

*Phoenicolacerta troodica* (WERNER, 1936)

Troodos Lizard

Grk. – Σάβρα του Τροόδουζ (Sávra tou Troódous)

Trk. – Troodos Kertenkelesi

**Taxonomy.** UNGER & KOTSCHY (1865) reported the presence of three species of the genus *Lacerta* on Cyprus: *Lacerta vivipara*, *L. agilis* and *L. muralis*. However, there have been no further reported sightings of these species, and BOULENGER (1888) was the first to assign the Cyprus *Lacerta*-species to *L. laevis*, the Syrian lizard.

WERNER (1936: 655) described the Cyprus population as a distinct subspecies, *Lacerta laevis troodica* (Terra typica: Platres [inferred from WERNER 1936's descriptions], Cyprus; syntypes NMW 16015:1–5. + F. WERNER mentioned [p. 655] that “he brought together five specimens ..., and took a sixth from the stomach of a young *Malpolon monspessulanus*”. While the five specimens first mentioned may be the five syntypes in the Natural History Museum of Vienna, the sixth specimen could not be traced – we think that WERNER could not have preserved it). He falsely thought that this lizard was restricted to the Troodos Range (“This form is probably restricted to the higher parts of the Troodos Range”), explaining its somewhat confusing scientific name. There could be a case for giving a more appropriate common name to this lizard.

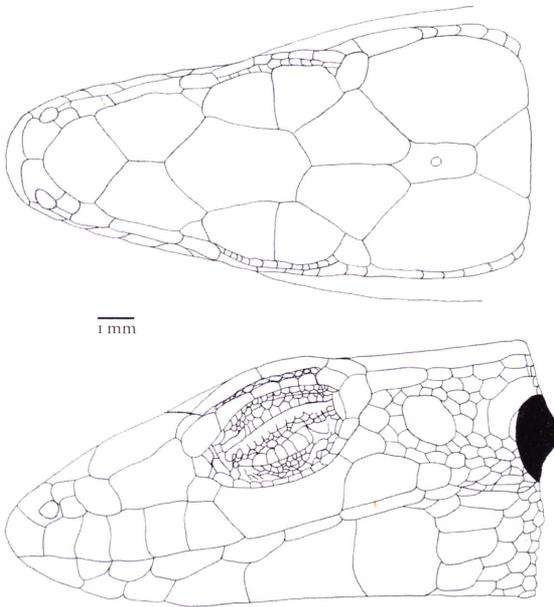
OSENEGG (1989) questioned the distinct subspecific status of the Cyprus population since she was not able to record statistically supported diagnostic characteristics in body dimension and pholidosis. On the contrary, she used colour and pattern to diagnose this taxon. BÖHME & WIEDL (1994), however, concluded that colour characteristics within this taxon are too variable to be used diagnostically. Both OSENEGG (1989) and SCHÄTTI & SIGG (1989b) highlighted the need for a revision of this taxon including mainland populations. BUDAK & GÖÇMEN (1995) compared specimens from northern Cyprus with specimens from Anatolia (named as *Lacerta laevis laevis*) and proposed two new characteristics (see diagnosis) for the separation of *Lacerta laevis laevis* and *L. l. troodica*, and suggested that these differences might even justify the erection of *Lacerta laevis troodica* to full species status.

TOSUNOGLU *et al.* (1999) compared the bloodserum proteins of the Cyprus population with animals from southern Turkey (Adana) using polyacrylamid-electrophoresis, a method which appears to be of limited relevance in this context, and concluded that *Lacerta laevis troodica* should be elevated to a full species (as *Lacerta troodica*). According to BEYERLEIN & MAYER (1999), who investigated the *Lacerta laevis/kulzeri*-complex using mitochondrial rRNA-genes, the Cyprus population deserved only the status of a distinct subspecies. However, the inclusion of further mt- and ncDNA characters seemingly confirms the species status of *Lacerta troodica* (W. MAYER *et al.*, in litt.).

The genus *Lacerta* was traditionally considered to be very large. However, following a thorough (long overdue) review of this genus (ARNOLD *et al.* 2007), the Cyprus form was assigned to the new genus *Phoenicolacerta* and fully recognised as a distinct species, making it the second endemic reptile species in Cyprus.

