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NOTES ON SOME SPECIES OF MALAYAN AMPHIBIA AND REPTILIA,—
by DR. F. STOLICZKA.

(Received 15th Feb. 1872; read 5th March, 1872.)

[With plate XI.]

It is nearly three years ago that I had the pleasure of submitting to the Society a few notes on Indo-Malayan Reptiles and Amphibians, chiefly collected by myself along the Burmese and Tenasserim coasts, about Penang and on the Nicobar and Andaman islands. When visiting Penang in 1869, I received information of a tolerably extensive* collection of Reptiles, brought together by a zealous Jesuit during a residence of about twenty years on the island. The specimens were collected either on Penang itself or on the opposite coast of the Wellesley Province. A very large number had been captured alive, and coloured drawings, taken from most of the live specimens, had been prepared. The colouring appeared to me to have been faithfully copied, and this it was which particularly excited my interest in the collection, because in many cases the colours of Reptiles fade most rapidly, as soon as the specimens are placed in spirit; in others the colouring changes immediately after death, and again some alter even during life their colour, as soon as they become conscious of their captivity. In any case the coloured sketches from life seemed to me valuable and I, therefore, resolved to buy the collection.

As soon as the formal matters were arranged, the collection of the specimens was transmitted to me, the drawings, however, were afterwards not considered to form an essential part of it, and were handed over to some one else, according to a wish of the deceased gentleman under whose supervision they were executed. After a brief correspondence it did not appear to me much use treating further about the subject. My interest in the collection has, on that account naturally enough, partly diminished, and having had other more pressing work to attend to, the specimens were for more than two years left unnoticed. More recently my friend Mr. Stahlknecht of Singapore visited Sumatra, and made for me a very nice little collection of Reptiles, most of which were in a beautiful state of preservation. This circumstance induced me to look over my old acquaintances, and to prepare a critical list of all of them. In the old collection I only found two new species, a *Rana* and a *Simotes*, a specimen of the latter had very recently been also obtained by Mr. J. Wood-Mason's collector at Jahore, situated at the extreme south end of the Malayan Peninsula, north of Singapore island. Mr. Stahlknecht's collection yielded a new *Calamaria*.

* This refers to the number of specimens, but not to that of species, as I subsequently discovered.

Thus, although I cannot say, that I came into possession of a great number of new forms, there are among those, which I shall place on record, a few rare and very interesting species, some of which were previously known only from single specimens, and these often were not very perfect. I may mention for instance *Draco quinquefasciatus*, *Podophis chalcides*, *Ophites subcinctus* and *albofuscus*, *Ablabes flaviceps*, *Oxycalamus longiceps*, &c.

I shall first enumerate all the species, and attach an (*) asterisk to those, about which I shall have to say a few words.

The collection was made, as I said, to a large extent on Penang itself or in the Wellesley Province, and judging from the examination of it, I have found no reason to doubt in any way this statement. A great many of the same species had been collected by myself in that part of the country on a former occasion, others were known to occur there from the very elaborate and extensive researches of Dr. Cantor; others again had been recorded from Malacca, Singapore, Sumatra or Java, all countries which belong to the same zoological province, and which have a large number of species common. I have not met with a single instance which would lead me to suspect, that any mixture of other distant localities had taken place. Thus the present list in connection with that of Drs. Cantor, Gray and Günther, and my own published in 1870, may be considered as fairly completing the number of Reptiles and Amphibians, inhabiting Penang and the neighbouring Wellesley Province. Mr. Stahlknecht's specimens are from the neighbourhood of Dilli on Sumatra. In the general list I shall briefly note the localities as *Penang* and *Sumatra*.

BATRACHIA.†

1. *Rana tigrina*, var. *pantherina*, Fitz. apud Steindachner. (Novara Amphibiens).—*Penang*.

2.* „ *fusca*, Blyth.—*Penang*.

3. „ *lymnocharis*, Boie (= *gracilis*, Wiegman.); typical.—*Penang*.

4.* „ *lymnocharis*, var. *pulla*, Stol.—*Penang*.

5.* „ *plicatella*, n. sp.—*Penang*.

6. *Polypedates maculatus*.—*Penang*.

7. „ *quadrilineatus*.—*Penang* and *Sumatra*.

8. *Hylarana erythraea*.—*Penang* and *Sumatra*.

Comp. Proceed. A. S. B. for June, 1872, p. 104. The largest specimen measures: body 3 inch, hind limb 5 inch.

9. *Bufo melanostictus*.—*Penang*.

