

the beds are evidently of the same age as those of Haldon, only three species have been found. The Gasteropoda and Conchifera are nearly the same at both places, but only one species of coral, viz. *Favia stricta*.

In addition to the above-named number, *i. e.* "ten species," I have lately found the coral herewith figured, which I believe to be nearly allied to *Merulina*, if, indeed, it does not belong to that genus. Should this be the case, we shall then not only possess a new species from Haldon Hill, but a form that will assist the "Dredging-expedition" (although in a reverse direction) to supply a link between the past and the present forms.

IX.—*Descriptions of some Ceylonese Reptiles and Batrachians.*

By Dr. ALBERT GÜNTHER, F.R.S.

MR. G. H. K. THWAITES, Director of the Royal Botanic Gardens at Peradeniya, has presented to the British Museum a very fine series of Reptiles, and especially Batrachians, which appear to have been collected chiefly in the neighbourhood of the locality named. It is only recently that we have received specimens from that central district, which is inhabited by many peculiar forms unknown in the littoral and best-explored parts of the island. The majority of the new Batrachians added by me on a former occasion (Proc. Zool. Soc. 1868, p. 478) to the fauna of Ceylon are again represented in this collection sent by Mr. Thwaites—for instance *Nannophrys*, which grows to a length of $1\frac{2}{3}$ inches, *Ixalus femoralis*, *I. temporalis*, and *I. macropus*, *Polypedates reticulatus*, *P. nasutus*, and *P. cavirostris*. The three species of *Ceratophora* appear to be common, especially *C. aspera*, which varies considerably in the arrangement and development of the folds and tubercles; *Geckoëlla punctata* also inhabits this district. *Rhinophis punctatus*, *Rana* (*Hoplobatrachus*) *ceylanica* (Peters), and *Ixalus Schmardanus* (Kelaart)*, which I had never received before, are evidently scarce, as only two examples of the first and one of the two latter were in the collection. But our knowledge of the reptilian fauna of this island is evidently still far from being complete, nearly every collection containing some new forms; and particular attention should be paid to the small burrowing snakes or snake-like lizards, and to frogs.

Mr. Thwaites's collection contained the following new species:—

* Three other, very fine, examples have been recently obtained by Mr. Holdsworth.

Nessia Thwaitesii.

Toes four in front and four behind. Nostril close to the hind margin of the rostral shield, and without longitudinal slit behind.

This species might be taken for a Sepoid, in consequence of the situation of the nostril, which is in contact with the hinder edge of the rostral shield. However no other shield enters into the circumference of the nostril, which is entirely within the rostral. Otherwise the pholidosis of the head is very similar to that of the other two species known. Two loreals, one behind the other. Trunk surrounded by twenty-six longitudinal, and seventy-two transverse series of scales. Præanals and subcaudals like the other scales. Limbs rather more developed than in *N. Burtonii*; the hind leg nearly as long as the head. All the toes distinct and clawed; the anterior very short; the first of the posterior shorter than the second, the second shorter than the third and fourth, which are nearly equal in length. Ear-openings minute, hidden. Upper parts brown, the lower of a lighter colour.

One specimen 4 inches long; tail $1\frac{1}{3}$ inch.

Calotes liocephalus.

No spines whatever on the side of the head. Dorsal crest composed of slender spines of moderate length on the neck, a low, merely serrated crest in the middle of the trunk, but re-appearing in the sacral region as a short series of three or four spines. A very distinct fold in front of the shoulder, covered by granular scales. Gular sac very slightly developed. About forty-five series of scales round the middle of the trunk. Scales round the part of the tail in which the penis is hidden much the largest. Green, with irregular dark cross bands on the back. Upperside of the head marbled with dark green. A narrow green band from the eye to above the tympanum. Tail olive, with broad brown rings. Limbs with alternate lighter and darker green rings.

One adult male is 15 inches long, the tail being 11 inches.

Hemidactylus Coctæi.

Ceylonese specimens are not specifically distinct from those of the continent, as has been ascertained also by Cantor (see Kelaart, Prodr. Faun. Zeyl. i. p. 160). Examples occur in which the ornamental colours are unusually dark, in the form of clouded transverse bands.

Gymnodactylus frenatus.

