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HERPETOLOGY OF THE SOLOMON ISLANDS.

By

J. R. Kinghorn, C.M.Z.S.

(Plates xiii-xv and Figures 1-35.)

The following paper is based on the collection of Solomon Islands reptiles and amphibians in the Australian Museum. The greater portion of this material has been added during the last three years by the efforts of Mr. N. S. Heffernan, District Officer at Ysabel Island, and Mr. C. E. Hart, of Gaudalcanar.

In the past many papers have been written concerning the herpetology of the Solomons, but as they are scattered in many publications, students are precluded from consulting them, unless they have the facilities of a reasonably complete library at their disposal. It was this which prompted me, while working through the collection, to assemble and modify previous descriptions, to republish old and add new figures, and to compile keys to the species, so that future workers will have a complete reference to the reptiles and amphibians of this group of islands.

BATRACHIA.

Key to the families (Fig. 1).

A. Shoulder girdle firmly united, chest not expansible, diapophyses of sacral vertebræ cylindrical or only slightly dilated.

B. Upper jaw toothed, skin smooth or warty ..... Ranidæ

BB. Both jaws toothed, snout, eyelids and other parts bearing thorn-like prominences ..... Ceratobatrachidæ

AA. Shoulder girdle not firmly united, overlapping, chest expansible, diapophyses of sacral vertebræ dilated ..... Hylidæ

Family RANIDÆ.

Key to the genera.

A. Vomerine teeth present.

B. Toes strongly webbed, fingers free, outer metatarsals connected by a web ..... *Rana*

BB. Toes free or with only rudiment of web, fingers free, outer metatarsals united or separated by a groove.

C. Fingers and toes with large discs ..... *Cornufer*

CC. Fingers and toes cylindrical, no discs ... *Platymantis*

AA. No vomerine teeth, fingers and toes with large discs.

D. Fingers and toes webbed ..... *Hypsirana*

DD. Fingers and toes without webs ..... *Batrachylodes*

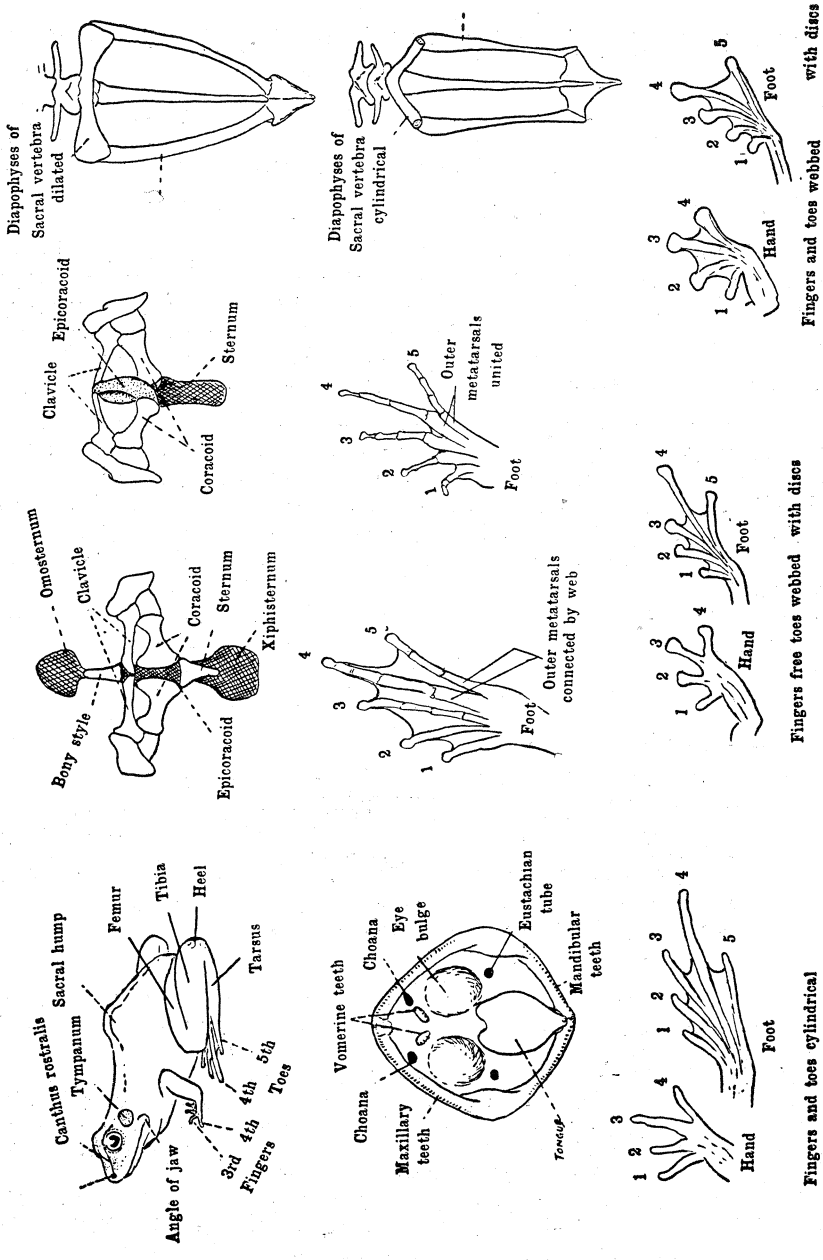

Fig. 1.—Guide to the Key to the Frogs.

Genus RANA *Linnæus.*

Rana Boulenger, Brit. Mus. Cat. Batr. Ecaud., 1882, p. 6.

Boulenger[1] divides this genus into nine subgenera, of which two refer to species occurring in the Solomon Islands, viz.:

1. *Discodeles* for two species, *Rana bufoniformis* and *R. guppyi*, which may be distinguished as follows: Tips of toes and fingers dilated into discs, the upper surfaces of which are separated from the lower by a crescentic or horseshoe-shaped groove; web not penetrating far between the outer metatarsals. Vomerine teeth in transverse or oblique series behind the choanæ, or on a level with the posterior border of the latter. Tongue with a large retractile papilla in the middle. Glandular dorso-lateral fold, if present, not confluent with the temporal. Nasal bones large, in contact with each other and with the fronto-parietals. Omosternal style forked at the base.

2. *Hylorana* (*Rana krefftii*) differs from the above in having the vomerine teeth between the choanæ; the canthus rostralis is strong and angular; the glandular dorso-lateral fold is confluent with the temporal; the nasal bones are narrow and oblique, and widely separated from each other and from the fronto-parietals. The omosternum is not forked at the base.

For convenience I have compiled a key by which the species may be easily separated, as follows:

A. Canthus rostralis vertical, strong, snout sharp pointed. Vomerine teeth between the choanæ ..... *krefftii*

AA. Canthus rostralis oblique, obtuse, snout broadly rounded, vomerine teeth behind the choanæ.

B. Vomerine teeth not extending outwards beyond the vertical of the inner edges of the choanæ ..... *bufoniformis*

BB. Vomerine teeth extending outwards beyond the vertical of the inner edges of the choanæ ..... *guppyi*

RANA KREFFTII *Boulenger.*

(Fig. 2.)

Rana krefftii Blgr., Brit. Mus. Cat. Batr. Ecaud., 1882, p. 64, Pl. iii, fig. 2. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 97.

Main Characters.—Vomerine teeth in two oblique groups between the choanæ. Head depressed, snout narrow, sharp pointed, canthus rostralis strongly defined. Tympanum very distinct, two-thirds the size of the eye; interorbital space as broad as the upper eyelid. Fingers and toes rather slender, toes almost entirely webbed; when the hind limb is stretched forward, the tibiotarsal articulation extends slightly beyond the eye. Skin smooth.

[1] Boulenger.—Records Indian Museum, xx, 1920, p. 5.

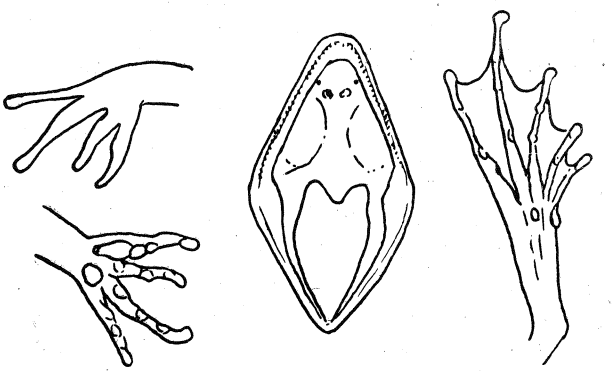

Fig. 2.—*Rana krefftii* Boulenger.

Colour (in spirits).—Brownish above, darker on the sides of head and body, forming a distinct lateral band. A dark band from eye to snout, bordered by a white upper lip and a thin white line along the canthus rostralis. Under surfaces white, more or less mottled with brown. The thighs are mottled on the upper as well as the lower surfaces.

Measurements of adult from snout to vent average 60 to 70 mm.

Mr. Heffernan sent two typical specimens 60 mm. in length from the Government Station, Tunabuli Harbour, and two young 35 and 38 mm. In the young the markings are very distinct and the white lip is a prominent feature.

Distribution.—This species is common on most of the islands throughout the Solomon group.

Rana bufoniformis *Boulenger.*

(Fig. 3.)

Rana opisthodon Blgr., Proc. Zool. Soc. London, 1884, p. 211. *Id.* Trans. Zool. Soc., xii, 1886, p. 50, Pl. x.

Rana bufoniformis Blgr., Proc. Zool. Soc. London, 1884, p. 210. *Id.* Trans. Zool. Soc., xii, 1886, p. 47, Pl. viii.

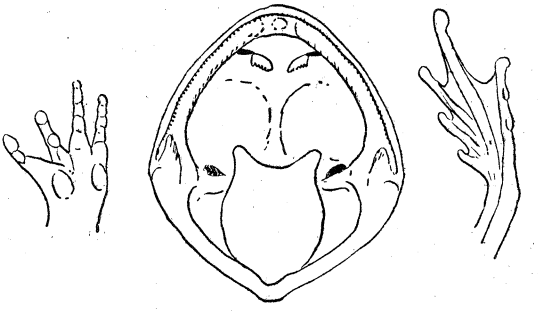

Fig. 3.—*Rana bufoniformis* Boulenger.

Rana bufoniformis Barbour, Proc. New Eng. Zool. Club, vii, 1921, pp. 98-99.

Main Characters.—Canthus rostralis obtuse, snout broadly rounded, vomerine teeth behind the level of the choanæ and not extending outwards beyond the vertical of the inner edges of the choanæ.

Habit very stout, nostril nearer the tip of the snout than the eye. Fingers short, thick, with slightly swollen tips, the first as long as or a little longer than the second, the third about as long as the snout. Hind limb short; when stretched forward the tibiotarsal articulation reaches the temple. Toes short, two-thirds to three-quarters webbed, the tips dilated into small discs, of which the upper half is divided from the lower by a groove.

Upper parts more or less warty; lower parts smooth, except for the belly and thighs, which are slightly granulate.

Colour.—Brownish above, with or without some dark spots or cross bars on the limbs. Lower parts brownish white.

Specimens in the Australian Museum from Uji, Solomon Islands.

RANA GUPPYI *Boulenger.*

(Fig. 4.)

Rana guppyi Blgr., Proc. Zool. Soc. Lond., 1884, p. 211, and Trans. Zool. Soc. Lond., xii, 1886, p. 48, Pl. ix. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 98.

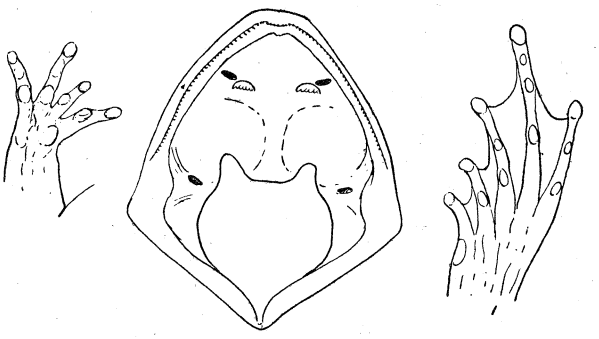

Fig. 4.—*Rana guppyi* Boulenger.

