency. For habitat, see Plate 48E.

Pelamis platurus (Text, page 271)

C: Adult from Hong Kong territorial waters, South China Sea. Photograph by A. J. Brandt. For habitat, see Plate 48F.

Praescutata viperina (Text, page 272)

D: Adult from Dongfang County, Hainan Island, Hainan Province, China. Photograph by Mo-yuan Cao, courtesy Yu Zong. For habitat, see Plate 48F.

Family Viperidae

Agkistrodon blomhoffii brevicaudus (Text, page 272)

E: Adult from Gulin County, Sichuan Province, China. Photograph by Er-mi Zhao.

Agkistrodon intermedius (Text, page 273)

F: Adult from Banggowa, vicinity of Aksay, Gansu Province, China. Photograph by J. Robert Macey. For habitat, see Plate 45C.

Agkistrodon monticola (Text, page 273)

G: Adult from Yulongshan, north of Lijiang, Yunnan Province, China; 2,400–3,200 meters. Photograph by Gernot Vogel.

PLATE 42

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PLATE 43

VIPERIDAE II

Family Viperidae

Agkistrodon shedaoensis (Text, page 273)

A: Adult from Shedao (Snake Island), northwest of Lüshun (Port Arthur), Liaoning Province, China. Photograph by Robert W. Murphy.

Agkistrodon strauchi (Text, page 274)

B: Adult from Waqên, 42 km north of Hongyuan, Hongyuan County, Sichuan Province, China. Photograph by Robert W. Murphy.

Agkistrodon ussuriensis (Text, page 274)

C: Adult from Panshi County, Jilin Province, China. Photograph by Er-mi Zhao.

Azemiops feae (Text, page 274)

D: Adult from Leishan County, Guizhou Province, China. Photograph by Guan-fu Wu.

Deinagkistrodon acutus (Text, page 275)

E: Adult from Huanganshan, Wuyi Mountain Preserve, western Fujian Province, China. Photograph by Ray E. Ashton, Jr. For habitat, see Plate 48A.

Trimeresurus albolabris (Text, page 275)

F: Adult male from Lantau Island, Hong Kong, China. Photograph by Timothy Loose, courtesy James D. Lazell and The Conservation Agency.

Trimeresurus gracilis (Text, page 275)

G: Adult in natural habitat, Taichung County, Taiwan Province, China. Photograph by C. M. Kuo, courtesy Hon-tsen Yu.

Trimeresurus jerdonii (Text, page 275)

H: Adult from Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters. Photograph by J. Robert Macey. For habitat, see Plate 47C.

PLATE 43

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PLATE 44

VIPERIDAE III AND ALLIGATORIDAE

Family Viperidae

Trimeresurus mangshanensis (Text, page 275)

A: Young female from Pingkeng, Mangshan, Yizhang County, Hunan Province, China; 700-900 meters. Photograph by Er-mi Zhao.

Trimeresurus stejnegeri stejnegeri (Text, page 276)

B: Adult in natural habitat, Pingtung County, Taiwan Province, China. Photograph by Hon-tsen Yu. For habitat of *T. stejnegeri yunnanensis*, see Plate 48E.

Trimeresurus tibetanus (Text, page 277)

C: Adult from the vicinity of Zhangmu, Nyalam Region, Xizang (Tibet) Autonomous Region, China, on the Nepalese border; 2,800 meters. Photograph by J. Robert Macey. For habitat, see Plate 47E.

Vipera berus (Text, page 278)

D: Adult from Hovd (Kobdo or Jirgalanta), Kobdo Province, Altai region, western Mongolia. Photograph by Nikolai L. Orlov.

Vipera russellii siamensis (Text, page 278)

E: Adult from Guangdong Province, China; no specific locality. Photograph by Er-mi Zhao.

Vipera ursinii (Text, page 279)

F: Adult from Nilka County, northwestern Xinjiang Uygur Autonomous Region, China. Photograph by Bao-yuan Jin.

Family Alligatoridae

Alligator sinensis (Text, page 279)

G: Adult from the Chang Jiang (Yangtze River), Anhui Province, China. Photograph by Zheng-dong Zhang. See also illustrations on text page 60 (Figure 32).

