DESCRIPTIONS OF NEW REPTILES AND A NEW BATRACHIAN FROM SIAM

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Types of all the species here described will be presented to the British Museum of Natural History, London.

Gymnodactylus intermediu?, sp. nov.

Diagnosis. Intermediate between G. consolrinus Peters, and G. pulchellus Gray; resembling the former in the arrangement of the praeanal pores, and the latter in colouration.

Description. Ear opening suboval, vertical or slightly oblique, as large as in G. pulchellus. Head granular, with small rounded tubercles on the occipital and temporal regions; rostral with a median cleft above entering the nostril; 10 or 11 upper and 10 or 11 lower labials; symphysial triangular; 2 or 3 pairs of chin-shields, the first pair forming a long median suture. Body and limbs covered above with small granules, intermixed with small, rounded, conical tubercles, not perhaps so distinctly keeled as in G. pulchellus, but quite as large; a lateral fold of enlarged tubercles. Ventral scales intermediate in size between G. pulchellus and G. consolrinus, about 40 to 45 in a transverse series. Male with a wide-angled series of 8 to 10 praeanal pores, not interrupted mesially; enlarged scales in front and behind; no pubic groove, no femeral pores, but a series of 7 to 10 large scales separated from the pra anal ones by an interval of about one scale. Tail above with small flat scales and rows of enlarged tubercles; below with transverse plates.

Colour (in life). Greyish brown with five dark brown cross bands bordered with pale yellow, the first band horse-shoe shaped from eye to eye across the nape. Below dirty white.

Dimensions. Head and body 85, tail 110 mm.

Type specimens. \eth and Ψ , from Khao Sebab, near Chantabun, S. E. Siam.

Remarks. Five specimens in all were obtained upon the hill, at varying elevations up to 500 metres. They were caught beneath the

bark of decaying wood. One specimen is pale grey in colour above, almost uniform, the dark cross bands being hardly distinguishable. It appears to be abnormal.

Lygosoma koratense, sp. nov.

Diagnosis. Section Lygosoma. Body elongate; limbs short but well developed, widely separate when adpressed; ear opening distinct; two frontoparietals.

Near to Lygosoma isodactylum Günther, from Siam and Indo-China, from which it differs in the much stouter build, in possessing two frontoparietals, in the character of the ear-opening, and in colouration.

Description. Snout obtuse, lower evelid scaly, ear-opening small, oval, half the size of the eve-opening, with projecting lobules anteriorly. Nostril between two shields, a large superior-anterior and a small posterior-inferior; no supranasals. Rostral convex above; nasals forming a median suture; frontonasal much broader than long, forming a broad suture with the frontal; praefrontals small and widely separate; frontal not very narrow behind, equal to or longer than the frontoparietal and interparietal together. Four large supraoculars; two frontoparietals; the parietals in contact; no nuchals. Fifth and sixth supralabials subocular. Body elongate; distance between the end of the snout and the forelimb twice in distance between the axilla and groin. 32 to 34 smooth scales round the middle of the body, subequal. No enlarged praeanals. Digits short, fourth toe a little longer than third; 13 to 14 keeled lamellae beneath the fourth toe. Tail thick, about as long as the head and body.

Colour (in life). Reddish-brown above, each scale tipped with black; flanks pale greenish yellow, the scales tipped with black as on the back, the colour sometimes extending to the base of the adjacent scales. Below yellowish white. Head scales each with one or more central black spots. Lips yellowish with large black spots.

Dimensions. Head and body, 105; tail (reproduced) 95; fore-limb, 15; hind limb, 24 mm.

Type locality. Lat Bua Kao, near Korat, E. Siam, on the eastern slopes of the Dong Rek Mountains.

Remarks. Four specimens in all were obtained. They were found beneath fallen timber. One was brought to me alive, and was kept for some time. Its habits appeared to be entirely subterranean, and were similar to those of L. isodactylum.* I never saw it above ground, though possibly it emerged during the night time. In loose mould it could burrow rapidly, using its snout for the purpose, the limbs being folded back along the sides of the body.

Vipera russelli siamensis, subsp. nov.

A geographical race differing from the typical form in possessing an additional series of small, elongated spots on either side of the body, interposed between the usual three longitudinal rows of large ones.

The spots composing these two extra rows are considerably smaller in size than those forming the normal dorsal and lateral chains, are black in colour, with or without a lighter centre, and edged entirely, or in part, with white.

In other characters this form does not differ from the typical one.

Type. From Sam Kok, Central Siam, about 60 km. N. of Bangkok. Total length, 565 mm. Scales in 29 rows in mid-body; ventrals 163; subcaudals 44.

Remarks. I have examined four other examples of this well-marked race, one from Bangkok itself, and the other three from Klong Rangsit, Chiengrak Noi and Lopburi respectively, all localities within the central plain of Siam. They do not differ in any important respect from the type.