Main Characters.—Canthus rostralis oblique, obtuse, snout broadly rounded, vomerine teeth behind, and extending outwards beyond the vertical of the inner edges of the choanæ. Nostril much nearer the tip of the snout than the eye. Fingers long, the tips dilated into small discs. The first finger longer than the second, the third about as long as the snout. Hind limb fairly long; when stretched forward the tibiotarsal articulation reaches to the eye or the end of the snout. Toes three quarter or entirely webbed, the

tips dilated into small discs, which are somewhat larger than those of the fingers. Upper parts smooth or warty, lower parts smooth.

Colour.—Brownish above and white or brownish below; the lips and limbs may bear indistinct, darker bars.

Three specimens from Tunabuli Harbour and one from Kia, Ysabel Island. The latter when caught was in the act of eating a centipede, one half being in the mouth and the other in the gullet.

Genus CORNUFER *Tschudi.*

Cornufer Boulenger, Brit. Mus. Cat. Batr. Ecaudata, 1882, p. 107.

Main Characters.—Vomerine teeth present. Pupil horizontal. tympanum distinct. Fingers free, toes free or with only a rudiment of a web; fingers and toes with large discs. Outer metatarsals united or separated by a groove. Omosternum and sternum with a bony style. Terminal phalanges T-shaped.

CORNUFER GUPPYI *Boulenger.*

(Fig. 5.)

Cornufer guppyi Boulenger, Proc. Zool. Soc. London, 1884, p. 211. *Id.* Trans. Zool. Soc., xii, 1886, p. 53, Pl. xi, fig. 1. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 97.

Fig. 5.—*Cornufer guppyi* Boulenger.

Main Characters.—Vomerine teeth in two short, straight, or slightly oblique series behind the choanæ. Head large, broad, depressed, somewhat broader than the body. Snout rounded, canthus rostralis distinct, oblique, the loreal region concave. Fingers short and depressed, the tips dilated into large round discs, but there are no webs. The toes are about one-third webbed, and bear a narrow dermal margin; the discs are large, but smaller than those of the fingers. When the hind leg is stretched forward the tibiotarsal articulation reaches the eye. There is a prominent fold from the eye to the shoulder. The under parts, and the lower abdomen and thighs are granular, otherwise the integument is smooth.

Colour.—The general colour is greyish or pinkish brown above, with minute dark speckles or larger markings, the thighs usually barred with brown.

Distribution.—One specimen in the Australian Museum was collected by Captain Wolsch at Gaudalcanar in August, 1884. Others were collected by Mr. Heffernan in the following localities: one small specimen, 31 mm. in length, identical with a specimen of equal size from Nadaravati, Fiji Islands; two from Ysabel Island, 50 and 86 mm. in length.

Genus PLATYMANTIS *Günther.*

PLATYMANTIS SOLOMONIS *Boulenger.*

(Fig. 6.)

Cornufer solomonis Boulenger, Proc. Zool. Soc. London, 1884, p. 212. *Id.* Trans. Zool. Soc., xii, 1886, p. 54, Pl. xi, fig. 2.

Platymantis solomonis Boulenger, Ann. Mag. Nat. Hist., (9), i, 1918, p. 373. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 96.

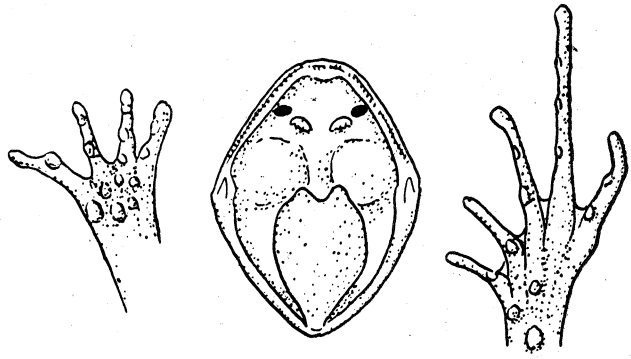

Fig. 6.—*Platymantis solomonis* Boulenger.

Main Characters.—Vomerine teeth in two long transverse or oblique series behind the level of the choanæ. Head large, as broad as the body, snout rounded, its length equal to the orbital diameter.

Canthus rostralis distinct, obtuse, the loreal region oblique, concave. Eye large, a slight median keel in the interorbital space.

Fore limb stretched backwards reaches as far as the vent; when the hind limb is carried forward, the tibiotarsal articulation reaches the eye.

Fingers slender, cylindrical, the tips not dilated but simply swollen, the subarticular tubercles remarkably strong and prominent; the inner finger as long as the third and fourth, and longer than the second. The three oval metatarsal tubercles are very distinct. Toes long, slender, free, there being only a slight rudiment of web at the base, tips swollen like those of the fingers.

Skin of the back granular, with irregular, scattered, longitudinal folds. A prominent oblique fold runs from eye to shoulder. Lower parts smooth except the lower belly and thighs.

Colour.—Grey, brown or purplish above with more or less distinct darker markings. Tympanum chestnut brown, loreal and temporal regions dark brown, lips and limbs with dark bars. Lower surfaces whitish.

Variation.—Of the specimens collected by Mr. Heffernan, nine are from Kia, Ysabel Island; all have rough backs, some are marbled above, while others have distinct light brown lateral stripes. One has typical markings on the sides, arms, and legs, but the back is uniform blackish.

Two specimens from Hivo, north-east Ysabel Island, one typical, the other with three light stripes, one dorsal and two lateral. Twenty specimens are from Tunabuli Harbour, three striped and three marbled, the largest being 82 mm. from snout to vent. As Dr. T. Barbour states, the older specimens have the smoother backs. The series before me proves that the wrinkles so characteristic of young specimens gradually disappear with age, and are entirely absent in the large old specimens. The specimens examined range from 30 to 85 mm. from snout to vent; the largest, which is from the Government Station, Tunabuli Harbour, contained the remains of hard-shelled insects and one crab. The collection also contains one from New Georgia, and one from Kinigunum, Bismarck Archipelago.

HYPSIRANA *gen. nov.*

Description.—Pupil round. No vomerine teeth. Fingers and toes webbed, the tips dilated into discs. Tongue free, heart shaped, deeply notched behind. Tympanum very indistinct, smaller than, or equal in size to the pupil. Outer metatarsals separated by a groove. Terminal phalanges T-shaped. Omosternum and sternum with a bony style.

HYPSIRANA HEFFERNANI *sp. nov.*

(Pl. xiii, figs. 7, 7A and Fig. 7.)

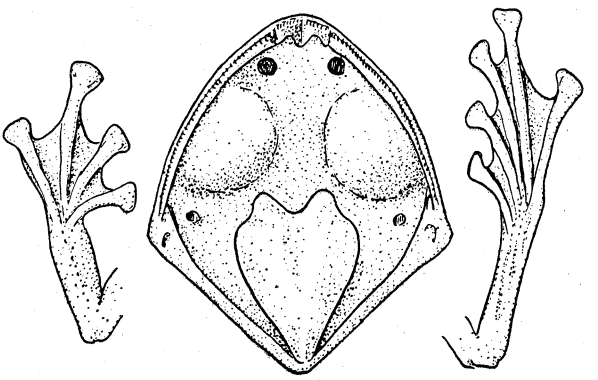

Fig. 7.—*Hypsirana heffernani*, gen. et sp. nov.

Description.—Vomerine teeth absent. Choanæ larger than the eustacean tubes. Head very large, flat, depressed, broader than long, broader than the body. Snout broadly rounded. Canthus rostralis indistinct; nostrils close together near the tip of the snout. Eye very large, interorbital space broader than the upper eyelid, as great as the distance from the eye to the nostril. Limbs slender, the tips of the fingers reaching to the vent, and when the hind limb is stretched forward the tibiotarsal articulation reaches the tip of the snout. Fingers somewhat flattened, fringed and about two-thirds webbed, the tips dilated into large discs. Toes almost fully webbed, the tips with large discs. Under surface of the feet and hands without tubercles. Skin smooth above, but granular on the sides, belly, and under surface of the upper arm and thighs.

Colour (in spirits).—At first purplish brown above and yellow below, but becoming yellowish all over with age.

Described from two specimens from Tunabuli Harbour, Ysabel Island, and named after the collector, Mr. N. S. Heffernan. Holotype in the Australian Museum, Reg. No. R.8619, paratype R.8618.

Genus Batrachylodes *Boulenger.*

Batrachylodes Boulenger, Proc. Zool. Soc. London, 1887, p. 337, Pl. xxviii, fig. 3.

Pupil horizontal. Vomerine teeth absent. Tongue oval, free and very feebly nicked behind. Tympanum distinct. Fingers and toes free, no rudiments of webs, the tips dilated into large discs. Distal phalanges T-shaped. Omosternum and sternum with a bony style.

Batrachylodes vertebralis *Boulenger.*

(Pl. xiii, fig. 6.)

Batrachylodes vertebralis Blgr., Proc. Zool. Soc. London, 1887, p. 337, Pl. xxviii, fig. 3. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 95.

Main Characters.—No vomerine teeth, snout short, obtusely pointed, canthus rostralis distinct, loreal region almost vertical, head small, narrower than the body. Nostril nearer the tip of the snout than the eye, interorbital space broader than the upper eyelid. Tympanum three-fifths the diameter of the eye.

When the hind limb is stretched forward the tibiotarsal articulation reaches the eye. Fingers and toes slender, the tips dilated into large discs, those of the toes being the smaller; disc of third finger equal in size to the tympanum; first finger shorter than the second. Skin smooth above and below.

Colour.—Usually greyish brown above, with a fine, white, vertebral line dividing into two above the vent and continuing along the thigh and tarsus. A white line from the eye along the canthus rostralis meets its fellow at the tip of the snout, and also extends backwards to above the shoulder, in some specimens widening out and continuing to the groin. A conspicuous broad dark band extends from the snout to the shoulder. There may be indistinct bands across the limbs. The lower parts are whitish.

Six specimens were examined; the dark line from the snout is present in all, but in two from Kia, Ysabel Island, the white vertebral line is absent. Four others from Ysabel Island have the vertebral stripe, and the dark lateral line is also present, but there is also an irregular semicircle of black spots on the back between the shoulders, while there may be indefinite shadings all over the dorsal surface.

Family CERATOBATRACHIDÆ.

Genus CERATOBATRACHUS *Boulenger.*

Ceratobatrachus Boulenger, Proc. Zool. Soc., 1884, p. 212. *Id.* Trans. Zool. Soc., xii, 1886, p. 56.

Main Characters.—Teeth in lower as well as upper jaw. Pupil horizontal. Tongue deeply notched and cordiform, extensively free behind. Vomerine teeth present. Head large, strongly ossified. Tympanum distinct. Fingers and toes free, tips not dilated. Outer metatarsals united. Precoracoids present; omosternum and sternum with a bony style. Terminal phalanges simple.

CERATOBATRACHUS GUENTHERI *Boulenger.*

(Fig. 8.)

Ceratobatrachus guentheri Boulenger, Proc. Zool. Soc., 1884, p. 212. *Id.* Trans. Zool. Soc., xii, 1886, p. 56, Pl. xii and xiii. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 94.

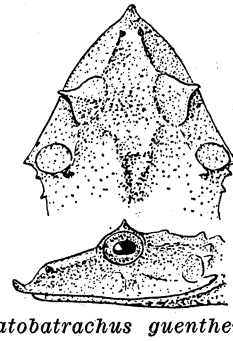

Fig. 8.—*Ceratobatrachus guentheri* Boulenger.

