

V. *An Annotated List of the Batrachians and Reptiles collected by the British Ornithologists' Union Expedition and the Wollaston Expedition in Dutch New Guinea.* By G. A. BOULENGER, F.R.S., F.Z.S.*

[Received October 30, 1913; Read February 3, 1914.]

[PLATES XXVII.-XXX.†]

INDEX.

	Page
Geographical Zoology: Dutch New Guinea	247
Development: Advanced Embryos of <i>Carettochelys insculpta</i>	253
Systematic:—	
BATRACHIANS.	
<i>Hyla wollastoni</i> , sp. n.	248
<i>Nyctimantis granti</i> , sp. n.	249
<i>Sphenophryne klossi</i> , sp. n.	251
<i>Liophryne kampeni</i> , sp. n.	252
REPTILES.	
<i>Parotosaurus</i> , n. sect. gen. <i>Lygosoma</i>	257
<i>Gymnodactylus mimikanus</i> , sp. n.	253
<i>Lygosoma nototœnia</i> , sp. n.	256
,, <i>mimikanum</i> , sp. n.	257
,, <i>klossi</i> , sp. n.	259
,, <i>tropidolepis</i> , sp. n.	260
,, <i>wollastoni</i> , sp. n.	261
,, <i>oligolepis</i> , sp. n.	261
,, <i>jeudii</i> , nom. n. for <i>L. tigrina</i> Lidth de Jeude, nec de Vis ..	261
<i>Apistocalamus grandis</i> , sp. n.	265

BATRACHIA.

HYLIDÆ.

1. *HYLA RHACOPHORUS* van Kampen.

Nova Guinea, ix., Zool. p. 32, pl. ii. fig. 1 (1913).

A single half-grown specimen from Canoe Camp, Setekwa R. (Wollaston Exped.).

2. *HYLA INFRAFRENATA* Gthr. (*DOLICHOPSIS* Cope).

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. and Camp I, Utakwa R. (Wollaston Exped.).

* Published by permission of the Trustees of the British Museum.

† For explanation of the Plates see pp. 267-274.

3. *HYLA MONTANA* Peters & Doria.

Camp I, Utaqua R., and Canoe Camp, Setekwa R. (Wollaston Exped.).

4. *HYLA FALLAX* Blgr.

Proc. Zool. Soc. 1898, p. 482, pl. xxxix. fig. 4.

Hylella boulengeri Méhely, Term. Füzet. Budapest, xx. 1897, p. 414, pl. x. fig. 8, is probably based on a young specimen of this species. Should it be so, the name *fallax* will nevertheless stand, as there is a previously described *Hyla boulengeri* (*Scytopsis boulengeri* Cope, Bull. U.S. Nat. Mus. no. 32, 1887, p. 12).

Two specimens from Launch Camp, Setekwa R. (Wollaston Exped.).

5. *HYLA THESAURENSIS* Peters.

Five specimens from Launch Camp, Setekwa R. (Wollaston Exped.).

6. *HYLA WOLLASTONI*, sp. n. (Pl. XXVII. fig. 1.)

Tongue oval, free and feebly notched behind. Vomerine teeth in two oblique groups between the choanæ. Head slightly broader than long; snout rounded, as long as the eye, with sharp canthus and not very oblique, concave lores; nostril nearer the tip of the snout than the eye; interorbital space nearly as broad as the upper eyelid; tympanum distinct, two-fifths the diameter of the eye. Fingers moderately elongate, with a rudiment of web, the disks as large as the tympanum; toes extensively webbed, the membrane reaching the disks of the third and fifth, two phalanges of fourth free, the disks a little smaller than those of the fingers; no tarsal fold. Tibio-tarsal articulation reaching beyond the tip of the snout; tibia as long as distance from occiput to vent. Skin smooth above, granular on the sides and beneath; a strong, straight glandular fold from behind the eye to above the shoulder; a subconical tubercle on the upper eyelid and others around the vent; a spur-like tubercle on the heel. Green above, with black spots forming an hour-glass marking from between the eyes to the sacrum; a fine whitish streak, edged with black beneath, from the tip of the snout along the canthus rostralis to the eye and along the fold behind the eye; lower parts yellowish white, with scattered small brown spots. Male with an external gular vocal sac.

From snout to vent 46 mm.

A single specimen from Camp VI, Utaqua R., 2100 ft. (Wollaston Exped.).

7. *HYLELLA CHLORONOTA* Blgr.

Ann. & Mag. N. H. (8) viii. 1911, p. 55.

A single specimen from Camp III, Utaqua R., 2500 ft. (Wollaston Exped.).

8. *NYCTIMANTIS GRANTI*, sp. n. (Pl. XXVII. figs. 2-2 b.)

Tongue circular, nicked and slightly free behind. Vomerine teeth in two transverse series between the large choanæ. Head moderate, much broader than long, the skin free from the skull; snout rounded, shorter than the orbit, with obtuse canthus and very oblique, slightly concave loreal region; interorbital space as broad as the upper eyelid; tympanum very indistinct, about one-third the diameter of the eye. Fingers much depressed, outer one-third webbed, disks two-thirds the diameter of the eye. Toes webbed to the disks of the third and fifth and to the penultimate phalanx of the fourth; a very small inner metatarsal tubercle; subarticular tubercles moderate. The tibio-tarsal articulation reaches the tip of the snout. Skin smooth above, granular on the belly and under the thighs; a strong curved fold above the tympanum. Purplish grey above, vermiculate with black; flanks and sides of thighs lilac; lower parts whitish.

From snout to vent 100 mm.

A single female from Camp VI a, Utakwa R., 3000 ft. (Wollaston Exped.).

Closely allied to *N. papua* Blgr., Ann. & Mag. N. H. (6) xix. 1897, p. 12, pl. i. fig. 5, from Mount Victoria, Owen Stanley Range.

Named in honour of the organiser of the Expeditions, Mr. W. R. Ogilvie-Grant.

RANIDÆ.

9. *RANA GRUNNIENS* Daud.

Six specimens from Mimika R. (B. O. U. Exped.).

These specimens agree well with Duméril and Bibron's description of the type from Amboyna, and with the single specimen, probably from Java (Lidth de Jeude Coll.), mentioned in the British Museum Catalogue of Batrachians. They differ from *R. macrodon* Kuhl, which van Kampen records from the Lorentz River in Dutch New Guinea, in the shorter fingers and in the absence of the tooth-like processes of the lower jaw, which are more or less developed in adults of that species.

10. *RANA MACROSCELIS* Blgr.

Ann. & Mag. N. H. (6) i. 1888, p. 345, and Ann. Mus. Genova, (2) xviii. 1898, p. 706; Roux, Abh. Senck. Ges. xxxiii. 1910, p. 226.

Several specimens from Mimika R. (B. O. U. Exped.).—One young from Camp no. 1, Setekwa R., 500 ft. (Wollaston Exped.).

I have pointed out, in 1898, that some specimens (males) may be covered above with large flat warts in addition to small granules. I believe van Kampen's *R. waigeensis*, Bijdr. Dierk. xix. p. 70, and Nova Guinea, ix., Zool. p. 459, pl. xi. fig. 2 (1913), to be founded on immature specimens of this species. The smaller

digital expansions and the absence of a glandular lateral fold in the young distinguish *R. macroscelis* from *R. arfaki* Meyer.