† If no special reference to literature is given, it is understood that the species is described in Dr. Günther's Reptiles of Brit. India, or in my former paper on Malayan Reptiles in Journal A. S. B. vol. xxxix, pt. II.

10. *Bufo asper*.—*Penang*.
Largest specimen, body 5·5 inch. long.
11. *Epicrium glutinosum*.—*Penang*.

SAURIA.

12. *Euprepes carinatus*, Schneid., = *rufescens*.—*Penang* and *Sumatra*.
All have a rufescent bronzy tinge and dorso-lateral pale bands.
- 13.* *E. olivaceus*.—*Penang* and *Sumatra*.
14. *Riopa albopunctata*.—*Penang*.
Exactly the same as in Bengal.
15. *Podophis chalcides*.—*Sumatra*.
- 16.* *Gymnodactylus* (? *Cyrtodactylus*) *pulchellus*.—*Penang*.
17. *Cyrtodactylus affinis*.—*Penang*.
Comp. J. A. S. B. vol. xxxix, pt. II, 1870, p. 167.
18. *Peripia mutilata*, Wiegman., = *Peronii*, D. and B., teste Peters et Günther. — *Penang* and *Sumatra*.
19. *Hemidactylus frenatus*.—*Sumatra*.
20. *Nycteridium platyurus*, Schneid. = *Schneideri*.—*Penang* and *Sumatra*, very common.
All have less dark coloration than Himalayan or Khasi hill specimens, but are in other respects not distinguishable, Comp. J. A. S. B. xl, pt. II, p. 103.
21. *Gecko guttatus*.—*Penang*.
22. „ *stentor*.—*Penang*.
23. *Ptychozoon homalocephalum*.—*Penang* and *Sumatra*.
24. *Bronchocela cristatella*, Kuhl. — *Sumatra*, very common.
All have 36 to 42 small equal scales in a lateral row.
25. *Draco volans*, Linn. — *Penang* and *Sumatra*, very common.
- 26.* „ *quinquefasciatus*.—*Penang*.
- 27.* „ *fimbriatus*.—*Penang*.
28. *Hydrosaurus salvator*.—*Penang* and *Sumatra*.

The light spots and bands are in young and in old males [at least] bright yellow, not white. The species is also very common on all the Nicobar and Andaman islands.

29. *Crocodylus porosus*.†—*Penang*.

† The similarity of form and colour of the young of this species with equally large specimens of *C. Pondicherianus*, Günther, is very striking. My collector recently brought several young specimens (12-14 inches) of the latter species from Arrakan, and when compared with equally large specimens of *porosus*, the former all have the snout, and also the tail, conspicuously shorter; all have only six rows of shields on the back, but there is an additional one on either external edge broken up into single shields. In *porosus* the outer row of shields on either side is complete, or continuous, and on the whole the dorsal shields appear to be smaller. In every other respect the young of both species are identical. I have not seen an adult of *Pondicherianus*, but it ought to be looked for in Arrakan. Both have a small shield on either anterior side of the

OPHIDIA.

30. *Typhlops nigroalbus*.—Penang.
31. " *braminus*.—Penang.
32. *Cylindrophis rufus*.—Penang.
- 33.* *Calamaria Stahlknechti*, n. sp.—Sumatra.
- 34.* *Oxycalamus longiceps*.—Penang.
- 35.* *Simotes bicatenatus*.—Sumatra and Penang.
- 36.* " *cruentatus*, Theob.—Penang.
- 37.* " *catenifer*, n. sp.—Penang and Jahore.
- 38.* *Cyclophis tricolor*.—Sumatra.
- 39.* *Ablabes flaviceps*, Günth.—Sumatra.
40. *Compsosoma (Elaphis) melanurum*.—Penang.
41. " *radiatum*.—Penang.
42. *Ptyas korros*.—Penang.
43. " *hexagonotus*, (Cant.).—Penang.
44. *Tropidonotus quincunctiatus*.—Penang.
45. " *trianguligerus*, Schleg.—Penang.
46. " *vittatus*.—Penang. (Günther's Colub. Snakes).
- 47.* *Gonyosoma oxycephalum*.—Penang.
- 48.* *Dendrophis caudolineatus*, Gray.—Penang and Sumatra.
49. " *pictus*.—Penang and Sumatra.
50. *Tragops prasinus*.—Penang and Sumatra.
51. *Dipsas cynodon*.—Penang.
52. " *Drapiezii*.—Sumatra. (Comp. Schlegel's Abbildungen).
53. " *dendrophila*.—Penang.
54. *Chrysopelea ornata*.—Penang and Sumatra.
55. " *rubescens*.—Penang and Sumatra.

neck, it being a rudiment, or rather probably the beginning, of the anterior nuchal plates.