Main Characters.—Vomerine teeth in two small groups behind the level of the choanæ; the latter as large as the vomerines, while the eustachian tubes are larger still. Head triangular, broader than long, almost as large as the body, mouth enormous, stretching well behind the eye. Canthus rostralis distinct, obtuse; loreal region almost flat, sloping obliquely outwards. Interorbital space broad, deeply concave. Tympanum large, vertically elliptic. Skull with prominent ridges and a small, sharp, curved spine at the angle of the mouth. A prominent fold stretches from the posterior border of the eye over the shoulder.

The limbs are short and heavy; when the hind limb is stretched forward, the tibiotarsal articulation reaches to the posterior border of the eye, and the tips of the fingers, when the fore limb is produced backwards, reach to the vent. The digits are swollen at the tips and the subarticular tubercles are very prominent. The toes are free with a rudiment of web at the base. There are glandular folds on the upper surface of the back, while there are small, triangular dermal flaps on several parts of the body as follows:—tip of the snout, from each upper eyelid, behind the angle of the mouth, the hinder edge of each forearm, below the vent, and from the tibiotarsal articulation.

The colour is very variable and beautiful, as also are the markings of lines and blotches which adorn the upper surfaces. In some examples the under parts are uniform whitish, while in others the throat, breast, and under surface of the legs are very dark brown with white spots. Two conspicuous, white, nipple-like spines are present throughout the series.

A large series was examined, ranging from 15 mm. to 75 mm. in length, the specimens being mostly from the vicinity of Kia, Ysabel Island. One specimen, which was collected in September, 1884, by Captain Wolsch, and which measured 73 mm., had swallowed another frog, *Cornufer solomonis,* 50 mm. in length.

Family HYLIDÆ.

Main Characters.—Shoulder girdle not firmly united, chest expansible, upper jaw toothed. Diapophyses of sacral vertebræ dilated. Terminal phalanges claw shaped, swollen at the base.

Genus HYLA *Laurente.*

Hyla Boulenger, Brit. Mus. Cat. Batr. and Ecaudata, 1882, p. 338.

Main Characters.—Pupil horizontal. Tongue entire or slightly nicked, more or less free behind. Vomerine teeth present. Tympanum distinct or hidden. Fingers free, or more or less webbed; toes webbed, the tips dilated into large discs. Outer metatarsals united or only slightly separated. Omosternum cartilaginous; sternum a cartilaginous plate. Diapophyses of sacral vertebræ more or less dilated. Shoulder girdle overlapping, not firmly united, chest expansible.

HYLA THESAURENSIS *Peters.*

(Plate xiii, figs. 3-5, and Fig. 9.)

Hyla thesaurensis Peters, Monatsb. Akad. Wiss. Berlin, 1877, p. 421. *Id.* Boulenger, Brit. Mus. Cat. Batr. Ecaud., 1882, p. 409.

Hyla macrops Boulenger, Ann. Mag. Nat. Hist., (5), xii, 1883, p. 164. *Id.* Trans. Zool. Soc., xii, 1886, p. 59, Pl. xl, fig. 3.

Hyla lutea Boulenger, Proc. Zool. Soc. London, 1887, p. 337, Pl. xxviii, fig. 4.

Hyla thesaurensis Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 93.

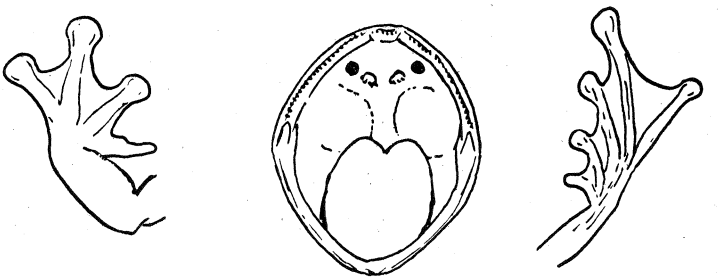

Fig. 9.—*Hyla thesaurensis* Peters.

Main Characters.—Tongue small, heart-shaped. Vomerine teeth in two transverse groups behind the level of the choanæ; the latter are longer than the eustachian tubes. Head depressed, snout rounded, about as long as the diameter of the orbit. Canthus rostralis more or less distinct, loreal region concave. Nostril nearer the tip of the snout than the eye. Eye large, interorbital space as broad as, or broader than the upper eyelid. Tympanum very distinct, circular, and about two-thirds to half the diameter of the eye. Toes more or less webbed and with small subarticular tubercles. One or two small flat metatarsal tubercles, the outer minute. No cutaneous tarsal fold. Discs of toes as large as or larger than the tympanum, those of the fingers a little smaller. Skin smooth above, lower surfaces with large flat granules. When the hind limb is stretched forward the tibiotarsal articulation reaches to the tip of the snout.

Colour.—Very variable; it may be referable in two varieties:

1. var. *thesaurensis.* Olive brown above with a broad white vertebral line from the tip of the snout to the coccyx, and another similar line on each side from the upper eyelid; a short white streak on the end of the snout, a curved transverse streak between the eyes, and another on each side of the head from below the nostril to the angle of the mouth. Lower surfaces whitish.

2. var. *macrops* (including *lutea*). Upper surfaces uniform green or lemon yellow, abdomen white, hinder side of thigh brown.

There may be a white line along the outer side of the forearm and fourth finger, and along the tarsus and fifth toe.

Distribution.—Treasury, Faro, Ysabel, New Georgia, Russel, Malaita and Gaudalcanar Islands.

It is fairly evident that the strong markings which were originally described as being typical of *thesaurensis,* belong to young specimens, and they disappear with age.

There are nine specimens in the Australian Museum.

Affinities.—In regard to the placing of *Hyla macrops* and *lutea* in the synonymy of *H. thesaurensis* by Dr. Barbour, I cannot do better than quote from his paper, in which he says: "Peters' type was a young specimen, 28 mm. in length. The measurements which Boulenger gave when he described *H. macrops* were: Male, 38 mm. and female 54 mm. in length, while later he stated *H. lutea* to be 67 mm. long. Boulenger himself was in doubt as to the validity of *macrops,* and (1886) inclined to consider it a colour variety only of *thesaurensis. H. lutea,* however, was said to have the fingers half webbed; while in *macrops* no web in the fingers is mentioned, and Peters also states that the fingers are free in *thesaurensis.* Boulenger mentioned a slight trace of finger web in the little 31 mm. long individual which in 1886 he called *thesaurensis.* The character seems to be variable, and while none of our specimens shows as much web as is drawn in his figure of *lutea,* nevertheless many of them do show a very considerable and a very variable degree of webbing. The types of *thesaurensis* and *macrops* both come from Treasury Island, and those of *lutea* from Faro, near by. Mann's booty shows that the species is very abundant and wide-ranging throughout the group . . . . A very variable series as to finger webs."

OPHIDIA.

Key to the genera (Fig. 10).

A. Worm-like blind snakes, eye under the head shields, mouth inferior, somewhat shark-like, teeth microscopic, few ..... *Typhlops*

AA. Typical snakes, eyes well developed, mouth ordinary, teeth well developed.

B. Body and tail cylindrical.

C. Scales keeled ..... *Enygrus*

CC. Scales smooth.

D. Fangs at rear of maxillary bone, head very distinct from neck, Brown Tree snakes ..... *Boiga*

DD. Fangs at front of maxillary bone, head not very distinct from neck.

E. Eye equal to distance from mouth .. *Denisonia*

EE. Eye minute, much less than distance from mouth ..... *Micropechis*

DDD. No fangs, all teeth solid, Green Tree snakes .... *Dendrophis*

BB. Body cylindrical, tail paddle-shaped ..... *Laticauda*

BBB. Body flattened laterally, tail paddle-shaped ..... *Pelamydrus*

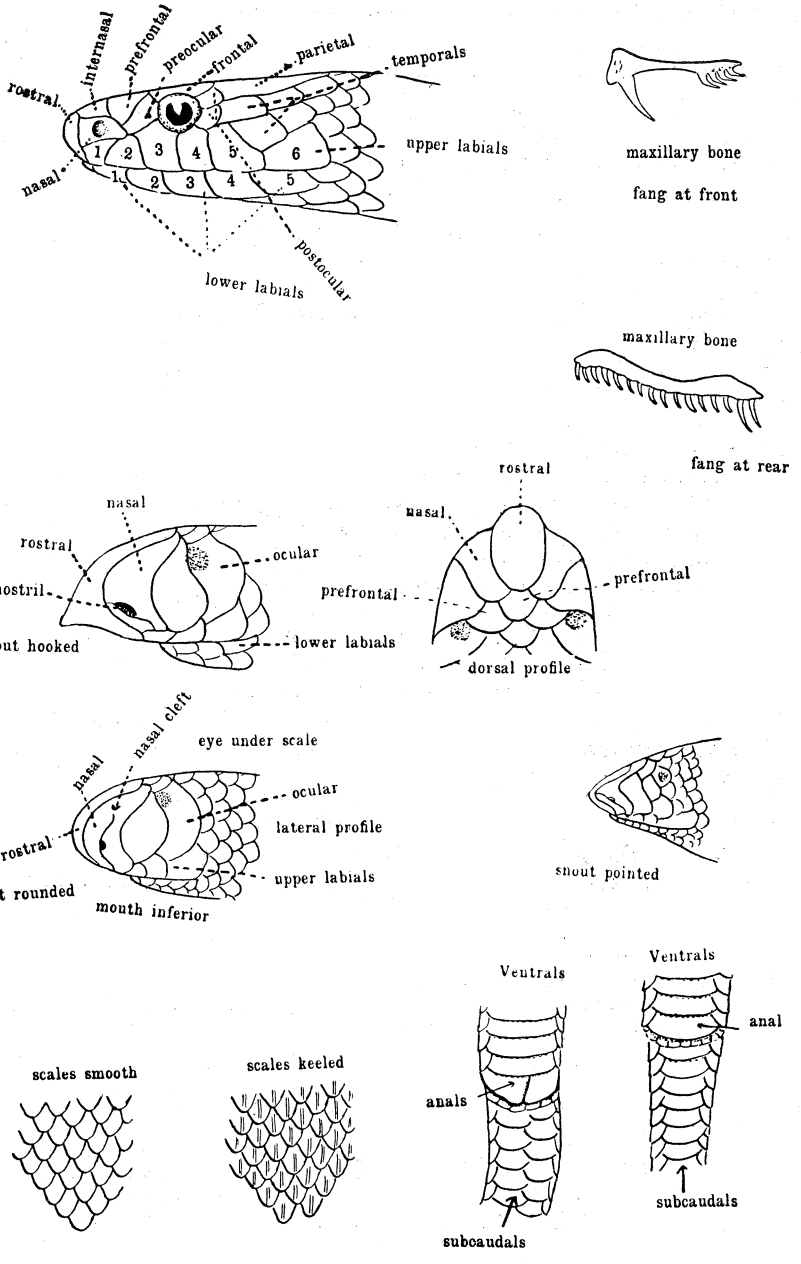

Fig. 10.—Guide to the Key to the Snakes.

Genus TYPHLOPS *Schneider.*

Typhlops Schneider, Hist. Amph., ii, 1801, p. 339.

Main Characters.—Worm-like blind snakes, eye under the head shields. Mouth inferior, somewhat shark-like. Body covered with uniform cycloid scales. Tail very short. Posterior portion of body usually thicker than the anterior.

Key to the species.

Snout rounded in lateral view, nostrils lateral, 22 rows of scales round body ..... *alluensis*

Snout hooked in lateral view, nostrils inferior.

Snout trilobed in dorsal view, 20 to 22 rows of scales .... *olivaceus reduncus*

Snout rounded in dorsal view, 24 scales round body .... *cumingii* var. *mansuetus*

Snout sharp pointed in lateral and dorsal views, not hooked, 26 scales round body ..... *infralabialis*

TYPHLOPS ALUENSIS *Boulenger.*

(Fig. 11.)

Typhlops aluensis Boulenger, Proc. Zool. Soc. London, 1887, p. 336, Pl. xxviii, fig. 2.