The habitat of *R. macroscelis* would embrace Waigiou and the Aru Islands in addition to New Guinea.

11. RANA PAPUA Less.

Mimika R. (B. O. U. Exped.).—Launch Camp and Canoe Camp, Setekwa R. to Camps III and VI, Utakwa R., 2100–2500 ft. (Wollaston Exped.).

If this species really varies to the extent described by van Kampen, Nova Guinea, Zool. v. p. 164 (1906), and by Roux, Abh. Senck. Ges. xxxiii. 1910, p. 224, it is difficult to conceive how *R. temporalis* Gthr. and a few allied Indo-Malay and Papuan frogs are to be separated from it, and the two following would also have to be lowered to the rank of varieties.

12. RANA GRISEA van Kampen.

Nova Guinea, ix., Zool. p. 460, pl. xi. fig. 3 (1913).

Three specimens, males, from Utakwa R., Camps III and VI_a, 2500–3000 ft. (Wollaston Exped.).

Agree well enough in essentials with the description, drawn up from a single female specimen from the Went Mountains, circa 4200 ft., and differ from all the males referred by me to *R. papua* in being provided with external vocal sacs and humeral glands.

Vomerine teeth extending a little beyond the posterior border of the choanæ. Head as long as broad; snout rather obtuse, as long as the eye; interorbital space narrower than the upper eyelid; tympanum two-thirds the diameter of the eye. Tibio-tarsal articulation reaching beyond the tip of the snout; tibia as long as or a little shorter than the distance from occiput to vent. Skin of back nearly smooth or finely granulate, with a few scattered warts. Hinder side of thighs dark, not marbled or indistinctly marbled. From snout to vent 70 to 80 mm.

13. RANA DÆMELI Sldr.

Rana novæ-guineæ van Kampen, Nova Guinea, ix., Zool. p. 37, pl. ii. fig. 5 (1909).

Three specimens from Mimika R. (B. O. U. Exped.).

Distinguished from *R. papua* by shorter hind limbs (tibia about half length of head and body).

The specimens I have examined from Port Moresby and Queensland (Cape York) belong to this form.

14. CORNUFER CORRUGATUS A. Dum.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

ENGYSTOMATIDÆ.

15. SPHENOPHRYNE CORNUTA Peters & Doria.

Four specimens, Launch Camp, Setekwa R. (Wollaston Exped.).

I regard *Chaperina ceratophthalmus* van Kampen, Nova Guinea, ix., Zool. p. 43, pl. ii. fig. 8 (1909), as identical with this species. Dr. Gestro informs me that the type preserved in the Genoa Museum has the third toe longer than the fifth; the description and figure given by Peters and Doria are therefore not quite correct.

16. SPHENOPHRYNE KLOSSI, sp. n. (Pl. XXVII. figs. 3-3 b.)

Tongue entire. Head broader than long; snout obtusely pointed, projecting and obliquely truncate at the end, as long as the eye, with strong canthus and moderately oblique, slightly concave lores; interorbital space broader than the upper eyelid; tympanum moderately distinct, about two-thirds the diameter of the eye. Fingers rather short, terminating in very small disks; first finger not extending as far as second; toes free, with small disks, which are, however, larger than those of the fingers; subarticular and metatarsal tubercles not very prominent. The tibio-tarsal articulation reaches between the eye and the tip of the snout. Skin smooth, with a few small warts above and two chevron-shaped fine glandular ridges on the scapular region, pointing towards each other (><); a narrow glandular fold from behind the eye to the side of the body; a fine glandular ridge along the middle of the back. Yellow above, with an interrupted blackish bar between the eyes, another, Λ -shaped, on the scapular region, and a third on the sacral region; loreal and temporal regions blackish brown, this shade sometimes continued to the side of the body below the glandular lateral fold; limbs with dark brown cross-bars; hinder side of thighs blackish brown; lower parts white, throat and lower surface of hind limbs mottled with brown; a fine white line from the tip of the snout to the gular region.

From snout to vent 42 mm.

Two specimens from Launch Camp, Setekwa R. (Wollaston Exped.).

Named after Mr. C. B. Kloss, who collected most of the Batrachians and Reptiles on the Wollaston Expedition.

17. COPHIXALUS CRUCIFER van Kampen.

Nova Guinea, ix., Zool. p. 462, pl. xi. fig. 6 (1913).

A single small specimen from Launch Camp, Setekwa R. (Wollaston Exped.).

18. CHAPERINA BASIPALMATA van Kampen.

Op. cit. v. p. 168, pl. vi. fig. 3 (1906).

A single specimen from Mimika R. (B. O. U. Exped.).

19. LIOPHYRNE KAMPENI, sp. n. (Pl. XXVII. figs. 4, 4 a.)

Tongue large, covering the whole floor of the mouth, grooved and nicked behind. Two long oblique series of vomero-palatine teeth behind the choanæ. Head much broader than long; snout shorter than the orbit, rounded, with obtuse canthus and oblique, concave loreal region; nostril a little nearer the tip of the snout than the eye; interorbital space as broad as the upper eyelid; tympanum about half the diameter of the eye. Fingers and toes moderately elongate, the tips dilated into small disks; first finger shorter than second; subarticular and metatarsal tubercles feebly prominent. The tibio-tarsal articulation reaches the shoulder. Uniform dark brown above, pale brown beneath.

From snout to vent 58 mm.

A single specimen from the Mimika R. (B. O. U. Exped.).

REPTILIA.**CHELONIA.****CHELYDIDÆ.**

1. EMYDURA SUBGLOBOSA Krefft.

Two specimens from Mimika R. (B. O. U. Exped.).—Three from Launch Camp, Setekwa R. (Wollaston Exped.).

Intergular shield $1\frac{1}{3}$ to 2 times as long as broad, its width $\frac{3}{4}$ to $1\frac{1}{3}$ times that of gular. Nuchal $1\frac{2}{3}$ to $2\frac{1}{2}$ times as long as broad, absent in one specimen. Width of bridge $2\frac{4}{5}$ to $3\frac{1}{8}$ times in length of plastron. A sharply defined yellow streak from the end of the snout, through the eye, to above the tympanum.

2. EMYDURA NOVÆ-GUINÆÆ Meyer.

Four specimens from Mimika R. (B. O. U. Exped.).—Three from Launch Camp, Setekwa R., and one from Canoe Camp, Setekwa R. (Wollaston Exped.).—I have also examined one from Fak-Fak, Dutch New Guinea (collected by A. E. Pratt).

Intergular shield $1\frac{2}{3}$ to $3\frac{1}{2}$ times as long as broad, its width 1 to $2\frac{1}{2}$ times that of gular. Nuchal $1\frac{1}{3}$ to 2 times as long as broad, absent in one specimen. Width of bridge 3 times in length of plastron. A more or less distinct yellowish streak from behind the eye to above the tympanum, uniting with its fellow on the snout in front of the interorbital region, but not extending to the nostril. A black spot on each vertebral and costal shield.

The specimen from Canoe Camp, Setekwa R., was found by Mr. Kloss to contain three eggs: longitudinal diameter 55 mm., transverse diameter 30.