Besides *C. Pondicherianus*, my collector brought among others the following species which I do not think had been previously recorded from Arrakan.

Callula pulchra.

Diplopelma carnaticum and *D. Berdmorei*.

Polypedates maculatus and *P. quadrilineatus*.

Hylarana erythræa and *H. Tytleri*. Both quite distinct species.

Riopa lineolata.

Tachydromus sexlineatus.

Hemidactylus (Doryura) Berdmorei.

Hinulia maculata. Also common on all the Andaman and Nicobar islands.

Lycodon aulicus, (black variety).

56. *Psammodynastes pulverulentus*.—Penang.
 57. " *pictus*.—Sumatra.
 (Colub. Snakes, p. 251). Exactly agreeing with Günther's description.
 58. *Lycodon aulicus*.—Penang.
 59.* *Ophites subcinctus*.—Sumatra.
 60.* " *albofuscus*.—Sumatra.
 61. *Bungarus fasciatus*.—Penang.
 62. *Adeniophis** (*Callophis*) *intestinalis*.—Penang.
 " " *bivirgatus*.—Penang and Sumatra.
 63. *Xenopeltis unicolor*.—Sumatra.
 64. *Python reticulatus*.—Penang.
 65. *Hypsirhina enhydris*.—Penang.

All specimens have an almost continuous dark line along the middle of the lower side.

66. *Hypsirhina plumbea*. (Very variable).—Penang.
 67.* " [*Ferania*] *alternans*.—Sumatra.
 68. *Fordonia unicolor*.—Sumatra.
 (The young are brownish olive with numerous dark dots).
 69. *Cerberus rhynchops*.—Penang.
 70. *Homalopsis bucata*.—Penang.
 71. *Hipistes hydrinus*.—Penang.
 72. *Hydrophis robustus*.—Sumatra.
 73.* *Trimeresurus Wagleri*.—Penang and Sumatra.
 74. " *erythrurus*.—Penang.

RANA FUSCA.

Comp. Anderson in P. Z. S. for 1871, p. 197.

Rufous brown above, with a pale longitudinal dorsal streak, broad in front, narrow towards the posterior end; limbs above somewhat indistinctly variegated and banded with darker brown, posterior side of femora with closer and darker variegations. Lower side uniform whitish, except a few dark spots on the lower lip, but the front-end of the lower lip has a conspicuous white spot, as stated by Blyth.

The nostrils are much nearer the snout than the eye; the tympanum is smaller than the eye, but quite distinct in a nearly full grown specimen; skin above and at the sides of the belly with few scattered slightly enlarged tubercles; lower side perfectly smooth. The first and second fingers are slightly shorter than the third and fourth respectively; the second is shortest. The metatarsus has a single, inner, marginal, elongated tubercle. The first and fifth toes are fringed externally, but the tarsus has no fold. The toes are entirely webbed and their tips very distinctly swollen.

The length of the body equals the distance from the vent to half the length of the tarsus.

* See Peters in Monatsb. Berlin Akad., 1871, p. 579.

RANA LYMNOCHARIS, var. PULLA.

Comp. Stoliczka, Journ. A. S. B. vol. xxxix. pt. II, 1870, p. 144.

Since the publication of my notes on this variety I have received two other specimens from Penang. The form of the body, the teeth, the structure and general coloration exactly agree with typical *lymnocharis*, except that in one of the specimens the four dark bands on the upper side of the femora are well marked and somewhat narrower than in the other, in which the coloration is typical. In both, the lower lip is spotted and the chin variegated with dusky. Neither of the specimens has a dorsal pale streak.

One of them measures, body 1·35 inch., which is only one tenth less than the distance between the vent and the metatarsal tubercle, the total of the hind-limb being 2 inch., while in a specimen of typical (half-webbed) *lymnocharis* of which the body is also only 1·35 inch., the distance between vent and metatarsal tubercle is 1·15 inch, but the total hind-limb is 2·2 inch. Thus in *lymnocharis var. pulla* the metatarsal bones are longer and the fourth toe on the contrary much shorter than in typical *lymnocharis*. In the former also, as previously noticed, the toes are nearly fully webbed, the web reaching to very near the tip of the third and fifth toes, but only to the base of the penultimate joint of the fourth toe.