Main Characters.—Body elongated, of subequal diameter throughout. Snout depressed, rounded. Nasal completely divided; a preocular separates the nasal from the ocular, which rests on the third and fourth upper labials. Rostral rounded or slightly constricted posteriorly, its width about three-fifths the distance between the eyes. A small azygous shield separates the rostral from the mouth. Tail twice as long as broad at the base, tapering, ending in a spine.

Total length 245 mm., diameter of body 4 mm., length of tail 10 mm.

Holotype from Alu Island, Solomons. Described from a single specimen.

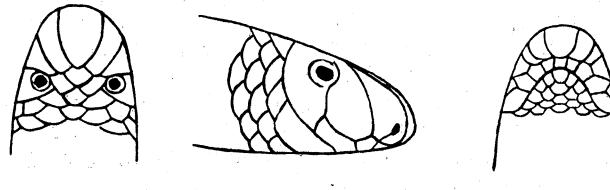

Fig. 11.—*Typhlops aluensis* Boulenger (after Boulenger).

General Notes.—Dr. Barbour received a specimen collected by Dr. Mann at Keri Keri, San Cristoval Island. In the Australian Museum collection there are five specimens, two being from the Fiji Islands.[2] Of the three from the Solomons, one is from the Government Station, Ysabel, one from Tulagi, and one without definite locality. All agree with Boulenger's original description. Boulenger's figure does not show the nasal to be completely divided, the error evidently being made by the artist.

TYPHLOPS OLIVACEUS *Gray.*

(Figs. 12-13.)

Onychophis olivaceus Gray, Brit. Mus. Cat. Liz., 1845, p. 133.

Onychocephalus olivaceus Peters, Monatsb. Akad. Wiss. Berlin, 1861, p. 684.

Typhlops (Onychocephalus) angusticeps Peters, Monatsb. Akad. Wiss. Berlin, 1877, p. 417, Pl. —, fig. 3.

Typhlops olivaceus Boulenger, Brit. Mus. Cat. Snakes, i, 1893, p. 50.

? *Typhlops olivaceus reduncus* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 107, Pl. v.

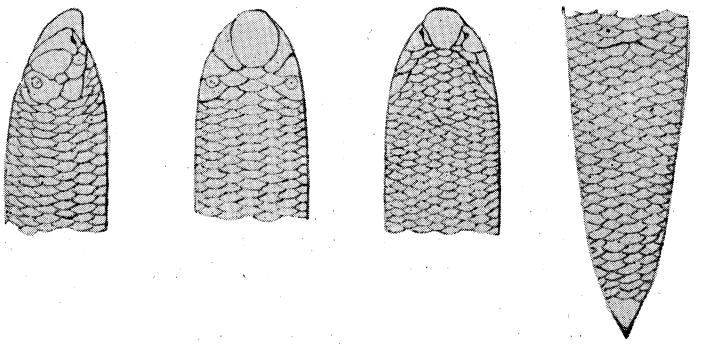

Fig. 12.—*Typhlops olivaceus* Gray (after Peters).

Main Characters.—Snout very prominent, slightly hooked, with a narrow subcrescentic, sharp, transverse edge. Nostrils inferior. Eye fairly distinct. Rostral large, its upper part longer than broad, and about three-fifths the width of the head, not extending to the level between the eyes, its lower part as broad as long. Nasal nearly completely divided, the cleft proceeding from the first labial. Preocular present, nearly as broad as the nasal or the ocular, in contact with the second and third labials. Prefrontal considerably enlarged; four upper labials. Diameter of body 50 to

[2] Waite.—Proc. Linn. Soc. N.S.W., xii, 1898, p. 685.

68 times in the total length. Tail twice and a half as long as broad, ending in a spine. There are 20 to 22 scales round the body.

Colour pale brown above, lighter below. Total length 410 mm.

General Notes.—Dr. Barbour did not give a description of his subspecies, but merely recorded the characters by which he considered it differed from the typical form. He says: "Similar to the true *T. o. olivaceus* from the Philippines, which has been recorded also from the Moluccas and Australia, but with a much longer and more sharply produced rostral scale and a much more conspicuously developed ornamentation of excrescenses."

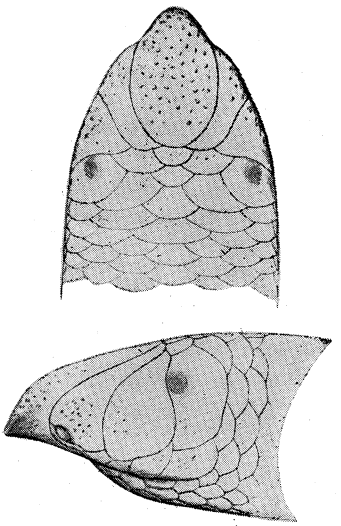

Fig. 13.—*Typhlops olivaceus reduncus* Barbour (after Barbour).

Miss Procter compared Barbour's drawings with specimens in the British Museum, and, judging by her remarks, she appears to be doubtful whether Barbour's specimens constitute a subspecies. Unfortunately no specimens are available to me, but, relying entirely upon the figures and descriptions available, and realizing that there is a considerable degree of variation in allied species, I prefer to place Barbour's subspecies in the synonymy. The same remarks also apply to the following species.

Typhlops cumingii *Gray.*

(Fig. 14.)

Onychophis cumingii Gray, Brit. Mus. Cat. Liz., 1845, p. 133.

Onychocephalus cumingii, Boettger, Berl. Senck. Ges., 1886, p. 104.

Typhlops cumingii Boulenger, Brit. Mus. Cat. Snakes, i, 1893, p. 51, Pl. iii, fig. 4.

? *Typhlops cumingii mansuetus* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 108, Pl. vi.

Main Characters.—Snout very prominent, not hooked, with or without the sharp subcrescentic transverse edge. Nostrils inferior. Eye distinct. Rostral large, its upper part longer than broad, and about half the width of the head, not extending to the level of the eyes; its lower part as broad as long. Nasal completely divided, the cleft proceeding from the second labial. Preocular present, narrower than the nasal or the ocular, in contact with the third labial only. Prefrontal large, parietals broad. Four upper labials. Diameter of body 48 to 52 times in the total length. Tail four or five times as long as broad, ending in a spine. There are 24 rows of scales round the body. Total length 365 mm. Olive brown above, yellowish below.

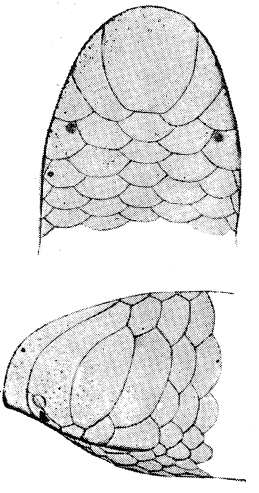

Fig. 14.—*Typhlops cumingii* Gray, *mansuetus* Barbour (after Barbour).

Distribution.—Philippine Islands to Solomon Islands. Barbour's subspecies *mansuetus* appears to be restricted to the Solomon group.

Typhlops infralabialis *Waite.*

(Fig. 15.)

Typhlops infralabialis Waite, Rec. South Austr. Mus., i, 1, 1918, pp. 35-36, fig. 25.

Main Characters.—Head moderate, head and snout acute. Nostrils sublateral, nearer the rostral than to the anterior preocular. Eye indistinct. Rostral short and narrow, extending to two-thirds its distance from the level of the eyes. Nasal nearly

divided, the cleft extending to the hinder edge of the first labial. No supranasals. A large preocular, which does not touch the ocular. The normal position of the ocular represented by four scales. A small ocular, posterior ocular, subocular, and a supralabial, the latter wedged in between the third and fourth labials. Four upper labials and three supralabials. Jaw V-shaped, a small chin shield and a series of very narrow labials bordering the mouth. Diameter of body 52 times in its length; tail as broad as long, ending in a spine. Total length 315 mm. Brown above and yellow below.

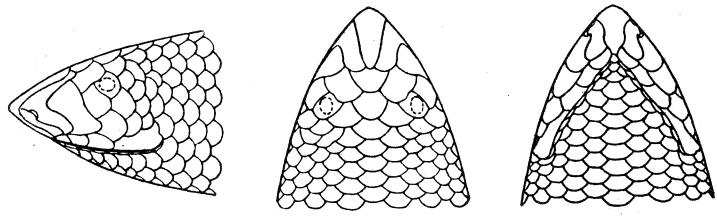

Fig. 15.—*Typhlops infralabialis* Waite (after Waite).

Type in Australian Museum Reg. No. R.4609, from Malaita, Solomon Islands.

Enygrus *Wagler.*

Enygrus Wagler, Syst. Amph., 1830, p. 166. *Id.* Boulenger, Brit. Mus. Cat. Snakes, 1893, i, p. 104.

Main Characters.—Anterior maxillary and mandibular teeth very large, the rest small and subequal. Head distinct from neck, covered with small scales. Snout prominent, obliquely truncate. Body slightly compressed, scales keeled, pupil vertical. Tail short, prehensile, subcaudals single.

Key to the species.

A. Upper labials entering the orbital area.
33-43 scales round the body, 38-56 subcaudals ..... *carinatus*

AA. Upper labials not entering the orbital area, separated therefrom by a row of subocular scales.
31-33 scale rows, 50-58 subcaudals ..... *bibronii*
33-39 scale rows, 15-21 subcaudals ..... *asper*
41-42 scale rows, 51-62 subcaudals ..... *australis*

Enygrus carinatus *Schneider.*

(Fig. 16.)

Enygrus carinatus Schneider, Hist. Amph., ii, 1801, p. 261. *Id.* Boulenger, Brit. Mus. Cat. Snakes, i, 1893, p. 107.

Main Characters.—Snout prominent, obliquely truncate, canthus rostralis angular. Rostral broader than deep, not visible

from above. Head covered with small scales which are either keeled or bear small tubercles. Three upper labials and a row of small scales, of which there are ten to fourteen, surrounding the eye and entering the orbital area. There are 5-10 scales between the eyes. Ten to thirteen upper labials. From 33 to 43 strongly keeled scales round the thickest part of the body. Ventrals from 160 to 200; anal entire; subcaudals 38-56.

The colour is very variable.

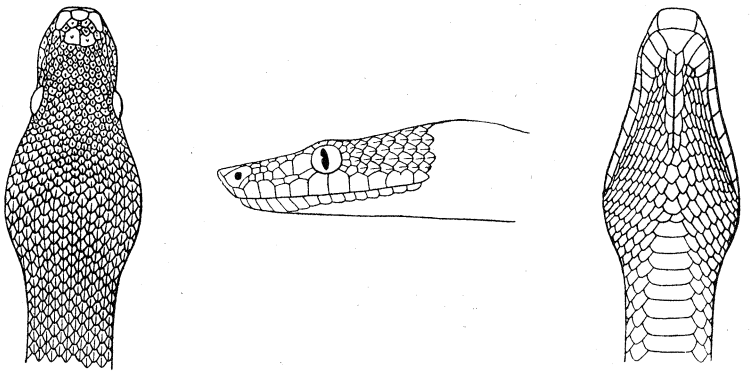

Fig. 16.—*Enygrus carinatus* Schneider (after Jan).

Distribution.—There are four specimens from Gaudalcanar, two being adult and two young, the latter being from 220 to 250 mm. in length. One of the adults is exceptionally dark coloured, the ventral surface being heavily spotted and blotched with black. Three specimens from Bougainville Island measure from 20 to 28 inches in length; one of these is very light brown, almost yellowish above, with diamond-shaped patches on the vertebral line, each diamond connected with a narrow dark brown band. In the collection are five from Ysabel Island, which could be placed nearest the variety *superciliosa,* two being from Kia and three from the Government Station, Tunabuli Harbour. The species is widely distributed throughout the group. It grows to 900 mm. in length, of which the tail may occupy 110 mm.

