



Fig. 324: Close-up of the head of a Steppe Runner.

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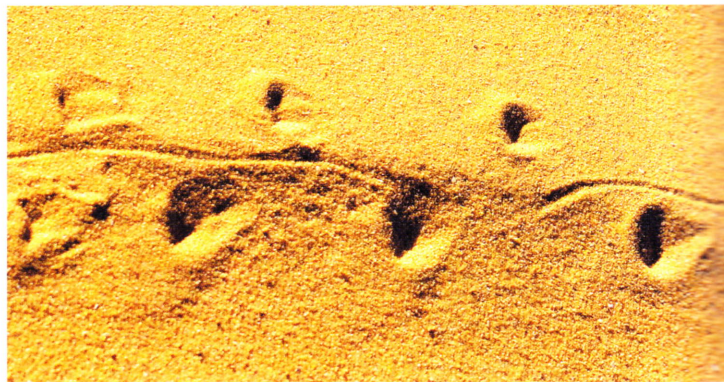


Fig. 325: Track left by a Steppe Runner in loose sand.

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bluish. The top of the tail is dark grey, and the inner sides of the lower leg and thigh are yellow.

Distinguishing features: This species differs from the Rapid Racerunner by its massive build, short tail, distinct pattern, and the subocular scale being separated from the supralabial.

Distribution and subspecies: The Steppe Runner is widespread from north-eastern Romania in the west, to south-western Mongolia and north-western China in the east. The northern boundary of the species' range passes through the steppe zone of the European part of Russia, whereas the southern limit is in Turkey and Iran. In the former USSR, Steppe Runners inhabit the steppe, semi-desert, and desert zones of the European part of Kazakhstan and the states of Central Asia.

The Russian range extends from the Ural River southwards to Dagestan, northwards up to the Voronezh and Samara regions, where the species occurs in the Khopersky Nature Reserve and the surroundings of the city of Tolyatti.

Within the distribution range, five subspecies are recognized; in Russia, only the western subspecies, *E. arguta deserti* (GMELIN, 1789), is found.

Natural history: Steppe Runners occur both in lowlands as well as mountains up to 2,000–2,200 m elevation in Transcaucasia and Kirghizia. They inhabit areas with loose, soft or slightly hard soils with patches of grass and shrub vegetation, where they quickly burrow themselves into loose sand at the sign of danger. In solid ground thinly covered with grass, it digs burrows up to 75 cm long and 20–30 cm deep. The daily activity of this species is diurnal, with a single peak in early spring and late autumn, and with two peaks at other times of the year. Depending on geographic location, hibernation ends between late February and late April; whilst it begins between the second half of September to early or mid-November. Mating is in April or May. Females produce 1–2 clutches containing 2–8 eggs in the reproductive season. In Kalmykia, females lay their eggs in abandoned rodent burrows in hard soil, and in self-constructed, 5–8 cm deep holes in soft soil. The incubation period lasts 50–60 days. The time of hatchling emergence varies significantly in different populations, subject of weather conditions. The young have body lengths of 2.5–3.4 cm at hatching. Sexual maturity is attained at the approximate age of one year, after reaching a body length of 5.5 cm. The diet consists chiefly of beetles, ants, butterflies, caterpillars, dipterans, orthopterans, and bugs. Other insects, slaters, spiders, and molluscs are

less common. Isolated cases of cannibalism are known. Leaves, cruciferous seeds, mulberries and other plant materials are eaten only in small quantities.

Steppe Runners are preyed upon by several species of snakes (sand boas, Smooth Snake, Dione's Snake, Caspian Whip Snake, Four-lined Snake, Steppe Viper), raptors (buzzards, Black Kite, Steppe Eagle) and carnivorous mammals, including dogs.

Conservation status: The Steppe Runner is included in the Red Data Books of Ingushetia, the Altai and Krasnodar Territories, and the Lipetsk, Orenburg, Samara, and Saratov regions.

Multi-ocellated Racerunner

Eremias multiocellata GÜNTHER, 1872

Figs. 326–329, Map 66

The name of this species refers to the dorsal pattern formed by numerous eyespots. It was in this species of racerunners that Russian zoologist V. N. SHNITNIKOV first discovered ovoviviparity.

External appearance: Maximum body length 7.4 cm, tail length 9.8 cm. Racerunners inhabiting mountains are usually larger and have a longer tail than those living in the lowlands.

The subocular scale is separated from the mouth edge by the supralabials. Body scales are smooth, granular or flat. The top of the tail is covered with flat smooth scales on its front third, then elongate scales with weak keels. Femoral pores do not reach the knee joint; the gap between the femoral pore rows is relatively wide. Pattern and colouration vary with both age and sex, and also depend on the type of habitat. The dorsal side of the Multi-ocellated Racerunner is grey with a brownish or greenish hue and a pattern of dark spots and ocelli. Males have blue, greenish or yellow ocelli edged with black on their flanks. These ocelli are very bright in the breeding season, and their colour may change from spring to autumn. Females are coloured more dingily and do not have the brightly-coloured ocelli of males. Specimens from mountain populations are darker; in contrast, those living in desert habitats with a yellowish-red substrate and small pebbles, are coloured in sandy tones. Young Multi-ocellated Desert Runners have a contrasting mosaic pattern of pale, dark-edged ocelli on their back, and conspicuous longitudinal stripes on the neck and flanks. In half-grown and adult specimens, the longitudinal stripes are more pronounced. The belly is white or slightly yellowish. In old males



Fig. 326: The Multi-ocellated Racerunner, *Eremias multiocellata* has an attractive colour pattern. This individual is from Mongolia.