Dr. Nelly de Rooy's identification of a male specimen as *E. macquariæ* Gray (Nova

Guinea, v., Zool. p. 382, pls. xvii. & xviii. fig. 1) stands in need of revision in view of the individual variations shown by the above series of specimens indubitably belonging to *E. novæ-guinææ*.

CARETTOCHELYDIDÆ.

3. CARETTOCHELYS INSCULPTA Ramsay. (Pl. XXVIII. figs. 1-1 b.)

Two small specimens, with umbilical cord, removed from the egg, from Launch Camp and Canoe Camp, Setekwa R. (Wollaston Exped.).

Length of shell 50 mm. A distinct rostral egg-wart. Six or seven neural plates appearing as a series of prominent, oval or pear-shaped, perfectly smooth tubercles; costal plates granulate, in contact in their proximal half; margin of the carapace soft, serrated, strongly unciniate on the sides, with thickenings corresponding with the marginal shields. Epiplastron and mesoplastron in contact with each other and with the hyoplastron; hyoplastra and hypoplastra narrow, widely separated from each other, the latter in contact with the xiphoplastra. Neck extremely short, as in a *Chelone*. Limbs with two strong claws, with the digits quite distinct and united to the tips by a very broad web; fore limb longer than the hind limb, with the distal part (two phalanges of the third, fourth, and fifth fingers) folding at an angle to the rest of the hand, somewhat after the fashion of the wings of a bat.

TRIONYCHIDÆ.

4. PELOCHELYS CANTORIS Gray.

A young specimen from the Setekwa R. (Wollaston Exped.).

LACERTILIA.

GECKONIDÆ.

5. GYMNODACTYLUS MARMORATUS Kuhl.

Mimika R. (B. O. U. Exped.).—Canoe Camp and Launch Camp, Setekwa R. (Wollaston Exped.).

6. GYMNODACTYLUS MIMIKANUS, sp. n. (Pl. XXVIII. figs. 2-2 b.)

Head large; snout longer than the diameter of the orbit, which equals its distance from the nostril, and equals or a little exceeds its distance from the ear-opening; forehead and postnasal region concave; ear-opening roundish, about one-third the diameter of the eye. Body and limbs rather elongate. Digits strong, slightly depressed at the base, strongly compressed in the raised portion, with well-developed transverse lamellæ inferiorly. Head granulate, with small round tubercles on the

occipital and temporal regions. Rostral twice as broad as deep, with median cleft above; supranasal separated from its fellow by three series of granules; nostril pierced between the rostral, the supranasal, the first upper labial, and four or five granular scales; 11 or 12 upper and as many lower labials; symphyisial triangular or pentagonal; two or three pairs of chin-shields, median largest and forming a suture behind the symphyisial; throat minutely granulate. Body and limbs covered above with very minute flat granules intermixed with numerous feebly keeled or conical tubercles; a series of enlarged conical tubercles on a fold along each side of the body, from axilla to groin. Ventral region covered with very small, smooth, juxtaposed or subimbricate flat scales. Male with an angular series of 7 to 9 præanal pores, widely separated from a series of 10 to 12 femoral pores on each side; no præanal groove. Tail cylindrical, tapering, covered with very small flat scales, with a ventral series of transversely enlarged scales; conical tubercles form transverse series on the basal part of the tail. Pale brown above, with eight or nine dark brown transverse lines, the first crescentic and extending from eye to eye across the nape, the second also crescentic and extending from ear to ear, the others straight, oblique, or wavy; intact tail blackish brown, with pale brown or whitish cross-bars above; lower parts white or pale brownish.

	♂.	♀*.
Total length	220	? mm.
Head	26	28
Width of head	18	19
Body	64	72
Fore limb	35	35
Hind limb	43	44
Tail	130	?

Five specimens from the Mimika R. (B. O. U. Exped.).

Nearly related to *G. lorice* Blgr. (Ann. Mus. Genova, [2] xviii. 1898, p. 695, pl. vi.); distinguished chiefly by the finer granules, the more prominent tubercles, especially on the lateral fold, the interrupted series of præanal and femoral pores, and the longer tail with transversely enlarged scales inferiorly.

7. *GEHYRA INTERSTITIALIS* Oudemans.

One specimen from Launch Camp, Setekwa R. (Wollaston Exped.).

8. *GECKO VITTATUS* Houtt.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

* Tail injured.

A G A M I D Æ.

9. GONYOCEPHALUS MODESTUS Meyer.

Mimika R. (B. O. U. Exped.).—Camp VI a, Utakwa R., 3000 ft. (Wollaston Exped.).

10. GONYOCEPHALUS AURITUS Meyer. (Pl. XXVIII. fig. 3.)

One specimen from Mimika R. (B. O. U. Exped.).—One from Canoe Camp, Setekwa R., and two from Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

I have also examined a specimen from Fak-Fak, Dutch New Guinea, from Mr. A. E. Pratt's Collection.

The large blackish spot, within a light circle, which involves the ear, whence the name proposed by Dr. A. B. Meyer, is very well marked in some of the specimens, whilst in others it is broken up into smaller spots. The lobes of the nuchal crest are detached from one another at the base and may be quite as long as the diameter of the large tympanum; dorsal crest lower than the nuchal, but very distinct. Gular scales smooth, ventrals strongly keeled. Gular appendage very large in adults of both sexes. The largest specimen measures 125 mm. from snout to vent, tail 340.

11. GONYOCEPHALUS NIGRIGULARIS Meyer. (Pl. XXVIII. fig. 4.)

I refer to this species six specimens from the Mimika R. (B. O. U. Exped.), and three from Launch Camp, Setekwa R. (Wollaston Exped.), which agree in all essentials with the very short description given by A. B. Meyer.

This species differs from *G. godeffroyi* Peters, to which it is closely allied, by the perfectly smooth gular scales and the more feeble dorsal crest, which, on the tail, is reduced to a mere serrature. Gular sac small. The coloration varies, but in most adult specimens the top of the back, including the crest, bears seven or eight black cross-bars separated by narrower greenish-white interspaces, and each black bar is divided in the middle by a short and narrow greenish-white bar; lobes of the nuchal crest all greenish white; lower surface of neck black or dark greyish olive behind the gular sac.

I append measurements of adult male and female specimens:—

	♂.	♀.
Total length	880	685 mm.
Head	70	47
Width of head	50	27
Body	160	128
Fore limb	105	80
Hind limb	175	135
Tail	650	510

12. GONYOCEPHALUS DILOPHUS D. & B.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

VARANIDÆ.

13. VARANUS SALVADORII Peters & Doria.

A head of this rare Monitor from Camp II, Setekwa R., 1800 ft. (Wollaston Exped.).

14. VARANUS INDICUS Daud.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

15. VARANUS PRASINUS Schleg.

Mimika R. (B. O. U. Exped.).

SCINCIDÆ.