Mr. Heffernan advises me that this species is known as the Whip Snake on Karamulan Island, but the Whip Snake of Ysabel and perhaps other islands is probably the Green Tree Snake *Dendrophis.*

Enygrus bibronii *Hombron and Jacquinot.*

(Fig. 17.)

Enygrus bibronii, Hombron and Jacquinot, Voy. Pole. Sud, Zool., Rept. i, 1842, p. 18, Pl. i. *Id.* Boulenger, Brit. Mus. Cat. Snakes, i, 1893, p. 106.

Main Characters.—Snout prominent, obliquely truncate, canthus rostralis rounded. Rostral broader than deep, not visible from above. Head covered with small irregular scales, which may bear either tubercles or keels. There are 11 to 14 upper labials, those below the eye separated from it by a row of suboculars. From 31 to 33 rows of strongly keeled scales round the thickest part of the body. There are 10 to 14 scales between the eyes across the forehead. Ventrals from 210 to 225; anal entire; subcaudals 50 to 58.

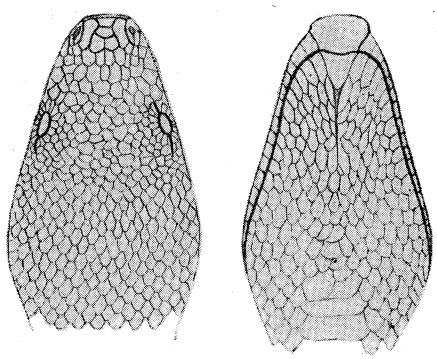

Fig. 17.—*Enygrus bibronii* Hombron and Jacquinot (after Hombron and Jacquinot).

This is a beautifully marked species; olive to greyish brown above, variously marked with brown, reddish or black spots, and stripes. The under parts are usually yellowish uniform or spotted and marbled with black. Total length 1,000 mm., tail 130 mm.

Distribution.—This species is widely distributed in the Solomons and occurs also in Fiji, Tonga, and the Friendly Islands.

Enygrus asper *Günther.*

(Fig. 18.)

Erybophis asper Günther, Proc. Zool. Soc. London, 1877, p. 132, Pl. xxi.

Enygrus asper Boulenger, Brit. Mus. Cat. Snakes, i, 1893, p. 109.

Main Characters.—Snout prominent, obliquely truncate, canthus rostralis angular. Rostral broader than deep, not visible from above. Head covered with small irregular scales, which have small tubercles or keels. There are 8 to 11 scales from eye to eye across the forehead. Eye surrounded by a circle of thirteen or fourteen scales. Ten or eleven upper labials, separated from the eye by the suboculars. Scales strongly keeled, the keels forming oblique lines. There are 33 to 39 rows of scales round the body. Ventrals 131 to 153. Anal entire. Subcaudals 15 to 21. Total length 730 mm., tail 55 mm.

Reddish brown above with a dorsal series of large dark brown black edged spots, the edges sometimes forming irregular lines across the body. Yellowish below, uniform or with dark brown spots.

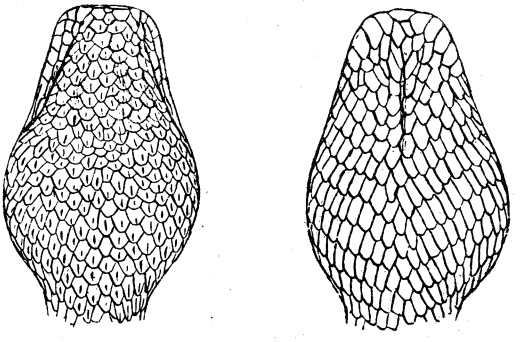

Fig. 18.—*Enygrus asper* Günther (after Günther).

Distribution.—There is a specimen in the Australian Museum from Bougainville Island; it was collected in 1917 and constitutes a new record for the distribution of the species, this being the first occasion on which it has been found in the Solomon group.

Enygrus australis *Montrouzier.*

Boa australis Montrouzier, Rev. et Mag. Zool., xii, 1860, p. 95. *Id.* Boulenger, Brit. Mus. Cat. Snakes, i, 1893, p. 105.

Main Characters.—Snout prominent, obliquely truncate, canthus rostralis rounded. Rostral broader than deep, not visible from above. Head covered with small, irregular, keeled, or nodular scales. There are 11 to 14 scales from eye to eye across the forehead. Eye encircled by fourteen to eighteen scales. Upper labials, 10-14, separated from the orbital space by the suboculars. Scales strongly keeled, in 41 to 42 rows round the thickest part of the body. Ventrals 232 to 252. Anal entire, subcaudals 51 to 62.

Colour and markings variable, usually reddish brown or olive above, with a dark brown vertebral line edged with yellow, or large dorsal spots. Zigzag lines on the sides of the body, a dark stripe along the side of the head and from eye to eye. Total length to about 1,130 mm., tail 140 mm.

Distribution.—Widely distributed throughout many of the north Pacific islands.

Genus BOIGA *Stejneger.*

Dipsadamorphis Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 59.

Boiga Stejneger, Proc. Biol. Soc. Wash., xv, 1902, p. 15.

Main Characters.—Body more or less compressed, head very distinct from neck. Maxillary teeth ten to fourteen, followed by two or three enlarged grooved fangs. Anterior mandibular teeth longest. Scales more or less oblique. Ventrals obtusely angulate laterally. Tail long, subcaudals in two rows.

BOIGA IRREGULARIS *Merrem.*

Coluber irregularis Merrem, in Bechst. Uebers. Lacép. iv, 1802, p. 239, Pl. xxxvii, fig. 1.

Dipsadamorphis irregularis Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 75.

Boiga irregularis Stejneger, Proc. Biol. Soc. Wash., xv, 1902, p. 15.

Main Characters.—Head very distinct from the neck. Rostral broader than deep, just visible from above. Internasals broader than long, much shorter than the prefrontals. Frontal as long as or a little longer than broad, as long as its distance from the rostral, shorter than the parietals. One or two preoculars in contact with, or narrowly separated from, the frontal. Eight to ten upper labials. Scales in 19 to 23 rows round the middle of the body, vertebral row moderately or strongly enlarged. Ventrals 217 to 270; anal entire or divided; subcaudals paired in 103 to 125 rows (some at irregular intervals may be single).

Colour very variable, usually brown above, crossed with irregular zigzag dark bars. Belly yellowish, uniform, or more or less spotted and speckled with brown.

Affinities.—After having examined a series of this species from the Solomon Islands and other places, I find that many of the characters are very variable. Two specimens from the Solomons which have about 234 ventrals, 110 subcaudals and each with 21 rows of scales round the body, also have a divided anal, a character which is typical of *B. philippinus*, but I have no hesitation in regarding them as *B. irregularis*, all other characters being typical of this species. It would appear that *B. philippinus* is founded on very slender grounds, and may yet prove to be merely a subspecies of *B. irregularis*.

Genus DENDROPHIS *Boie.*

Dendrophis Boie, Isis, 1827, p. 520. *Id.* Boulenger, Brit. Mus. Cat. Snakes, ii, 1894, p. 77.

Main Characters.—Head distinct from neck, more or less elongate. Maxillary teeth 20 to 26, the posterior ones more or less enlarged; stouter if not longer than the others. Body elongate, more or less compressed. Scales smooth, in 13 to 15 rows which are obliquely arranged, the vertebral row being more or less enlarged. Ventrals with a lateral keel and notch on each side, corresponding to the keel. Subcaudals in two rows, keeled and notched like the ventrals.

Dendrophis calligaster *Günther.*

(Fig. 19.)

Dendrophis calligaster Günther, Ann. Mag. Nat. Hist., (3), xx, 1867, p. 53. *Id.* Boulenger, Brit. Mus. Cat. Snakes, ii, 1894, p. 81.

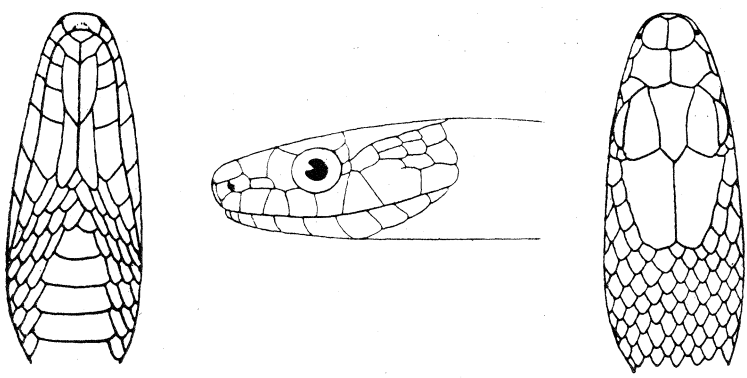

Fig. 19.—*Dendrophis calligaster* Günther (after Jan.).

Main Characters.—Head elongate, distinct from neck. Rostral once and two-thirds to twice as broad as deep, visible from above. Internasals about as long as the prefrontals. Frontal one and one-third to one and three-quarters as long as broad; as long as its distance from the rostral or the tip of the snout; shorter than the parietals. One preocular, two postoculars, temporals 2 + 2 or 1 + 2. Eight or nine upper labials, the fourth and fifth, or fifth and sixth under the eye. Five lower labials in contact with the anterior chin-shields. Maxillary teeth 20 to 26. Scales arranged in oblique rows round the body, the vertebrals enlarged, about as large as the last lateral row. Ventrals 176 to 211, anal divided, subcaudals 125 to 151.

Colour.—The colouration is very variable, and may be from bronzy olive to bright green above, and from greyish green to light yellow below. Some of the dorsal scales may have lighter and rather yellowish borders, while the ventrals may be spotted. A constant character is a blackish streak on each side of the head, passing through and sometimes well beyond the eye, and connecting with its fellow on the snout.

Genus MICROPECHIS *Boulenger.*

Micropechis Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 347.

Main Characters.—Maxillary extending forward as far as the palatine, the fangs followed by three small solid teeth. Anterior mandibular teeth longest. Head distinct from neck, eye minute, with round pupil. Nostril between two nasals; no loreal. Body cylindrical. Scales smooth, in 15 or 17 rows round the middle of the body; subcaudals in two rows.

MICROPECHIS ELAPOIDES *Boulenger.*

(Pl. xiv, fig. 1.)

Hoplocephalus elapoides Boulenger, Proc. Zool. Soc. London, 1890, p. 30, Pl. ii, fig. 3. *Id.* Waite, Rec. Austr. Mus., iii, 1899, p. 105.

Main Characters.—Head broad, not very distinct from the neck. Eye minute, not half as long as its distance from the mouth. Rostral much broader than deep, visible from above. Internasals two-thirds the length of the prefrontals. Frontal small, once and one-half to twice as broad as the supraocular, as broad as the prefrontal, as long as its distance from the rostral, shorter than the suture between the parietals. Posterior nasal in contact with the single preocular. Eye not much larger than the nasal aperture. Two small postoculars; temporals 1 + 2, seven upper labials, the third and fourth entering the eye, sixth largest. Four lower labials in contact with the anterior chin-shields which are as long as the posterior. Scales in 17 rows. Ventrals 208, anal entire; subcaudals 35 to 38.

Colour.—Cream coloured above and below, with 22 to 27 broad dark brown or black bands, which are broader than the interspaces between them; the bands not meeting on the belly, but completely encircling the tail. The first band may start on the neck, the parietal region being white, though a specimen in the Australian Museum has the parietal shields bearing a black patch. The rostral, ocular region, and upper labials are also black.

Type from Florida Island, Solomon group.

Genus DENISONIA *Krefft.*

Hoplocephalus, part, Günther, Brit. Mus. Cat. Col. Snakes, 1858, p. 213.

Denisonia Krefft, Proc. Zool. Soc. London, 1869, p. 321. *Id.* Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 332.

Main Characters.—Maxillary extending forward as far as the palatine, the fangs followed by three to five small solid teeth. Anterior mandibular teeth longest. Head not very distinct from

neck. Eye moderate, pupil round or vertically elliptic. Nasal divided, no loreal. Body cylindrical, scales smooth, without pits. Subcaudals single or paired.