PLATE 44



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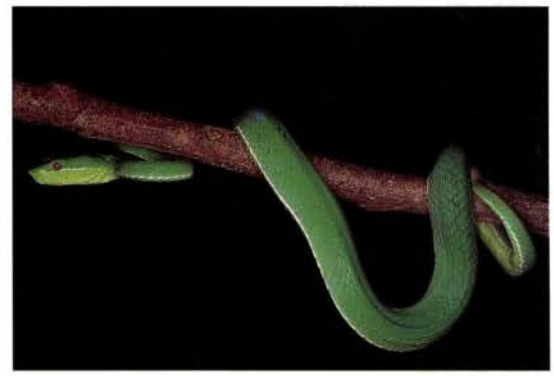

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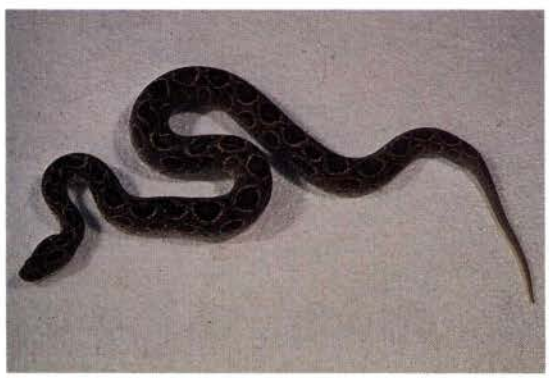

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PLATE 45

HABITATS IN ZOOGEOGRAPHICAL REGIONS I

Northeastern China Region (NE)

Changbai Shan Subregion (NE-B*) (Text, page 287)

A: Woodland pool in Qian Shan, southeast of Anshan, Liaoning Province, China; about 400 meters; April. Photograph by Gui-ting Li.

Habitat for *Hynobius leechii*. Females deposit eggs beneath rocks and among tree roots in the pool located at center foreground. LOCALITY A.*

North China Region (NC)

Loess Earth Plateau Subregion (NC-B) (Text, page 288)

B: Great Wall at Qinglongqiao, Beijing Municipality, China; about 800 meters; July. Photograph by J. Robert Macey.

Habitat for *Bufo gargarizans, B. raddei, Rana chensinensis, Eremias argus,* and *Coluber spinalis*. LOCALITY B.

C: Terraced agricultural lands along the road near Dingyuanzheng, Yuzhong County, about 110 km southeast of Lanzhou, Gansu Province, China; 1,790 meters. Photograph by Chongyong Yao.

Habitat for *Bufo raddei, Rana chensinensis, Eremias argus, E. multiocellata, Coluber spinalis,* and *Agkistrodon intermedius*. LOCALITY C.

Nei Mongol–Xinjiang Region (N)

East Steppe Subregion (N-A) (Text, page 288)

D: Dry steppe desert at Abagnar Qi (Xilinhot), Nei Mongol Autonomous Region, China; about 1,200 meters. Photograph by Ken-tang Zhao.

Habitat for *Phrynocephalus frontalis, Eremias argus, Coluber spinalis, Elaphe dione,* and *Agkistrodon* species. LOCALITY D.

West Desert Subregion (N-B) (Text, page 288)

E: Huang He (Yellow River) at Shapotou, Yinnan Prefecture, Ningxia Hui Autonomous Region, China; about 1,400 meters; August. Photograph by J. Robert Macey.

Riparian habitat along the river is inhabited by *Bufo raddei, Rana chensinensis, R. tenggerensis, Elaphe dione,* and *Rhabdophis tigrinus*; upland areas are occupied by *Phrynocephalus przewalskii, Eremias przewalskii,* and *Coluber spinalis*. LOCALITY E.

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*The location and extent of each of the zoogeographical regions and subregions are illustrated on pages 95 and 286. Habitat localities A to Z are mapped on page 95, at the beginning of the color plate section.

PLATE 45

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PLATE 46

HABITATS IN ZOOGEOGRAPHICAL REGIONS II

Nei Mongol–Xinjiang Region (N)

West Desert Subregion (N-B), continued (Text, page 288)

A: Sand dunes, 5 km south of Dunhuang, Gansu Province, China; August. Photograph by J. Robert Macey.
Habitat for *Cyrtodactylus elongatus, Teratoscincus przewalskii, Phrynocephalus axillaris,* and *Eremias vermiculata.* LOCALITY F.