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from Tuva, the underside of the tail is sometimes yellow-orange whereas in juveniles, it is yellow, and the ocelli on the flanks are more vividly coloured.

Distinguishing features: The Multi-ocellated Racerunner differs from the closely related Gobi Desert Runner by its build, smaller body size, the presence of yellow, green or blue ocelli with black edges on the sides of the body, and by some scalation characteristics.

Distribution and subspecies: The Multi-ocellated Racerunner is widespread in Mongolia and northern China. In Russia, it is found only in the Tuva Republic, in the southern foothills of the Tannu-Ola Range, and in the Altai Republic.

The subspecific taxonomy is complex. Of the four recognized subspecies, *E. m. bannikowi* SZCZERBAK, 1973 (Bannikov's Desert Runner) is common in Russia. This subspecies is now considered by most experts a synonym of *E. multiocella multiocellata*.

Natural history: The Multi-ocellated Racerunner occurs in a wide altitudinal range, from 600 to approximately 2,700 m a.s.l. It inhabits a variety of desert, semi-desert, and dry steppe biotopes. In Tuva and north-western Mongolia, at elevations between 700–1,500 m a.s.l., it lives in gravelly semi-desert with peashrubs (*Caragana*) and on light sandy soils with sparse vegetation. It is also found in fixed hilly, semi-fixed and dense sands, on the slopes and valleys of gravelly hills with rocky outcrops in Tuva (Mongun-Taiga slope) at an elevation of 2,200–2,300 m a.s.l. Multi-ocellated Racerunners construct their own 15–30 cm long and not more than 25 cm deep



Fig. 327: Multi-ocellated Racerunner from the Tuva Republic.

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Fig. 328: Fixed sand hills, a very typical habitat of the Multi-ocellated Racerunner in the Tuva Republic.

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Fig. 329: Head scalation of a Multi-ocellated Racerunner from the Tuva Republic. R. NAZAROV

burrows in soft soils, often at the base of *Caragana* bushes and rock piles. Also, Pika and Tarbagan Marmot burrows are used as shelters by these lizards.

This species is diurnal. Its active season lasts from April to early October. Lizards overwinter in underground tunnels at a depth of at least 50 cm.

The Multi-ocellated Racerunner is ovoviviparous. Mating occurs in May, and gestation lasts 2–2.5 months. Females release 2–5 follicles each season, but only 3 (rarely 4) of these develop into embryos. In Tuva, females with a body length of 5.6 cm are already mature and give birth to 3–4 young at a time. The babies have body lengths of 2.4–3.3 cm and tail lengths of 3.3–4.0 cm at birth, and are born between the second half of July and mid-August.

The main food is beetles and ants, less often and in smaller quantities other insects and spiders. The seeds and fruits of *Ephedra* are also eaten.

Conservation status: The Multi-ocellated Racerunner is included in the Red Data Books of Russia and Tuva.

Gobi Racerunner or Przewalski's Racerunner
Eremias przewalskii (STRAUCH, 1876)

Figs. 330–332, Map 67

The curator, later director, of the Imperial Academy of Sciences in St. Petersburg, Alexander A. STRAUCH, who described this racerunner, named it in honour of the great Russian traveler and explorer of Central Asia, Nikolay Mikhaylovich PRZEWALSKI (or PRZHEVALSKY).

External appearance: A rather large racerunner with a relatively long tail and limbs; the body length may reach 9.8 cm, the tail length 14 cm. The largest individuals are found in the southern part of the species' range. In Tuva, the maximum body length is just 8.1 cm. The head is long, pyramidal in shape, with a long snout, gradually narrowing and rounded at its tip.

The dorsal scales are smooth, weakly depressed or convex, and those bordering the venter are flatter and larger. The femoral pores do not reach the knee joint. There are two enlarged shields in the cloacal region.



Map 66: *Eremias multiocellata*.

Pattern and colouration are variable. The main ground colour of the upper side of the body is grey, sandy or yellowish-ochre, depending on the colour of the substrate the lizard lives on. The pattern consists of thin, merging or winding brown lines, large dark spots or crossbands. Gobi Racerunners from the western part of the range, i. e., Tuva Republic and western Mongolia, have a series of blue, black-edged ocelli on their flanks starting from the level of the front legs; such eyespots are less conspicuous in females. In the southern parts of the species' range, Gobi Racerunners lack blue ocelli. The top of the head is adorned with a pattern composed of large dark spots. The belly is milky white, unmarked. The tail of hatchlings is greenish; otherwise, they do not differ much from adults.

Distinguishing features: The Gobi Racerunner differs from the Multi-ocellated Racerunner by having a strong, intricate reticulate pattern on its back and by some by scalation characteristics.

Distribution and subspecies: The Gobi Racerunner is common in Mongolia and in the arid regions of China. In Russia, it has been recorded only from the south of the Tuva Republic, which is at the northern limit of its range.

Two subspecies are recognized, of which *E. p. tuvensis* SZCZERBAK, 1970, is found in Russia. However, most authorities no longer consider this subspecies valid.

Natural history: Gobi Racerunners are associated with soft soils. They settle on loosely fixed slopes of sand dunes, among islets and occasional thickets of grass, in wormwood and *Astragalus* shrubs, and in hilly sands with niterbush. They live at altitudes ranging between 760–1,800 m a. s. l. In the Tuva Republic, racerunners with body lengths of up to 6 cm are found on the loose slopes of



Map 67: *Eremias przewalskii*.