Many specimens of Vipera russelli from India and Burma show patches of small black dots upon the sides of the body, similar in position to the spots found in V. r. siamensis, but in no other respects resembling them. In a specimen from Pyawbwe, Lower Burma (lat. of N. Siam), however, there is a distinct series of marks very similar to those found in siamensis, but more irregular in shape and less clearly defined. Possibly this represents the northern range of this subspecies.

Russell's Viper is rare in Siam. Although it is evident that

^{*} Journ. Nat. Hist. Soc. Siam, I, p. 127.

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this species has descended into Siam from Burma, I have never yet seen any specimen from the North. One I believe was obtained in the Chiengmai district some years ago. Neither has it been met with south of Bangkok, and it is not known from the Peninsula.

Callula mediolineata, sp. nov.

Diagnosis. Finger tips not terminating in truncated discs, toes nearly or quite half webbed, two large compressed metatarsal tubercles.

Nearest to C. picta Bibr., from the Philippines, and C. verrucosa Boulenger, from Yunnan and N. China.

From C. pulchra, the only other species of this genus at present known from the same region, it can be distinguished by the characters above-mentioned, and by the elongated mark on the posterior part of the back.

Description. Snout short, rounded. Fingers free, first shorter than second, the tips very slightly swollen. Toes moderate, nearly or quite half webbed, the tips not swollen. Subarticular tubercles well developed; two large, compressed, blunt-edged metatarsal tubercles, the inner largest, elongate, the outer two-thirds the length of the inner. The tarso-metatarsal articulation reaches the shoulder or the posterior corner of the eye.

Skin above smooth, or with small flat tubercles; a feeble fold may be present from the eye to the shoulder.

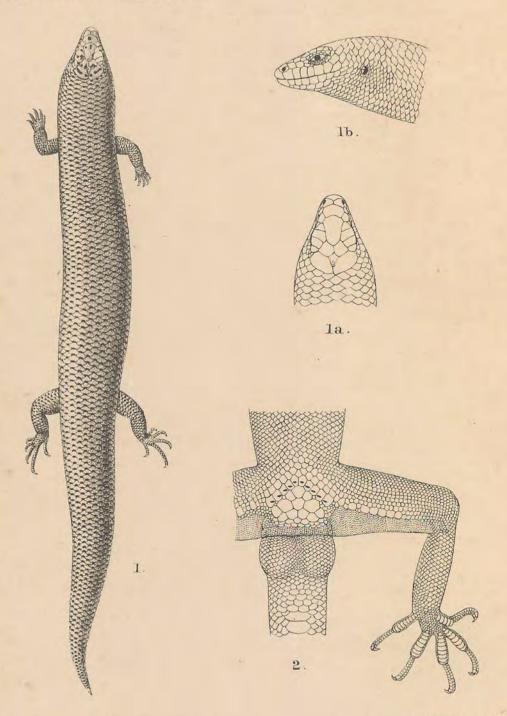
Colour (in life). Above light or dark olive, the snout paler, with a clear line of demarcation from eye to eye. A broad light yellow or brownish irregular stripe, from the upper eyelid to inset of thigh, and another, narrower one, from near the middle of the back to above the vent. Lower half of flanks, and limbs above, marbled with dark olive and buff. Below whitish or pale buff, the throat, and usually the chest, mottled with brown. Iris golden green, veined with black.

Light variegations may be present upon the back, and the yellow stripe along the side of the body may be indistinct or broken up. The median stripe appears to be constant, but is variable in length.

Type locality. Prachuap Kirikan, S. W. Siam.*

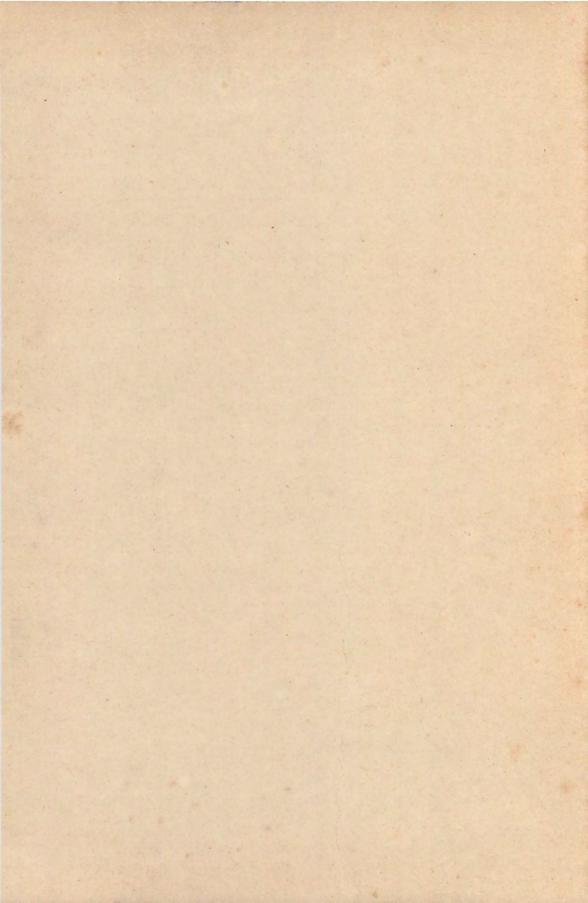
^{*} Known until two years ago, and marked on all maps up till that date, as Koh Lak. $^{\prime}$