B: Qaidam Depression, about 10 km west of Xiangride, Haixi Mongol Zang Kazak Autonomous Prefecture, Qinghai Province, China; 3,020 meters; August. Photograph by J. Robert Macey.
Habitat for *Phrynocephalus* species and *Eremias multiocellata.* LOCALITY G.

C: Turpan Depression, between Toksun and Turpan, Turpan Prefecture, Xinjiang Uygur Autonomous Region, China; –100 meters; September. Photograph by J. Robert Macey.
Habitat for *Cyrtodactylus elongatus, Teratoscincus scincus, Phrynocephalus versicolor, Eremias velox,* and *Psammophis lineolatus.* LOCALITY H.

D: Junggar Depression, hills west of Karamay, Xinjiang Uygur Autonomous Region, China; 1,050 meters; September. Photograph by J. Robert Macey.
Habitat for *Alsophylax pipiens, Cyrtodactylus elongatus, C. russowii,* and *Psammophis lineolatus.* LOCALITY I.

Tian Shan Subregion (N-C) (Text, page 288)

E: Grassland near Huocheng, northwestern Xinjiang Uygur Autonomous Region, China; about 500 meters. Photograph by Hong Yuan.
Habitat for *Testudo horsfieldii.* LOCALITY J.

Qinghai–Xizang Region (W)

Qinghai–South Xizang Subregion (W-B) (Text, page 289)

F: Marshes along the edge of Qinghai Hu (lake), Qinghai Province; 3,220 meters; August. Qinghai Hu can be seen in the background of this photograph. Photograph by J. Robert Macey.
Habitat for *Bufo raddei* and *Rana chensinensis.* LOCALITY K.

G: Hot springs at Wenquan, Hainan Zang Autonomous Prefecture, Qinghai Province, China; 3,710 meters; August. Photograph by J. Robert Macey.
Habitat for *Scutiger boulengeri,* which live in pools in exposed rocky areas. LOCALITY L.

H: Stream and adjacent pools at a site 24 km southwest of Yangbajain, Xizang (Tibet) Autonomous Region, China; 4,410 meters; September. Photograph by J. Robert Macey.
Habitat for *Altirana parkeri* and *Thermophis baileyi.* LOCALITY M.

PLATE 46

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PLATE 47

HABITATS IN ZOOGEOGRAPHICAL REGIONS III

Qinghai–Xizang Region (W)

Qinghai–South Xizang Subregion (W-B), continued (Text, page 289)

A: Sera Monastery, Lhasa, Xizang (Tibet) Autonomous Region, China; 3,850 meters; August. Photograph by J. Robert Macey.
Habitat for *Cyrtodactylus tibetanus, Agama sacra,* and *Phrynocephalus theobaldi.* LOCALITY N.

Southwest China Region (SW)

Southwest Mountainous Subregion (SW-A) (Text, page 290)

B: Pasture in Zhongdian County, northwestern Yunnan Province, China; 3,150 meters; May. Photograph by Er-mi Zhao.
Habitat (and only known locality) for *Nanorana ventripunctata,* which live in the exposed rocky pools in the foreground. LOCALITY O.

C: Qiliba, Liangshan Yi Autonomous Prefecture, Sichuan Province, China; 3,050 meters; August. Photograph by J. Robert Macey.
Habitat for *Bombina maxima, Oreolalax rugosus, Bufo andrewsi, Amolops mantzorum, Rana yunnanensis, Polypedates dugritei,* and *Trimeresurus jerdonii.* LOCALITY P.

D: Northeastern slope of Emeishan, Emei County, Sichuan Province, China; about 1,300 meters; September. Photograph by Kraig Adler, Guan-fu Wu, and Er-mi Zhao.
Habitat for *Batrachuperus pinchonii* and *Amolops mantzorum* in streams, for *Bufo andrewsi* along the shores of streams, and for *Vibrissaphora boringii* in adjacent fields. LOCALITY Q.

Himalayan Subregion (SW-B) (Text, page 290)

E: Nyalam region near Zhangmu, Xizang (Tibet) Autonomous Region, China, on the Nepalese border; 2,800 meters; September. Photograph by J. Robert Macey.
Habitat for *Bufo himalayanus, Scutiger sikimmensis, Rana liebigii, Calotes jerdoni,* and *Trimeresurus tibetanus.* LOCALITY R.