**Diagnosis.** WERNER (1936: 655) diagnosed his *Lacerta laevis troodica* using the following criteria: "... smaller size, narrower head, spotted lips, and bright colour of lower parts of male". However, the diagnostic value of these characteristics was doubted several times (SCHÄTTI & SIGG 1989b, OSENEGG 1989). BUDAK & GÖÇMEN (1995) (in Turkish, identification key in English) proposed the following characteristics for the separation of the taxa *troodica* and *laevis* (contrasting features of *laevis* in parentheses): on average 25 mediane gularia (on average 20); gularia very small (bigger); "parallel subocular bands extend below the temporal bands, and below these an orange-red region is present" ("the subocular lines below the temporal bands extend up to the mid-trunk level").

**Description.** A medium-sized lizard with relatively long head, cusped snout and dark bands on the flank. Up to 22 cm total length, with adult males being somewhat larger than females (snout-vent length 62 to about 65 mm in males, 48 to about 62 mm in females). The tail measures 2.0 to 2.3 the snout-vent length (OSENEGG 1989) (Fig. 135).



**Figs. 132–133:**  
Head scapulation of a Troodos lizard (*Phoenicolacerta troodica*).  
Specimen collected in Polis (ZFMK 46130).  
Modified after OSENEGG (1989).



Fig. 134: Troodos lizard (*Phoenicolacerta troodica*), male (rear) in breeding colours approaching a female. Chlorakas, April. D.J. SPARROW



Fig. 135: Troodos lizard (*Phoenicolacerta troodica*), Chlorakas, April. Note the tail length. D.J. SPARROW



Fig. 136: Male Troodos lizard (*Phoenicolacerta troodica*) in breeding colours, Chlorakas, April.  
D.J. SPARROW



Fig. 137: Male Troodos lizard (*Phoenicolacerta troodica*) in non-breeding colours, Chlorakas, October.  
D.J. SPARROW

Four supraoculars, two prefrontals, one frontal and two parietals. There are nine to thirteen supraciliar granula, and 25 to 73 temporals. 21 to 27 gulars, and nine to eleven collars. The number of dorsal scales at midbody is 54 to 68, with six longitudinal rows of ventrals. There are five to eight preanals, and 15 to 22 femoral pores. The fourth toe has 27 to 42 subdigital lamellae (OSENEGG 1989, pers. obs.).

The Troodos lizard is grey-brown to green-brown in colour with darker to black flecks along the back. There is a lower cream coloured stripe running from the snout along the length of the flank (Fig. 134). In the male a row of blue spots can run the length of the lower flank (Fig. 137). These markings continue along the upper part of the tail, but then disappear and the lower two-thirds of the tail is a uniformly brown colour. The blue spots are particularly noticeable during the mating season (Fig. 136). The venter of both sexes is creamy-white. However, males tend to show reddish colour on the venter, especially in the cranial part of the body (WERNER 1936). Also, the underside of the head (Fig. 136) is reddish in males during the mating period. The colouration of the suboculars and the three posterior following supralabials seem to be characteristic, as they are in nearly all cases dotted with black spots (WERNER 1936, OSENEGG 1989).

**Distribution.** This lizard can be found all over the island, “von Meereshöhe bis über 1500 m” (i.e., “from sea-level to over 1,500 m asl.”) (SCHÄTTI & SIGG 1989b: 18). Fig. 138 shows its distribution in Cyprus.

**Biogeographic classification.** Palaearctic: East Mediterranean. Species endemic to Cyprus.

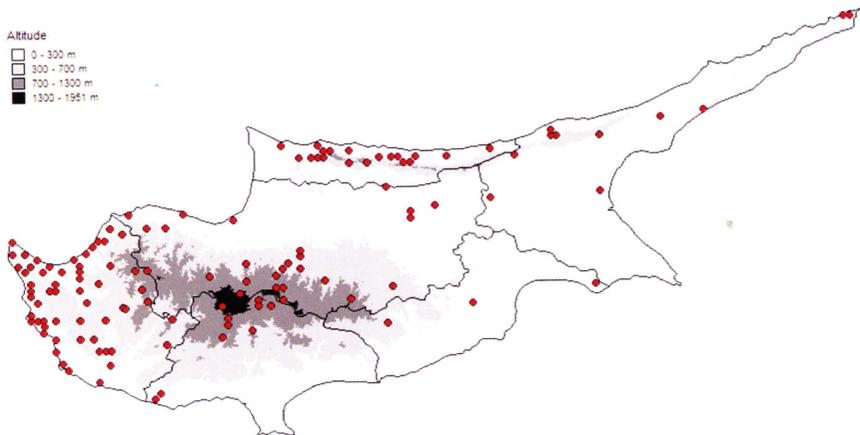


Fig. 138: Distribution of the Troodos lizard (*Phoenicolacerta troodica*) in Cyprus.