The other specimen has the length of the body 1·3 inches, which is equal to the distance between the vent and the heel, and the total hind-limb is 2·17; thus very nearly equal to that of *lymnocharis*, only differing from it by the fuller webbing, the web reaching fully to the middle of the penultimate joint of the fourth toe. In this specimen also the tips of the toes are all remarkably swollen. All other characters are exactly as in typical *lymnocharis*.

These variations appear to me to indicate that they are progressive or undergoing certain changes according to the requirements of the animal, and that we are, therefore, not entitled to give them a specific value, unless they become permanent. I look upon this longer-limbed, shorter-toed and fuller-webbed hill form of *lymnocharis* as a small (*pulla*) local variety, possessing certain peculiarities, in exactly the same manner as the Andaman and Nicobar variety of the same species. (Comp. l. c. p. 142 et seq., and Proc. A. S. B. for June 1872, p. 102).

RANA PLICATELLA, n. sp. Pl. XI. Fig. 1.

Body moderately stout with longish hind-limbs and swollen tips to the toes.

Head large, snout obtuse, with the canthi rostrales rounded; nostrils lateral, oval, somewhat directed upwards, nearer to the tip of the snout than to the eye; eye large, prominent, its longer diameter is slightly more than

the distance between it and the nostril, but it is equal to the width of the upper side between the eyes. Tympanum naked, as large as the eye.

Head smooth above, hinder half of the eyelids tuberculated; body above with about eight longitudinal somewhat interrupted folds, with numerous small tubercles between them; limbs also smooth above, with the exception of the posterior halves of the tibiæ, which are tubercular; chin in front with a few scattered, minute tubercles, a few others exist on the side of the belly, and the hinder part of the sacral region is densely studded with small plicated tubercles; the remainder of the under side is smooth.

The length of the body is very nearly equal to the distance between the vent and the middle of the tarsus; the fore limb is equal to the distance from the tympanum to the groin. The first finger is scarcely shorter than the third, the second and fourth are subequal. There is a slight fold on the inner lower edge of the tarsus, and one along the outer edge of the fifth toe. The tarsus has a single, inner, elongated, marginal tubercle. The toes are about three-quarter webbed, the web reaching on the fourth toe to scarcely beyond the base of the third-ultimate joint; on all the other toes it extends to the last joint, but it is deeply emarginate between all of them. The tips of all the toes are much swollen; the length of the fourth measured from the base of the tarsus is slightly less than half the length of the body.

Lower jaw with two fang-like projections directed inward. Tongue elongate, much broader towards the tip than at the base, terminating with two moderately sized projections. Vomerine teeth in two short oblique converging series. Sacral diapophyses not dilated.

Above, greenish brown, with a dark band from the nostril through the eye, continuing behind it; limbs with numerous transverse dark bands; they are somewhat ill-defined on the upper arm, on the lower arm there are three or four very short ones, six on the femur, five somewhat more distant ones on each tibia, three on the tarsus, one on metatarsus and a few more on the outer-side of the toes. The hinder sides of the femora are densely and rather minutely variegated with dark brown; a horse-shoe shaped yellow mark, open below, round the anus; folds on the tarsus and outer toe also yellowish; lips indistinctly variegated with pale and dusky; lower side uniform white, except on the tibiæ, and on the feet, which are speckled with dark.

The only species which in some respects resembles the present form is *Rana porosissima*, Steindachner, from Angola (Novara Amphibiens, p. 18, pl. I, figs. 9-13), but it differs in the coloration of the limbs, in the smaller size of the tympanum, smaller vomerine ridges of teeth, in having the apophyses on the lower jaw scarcely enlarged, the tips of the toes not swollen &c.

EUPREPES OLIVACEUS.

The young (body 1 to 1·5 and tail 1·5 to 2 inches) are very differently coloured from the old. The snout and headshields are olivaceous, the posterior edges of all the shields being blackish; the whole body and limbs are blackish brown, with numerous rather close, transverse, greenish white or yellow stripes; tail and the entire lower side yellowish white, or quite yellow. In the adolescent and some old ones the pale transverse bands exist as remnants in the shape of transverse series of spots, but most adults become entirely olivaceous, with only the edges of the eyelids bright yellow.

GYMNODACTYLUS PULCHELLUS.

In the descriptions of this species it is usually stated that there are six dark, white edged bands across the body, but properly speaking the sixth band is situated on the base of the tail. Further, it is stated that a fold of the skin exists along the side of the body. This is in reality not the case, at least not in live specimens, but the shield-like scales of the lower side are separated from the granular upper surface by a row of conspicuously enlarged granular scales; this row becomes strongly prominent in spirit specimens, and gives the appearance of a fold.