Central China Region (SC)

East Hill and Plain Subregion (SC-A) (Text, page 290)

F: Stream at a site about 7 km south of Zhangcun, Jiaxing Prefecture, Zhejiang Province, China; about 200 meters; July. Photograph by J. Robert Macey.
Habitat for *Pachytriton labiatus, Bufo gargarizans,* and *Amolops wuyiensis.* LOCALITY S.

PLATE 47



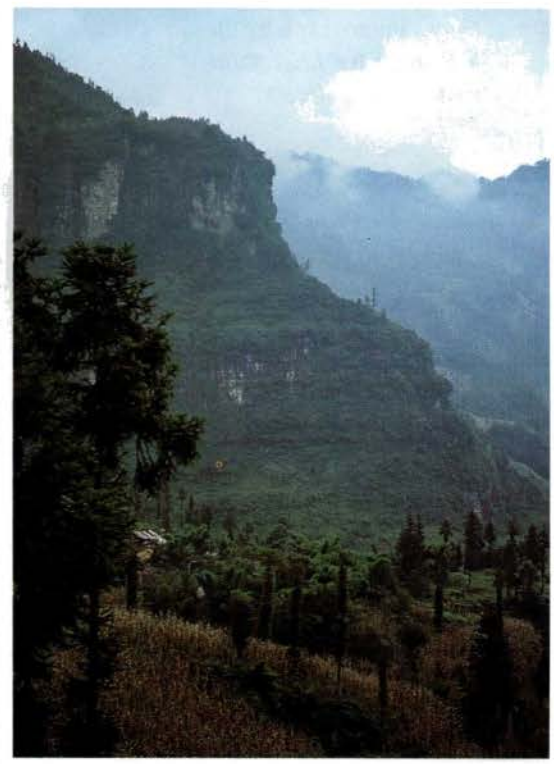
A



B



C



D



E



F

PLATE 48

HABITATS IN ZOOGEOGRAPHICAL REGIONS IV

Central China Region (SC)

East Hill and Plain Subregion (SC-A), continued (Text, page 290)

A: Huanganshan, Wuyi Mountain Preserve, western Fujian Province, China; November. Photograph by Ray E. Ashton, Jr.

Habitat for *Pachytriton brevipes, Leptolalax pelodytoides, Occidozyga lima, Elaphe carinata,* and *Deinagkistrodon acutus.* LOCALITY T.

West Mountain and Plateau Subregion (SC-B) (Text, page 290)

B: Stream at Sanheba, Guanyang, Wushan County, Sichuan Province, China; 1,460 meters; May. Photograph by Qi-xiong Hu.

Habitat for *Liua shihi.* Females deposit eggs in sacs that are attached to the underside of rocks in this stream. LOCALITY U.

South China Region (S)

Fujian–Guangdong Coast Subregion (S-A) (Text, page 291)

C: Rice paddy fields, about 40 km east of Guangzhou Shi, Guangdong Province, China; about 50 meters; August. Photograph by Kraig Adler.

Habitat for *Occidozyga lima, Rana limnocharis, R. nigromaculata, R. rugulosa, Amphiesma stolata, Xenochrophis piscator,* and *Bungarus multicinctus.* LOCALITY V.

D: Che Kei Shan (Victoria Peak), western Hong Kong Island, Hong Kong, as viewed from the campus of the University of Hong Kong; 552 meters at the summit; July. Photograph by Kraig Adler, Anthony Bogadek, and Michael Lau.

A few natural areas remain on Hong Kong Island, mostly on the peaks where construction of buildings and communication towers continues to encroach. Habitat for *Megophrys brachykolos, Amolops hongkongensis, Rana exilispinosa, R. livida, Tropidophorus sinicus,* and *Opisthotropis andersonii,* which can be found along the streams, whereas in the secondary woodland and old plantation habitats on the peak and slopes can be found *Polypedates megacephalus, Gekko chinensis, Ateuchosaurus chinensis, Scincella modesta, S. reevesii, Ramphotyphlops albiceps, R. braminus, Acalinus rufescens, Pareas margaritophorus, Ptyas mucosus,* and *Sibynophis chinensis.* LOCALITY W.