16. LYGOSOMA NOTOTÆNIA, sp. n. (Pl. XXIX. figs. 1, 1 a.)

Section *Hinulia*. Body moderately elongate, limbs rather short; the distance between the end of the snout and the fore limb is contained once and a half in the distance between axilla and groin. Snout short, obtuse. Lower eyelid scaly. Nostril pierced in a single nasal; no supranasal; frontonasal broader than long, forming a suture with the rostral and with the frontal; latter as long as frontoparietals and interparietal together, in contact with the two anterior supraoculars; four supraoculars; eight supraciliaries; frontoparietals and interparietal distinct, subequal in size; parietals forming a suture behind the interparietal; three pairs of nuchals; fifth upper labial below the centre of the eye. Ear-opening oval, smaller than the eye-opening; no auricular lobules. 24 smooth scales round the body, those of the two vertebral series much enlarged, more than twice as broad as long. A pair of large præanals. The adpressed limbs overlap. Digits rather short, feebly compressed; subdigital lamellæ smooth, 18 under the fourth toe. Tail thick. Reddish brown above, with a light, dark-edged dorso-lateral streak, and a broad blackish-brown vertebral streak formed of confluent spots; sides of head and body, and limbs blackish brown, with white dots; lower parts white.

Total length	110 mm.
Head	12
Width of head	8
Body	36
Fore limb	14
Hind limb	19
Tail (reproduced)	62

A single specimen from Launch Camp, Setekwa R. (Wollaston Exped.).

This species stands nearest to *L. nigrolineatum* Blgr. (Ann. & Mag. N. H. [6] xix. 1897, p. 6, pl. i. fig. 1), differing in the rather shorter body, the number of nuchal shields (three pairs instead of six) and of scales round the body (24 instead of 28), and the presence of a dark vertebral streak.

17. *LYGOSOMA UNDULATUM* Peters & Doria.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

18. *LYGOSOMA MELANOPOGON* D. & B.

Mimika R. (B. O. U. Exped.).—Canoe Camp, Setekwa R. (Wollaston Exped.).

19. *LYGOSOMA VARIEGATUM* Peters.

Mimika R. (B. O. U. Exped.).—Launch Camp and Canoe Camp, Setekwa R., and Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

20. *LYGOSOMA JOBIENSE* Meyer.

Mimika R. (B. O. U. Exped.).—Canoe Camp, Setekwa R. (Wollaston Exped.).

21. *LYGOSOMA MIMIKANUM*, sp. n. (Pl. XXIX. figs. 2, 2 a.)

Section *Parotosaurus* *. Habit rather stout; the distance between the end of the snout and the fore limb once and one-third the distance between axilla and groin. Snout short, obtuse. Lower eyelid scaly. Nostril pierced in a single nasal; a very small triangular supranasal between the frontonasal, the nasal, and the postnasal, which is single; frontonasal broader than long, forming a concave suture with the rostral and a convex suture with the præfrontal, which is single (probably an individual anomaly); frontal much narrowed posteriorly, as long as frontoparietals and interparietal together, in contact with the first supraciliary and the first three supraoculars; seven supraoculars, first longest, seventh very small; twelve supraciliaries, first largest; frontoparietals and interparietal distinct, the former a little larger than the latter; parietals forming a suture behind the interparietal; three pairs of nuchals; fifth, sixth, and seventh upper labials below the eye. Ear-opening large, oval, smaller than the eye-opening, the tympanum rather deeply sunk; no auricular lobules. 40 smooth scales round the middle of the body, dorsals largest, laterals smallest. A pair of enlarged præanals. The hind limb reaches the elbow of the adpressed fore limb. Digits rather short, compressed; 15 or 16 lamellæ under the fourth toe, mostly obtusely keeled. Reddish brown above, with small brown spots forming numerous

* Nom. n. for a Section connecting *Hinulia* and *Otosaurus*, and comprising *L. annectens* Blgr. (Ann. Mus. Genova, [2] xviii. 1898, p. 698) and *L. granulatum* Blgr. (P. Z. S. 1903, ii. p. 126).

irregular transverse series on the back; a dark brown blotch below and behind the eye; lips white, with a few dark brown spots; lower parts white.

Total length	195 mm.
Head	21
Width of head	14
Body	69
Fore limb	24
Hind limb	38
Tail (reproduced)	105

A single specimen from the Mimika R. (B. O. U. Exped.).

The three species of the Section *Parotosaurus*, all three from New Guinea, are easily distinguished as follows:—

Tympanum rather deeply sunk; seven supraoculars; three pairs of nuchals; 40 smooth scales round body	<i>L. mimikanum</i> , Blgr.
Tympanum scarcely sunk; nine supraoculars; no nuchals; 50 smooth scales round body	<i>L. annectens</i> , Blgr.
Tympanum scarcely sunk; seven supraoculars; no nuchals; 36 scales round body, dorsals and laterals rough with granular asperities . . .	<i>L. granulatum</i> , Blgr.

22. *LYGOSOMA SMARAGDINUM* Less.

Mimika R. (B. O. U. Exped.).

23. *LYGOSOMA LONGICEPS* Blgr.

Launch Camp, Setekwa R. (Wollaston Exped.).

24. *LYGOSOMA SEMONI* Oudemans.

Launch Camp, Setekwa R. (Wollaston Exped.).

The lower parts may be of a lovely pink colour.

25. *LYGOSOMA FUSCUM* D. & B.

Mimika R. (B. O. U. Exped.).—Launch Camp and Canoe Camp, Setekwa R. (Wollaston Exped.).

Some of the specimens from the Mimika River belong to the typical form, others from the same locality as well as most of those from the Setekwa R. may be referred to the var. *tricarinatum* (*Heteropus tricarinatus* Meyer, Sauvage). In these the dorsal scales are strongly tricarinate, and the males have the throat and sides of the neck blue, with black longitudinal lines.

26. *LYGOSOMA CYANURUM* Less.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).—Observation Point and Camp III, Utakwa R., 2500–3000 ft. (Wollaston Exped.).

27. *LYGOSOMA CYANOGASTER* Less.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

28. *LYGOSOMA IRIDESCENS* Blgr.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

29. *LYGOSOMA BAUDINII* D. & B.

Mimika R. (B. O. U. Exped.).—Launch Camp and Canoe Camp, Setekwa R. (Wollaston Exped.).—Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

30. *LYGOSOMA KLOSSI*, sp. n. (Pl. XXIX. figs. 3, 3 a.)

Section *Emoa*. Habit lacertiform; the distance between the end of the snout and the fore limb is contained once and one-fourth to once and one-third in the distance between axilla and groin. Snout rather elongate, obtusely acuminate. Lower eyelid with an undivided transparent disk. Nostril pierced between three shields—a nasal, a postnasal, and a supranasal; frontonasal much broader than long, forming a broad suture with the rostral and a narrower one with the frontal; latter a little longer than the frontoparietal, in contact with the first and second supraoculars; four supraoculars; seven supraciliaries; frontoparietals and interparietal fused to a single large shield; parietals forming a long suture behind the latter; a pair of nuchals and a pair of temporals border the parietals; six or seven labials anterior to the large subocular. Ear-opening oval, larger than the transparent palpebral disk, with one or two small projecting lobules anteriorly. 30 or 32 scales round the middle of the body, dorsals with five or seven feeble keels; dorsal scales largest, laterals smallest. Marginal præanals scarcely enlarged. The hind limb reaches the axil. Digits rather elongate, feebly compressed; subdigital lamellæ smooth, 40 to 42 under the fourth toe. Brown above, strongly iridescent, with black spots, with or without scattered whitish spots occupying a whole scale; a black band on each side from the eye to the shoulder; lower parts greenish, with scattered black dots.