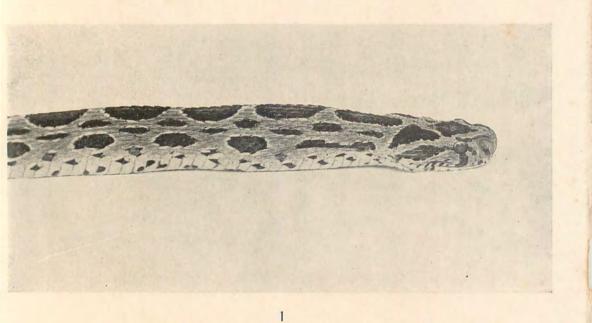
Journ. Nat. Hist. Soc. Siam. Vol. II. Nº 3.

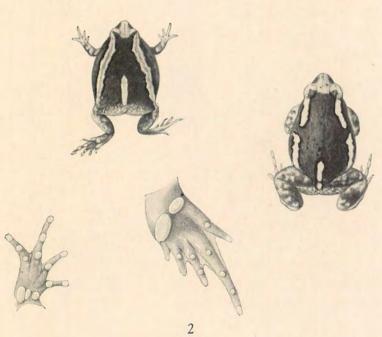


J. Green del.et lith. 1. LYGOSOMA KORATENSE . 2. GYMNODACTYLUS INTEPMEDIUS.

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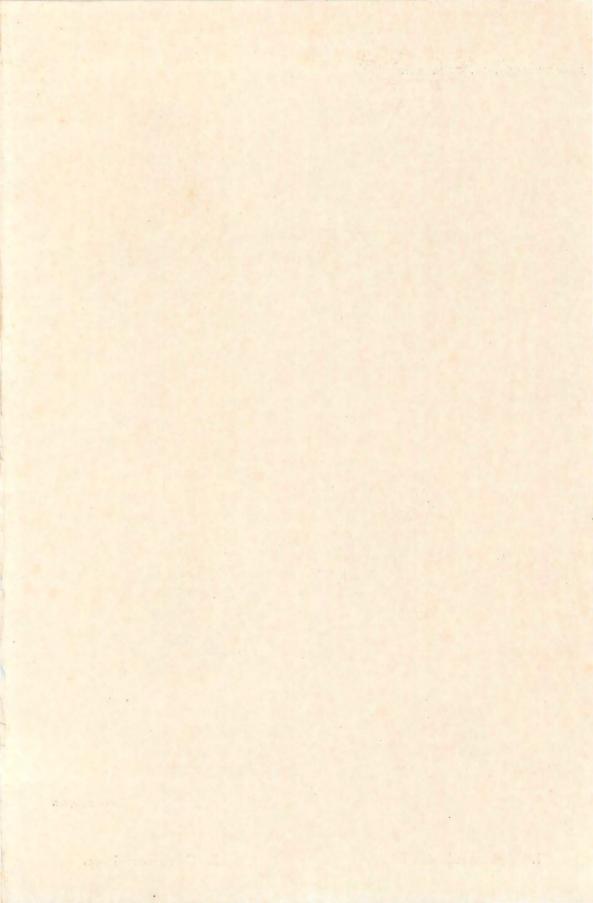




James Green, Del.

1. Vipera russelli siamensis.

2. Callula mediolineata.



Remarks. This species is described from examples (about 50) taken at Prachuap last November, having just emerged from the tadpole stage, and since kept by me alive. The practice of describing from specimens reared in captivity is, I believe, not a sound one, as certain modifications from the normal, particularly of the tips of the fingers and toes, and in the amount of webbing to the feet are liable to occur under the altered conditions. In this case, however, confirmation has been obtained from another specimen found at Nong Pling, near Paknampo, Central Siam, some 400 kilometres north of Prachuap. The length of this specimen is 88 mm. from snout to vent.

In both localities this frog was found in company with its ally C. pulchra, and with two other species of burrowing frog, Glyphoglossus molossus and Calluella guttulata. Callula mediclineata, however, appeared to be considerably rarer than either of the other three, as in spite of the most diligent search on the same ground on many occasions since, only the one adult specimen has so far been obtained.

My Siamese collector says he is familiar with this frog, and that it occurs in the country round Ubon. It is known there as the "eung mawhai", and is eaten by the country people.

I wish to thank Mr. G. A. Boulenger, F. R. S., of the British Museum of Natural History, for his kind assistance in the determination of the two lizards; and Dr. Annandale, D. Sc., of the Indian Museum, Calcutta, and Mr. N. B. Kinnear, of the Bombay Natural History Society, for sending me specimens of Russell's Viper from India and Burma to compare with my own from Siam.