

THE AMPHIBIANS AND REPTILES OBTAINED BY CAPT. KINGDON WARD IN UPPER BURMA, ASSAM AND S. W. TIBET

By MALCOLM A. SMITH.

The collection of Amphibians and Reptiles obtained by Capt. Kingdon Ward on his last expeditions to Upper Burma, Upper Assam and the adjacent region of Tibet, although not large, is of considerable interest. The region visited is the meeting place of the Eastern Himalayan fauna, which belongs mainly to the Indo-Chinese subregion, and the Trans-Himalayan, which is mainly Chinese in origin. Of the 16 species collected, 7 are known from China or Yunnan, 3 from the Himalayas, while the remainder are widely distributed or are peculiar to the region visited. The Tibetan collection extends the range of several species to a considerable extent. The accounts of the two journeys, with maps of the areas visited, have appeared in *The Geographical Journal*: "Explorations on the Burma-Tibet border", Vol. 80, Dec. 1932, pp. 465-480, and "The Himalaya East of the Tsangpo", Vol. 84, Nov. 1934, pp. 369-397.

The following is a detailed account of the collection, which has been presented to the British Museum (Natural History). The Lohit Valley was visited in March, the Rong-to Valley in May, Shugden Gomba and the Salween valley in July and August and the Di-chu Valley in August.

AMPHIBIANS.

Megophrys minor Stejneger.

To this species I refer a small Toad obtained in the Lohit Valley, Sadiya Frontier Tract, at 5,000 ft. altitude. It agrees well with the brief description of the type (*Proc. Biol. Soc. Washington*, XXXIX, 1926, p. 53), which came from Szechuan, E. China. The following details supplement Stejneger's description:

Female with ripe ova. Tongue nicked behind; canthus rostralis sharp; loreal region vertical, concave; nostril equidistant from the tip of the snout and the eye; interorbital region concave, broader than the upper eyelid; fingers long, the first when applied to the second reaching only half way up; third finger nearly twice as long as first; toes with a rudiment of a web, the third a little longer than the fifth; tibio-tarsal articulation reaching to the anterior border of the eye; skin above with numerous rounded glandules.

Colour in formalin: Greyish black above, the glandules paler. Lighter below, heavily marbled with black, the throat nearly all black.

From snout to vent 35 mm.

About 15 ova, 2 mm. in diameter, in each oviduct.

A single tadpole obtained in the same pool as the adult no doubt belongs to this species. Head about twice as long as broad, the mouth with a large funnel-shaped expansion. Tail four and a half times as

long as high, with narrow dorsal and ventral crests, the greatest height of the crests being about half the depth of the muscular portion of the tail at the middle. Olivaceous in colour, speckled with darker. Total length 28, tail 21 mm. No visible limbs.

Scutigera sikkimensis (Blyth).

Two adult males were found in the Adung Valley, Burma-Tibetan border at 12,000 ft. altitude. They were caught in February and have their peculiar breeding characters well marked, namely a large black plate on each breast composed of minute horny tubercles, and nuptial pads of large black horny spines on the first and second fingers.

From snout to vent 70 mm.

A rare toad previously known only from high altitudes, 12,000 to 14,000 ft. in the Eastern Himalayas.

Bufo viridis Laur.

Five examples from the Salween Valley (11,000-12,000 ft.), one from Shugden Gumpa (13,000 ft.), both localities in S. E. Tibet. All the specimens have the under-parts heavily marbled with dark olive.

Range.—Widely distributed in N. China and N. E. Tibet.

Bufo stuarti Smith.

One specimen from the Lohit Valley at between 3,000 and 4,000 ft. altitude. Colour in life bright yellow. The type and only other known specimen was described from the Putao plain, Upper Burma, in 1919 (Smith, *Rec. Ind. Mus.*, XXXI, p. 78, text-fig. 1).

Rhacophorus maximus Günth.

Three specimens from the Negmung Valley (1,500 ft.), Burma-Tibetan frontier.

Range.—Eastern Himalayas, Assam, Khasi Hills.

REPTILES.

Japalura splendida Barb. & Dunn.

Three examples, Salween Gorge, N. of Shugden Gumpa, 10,000 ft. altitude.

Range.—Western China.

Calotes kingdon-wardi Smith.

The description of this species has appeared in my Volume on the Lizards in the "Fauna of British India", New series, (1935, p. 204). The specimen, a juvenile, was caught in camp in the Adung Valley, 7,000 ft. altitude.

Lygosoma indicum (Gray).

Two examples, Lohit Valley, 2,000 ft., one from Nam Tamai, near Fort Hertz, 3,500 ft. altitude.

Range.—Widely distributed in the Indo-Chinese subregion.

Natrix nuchalis (Blgr.).

1 ♂, 2 ♀♀, Adung Valley, 6,000 ft. altitude. Ventrals ♂ 145, ♀♀ 147, 155; subcaudals ♂ 50, ♀♀ 46, 46.

Range.—Yunnan; N. China.

Natrix subminiata helleri Schmidt.

1 ♀, Lohit Valley, 3,000 ft. Scale-rows 17-19-17; ventrals 171, subcaudals 86; 8 supralabials, 1 pre- and 3 post-oculars; temporals 2+2. Dark olive above, the neck and anterior part of the body with an indistinct reticulation of red, the colour being confined chiefly to the interstitial skin; a series of small dorso-lateral spots on the posterior half of the body; below greyish, speckled with darker; upper labials yellowish.

The specimen is considerably larger than any previously recorded, measuring 1,300 mm. in total length, the tail being 300 mm.

Range.—Southern China; Yunnan.

Elaphe mandarina (Cantor).

1 ♂, Nam-tamai divide, Burma-Tibetan border, 4,000 ft. Scale-rows 23-23-19, ventrals 228, subcaudals 75.

Range.—China.

Elaphe taeniura taeniura Cope.

1 ♀, Rong-to (Rong-thod) Valley, N. of Rima, 6,000 ft. Scale-rows 23-21-19; ventrals 246, subcaudals 94. Light chocolate in life with the usual black markings.

Range.—E. Himalayas to China and Indo-China.

Ptyas korros (Schlegel).

One juvenile, Kachin Hills, Burma.

Range.—Eastern Himalayas and Indo-China.

Zaocys nigromarginatus (Blyth).

One ♀ caught among bracken in a pine forest in the Rong-to Valley. Ventrals 206, subcaudals 112 (tail incomplete).

Colour in life, grass green above on the anterior half of the body, yellowish posteriorly, with the usual black longitudinal stripes.

Range.—Szechuan; Yunnan.

***Trimeresurus jerdoni* Günth.**

One ♂, Di-chu Valley, S. E. Tibet, 9000 ft. Ventrals 188, subcaudals 73; two from the Adung Valley; ventrals 186, 187, subcaudal 66, 76.

Range.—Assam to Central China.

***Trimeresurus monticola* (Gray).**

One ♀, Burma-Tibetan border, 2,000 ft.

Range.—The Eastern Himalayas to China and Indo-China.