Fig. 139: Habitat of the Troodos lizard (*Phoenicolacerta troodica*), around Agros. F. BAIER



Fig. 140: Habitat of the Troodos lizard (*Phoenicolacerta troodica*), at the edge of Polis.

F. BAIER



**Ecology.** The Troodos lizard lives in gardens, fields, orchards, rocky forested areas, and also near houses and settlements. It prefers shady, cool and humid habitats (CLARK 1973, GÖÇMEN *et al.* 1996b, OSENEGG 1989, ZIEGLER & MERTEN 1997a, pers. obs.). Forest clearings and hillsides with significant plant cover and large stones are a preferred habitat at higher altitudes. At lower altitudes, covered edges of paths, springs and arid walls are inhabited, as well as rubbish dumps and debris (pers. obs.), and sometimes, well rooted sandy dunes near the coast (SCHÄTTI & SIGG 1989b). According to GÖÇMEN *et al.* (1996b), lizards will readily settle suitable habitats at higher altitudes (e.g., near Lapitos [Lapta]) if these are not available at lower altitudes. The animals can be found near streams (pers. obs.), wetlands (CLARK 1973), and dams (BLOSAT 1998). When there is enough coverage, the Troodos lizard also lives in arid areas like olive and carob plantations (CLARK 1973).

The lizard feeds on insects, particularly moths, butterflies, and spiders, but will also eat fruit and salad (pers. obs.). Apart from this general information, there are no detailed analyses of the diet spectrum of *P. troodica*.

The Troodos lizard is oviparous, with the female laying a clutch of typically between two and six eggs (ATATÜR & GÖÇMEN 2001). OSENEGG (1989) mentions a female, which was already gravid at time of capture, laying four eggs in the terrarium. A male and a female juvenile hatched after 47 days of incubation (29 °C and 100% relative humidity) and measured 25 mm snout-vent length and 55 mm tail length after 61 days. In the terrarium, the female juvenile laid four eggs (circa 10 × 5 mm) for the first time after six months. Outdoors, OSENEGG (1989) found a gravid female at the beginning of May.

ZAWADZKI (2000) reports 2–8 eggs per clutch (n = 5) in captivity. Three eggs measured circa 11 × 5–6 mm. One female laid two clutches per season, the other three. All observed ovipositions occurred during the day, especially at midday. Living juveniles hatched after 50 days of incubation (27–32 °C at daytime, 22–24 °C at night) and measured 26 mm snout-vent length and 46.7 mm tail length on average (n = 3). He also reported that the male was highly aggressive towards the female at the end of the reproduction period (at the beginning of October), which even led to the death of his specimens.

Sympatry exists frequently with *Ophisops elegans*, *Trachylepis vittata* and *Ablepharus budaki* (MANTEL & MUDDE 1987). From our own observations, *Phoenicolacerta troodica*, when occurring sympatrically with *Ophisops elegans*, tends to stay in the more shady, cooler and well covered places, while the snake-eyed lizard uses the open, exposed locations with less vegetation. Confirmed predators are *Malpolon insignitus* (WERNER 1936) and *Hierophis cypriensis* (BÖHME & WIEDL 1994, BLOSAT 1998). We have ob-

◀ **Fig. 141:** Spider preying on a juvenile Troodos lizard (*Phoenicolacerta troodica*) which became entangled in the spider's web, Chlorakas, July.