Key to the species.

Subcaudals single, plain coloured, no cross bands ..... *woodfordii*
Subcaudals paired, light and dark cross bars on body, 15-17 rows of scales ..... *par*

Denisonia par *Boulenger.*

(Pl. xiv, fig. 2, and Fig. 20.)

Hoplocephalus par Boulenger, Proc. Zool. Soc. London, 1884, p. 210
Id. Trans. Zool. Soc., xii, 1886, p. 46, Pl. vii, fig. 4.

Hoplocephalus melanurus Boulenger, Proc. Zool. Soc. London, 1888, p. 88, and 1890, p. 30, Pl. ii, fig. 1.

Denisonia melanura Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 345.

Denisonia par Boulenger, *loc. cit.*, p. 345.

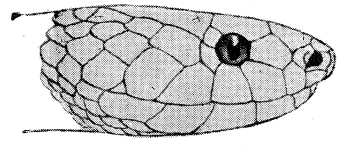

Fig. 20.—*Denisonia par* Boulenger (after Boulenger).

Main Characters.—Head more or less distinct from neck, eye about as long as its distance from the mouth. Rostral broader than deep, just visible from above. Internasals about half as long as the prefrontals. Frontal as long as, or a little longer than broad, and twice as broad as the supraocular, a little longer than the prefrontals, about half as long as the parietals. Nasal divided, the posterior nasal in contact with the single preocular. Two postoculars; temporals 1 + 2. Seven upper labials, the third and fourth entering the orbit, the third deeper than the fourth, the sixth largest. Four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Body scales in 15 to 17 rows Ventrals 164 to 170. Anal divided. Subcaudals 40 to 49, single.

Colour.—Variable. Dark brown above with some of the scales black edged, or brownish above with more or less distinct cross bands, or reddish brown cross bands on a yellowish ground colour. In the latter case the colour and markings are somewhat similar to those of *Micropechis elapoides*. Ventrals yellow.

Affinities.—There are eight specimens in the Australian Museum collection, and on examination I find that the characters previously separating the two species, *melanura* and *par*, are variable and not reliable, and furthermore that there is considerable overlapping of these characters. Two specimens have 16 rows of scales, one has 15, one 17, and one 16 or 17 according to the position chosen somewhere near the middle of the body. The remaining characters of the specimens examined agree in detail with those given by Boulenger in his descriptions of *D. par* and *D. melanura*. The number of scale rows and the colour markings being the only differences between his two descriptions (although I have not been able to examine the types), I have little hesitation in placing *D. melanura* in the synonymy of *D. par*.

Distribution.—There are specimens in the Australian Museum collection from Melanta and Ysabel. The species is restricted to the Solomon group, particularly Faro Island, Howla Island, and Gaudalcanar Island.

Denisonia woodfordii *Boulenger.*

(Pl. xiv, fig. 3.)

Hoplocephalus woodfordii Boulenger, Proc. Zool. Soc. London, 1888, p. 89, and 1890, p. 30, Pl. ii, fig. 2.

Denisonia woodfordii Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 346.

Main Characters.—Head more or less distinct from neck, eye about as long as its distance from the mouth. Rostral broader than deep, just visible from above. Frontal slightly longer than broad, nearly twice as broad as the supraocular, as long as its distance from the rostral, much shorter than the parietals. Nasal divided, the posterior nasal in contact with the single preocular. Two postoculars; temporals 1 + 2. Seven upper labials, the third and fourth entering the orbit. Four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 17 rows round the body. Ventrals 166 to 172. Anal divided. Subcaudals 41 to 45 pairs.

Colour.—Light brown above, each scale with a blackish brown border, forming a reticulate pattern. Head uniform dark brown. Lower parts white, the subcaudals edged with dark brown.

Distribution.—Evidently restricted to Rendora and New Georgia Islands, Solomon group.

Genus Laticauda *Laurente.*

Laticauda Laurente, Syn. Rept., 1768, p. 109.

Platurus Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 306.

Main Characters.—Body cylindrical, elongate, tail paddle-shaped. Maxillary bone extending beyond the palatine, with two

large poison fangs followed by one or two small solid teeth. Head shields large. Nostrils lateral, the nasals separated by internasals. Preocular present; no loreal. Scales smooth and imbricate, ventrals and subcaudals large.

LATICAUDA COLUBRINA *Schneider.*

(Fig. 21.)

Hydrus colubrinus Schneider, Hist. Amph., i, 1799, p. 238.

Platurus colubrinus Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 308.

Laticauda colubrina Stejneger, Bull. U.S. Nat. Mus., 58, 1907, p. 406.

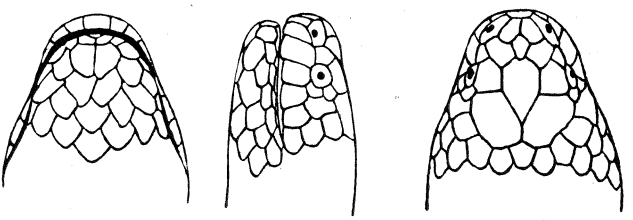

Fig. 21.—*Laticauda colubrina* Schneider (after Wall).

Main Characters.—Rostral deeper than broad. Frontal as long as, or slightly longer than, the parietals. One preocular and two postoculars. Six or seven upper labials the third and fourth under the eye. Temporals 1 + 2, sometimes 2 + 2. Scales in 21 to 25 rows round the middle of the body. Ventrals not keeled, 195 to 240; subcaudals 30 to 45.

Colour.—Olive above and yellowish below, with 28 to 54 black rings, which may completely surround the body or be interrupted on the belly.

This species is widely distributed from the Bay of Bengal to the western and south Pacific Ocean.

Genus PELAMYDRUS *Stejneger.*

Hydrus, part, Schneider, Hist. Amph., i, 1799, p. 233. *Id.* Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 266.

Pelamydrus Stejneger, Proc. U.S. Nat. Mus., xxxviii, 1910, p. 111.

Main Characters.—Body laterally compressed, tail paddle-shaped. Maxillary bone not extending forward as far as the palatine. Poison fangs short, followed by seven or eight small teeth. Snout long, head shields large; nostril superior, nasals in contact. One preocular, no loreal. Scales hexagonal, juxtaposed, no distinct ventrals.

PELAMYDRUS PLATURUS *Linnæus.*

(Fig. 22.)

Anguis platura Linnæus, Syst. Nat., i, 1766, p. 391.

Hydrus platurus Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 267.

Pelamydrus platurus Stejneger, Proc. U.S. Nat. Mus., xxxviii, 1910, p. 111.

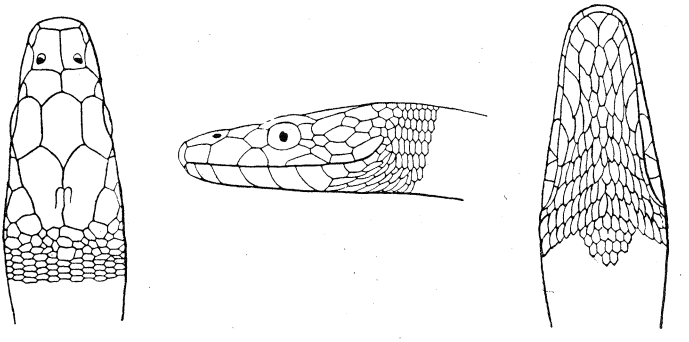

Fig. 22.—*Pelamydrus platurus* Linn. (after Stejneger).

Main Characters.—Head depressed, snout elongate. Frontal longer than its distance from the snout and nearly as long as the parietals. One or two preoculars and two or three postoculars. Seven to ten upper labials, the second largest in contact with the prefrontals. Three anterior temporals. Nasals in contact on the median line, nostrils on top of the snout, nasals longer than the prefrontals. Scales flat, hexagonal, juxtaposed, in 45 to 60 rows round the middle of the body. Body compressed laterally, tail paddle-shaped. Ventrals and subcaudals not distinct from the surrounding scales.

Colour.—Usually blackish above and yellowish below, tail spotted with black. The black markings are very variable, and the body may be more or less spotted or blotched.

This species grows to a length of about 42 inches, there being one of that size in the Australian Museum collection, though 30 inches is usually considered a large sized adult.

It is widely distributed throughout the tropical and temperate waters of the Indian and Pacfic Oceans.

LACERTILIA.

Key to the families (Fig. 23).

A. A strong dorsal crest of long spines ..... *Agamidæ*
AA. No dorsal crest.
  B. Head and body covered with small granular scales.
    C. Snout short, depressed, rounded, tongue fleshy .. *Geckonidæ*
    CC. Snout long, angular, pointed, tongue rod-like, forked .... *Varanidæ*
  BB. Head covered with more or less regular plates, body with smooth scales ..... *Scincidæ*

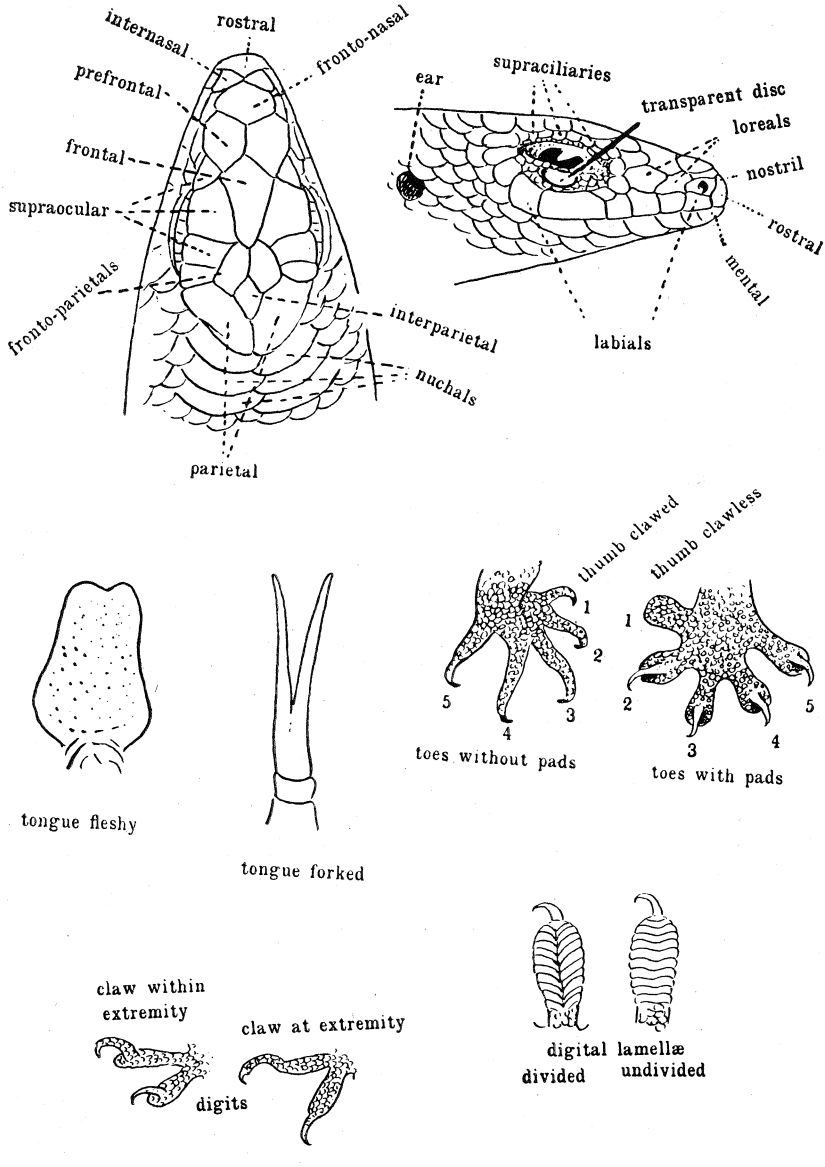

Fig. 23.—Guide to the Key to the Lizards.

Family AGAMIDÆ.