As regards the position of the femoral pores the species is intermediate between *Cyrtodactylus* and *Gymnodactylus*, the pores lying first in a longitudinal fold and then extending flatly on the femora. This instance shews that *Cyrtodactylus*, (as likewise the present species), should be looked upon merely as a section of *Gymnodactylus*.

DRACO QUINQUEFASCIATUS.

A single male specimen measures: head and body 3·5 inch, tail imperfect, apparently about 5 inches. The hind limb is contained 1·33 times in the distance between it and the fore limb, the latter being somewhat shorter than the former. There are no enlarged tubercles on the head, but only a number of interspersed, slightly larger white scales at the sides of the neck, and a broad band of closer set ones across the occiput. The scales on the anterior part of the back are obsoletely keeled, on the posterior part they are perfectly smooth. On the wings scales are present along all the ribs, and in numerous longitudinal series on the basal half of the alar skin, while further on their number greatly diminishes, except again at the outer margin.

The specimen has only a very slight indication of a crest on the neck; the gular sack is very long and lanceolate, a dark band running at its posterior base across the lower neck. Chin dark spotted, like the body; tail also spotted at its base, but further on with brown bands. In all other respects the specimen agrees with Gray's characteristic description.

DRACO FIMBRIATUS.

Dumeril and Bibron, vol. iv, p. 448.—Gray, *Lizards*, p. 234.

A specimen from Penang exactly agrees with the one figured by Gray and Hardwicke in *Illust. of Indian Zoology* as *D. abbreviatus* from Singapore. The scales of the back are very small and almost quite smooth, with a series of larger ones on either side at the base of each wing. Günther (*Rept. Brit. India*, p. 123) says that no orbital or rather post-orbital, spine exists. This is a mistake, at least as far as male specimens are concerned. In these there are two very distinct post-orbital spines; they are well shewn in Gray and Hardwicke's figure. Dumeril and Bibron's minute description of the headshields from Javanese specimens also appears exactly to correspond with the structure of Singapore and Penang specimens.

General colour bronze brown; head, not including the nape, a zigzag undulating slightly variegated band across the neck, another across the shoulders, a third between the hind limbs, and a fourth, though less distinct one, across the middle of the body, pale bluish, a bluish black spot between the eyes; on the body are four irregular marks, each composed of a few blackish lines, and each enclosing along the middle of the back a somewhat elongated diamond-shaped figure.

Limbs with cross dark stripes, and bluish edges to all the front and hind sides. Wings above blackish with radiating bluish lines, below pale with a few scattered black spots. Tail banded with bronze and pale bluish. Chin variegated with dark; gular pouch tinged with blue and red, dusky at the base. Body below uniform yellowish white, with scattered bluish dusky spots, mostly conspicuous along the sides.

CALAMARIA STAHLKNECHTI, n. sp. Pl. XI. Fig. 2.

Body long, cylindrical, snout somewhat narrowly obtuse; total length 13.5 inches, of which the tail is 1.2 inch; rostral reaching to the upper surface of the head; frontals anteriorly narrower than posteriorly, laterally bent down, and in contact with first and second labials, the nasal being very small; occipital six-sided, with the anterior angle shorter and more obtuse than the posterior one, it is smaller than one occipital; each of the latter has an obtuse angle in front and behind, and both form an inwardly directed angle along the suture on either end; one præ- and one post-ocular; five upper labials, the third and fourth touch the orbit, the fifth is largest, in contact with the post-ocular and occipital; it is followed by a moderately sized shield which has quite the appearance of a sixth labial, and indeed the gape partially extends below this quasi-sixth labial; above this last extends a long temporal. Mental shield small; five lower labials; the first pair is the smallest, separated from each other, the fifth the largest. The first pair of chin-shields is largest, each being in contact with three labials and having a very

obtuse angle behind ; the shields of the second pair are only about half the size of the first, entirely separated from each other by two scale-like shields following each other, and by two other somewhat larger shields from the first very large ventral. Scales smooth, in thirteen rows ; ventrals 163, anal entire, subcaudals 22, the last single occupying the shortly pointed end of the tail.

Uniform iridescent brownish black above, the two outer series of scales on either side mostly white ; upper labials spotted with yellow, the fifth labial being almost entirely yellow. Lower side, beginning a short distance from the throat, with two or sometimes three ventral shields alternately yellowish white and black, the black colour encroaching laterally upwards upon the yellowish white lateral bands, and being longitudinally connected along the edges of the ventrals and subcaudals ; the latter have besides an interrupted blackish line along the middle, and the pale colour is tinged with vermilion. Possibly the red colour extended over the whole of the light coloration during the life of the snake.