South Yunnan Mountainous Subregion (S-B) (Text, page 291)

E: River valley of the Lancang Jiang (Mekong River), near Simao, southwestern Yunnan Province, China; about 1,200 meters. Photograph by Cheng-ye Su, courtesy Da-tong Yang.

Habitat for *Bufo melanostictus, Occidozyga lima, O. martensii, Rana kuhlii, R. limnocharis, Polypedates megacephalus, Microhyla ornata, M. pulchra, Hemidactylus bowringii, H. frenatus, Calotes emma, Varanus salvator, Python molurus bivittatus, Oligodon cyclurus, Ptyas korros, Rhabdophis subminiatus helleri, Xenochrophis piscator, Bungarus fasciatus, Naja naja kaouthia, Ophiophagus hannah,* and *Trimeresurus stejnegeri yunnanensis.* LOCALITY X.

(Caption continued on rear side of Plate 48.)

PLATE 48

A





B

C



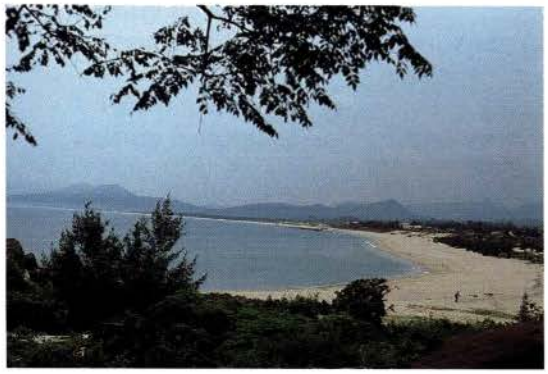


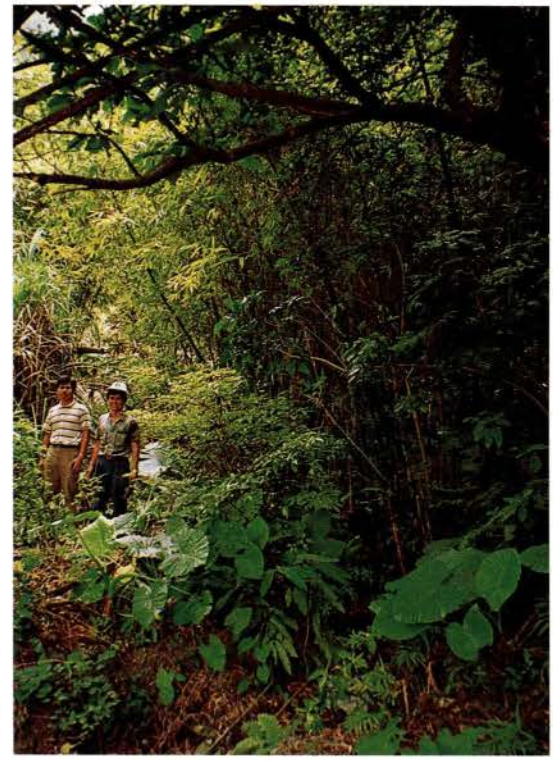
D

E



F





G

PLATE 48 (continued)

South China Region (S)

Hainan Subregion (S-C) (Text, page 291)

F: Beach at Tian Ya Hai Jiao (Border of the Earth), South China Sea, southern end of Hainan Island, Hainan Province, China; sea level; September. Photograph by Kraig Adler and Er-mi Zhao.

Sea turtles and sea snakes are sometimes found on Hainan beaches, including the four species of cheloniid turtles (only *Chelonia mydas* is known to nest on Hainan), four species of *Hydrophis, Lapemis curtus, Pelamis platurus,* and *Praescutata viperina.* LOCALITY Y.

Taiwan Subregion (S-D) (Text, page 291)

G: Northeastern slope of Kuanyinshan, north of Taipei, Taipei County, Taiwan Province, China; about 320 meters; July. Photograph by Kraig Adler and Kuang-yang Lue.

A small rocky stream (center foreground) passes through this ravine which contains fig trees and bamboo. Habitat for *Rana kuhlii, Buergeria robusta, Sphenomorphus indicus,* and *Cyclophiops major.* LOCALITY Z.