Genus GONYOCEPHALUS *Kaup.*

Gonyocephalus Kaup., Isis, 1825, p. 590. *Id.* Boulenger, Brit. Mus. Cat. Liz., 1, 1885, p. 282.

Main Characters.—Tympanum distinct; body compressed. Body scales small, uniform or intermixed with enlarged ones. A strong nuchal and dorsal crest of elongated spines. Gular fold conspicuous. Males with a gular sack. No preanal or femoral pores.

The genus is distributed from the East Indies to Papuasia, N.E. Australia and the Solomon Islands.

GONYOCEPHALUS GODEFFROYI *Peters.*

(Fig. 24.)

Lophura godeffroyi Peters, Mon. Akad. Wiss. Berlin, 1867, p. 707, Pl. —, fig. 1.

Gonyocephalus godeffroyi Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 295. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 102.

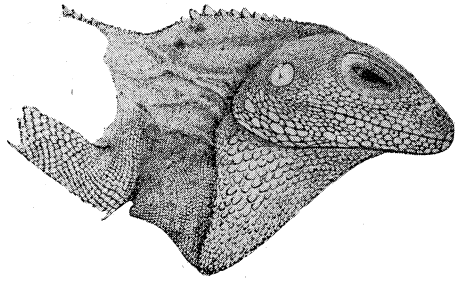

Fig. 24.—*Gonyocephalus godeffroyi* Peters (after Peters).

Main Characters.—Snout longer than the diameter of the orbit. Canthus rostralis and supraciliary edge angular, not projecting. Top of head concave. Tympanum larger than the eye opening. Scales on top of head minute, uniform in size, keeled; occipital scales enlarged. Ten to twelve upper and nine to ten lower labials. Gular sac large, not serrated anteriorly, median gular scales enlarged, smooth, posterior small, keeled. Nuchal crest separated from the dorsal by a notch. The longest spines of the nuchal crest equal the width of the tympanum. Dorsal crest longer than the nuchal crest, supported on greatly developed processes of the vertebræ. Crests much less developed in females and young specimens than in males. Dorsal scales small, keeled; ventrals larger, strongly keeled. Tail compressed, with a high crest on the basal portion.

Colour.—Dark brown, with more or less distinct cross bars. The young are greenish olive, either uniform or with darker cross bars.

Distribution.—There are sixteen specimens in the Australian Museum collection, and the characters are constant and show no variation from the above. Four are from Duke of York Island, two from Uji, four from St. Anna, two from Ysabel Island, one from Bougainville Island, three from the Solomons (no data). Dr. Barbour records this species from San Cristoval.

Family GECKONIDÆ.

Geckonidæ Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 3.

A very complete description of the family characters is given by Boulenger, but for the purpose of this paper all that is necessary is to give the most outstanding of the external features.

The snout is short, depressed and rounded. Eye large, with a vertical pupil, exposed, the valvular lids being rudimentary. Tympanum exposed. Tongue fleshy and only slightly nicked at the tip, and capable of protrusion from the mouth. Body more or less depressed, covered with granular scales on the dorsal surface, and small imbricate hexagonal ones on the lower surfaces.

Key to the genera.

Digits bent, claw shaped, without pads ..... *Gymnodactylus*
Digits not claw shaped, with dilations or pads.
  The distal joint long, free, rising from within the extremity of the digital expansion ..... *Gehyra*
  The distal joint at the extremity of the digital expansion.
    A double series of sub-digital lamellæ ..... *Lepidodactylus*
    A single series of sub-digital lamellæ ..... *Gecko*

Genus GYMNODACTYLUS *Boulenger.*

Gymnodactylus Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 22.

Digits bent, claw-shaped, cylindrical, without pads; the claw between two enlarged scales.

Key to the species.

16 to 20 rows of dorsal tubercles, back mottled, or with indefinite irregular cross bands ..... *pelagicus*
26 rows of dorsal tubercles, back with large definite cross bands ..... *louisiadensis*

GYMNODACTYLUS PELAGICUS *Girard.*

Heteronota pelagica Girard, Proc. Acad. Philad., 1857, p. 197.
Gymnodactylus pelagicus Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 40. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 100

Head large, oviform, depressed, snout longer than the distance from the eye to the ear. Forehead concave. Ear opening distinct, rounded, small. Body short, depressed. Head and upper surfaces covered with small granular scales, there being from 16 to 20 longitudinal series of conical, ribbed tubercles on the back. Rostral subquadrangular, not quite twice as broad as deep, with a median cleft above. Nostril pierced between the rostral, first upper labial, two nasals and two or three granules. Seven or eight upper and lower labials. Mental large, triangular, usually followed by a pair of chin-shields. Gular scales minute, granular; abdominal scales small, imbricate, keeled. Males usually with a series of eight preanal pores. Tail cylindrical, tapering, covered with small scales and occasional large tubercles.

Colour.—Brownish above, light below. There is usually a dark streak from the side of the snout through the eye to the ear, and irregular cross bands on the back. In some specimens the back may be slightly spotted with white and blotched with dark irregular bars. The lips are barred alternately with black and white markings.

There is a large series of this species in the Australian Museum collection from Australia, the islands of Torres Straits, New Guinea and many of the Pacific islands. Those from the Solomon group have been collected at the following localities: Hivo, N.E. Ysabel, Government Station, Ysabel.

Gymnodactylus louisiadensis *De Vis.*

(Pl. xv, fig. 5, and Fig. 26.)

Gymnodactylus louisiadensis De Vis, Ann. Qld. Mus., 2, 1892, p. 11.

Gymnodactylus loriæ Boulenger, Ann. Mus. Civ. Genova, (2), xviii, 1897, p. 695, Pl. i.

Gymnodactylus olivii Garman, Bull. Mus. Comp. Zool., xxxix, 1901, p. 1, Pl. i, fig. 1.

Gymnodactylus louisiadensis Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 100. *Id.* Waite, Rec. Austr. Mus., vi, 1905, p. 13.

Main Characters.—Head large, much broader than the body, three-fourths as broad as long, depressed, the snout nearly one-third longer than the distance between the eye and the ear. Body convex. Digits compressed at the base, and strongly compressed at the distal portion, with ten to eleven transverse plates under the distal joint. Tail cylindrical, tapering, longer than the head and body. Rostral shield broader than high, with a median groove above. Nostril bordered by the rostral, nasal, first upper labial, and several granules. Mental large, pentagonal, the posterior border wedged in between a pair of chin-shields. Head minutely granular, the

granules longer on the snout and supraorbital region. Back with small granules, among which are from 24 to 26 rows of enlarged tubercles, those on the thighs and tail being the largest. Abdominal scales smooth, imbricate, the free edges rounded.

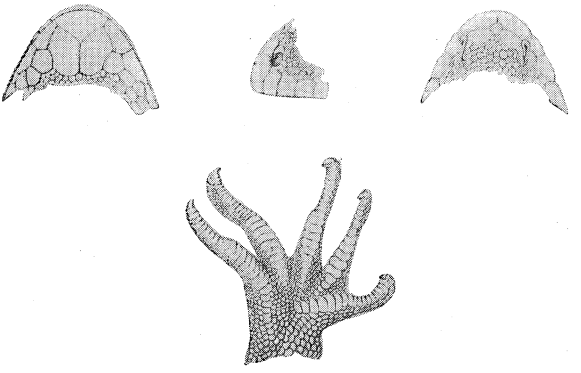

Fig. 26.—*Gymnodactylus louisiadensis* (after Garman).

Colour.—Pale brown above, the back being crossed by five or six darker bands, which are darkest on their outer borders. The first band extends from the snout through the eye, above the ear, and meets its fellow on the nape. The second crosses the body immediately in front of the fore limbs; there are three or four across the body between the limbs and one across the hips. The tail is crossed by similar bands, except in rejuvenated members, which are pale brown. The top of the head and snout is more or less mottled, and the whole of the underparts are whitish.

Distribution.—I have been able to examine several excellent specimens in the Australian Museum collection, only one of which is from the Solomon Islands. Two were collected in the year 1897 by Mr. G. Hislop near the Bloomfield River, Cooktown, Queensland, while another from Cooktown was presented to this Museum in 1908 by Mr. E. A. Olive. When the late Edgar R. Waite wrote doubting the Australian record from Cooktown he was not aware that in the "Old Collection," which was not catalogued at that time, were the three specimens mentioned above. Dr. Barbour has also recorded a specimen from the same locality. These records should set beyond doubt the occurrence of the species in Queensland.

Genus Gehyra *Gray.*

Gehyra Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 147.

Main Characters.—Digits strongly dilated, free or webbed at the base, with undivided transverse lamellæ on the under surface. Distal phalanges free, elongate, clawed, laterally compressed, raised

from within the extremity of the dilated disc. Thumb and inner toe clawless, and without free distal phalange. Back covered with granular scales, abdomen with cycloid imbricate scales. Pupil vertical; males with femoral pores.

Distribution.—The genus is distributed from the East Indies and islands of the Indian and south Pacific Oceans to Australia and the west coast of Mexico, South America.

Gehyra oceanica *Lesson.*

(Fig. 27.)

Gecko oceanicus Lesson, Voy. "Coquille," Zool., ii, 1830, p. 42, Pl. ii, fig. 3.

Gehyra oceanica Gray, Zool. Miscell., 1842, p. 58. *Id.* Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 152. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 101.

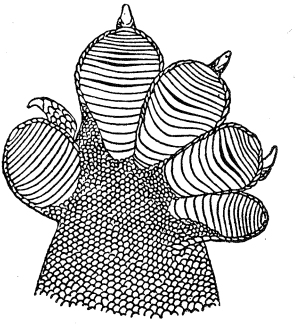

Fig. 27.—*Gehyra oceanica* Lesson (after de Rooij). Fore limb.

Main Characters.—Head much longer than broad, depressed. Snout once and one-half as long as the distance from the eye to the ear. The ear is oval, horizontal and equal in length to the distance between the orbits. Forehead with a distinct median groove. Body depressed, limbs stout, digits short, expanded into discs, the inferior transverse lamellæ not divided, but distinctly incurved. The distal joint long, free, rising from within the extremity of the digital expansion. The upper surfaces are covered with small, granular, juxtaposed scales, smallest on the neck. The scales are globular on the back, flat and subimbricate on the tail. Tail rounded, tapering, slightly depressed, and generally with a median groove on the dorsal surface. Femoral pores in an angular series, thirteen to twenty on each side.

Colour.—Brown above, uniform, or with darker or lighter markings and whitish spots. Lower surfaces creamy white.

Distribution.—This species is widely distributed throughout the Pacific islands. In the Australian Museum collection is a very large and unvarying series, the specimens being from the following localities: Ysabel and Gaudalcanar Islands in the Solomon group; New Hebrides; Duke of York Island; South East Cape, Papua; Murray Island, Torres Straits; Bismarck Archipelago; Samoa; Ocean Island; Funafuti, Ellice group; and Flint Island. The latter appears to be a new record, and is perhaps the furthest east that the species occurs. Flint Island is situated 151° 15′ west long., 11° 26′ south lat. The specimen before me does not vary from the typical forms. The collection contains, also, one specimen from Lord Howe Island, and two from the mainland of Australia, one of which is from Albany Rock, Queensland.

Genus LEPIDODACTYLUS *Fitzinger.*

Lepidodactylus Fitzinger, Syst. Rept., p. 98; *Id.* Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 162.

Main Characters.—Digits dilated, with or without a rudiment of web at the base. The inferior transverse lamellæ divided by a median groove. A short, compressed, clawed distal joint rising from the extremity of the digit. Inner digit clawless. Body covered with granular scales on the back, and juxtaposed or subimbricate ones on the under surfaces. Pupil vertical. Males with preanal or femoral pores.

Key to the species.

Digits webbed at the base, general colour brownish above, sides with dark spots ..... *guppyi*

Digits without distinct webs, body grey, with zigzag black cross bands .... *woodfordii*

LEPIDODACTYLUS GUPPYI *Boulenger.*

(Fig. 28.)