The only specimen examined was sent to me with several other species by my friend Mr. Stahlknecht of Singapore ; he collected the same near Dilli on Sumatra.

In general aspect the species resembles *O. Linnæi*, but differs essentially in several points of its structure. It also does not agree with any of the species more recently described by Bleeker and Edeling, or figured by Ján.

OXYCALAMUS LONGICEPS.

A single specimen of this rare snake was in the Penang collection ; it measures seven inches of which the tail is one.

The following may be added to Cantor's and Günther's descriptions :

The rostral shield is of moderate size, reaching with its angle to the upper surface of the head ; anterior frontals small, each about one-third the size of a posterior ; the suture separating the two anterior frontals is only two-fifths of the length of the suture between the posterior frontals ; vertical six sided, the sides touching the supraciliaries being parallel to each other ; one supraciliary not quite as wide as half the width of the vertical ; occipitals nearly double the length of the vertical, reaching down on either side to the postocular ; nasal in a *single* shield.

Vent. 137, anal entire, subcaudals 29.

Uniform iridescent black above and below, many of the ventrals and subcaudals with paler posterior edges ; a pale yellowish spot on the fifth upper labial and a second one on each side of the throat.

SIMOTES BICATENATUS.

In several specimens, the dark dorsal band is divided by a pale reddish

line. A young specimen has only one præocular, and only the upper smaller temporal is in contact with the postoculars.

SIMOTES CRUENTATUS.

Comp. Proceed A. S. B. for August, 1872, p. 145.

This species agrees in general aspect and coloration with *S. bicatenatus*, but it has only seventeen rows of scales. One specimen in the collection has a small portion of a labial detached, forming a second (lower) præocular; it has very few dark blotches on the anterior ventrals; only two black spots on the tail, one at the root, the other near the tip.

SIMOTES CATENIFER, n. sp. Pl. XI. Fig. 3.

The body is short, stout, moderately compressed, the head large, conspicuously truncate in front.

Rostral shield well reaching to the upper surface of the head; anterior frontals considerably smaller than the posterior ones, both bent down at the sides; superciliaries narrower anteriorly than posteriorly; vertical large, six-sided, with a very obtuse angle in front, somewhat converging sides, and with nearly a right angle behind; one occipital is about the same size as the vertical, each reaches down to the superior postocular and is rather broadly truncate behind. Nostril between an anterior large and a posterior somewhat smaller shield; loreal squarish; two præ-oculars, the upper is long, while the lower has the appearance of being only a small detached portion of the fourth labial; two postoculars; temporals 1 + 2 + pl., the last is somewhat irregular and scale-like, the first obliquely in contact with both postoculars. Eight, rarely nine, upper labials, the fourth and fifth under the orbit, sometimes a small portion of the fourth is detached, touching the orbit as a separate shield. Mental shield small; nine lower labials, those of the first pair form a suture; anterior pair of chin-shields largest, each in contact with four labials; second pair much smaller, and separated by other two somewhat smaller pairs following each other from the first ventral. Scales smooth, in nineteen rows; ventrals 178 to 205, distinctly angular at the sides; anal entire, moderately enlarged; subcaudals bifid, in 57 pairs.

The general coloration of the upper side is sandy brownish; head with the usual dark brown markings; the first band crosses the eyes and reaches forward to the rostral; the second ascends across the angles of the mouth to the outer median edge of the occipitals; the third is thick, arrow-shaped, anteriorly prolonged to between the eyes. Body with twelve or thirteen dark cross bands, each composed of four confluent spots, the two dorsal ones being larger and darker; tail with four or five cross bands. Between each two of these bands the scales, following alternately each other, are partially blackish, forming three undulating cross lines in each interspace. The sides

along the ventrals are checkered with blackish brown; lower labials with their hinder edges blackish. Lower side dusky yellowish, tinged with red which passes into vermilion on the posterior half; every second or third ventral has a quadrangular black spot at each of the outer edges, the interposed edges being white, and the spots are somewhat more distant on the ventrals than on the caudals.

The total length (in two specimens) is 9·5 inch., the tail being 1·75. I have received one specimen from Penang and Mr. Wood-Mason lately obtained a second one from Jahore, North of Singapore.