The coloration of the young is extremely similar to that of *Eublepharis Hardwickii*.

Bufo kandianus.

Crown flat, without bony enlargement. Snout rather obtuse, with angular canthus rostralis. Limbs and fingers of moderate length; the fourth finger longer than the second. Toes rather short, *completely webbed*. Metatarsus with two small flat callosities; *a cutaneous fold along the edge of tarsus*. Skin with small tubercles in small number. *Parotoid long and very narrow*. *Tympanum entirely hidden by the skin*. Inner nares narrow; Eustachian tubes very narrow. Upper parts uniform brownish grey, except the snout, which is yellowish, the yellowish part being sharply defined by an interorbital line. Lower parts yellowish.

One specimen, apparently immature, is 30 millims. long; hind limb 40 millims.

Ixalus fimbriatus.

Snout flattened, not obtuse in front, with the loreal region concave and sloping outwards; canthus rostralis distinct. Eye large, prominent; tympanum distinct, about one third of the size of the eye. Skin of the upper parts covered with rough tubercles and larger warts; an oblique fold on the upper eyelid, but no prominent spines; hinder margin of the forearm and foot fringed; a transverse series of white tubercles below the vent. Throat finely granulated like the abdomen. Metatarsus with a single tubercle; fingers not webbed. The interdigital web of the hind foot extends to the outer phalanx of the third and fifth toes. Disks of the fingers and toes moderately developed. The length of the body is conspicuously more than the distance between vent and heel. Upper parts dark brown, marbled with black; limbs with dark cross bars; hinder side of the thigh immaculate; cutaneous fringes white. Lower parts yellowish; throat with small brown spots.

One example is 32 millims. long, the hind limb being 47 millims.

Ixalus adspersus.

Snout short, not obtuse in front, with the loreal region flat, subvertical, and with the canthus rostralis angular. Eye large, prominent; tympanum distinct, about one fourth of the size of the eye. Skin of the upper parts with scattered flat tubercles; throat granular, the granules being finer than those on the abdomen. Metatarsus without fringe or fold, with a single tubercle. Fingers not webbed; the interdigital web of the hind foot does not reach the last phalanx of the third and

fifth toes. Disks well developed. The length of the body equals the distance between the vent and distal end of metatarsus. Upper parts dark violet (in spirits), with numerous round, smaller and larger, bright yellow spots. Hinder side of the thighs marbled with brown. Lower parts dirty yellow, throat marbled with brown.

One specimen is 34 millims. long, the hind limb being 48 millims.

Ixalus oxyrhynchus.

Snout rather elongate, sharply pointed, projecting beyond the mouth; loreal region flat, vertical; canthus rostralis angular. Eye of moderate size; tympanum distinct, one-third the size of the eye. Upper parts smooth, with a pair of folds commencing from the eyelid, and converging towards the middle of the back. Throat smooth, not granular. Metatarsus without fold, with a single tubercle. Fingers not webbed; the interdigital web of the hind foot does not reach the last phalanx of the third and fifth toes. Disks small. The length of the body is rather less than the distance between the vent and heel. Upper parts reddish olive, with a large, hourglass-shaped brown blotch on the back; its anterior base is between the orbits, and laterally it is bordered by the convergent folds of the skin. Limbs with a few blackish bars; an almost black spot occupies the hand and its root. Loreal region and a tympanic spot, the vent and hind parts of the thighs, and the lower part of the foot black. Lower parts white, throat dotted with brown.

Two specimens, the larger of which is 24 millims. long, the hind limb being 42 millims.

Ixalus pulchellus.

Snout depressed, obtuse, but rather longer than the eye, without canthus rostralis. Tympanum covered by the skin. Skin smooth; abdominal surface coarsely granular, the granules extending over a part of the throat. The length of the body is a little more than the distance between vent and heel. No fold along the tarsus; metatarsus with a small tubercle. Interdigital web rather broad, extending nearly to the ultimate phalanx of the third and fifth toes. The two outer fingers united by a membrane for a considerable part of their length. Disks well developed. Upper parts yellow (in spirits), mottled with violet, and with scattered minute black dots; upper arm, anterior and posterior sides of the femur colourless; lower parts uniform white.

One specimen is 23 millims. long, the hind limb being 38 millims.



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