Total length	290 mm.
Head	23
Width of head	13
Body	67
Fore limb	38
Hind limb	52
Tail	200

Two specimens from Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

Apart from the coloration this species is distinguished from *L. cyanurum*, *L. baudinii*, and other allies by the number (6 or 7) of anterior upper labial shields and by the numerous feeble keels on the dorsal scales.

31. *LYGOSOMA TROPIDOLEPIS*, sp. n. (Pl. XXIX. figs. 4, 4 a.)

Section *Emoa*. Habit lacertiform; the distance between the end of the snout and the fore limb is contained once to once and one-fourth in the distance between axilla and groin. Snout moderately elongate, obtusely acuminate. Lower eyelid with an undivided transparent disk. Nostril pierced between three shields—a nasal, a postnasal, and a supranasal; frontonasal much broader than long, forming a broad suture with the rostral and a narrower one with the frontal; latter a little longer than the frontoparietal, in contact with the first and second supraoculars; four supraoculars; seven or eight supraciliaries; frontoparietals and interparietal fused to a single large shield; parietals forming a long suture behind the latter; a pair of nuchals and one or two pairs of temporals border the parietals; four or five labials anterior to the large subocular. Ear-opening rounded, a little larger than the transparent palpebral disk, with small projecting lobules in front and sometimes all round. 34 or 36 scales round the middle of the body, dorsals and laterals with two to five (mostly three) strong sharp keels; dorsal scales largest, laterals smallest. Marginal præanals not enlarged. The hind limb reaches the axilla or the shoulder. Digits rather elongate, cylindrical at the base, compressed at the end; subdigital lamellæ smooth, 34 to 38 under the fourth toe. Dark brown above, strongly iridescent, with numerous small black spots; an ill-defined lighter dorso-lateral streak may be present; sides with more or less numerous black spots with whitish centres; upper and lower labial shields each with a small black spot; lower parts whitish.

Total length	195 mm.
Head	19
Width of head	12
Body	53
Fore limb	25
Hind limb	39
Tail	123

Five specimens from the Mimika R. (B. O. U. Exped.), and two from each of the following localities:—Launch Camp, Setekwa R.; Canoe Camp, Setekwa R.; Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

L. tropidolepis differs from all its congeners of the section *Emoa* in the strongly keeled scales.

32. *LYGOSOMA RUFESCENS* Shaw.

Mimika R. (B. O. U. Exped.).—Launch Camp, Setekwa R. (Wollaston Exped.).

33. *LYGOSOMA MUELLERI* Schleg.

Mimika R. (B. O. U. Exped.).

34. *LYGOSOMA WOLLASTONI*, sp. n. (Pl. XXX. fig. 1.)

Section *Lygosoma*. Body elongate, limbs short; the distance between the end of the snout and the fore limb is contained once and two-thirds in the distance between axilla and groin. Head small, much flattened; snout moderate, obtusely acuminate. Lower eyelid scaly. Nostril pierced in a single nasal; no supranasal; rostral narrowed and produced posteriorly between the nasals, forming a suture with the frontonasal, which is a little broader than long; præfrontals rather small and narrowly separated from each other; frontal a little longer than broad, broader than the supraocular region, as large as frontoparietals and interparietal together, in contact with the first supraciliary and the first supraocular and a small portion of the second; four supraoculars; seven or eight supraciliaries; frontoparietals and interparietal distinct, subequal; parietals forming a suture behind the interparietal; a pair of feebly enlarged nuchals; fifth and sixth labials below the eye. Ear-opening oval, a little smaller than the eye-opening; no auricular lobules. 32 smooth scales round the middle of the body, the two vertebral series transversely enlarged. A pair of enlarged præanals. Limbs widely separated when pressed against the body. Digits short, feebly compressed; 17 lamellæ under the fourth toe. Tail thick. Dark brown above, sides with lighter mottling; lower parts yellowish white, this colour extending to the last two upper labials.

Total length	245 mm.
Head	18
Width of head	13
Body	72
Fore limb	18
Hind limb	26
Tail	155

A single specimen from the Mimika R. (B. O. U. Exped.).

Closely allied to *L. muelleri* Schleg. and especially *L. pratti* Blgr. (P. Z. S. 1903, ii. p. 128, pl. xiii. fig. 1), differing from the latter in the number of scales round the body (32 instead of 36) and of lamellar scales under the fourth toe (17 instead of 13 or 14). *L. loriæ* Blgr. (Ann. Mus. Genova, [2] xviii. 1898, p. 698, pl. vii. fig. 1) is also related, differing in the narrower frontal, in contact with nearly the whole inner border of the second supraocular, in the narrower suture between the rostral and the frontonasal, and in the less flattened head. As I have previously pointed out (P. Z. S. 1903, ii. p. 128), *L. loriæ* connects the sections *Hinulia* and *Lygosoma*. Another species connecting these two sections is *L. jeudii*, nom. n. (*L. tigrina* Lidth de Jeude, Notes Leyd. Mus. xviii. 1897, p. 250, pl. vi. fig. 1, non De Vis).

35. *LYGOSOMA OLIGOLEPIS*, sp. n. (Pl. XXX. figs. 2, 2 a.)

Section *Lygosoma*. Body elongate, limbs short; the distance between the end of

the snout and the fore limb is contained twice in the distance from snout to vent. Head small; snout moderate, obtusely acuminate. Lower eyelid scaly. Nostril pierced in a single nasal; no supranasal; rostral narrowed and produced posteriorly between the nasals, forming a suture with the frontonasal, which is broader than long; præfrontals rather small and narrowly separated from each other; frontal longer than broad, broader than the supraocular region, smaller than the frontoparietals and interparietal together, in contact with the first supraciliary and the first and second supraoculars; four supraoculars; seven supraciliaries; frontoparietals and interparietal distinct, subequal; parietals forming a suture behind the interparietal; three to five pairs of very broad nuchals. Ear-opening oval, a little smaller than the eye-opening; no auricular lobules. 24 smooth scales round the middle of the body, the two vertebral series transversely enlarged. A pair of enlarged præanals. Limbs very widely separated when pressed against the body. Digits short, feebly compressed; 12 or 13 lamellæ under the fourth toe. Tail thick. Dark brown above, speckled or closely spotted with yellowish brown; lips dark brown; yellowish beneath, throat, sides, and tail spotted with dark brown.

Total length	115 mm.
Head	12
Width of head	7
Body	43
Fore limb	10
Hind limb	13
Tail (reproduced)	60

Two specimens from the Mimika R. (B. O. U. Exped.).

Resembles *L. loriae* in general appearance, scaling, and coloration, but differs in the rather longer body and shorter limbs, the presence of several pairs of nuchals, and 24 scales round the body instead of 30 or 32.

36. TRIBOLONOTUS NOVÆ-GUINEÆ Schleg.

Four specimens from the Mimika R. (B. O. U. Exped.).

OPHIDIA.

BOIDÆ.

37. PYTHON AMETHYSTINUS Schn.

Launch Camp, Setekwa R. (Wollaston Exped.).