This is the fourth species of a small group of *Simotes*, all of which are closely allied to each other and all belong to the Malay or Chinese fauna: they agree in their small size, short and stout body, in the form of the head-shields and in coloration. *S. Cochinchinensis*, Günther, has twenty-one rows of scales round the body. *S. brevicauda*, Steindachner, (Novara Rept. p. 61, pl. iii, figs. 13—14) has, like *catenifer*, nineteen rows of scales, but the occipitals and oculars are in the former somewhat differently shaped, the markings on the head are also somewhat different, and there are no lateral spots on the ventrals; in every other respect both species almost perfectly agree, as far as I can judge from the figure and description, and if I had not obtained two perfectly like specimens of *catenifer* from different localities, I would have hardly ventured to separate them as distinct. The fourth species is Ján's *S. ancoralis*, which has the black spots on the edges of the ventrals, but only seventeen rows of scales round the body and only one præ-ocular.

CYCLOPHIS TRICOLOR.

Schlegel, Phys. Serp. II, p. 187, pl. vii, figs. 16—18; *idem*, Dum. and Bibr.; Günther; Ján, Oph. Livr. 31, pl. vi, fig. 2.

One specimen measures 18·5 inches, of which the tail is 7 inch. Scales smooth, in fifteen rows, vent. 144, anal bifid, subcaudals 129. Greyish, or rather olivaceous, brown above, yellowish white below, a black streak from the nasal through the eye to the side of the neck, rapidly disappearing on the anterior part of the body. Each six-sided scale, above, has the anterior lateral margins pale, producing longitudinal zigzag pale lines; upper labials yellow; along the edges of the ventrals and sub-caudals runs an indistinct dusky line, and another interrupted one along the middle of the ventrals, these lines begin to appear a short distance from the neck, which is below and at the sides uniform yellowish.

The fine zigzag pale lines of the upper side are indicated in Ján's figure. Both in structure and coloration the Sumatra specimen agrees with Schlegel's figure and description, except that the head is a little more slender. This specimen had a large spider in the stomach. Schlegel's snake was

from Java and the species has, I think, not yet been recorded from anywhere else.

ABLABES FLAVICEPS, (*var.*), Günther.

Ann. and Mag. Nat. Hist. vol. XVIII, 1866, p. 26, pl. vi, fig. B.

One specimen agrees well with Günther's description and figure of this snake, but it has nine upper labials, the second being replaced by two, so that the 4th, 5th and 6th labials enter the orbit. The hinder chin-shields are almost in immediate contact with the first well marked ventral. Total length 16·7 inch., of which the tail is 5·5 inch., being somewhat obtuse at the end; scales in 17 rows, one præ- and one or two post-oculars, 150 ventrals, anal bifid, 70 subcaudals.

Head yellow, somewhat tinged with brown in front, a straight black streak through the eye and a white one along the upper labials. The general colour of the upper side is brown, powdered with grey; a light blue band begins on each side of the neck, continuing on each side of the back, the colour gradually turning to grey, but both bands remain tolerably distinct to the tip of the tail. On the front part of the body each is marked with squarish black spots along the inner edge, further on the spots become smaller, alternate in position on the two sides, but are somewhat removed from the internal margins towards the middle line. Below, yellowish, all the ventrals, (except those on the neck), with narrow blackish hind edges about the middle of the body, almost meeting in the centre, but further on the black becomes more confined to the outer margins, and on the subcaudals it forms a serrated black band on either side, as in *Ablabes melanocephalus*, to which the present species bears a very strong resemblance. Dr. Günther mentions in his specimen only the presence of a black spot on either side of the ventrals.

GONYOSOMA OXYCEPHALUM.

A very large specimen, measuring about five feet, has the scales round the body in 27 series; it is sea-green, the tail strongly tinged with rubescent brown, the sutures of the scales being blackish; the dark streak on the side of the head is very indistinct; upper labials whitish green.

DENDROPHIS CAUDOLINEATUS.

Dr. Günther when noticing my paper on Penang Reptiles in the Zool. Record for 1870, says that I described his *D. caudolineolatus* (from Ceylon), as *D. caudolineatus* of Gray. I should have hardly expected such a brief dismissal of the consideration of all other points connected with the identification of this species. Dr. Günther appears to have noticed merely my statement regarding the thirteen rows of scales round the body, and to this one charac-

ter he seems to have sacrificed everything else. Now the Penang species, of which I lately also received four beautifully preserved specimens from Sumatra, has only *thirteen rows of scales*. Cantor's description of the snake is admirable, and he gives also thirteen rows of scales. Dumeril and Bibron, when describing their *D. octolineatus*, also speak of only thirteen rows, and Ján (Ophid. Livr. 31, pl. II,) gives the same number of scales when figuring the species under Dum. and Bibron's name.