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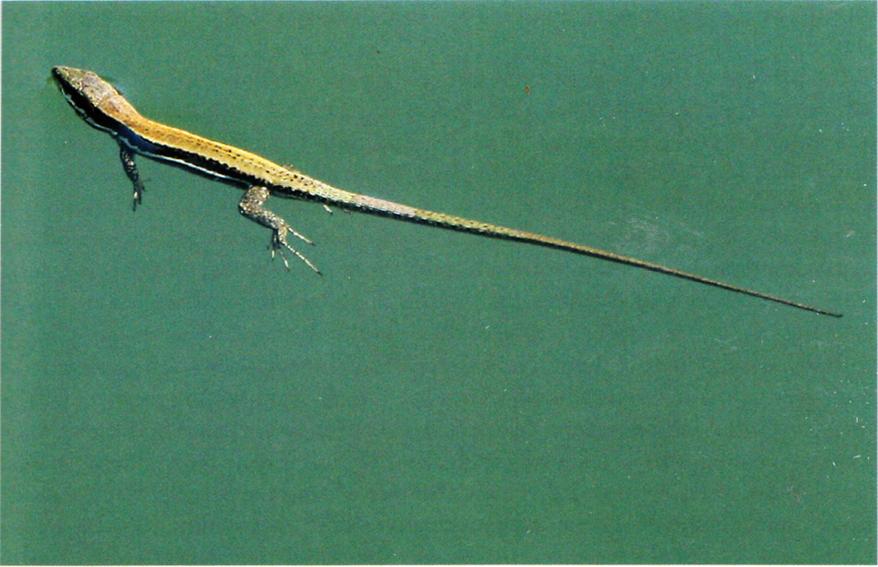


Fig. 142: A swimming Troodos lizard (*Phoenicolacerta troodica*), after it fled into a dam (district Lefkosia), July.

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Fig. 143: Specimen from Fig. 142, recovering under water plants after returning to the bank of the dam.

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served juvenile lizards becoming ensnared in a spider's web and being preyed upon (Fig. 141).

*Phoenicolacerta troodica* is generally a very adaptable species, and as such is not considered to be particularly endangered. *Phoenicolacerta laevis* – the species the Troodos lizard was for a long time assigned to – is listed as a 'Least Concern' species in the IUCN Red List of Threatened Species (IUCN 2007).

**Behaviour.** Although WERNER (1936) described *P. laevis* as living on the ground near Platres, the animals often climb on walls and branches of trees (CLARK 1973, pers. obs.). They often bask in trees (we observed lizards in apple trees at a height of 2.2 m, to take advantage of sunny spots) and sometimes also hunt in trees (olive tree, pine, carob tree), but usually come to the ground to forage, sometimes by rummaging through the leaf covering in the search of food (pers. obs., CLARK 1973), seemingly small beetles (pers. obs.). CLARK (1973) stated that the lizards tend to live in pairs in arid areas while grouping in humid areas. According to SCHÄTTI & SIGG (1989b), populations living at low altitudes consist of more individuals. Our own observation suggests that *P. troodica* lives in small groups of eight to twelve animals, females usually outnumbering males.

ZAWADZKI (2000) observed two females in the terrarium trying to mate. In his opinion, this might be explained by co-sexual dominance behaviour, the cramped atmosphere in the terrarium or simply a misunderstanding.

During summertime, these lizards tend to stay under cover (SCHÄTTI & SIGG 1989b) and avoid direct exposure to the sun (CLARK 1973). Due to its preference for shady habitats, *P. troodica* might estivate in the lowlands during the summer months (cp. CLARK 1973) or is active only in the early morning or evening. At the beginning of June, the lizards were active at midday with a surface temperature of 32.2 °C (Agros, 938 m asl.) (pers. obs.). *Phoenicolacerta troodica* hibernates during the winter months. In the higher slopes of the Troodos Mountains up to heights of 1,200 m asl., they go into hibernation earlier, typically from November to April (pers. obs.). WARMELO in OSENEGG (1989) mentioned that the animals bask briefly on warm days near Sotira (circa 120 m asl.) during winter time. From our observation, all populations in lower areas come out on warm days during winter time in order to bask.

ZAWADZKI (2000) described a case of thanatosis in a male kept in terrarium. The animal remained absolutely fixed and motionless for thirty seconds while observing the catcher with opened eyes. After he put the animal back to the terrarium and recaptured it, the same behaviour occurred, just shortened. In the third trial, the behaviour was of even shorter duration. This is obviously a case of habituation.

The Troodos lizard has been observed to flee into water and to swim when there was no other escape route (Figs. 142–143).