38. CHONDROPYTHON VIRIDIS Schleg.

Mimika R. (B. O. U. Exped.).—Canoe Camp, Setekwa R. (Wollaston Exped.).

39. *ENYGRUS CARINATUS* Schn.

Mimika R. (B. O. U. Exped.).

40. *ENYGRUS ASPER* Gthr.

Mimika R. (B. O. U. Exped.).

COLUBRIDÆ.

41. *ACROCHORDUS JAVANICUS* Hornst.

Mimika R. (B. O. U. Exped.).

42. *TROPIDONOTUS PICTURATUS* Schleg.

One specimen from the Mimika R. (B. O. U. Exped.), two from Canoe Camp, and one from Launch Camp, Setekwa R. (Wollaston Exped.).

Particulars of these specimens:—

	Upp. Labials.	Lab. enter. eye.	Ant. tempor.	Ventrals.	Subcaudals.
♀. Mimika. . .	8-9	4.5-5.6	1-2	132	49
„ Canoe Camp .	8	4.5	2	132	48
„ „ . . .	8	4.5	1	135	47
„ Launch Camp.	8	3.4.5	2	130	50

The last specimen, the largest (620 mm., tail 120), differs from typical examples in the absence of the black streaks on the head, which is uniform brownish above and whitish beneath, with black lines on the sutures between the upper labial shields; back with black spots or cross-bars, some of which are oblique; sides of belly and lower surface of tail dotted with black. Represents the *T. novæ-guineæ* v. Lidth de Jeude (Nova Guinea, ix., Zool. p. 271, 1911), which should probably rank as a variety of *T. picturatus*.

43. *TROPIDONOTUS MAIRII* Gray.

Bouleng. Ann. Mus. Genova, (2) xviii. 1898, p. 703.

Five specimens from the Mimika R. (B. O. U. Exped.).—Three from Camp III and two from Camp VI, Utakwa R., 2100-2500 ft. (Wollaston Exped.).

	Upp. Labials.	Lab. enter. eye.	Ant. tempor.	Ventrals.	Subcaudals.
♂. Mimika . . .	8	3.4.5	2	149	102
♀. „ . . .	8	3.4.5	1-2	149	96
„ „ . . .	9	4.5.6	1	150	?
„ „ . . .	8-9	3.4.4-4.5.6	1	146	89
Yg. „ . . .	8	3.4.5	2	150	?
♂. Camp III . .	9	4.5.6	2	141	90
♀. „ . . .	9	4.5.6	1	143	?
Yg. „ . . .	9	4.5.6	2	149	79
♀. Camp VI. . .	9	4.5.6	2-1	137	84
„ „ . . .	9	4.5.6	2	145	91

44. TROPIDONOTUS DORLÆ Blgr.

T. c. p. 704.

This species, easily distinguished by the number of rows of scales (17 instead of 15), is represented by four specimens from the Mimika R. (B. O. U. Exped.).

	Upp. Labials.	Lab. enter. eye.	Ant. tempor.	Ventrals.	Subcaudals.
♀	8	3.4.5	1	151	?
„	8	4.5	2	153	83
„	8	3.4.5-4.5	2-1	150	80
Yg.	8	3.4.5	2	156	85

45. STEGONOTUS CUCULLATUS D. & B.

Mimika R. (B. O. U. Exped.).

46. STEGONOTUS MODESTUS Schleg.

Launch Camp, Setekwa R., and Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

47. STEGONOTUS PLUMBEUS Macleay.

A single specimen, 144 cm. long, from the Launch Camp (Wollaston Exped.), agrees with the definition of this species, founded on a specimen from the Herbert R., Queensland, in having nine upper labials, third, fourth, and fifth entering the eye; but in all other respects it agrees so well with *S. modestus* that it does not appear to me improbable that *S. plumbeus* may have to be united with *S. modestus*. Ventrals 211; subcaudals 67 pairs.

48. DENDROPHIS CALLIGASTER Gthr.

Mimika R. (B. O. U. Exped.).—Camp VI *a*, Utakwa R., 3000 ft. (Wollaston Exped.).

49. DENDROPHIS LORENTZII van Lidth de Jeude.

Nova Guinea, ix., Zool. p. 274, pl. viii. fig. 2 (1911).

Mimika R. (B. O. U. Exped.).—Two female specimens: ventrals 163, 159; caudals 123, 121.

50. DENDROPHIS LINEOLATUS Hombr. & Jacq.

Mimika R. (B. O. U. Exped.).—Canoe Camp, Setekwa R. (Wollaston Exped.).

Dendrophis elegans Douglas Ogilby, Rec. Austral. Mus. i. 1891, p. 199, and Lidth de Jeude, Nova Guinea, ix., Zool. p. 275, pl. viii. fig. 1 (1911), cannot be regarded as more than a variety of *D. lineolatus*.

51. FORDONIA LEUCOBALIA Schleg.

Mimika R. (B. O. U. Exped.).

52. *DIPSADOMORPHUS IRREGULARIS* Merr.

Mimika R. (B. O. U. Exped.).—Canoe Camp, Setekwa R. (Wollaston Exped.).

53. *PSEUDELAPS MUELLERI* Schleg.

Camp III, Utakwa R., 2500 ft. (Wollaston Exped.).

54. *APISTOCALAMUS GRANDIS*, sp. n. (Pl. XXX. figs. 3, 3 a.)

Snout short, broadly rounded. Rostral broader than deep, just visible from above; internasals not quite half the length of the præfrontals; frontal once and one-fifth as long as broad, as long as its distance from the end of the snout, much shorter than the parietals; nostril between two nasals, widely separated from the internasal and the first labial; præocular once and one-third as long as deep, in contact with the posterior nasal; one postocular; temporals 1+2; six upper labials, third and fourth entering the eye, last largest; three lower labials in contact with the anterior chin-shields, which are a little larger than the posterior. Scales in 15 rows. Ventrals 207; anal divided; subcaudals 27. Dark brown above, with irregular whitish blotches; upper lip and lower parts white.

Total length 940 mm.; tail 80.

A single female specimen from Launch Camp, Setekwa R. (Wollaston Exped.).

Nearly allied to *A. loennbergii* Blgr., Ann. & Mag. N. H. (8) i. 1908, p. 248, from Fak-Fak, Dutch New Guinea, 1700 feet, the head of which is here figured for comparison (Pl. XXX. fig. 4).

55. *MICROPECHIS IKAHEKA* Less. (Pl. XXX. fig. 5.)

A single specimen from the Mimika R. (B. O. U. Exped.).

This specimen belongs to the var. *fasciatus* Fischer, which differs only in the coloration from the typical form. Ventrals 182; subcaudals 40. Cream-coloured above, most of the scales with a brown dot or spot; 28 brown, dark-edged cross-bands, the anterior forming pairs between which the ground-colour is pale brown instead of cream-colour; head dark brown; belly cream-colour, dotted with brown in its posterior two-thirds; lower surface of tail blackish brown.

A specimen obtained by Mr. A. E. Pratt in the Owen Stanley Range of British New Guinea, altitude 4000 feet, is intermediate between the typical form and the var. *fasciatus*.

56. *ACANTHOPHIS ANTARCTICUS* Shaw.