Thus the question to be determined is, whether Gray's type has thirteen or fifteen rows of scales round the body? If fifteen rows are present, we have to see whether we are entitled to regard this number as a normal or abnormal one in that particular specimen, that is, whether other specimens from the same locality have 13 or 15 rows of scales; for as far as other points of structure and coloration go, the Penang and Sumatra species is absolutely identical with Gray's *caudolineatus*. I have no Bornean specimens for comparison, so I can add nothing more towards the solution of the question.

The Ceylonese *D. caudolineolatus*, as far I can judge from the description and figure of it, differs in the structure of the præ-ocular, in the upper labials, and so very essentially in coloration, that I could not have thought of identifying the Penang *caudolineatus* with it.

OPHITES SUBCINCTUS.

One specimen measures eighteen inches, of which the tail is 3·25 inch. The general colour of the upper surface is black, slightly duller at the sides, dull olivaceous blackish below; front head above blackish brown; seventeen broad white rings round the body, the first on the neck, and four on the tail; the white of the rings is considerably more distinct on the anterior than on the posterior part of the body. The eight median rows of scales on the back are keeled; eight upper labials, regular on both sides.

OPHITES ALBOFUSCUS.

A remarkably slender snake, measuring 18·75 inches, of which the tail is 5·75 inch. It has seventeen rows of scales, all strongly keeled, the keels on the back being finely crenulated. The general structure exactly agrees with Günther's account of the species. The specimen has 241 ventrals, anal bifid, and 178 subcaudals, the last shield is single, very long and cylindrical.

The general colour is dark brown above, olivaceous white below; hind head and collar on neck very slightly olivaceous white tinged with yellow; body with twenty-six transverse white cross bands, some are imperfect, the intermediate brown bands of ground colour being first thrice, afterwards only twice as broad as the white ones. Tail with about twenty-six transverse white bands, several of them succeeding each other being often

confluent along the middle line, and all are about equally broad as the brown bands separating them; towards the tip of the tail the light coloration prevails and almost entirely suppresses the dark one.

Mr. Stahlknecht obtained only a single specimen near Dilli on Sumatra. Dumeril and Bibron also described a specimen from Sumatra; another one is reported by Dr. Günther as having been brought from Malabar, but as it was bought from a dealer, the locality is not considered reliable.

HIPSIRHINA [FERANIA] ALTERNANS, REUSS.

Eurostus alternans, apud Dum. and Bib., Herp. Gen., VII, p. 957.

Homalopsis decussata, Schlegel.—*Hipsirhina alternans* apud Ján, Ophid., Livr. 30 pl. vi, figs. 1 and 2.

One specimen measures: total length 8.25 inches, the tail being one inch. It has two anterior frontals, the first scarcely half as large as the posterior, vertical six-sided, much smaller than one occipital; one loreal, one præ-ocular, two post-oculars; seven upper labials, the fourth under the orbit; the two first lower labials are in contact; two pairs of chin-shields, the first forms a suture, the shields of the second pair are much smaller, diverging and with their upper pointed ends lying between the first chin-shields and the labials. There are twenty-six rows of scales immediately behind the head, twenty-two round the neck, below interrupted by the second ventral, and nineteen round the middle of the body, ventrals 157, anal bifid, subcaudals thirty-four, the first five entire, the last conical.

General colour brown; head, above, anteriorly with a few pale spots; back with narrow pale (yellowish) cross bands: the first passes over the hind-edges of the occipitals and is laterally bipartite, the next four are simple and complete, the following after these mostly interrupted along the centre, and after the middle of the body the bands become reduced to indistinct lateral spots. The sides of the body are marked with a series of pale yellow cross-bars, more than one scale broad, and are separated by equally broad bands of the general brown coloration; the lateral pale bands more or less encroach upon the ventrals, but the general colour of these latter is pale brown. Chin and upper labials spotted with yellow.

This coloration slightly differs in minor details from that given by Ján, but it agrees with it in all essential points.

The larger size of the occipitals as compared with the vertical, the smaller number of upper labials and of the scales round the middle of the body, and the coloration readily distinguish the present species from *F. Sieboldi*.*

* Günther, in Ann. and Mag. N. H., 1866, xviii, p. 28 and in Zool. Rec. for 1868 says, that Ján figured *F. Sieboldi* as *Hypsirhina Bocourti* (Iconograph. Livr. 28, pl. v, fig. 2). Ján's *H. Bocourti* has apparently only 23 or 25 rows of scales round the body,