Mimika R. (B. O. U. Exped.).

The specimens show, in a very marked manner, the characters of the var. *palpebrosus* Shaw.

PLATE XXVII.

PLATE XXVII.

- Fig. 1. *Hyla wollastoni*, p. 248.
2. *Nyctimantis granti*, p. 249.
2 a. „ „ Side view of head.
2 b. „ „ Open mouth.
3. *Spnenophryne klossi*, p. 251.
3 a. „ „ Lower view.
3 b. „ „ Side view.
4. *Liophryne kampeni*, p. 252.
4 a. „ „ Open mouth.



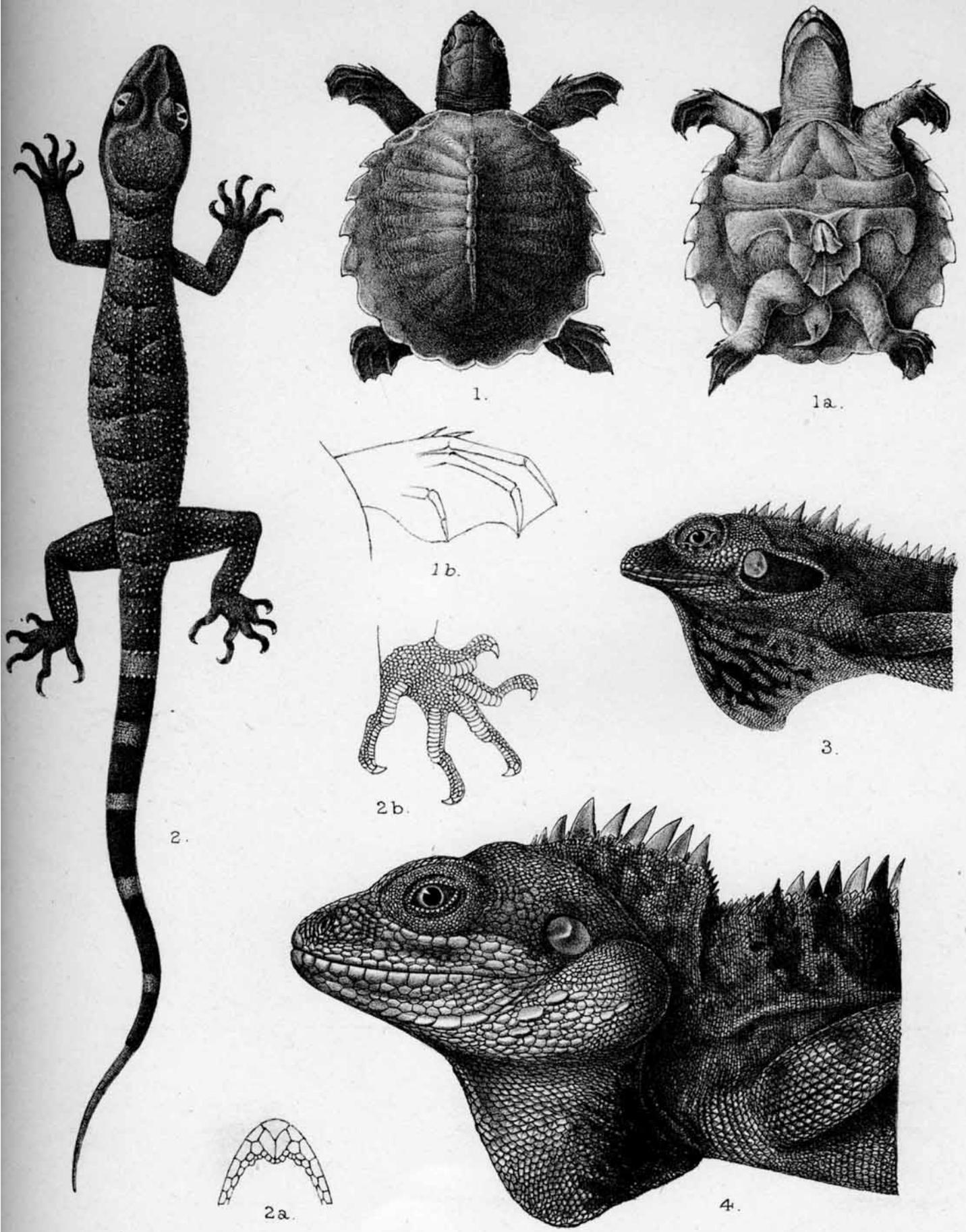
1. *HYLA WOLLASTONI*. 2. *NYCTIMANTIS GRANTI*. 3. *SPHENOPHRYNE KLOSSI*.
4. *LIOPHRYNE KAMPENI*.

J. Green del. lith. et imp.

PLATE XXVIII

PLATE XXVIII.

- Fig. 1. *Carettochelys insculpta*, p. 253.
1 a. " " Lower view.
1 b. " " Hand. × 2.
2. *Gymnodactylus mimikanus*, p. 253.
2 a. " " Chin. × 2.
2 b. " " Lower view of foot. × 2.
3. *Gonyocephalus auritus*, p. 255. Head of male.
4. " *nigrigularis*, p. 255. Head of male.



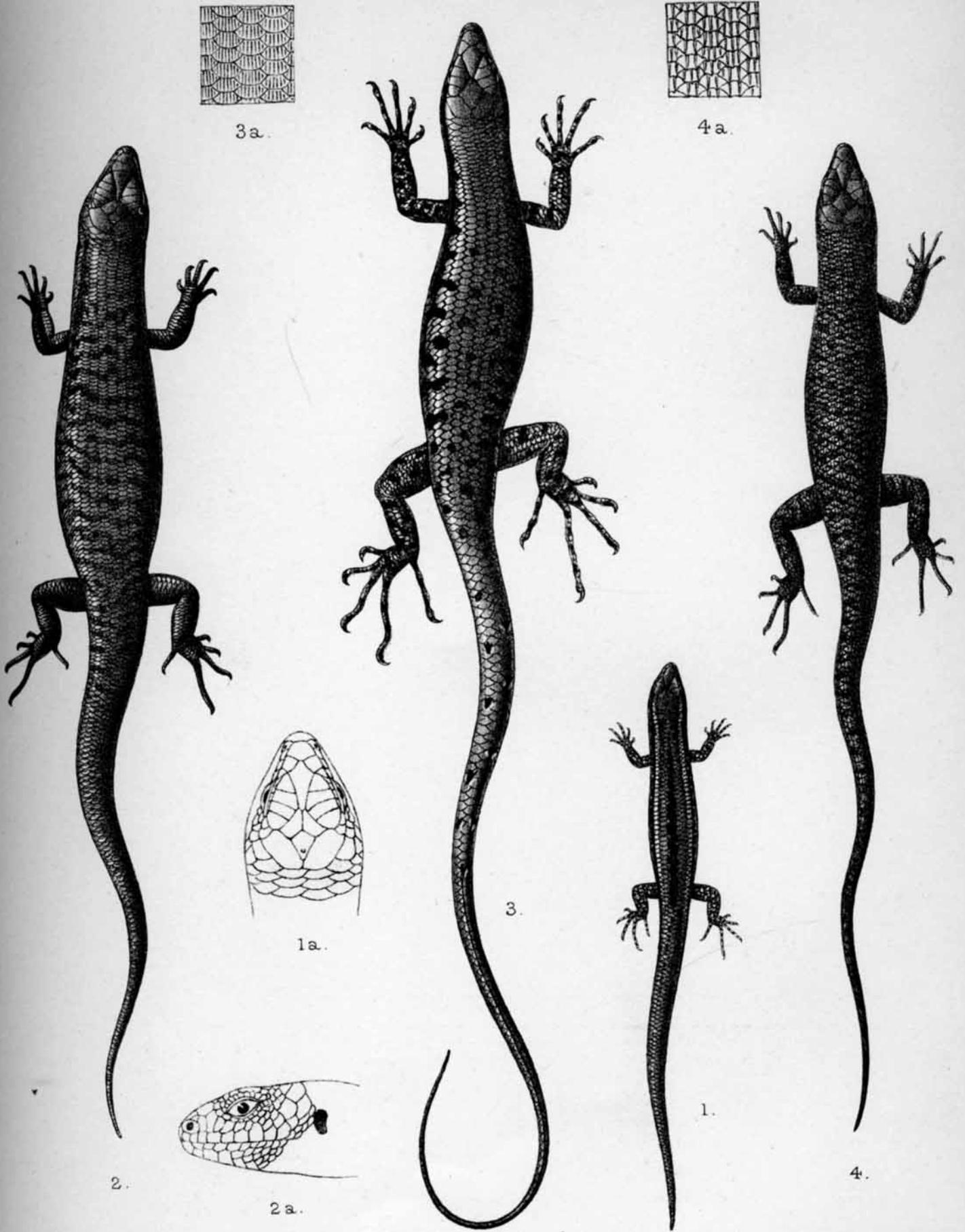
1. CARETTOCHELYS INSCULPTA. 2. GYMNOACTYLUS MIMIKANUS.
3. GONYOCEPHALUS AURITUS. 4. G. NIGRIGULARIS.

J. Green del. lith. et imp.

PLATE XXIX.

PLATE XXIX.

- Fig. 1. *Lygosoma nototænia*, p. 256.
 1 a. " " Upper view of head. × 3.
 2. " *mimikanum*, p. 257.
 2 a. " " Side view of head. × 1½.
 3. " *klossi*, p. 259.
 3 a. " " Dorsal scales. × 2.
 4. " *tropidolepis*, p. 260.
 4 a. " " Dorsal scales. × 2.

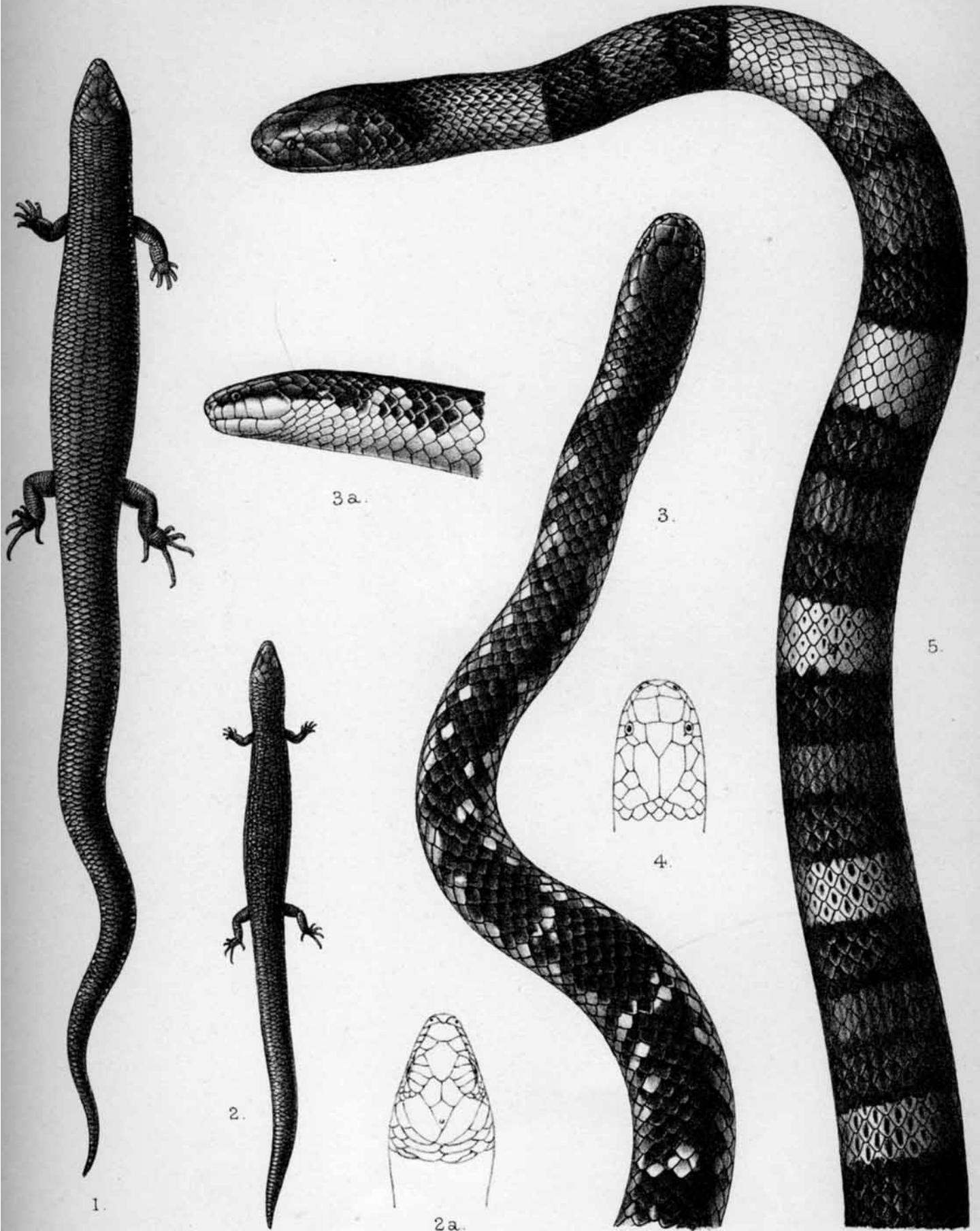


1. *LYGOSOMA NOTOTÆNIA*. 2. *L. MIMIKANUM*. 3. *L. KLOSSI*.
4. *L. TROPIDOLEPIS*.

PLATE XXX.

PLATE XXX.

- Fig. 1. *Iygosoma wollastoni*, p. 261.
2. ,, *oligolepis*, p. 261.
2 a. ,, ,, Upper view of head. × 3.
3. *Apistocalamus grandis*, p. 265.
3 a. ,, ,, Side view of head.
4. ,, *loennbergii*, p. 265. Upper view of head. × 2.
5. *Micropechis ikaheka*, var. *fasciatus*, p. 265.



1. LYGOSOMA WOLLASTONI. 2. L. OLIGOLEPIS. 3. APISTOCALAMUS GRANDIS.
4. A. LOENBERGII. 5. MICROPECHIS IKAHEKA, VAR. FASCIATUS.

J. Green del. lith. et imp.