Lepidodactylus guppyi Boulenger, Proc. Zool. Soc. Lond., 1884, p. 210. *Id.* Trans. Zool. Soc. Lond., xii, 2, 1886, p. 38, Pl. vii, fig. 1.

Main Characters.—Head small, slender, oviform, its length being contained four times in the distance between the end of the snout and the vent. Body narrow, contained about six times in the distance between the snout and the vent. The limbs are moderate; the digits are united at the base by a small web and are strongly dilated. There are eleven lamellæ under the median digit, the two or three under the proximal joint being divided, the others undivided. Rostral quadrangular, more than twice as broad as high. Nostril pierced between the rostral, the first upper labial and the nasals. There are eleven or twelve upper and lower labials, and three or four rows of small chin-shields. Tail cylindrical, tapering, covered

with small, equal flat scales. Head and body covered with uniform small granules above, minute on the occiput, largest on the snout.

Colour.—The upper surfaces are pinkish brown, with indistinct darker dots on the back, more distinct on the sides and limbs. An ill-defined dark streak extends from the end of the snout to the ear, passing through the orbit. The upper lip is pink, with brown spots. Tail with dark annuli above. The lower surfaces are whitish, except for the throat, which is finely dotted with reddish brown.

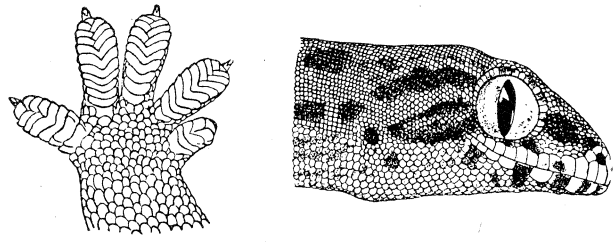

Fig. 28.—*Lepidodactylus guppyi* Boulenger (after de Rooij).

Boulenger states that the unique specimen from which the species is described is a female, and shows no femoral or preanal pores, but the enlarged scales on those regions indicate that both kinds of pores are developed in the males.

Length of type, 48 mm. from snout to vent; head 12 mm., tail 45 mm.

Locality.—Faro Island, Solomon group.

No specimen available to me.

Lepidodactylus woodfordii *Boulenger.*

(Pl. xiii, fig. 2.)

Lepidodactylus woodfordii Boulenger, Proc. Zool. Soc. Lond., 1887, p. 334.

Main Characters.—The following short description is given in the above paper: "Closely allied to *L. guppyi.* Digits without distinct web. Tail a little depressed, rounded. Femoral and preanal pores 25 altogether. Grey above, with zigzag black cross bands, six between the nape and the base of the tail; a black streak from the nostril to the neck, passing through the eye and above the ear; lower surfaces whitish." Boulenger also gives the following measurements: total length 78 mm., head 11 mm., width of head 7 mm., tail 38 mm.

Locality.—Described from a single specimen from Faro Island.

No specimen available to me.

Genus GECKO *Laurenti.*

Gekko, part, Laurenti, Syn. Rept., 1768, p. 44.

Gecko Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 182.

Main Characters.—Digits strongly dilated, more or less webbed at the base. Digital lamellæ undivided. Thumb clawless. Body covered with juxtaposed granular scales, with which are mixed many irregularly placed tubercles. Belly with small, flat, imbricate scales. Pupil vertical. Males with preanal and femoral pores.

Distribution.—The genus is distributed from China through the East Indies to New Guinea and the Solomon Islands.

GECKO VITTATUS *Houttuyn.*

Gecko vittatus Houttuyn, Verh. Zeeuw. Gen. Vlissingen ix, 1782, p. 325, Pl. —, fig. 2. *Id.* Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 185. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 101.

Main Characters.—Head oviform, snout longer than the distance between the eye and the ear, equal to the greatest width between the orbits. Forehead concave, ear oval, vertical, about as large as the pupil, its greatest diameter about half that of the orbit. Body slightly depressed, elongate; limbs long, the digits greatly expanded and slightly webbed. Head covered with small granular scales, slightly larger than those on the back. Nostril small, bordered by the rostral, nasal, and first labial. There are ten to fourteen upper and ten to twelve lower labials. Mental small, subtriangular, no chin-shields. Chin and throat covered with small granules, among which are larger tubercles. Scales of back minute, granular, intermixed with many larger, smooth, or slightly keeled tubercles. Femoral and preanal pores present. Tail slender, slightly depressed, distinctly annulate, covered above with small flat granules and larger tubercles, there being about twelve rows of scales above and five below, between the annuli. Under surfaces of body covered with smooth imbricate scales.

Colour.—Greyish to reddish brown above, variegated with darker markings and a light, dark edged, vertebral stripe which is forked on the neck. Tail with distinct white annuli. Under surfaces whitish. Some of the specimens examined are uniform brownish above, without distinctive markings.

Distribution.—This species is distributed from the Moluccas through New Guinea to the Solomon group. In the Macleay Museum, Sydney, are four specimens from the Solomons, while in the Australian Museum are thirty-three specimens from the following localities: Paniete, Louisiade Archipelago; New Britain; Humboldt Bay, Dutch New Guinea; Fife Bay, Papua; Duke of York Island; Maroom, Bismarck Archipelago; Gaudalcanar, Santa Anna, Uji, Howla, and Bougainville Islands in the Solomon group.

Family VARANIDÆ.

Genus VARANUS *Merrem.*

Varanus Merrem, Tent. Syst. Amph., 1820, p. 58. *Id.* Boulenger, Brit. Mus. Cat. Liz., ii, 1885, p. 304.

Main Characters.—Tongue smooth, rod-like, bifid, retractile into a sheath at its base. Head long, pointed, covered with small polygonal scales. Eyelids well developed. Ear opening distinct. Limbs well developed. Dorsal scales smooth, round, juxtaposed, surrounded by rings of minute granules. Ventral scales rather square, juxtaposed, flat, arranged in transverse rows. Tail very long, laterally compressed. No femoral or preanal pores.

Distribution.—The genus is distributed from Africa through Asia to the Australian region.

VARANUS INDICUS *Daudin.*

(Fig. 29.)

Tupinambus indicus Daudin, Rept., iii, 1802, p. 46, Pl. xxx.

Varanus indicus Boulenger, Brit. Mus. Cat. Liz., ii, 1885, p. 316.

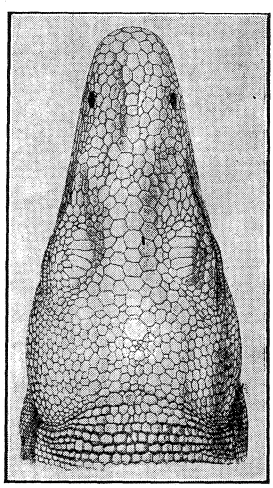

Fig. 29.—*Varanus indicus* Daudin (after Peters and Doria).

Main Characters.—Snout long, depressed at the tip, the distance from the tip to the eye being about equal to the distance from the anterior border of the eye to the ear opening. Canthus rostralis acute. Nostril round, nearer to the tip of the snout than to the eye. Scales of head comparatively large, larger on the forehead

than on the temples. Supraoculars transversely dilated. Dorsal scales small, oval, keeled; abdominal scales smooth, squarish, in 90 to 110 transverse rows. Tail strongly compressed, keeled above, all caudal scales keeled.

Colour.—The colour varies considerably. It may be olive brown to blackish above, with small yellow spots all over the body, or widely spaced larger ones, while the tail may bear more or less distinct cross bands and reticulations.

There is a large series of specimens in the Australian Museum collection from the Solomon Islands and other places.

Family SCINCIDÆ.

Key to the genera.

Palatine bones separated on the median line of the palate. Head very distinct from neck, squarish, snout as deep as broad, loreal region perpendicular, angular ..... *Corucia*

Palatine bones in contact on the median line of the palate. Head not very distinct from neck, angular, snout depressed, loreal region usually oblique, rounded ..... *Lygosoma*

Genus CORUCIA *Gray.*

Corucia Gray, Proc. Zool. Soc. Lond., 1885, p. 217. *Id.* Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 141.

Main Characters.—Palatine bones not meeting on the middle line of the palate. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the single nasal; no supranasals. A complete series of shields between the orbit and the upper labials. Prefrontals well developed. Frontoparietals and interparietal distinct, the latter shield in contact with an azygous occipital. Limbs well developed, pentadactyle; digits slightly compressed, with undivided transverse lamellæ inferiorly. Tail prehensile. Loreal region perpendicular, angular.

Distribution.—As far as is known the genus is restricted to the Solomon Islands.

CORUCIA ZEBRATA *Gray.*

(Fig. 30.)

Corucia zebrata Gray, Proc. Zool. Soc. Lond., 1885, p. 218, Pl. viii. *Id.* Boulenger, Trans. Zool. Soc. Lond., xii, 1886, p. 43, Pl. vii, fig. 3. *Id.* Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 142. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 102.

Main Characters.—Head large, angular, distinct from neck. Snout short, rounded. Frontonasal the largest head shield. Prefrontals forming a median suture. Frontal small, broader than

long. Five band-like supraoculars, the second largest, the third and fourth bordering the eye. Interparietal larger than the frontal, and almost as large as the parietals. Two very large temporals, the upper largest. Ear opening without distinct lobules, and nearly as large as the orbit. The head shields are liable to slight variation in shape and size. Body scales large, those on the back being largest, and slightly keeled; there are from 36 to 38 rows round the middle of the body. The adpressed limbs overlap. Digits short, strong and provided with powerful claws. The two inner toes are very much larger than the outer three. Tail prehensile, a little longer than the head and body, cylindrical and with an obtuse end.

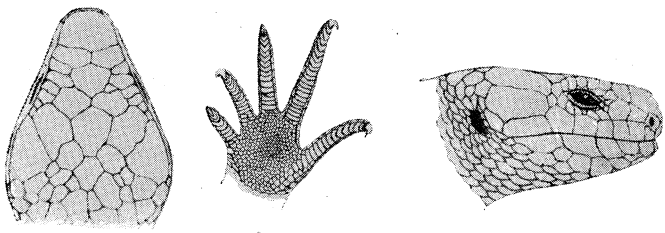

Fig. 30.—*Corucia zebrata* Gray (after Boulenger).

Colour.—Greenish white above with irregular dark brown cross bands, or olive above with lighter variegations, and there may be blackish spots irregularly spaced. The head is uniformly coloured, sometimes a reddish brown. The under surfaces of the body are greenish white.

Distribution.—There are four specimens in the Australian Museum collection. One was collected on Uji and two on St. Anna Islands in June, 1883, or some two years before Gray described the genus as new. The fourth specimen is from the south coast of Ysabel Island, and is twenty-seven and three-quarter inches in length.

Habits.—In regard to the habits of *Corucia zebrata,* Mr. Heffernan sent me the following interesting note: *"One large leaf eating lizard*: leads the same kind of life as the opossum, feeding at night only and sleeping in hollow trees during the day; often found asleep with the opossum. Western natives assert that if there is more than one of these lizards in the same hollow tree, the topmost one only comes out to feed, the others underneath remaining and feeding on the excreta of the top one, which is always very fat and healthy, the second one being thinner, and the third very thin. This species is edible."

The stomach of the specimen from Ysabel Island contained a mass of particles of leaves cleanly cut into discs.

Genus Lygosoma *Gray.*

Lygosoma Gray, Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 209.

Main Characters.—Palatal bones in contact on the middle line of the palate. Palatal notch not extending forward to the level of the centre of the eye. Eyelids well developed. Ear distinct or hidden, if distinct, tympanum more or less sunk. Nostril pierced in the nasal; supranasal present or absent. Limbs more or less developed, rudimentary or absent. Loreal region usually rounded.

Distribution.—The genus has a wide distribution from Africa through India and China to America, Australia and the Pacific islands.

As the genus *Lygosoma* is a very large one, the following key to the subgenera or sections will enable workers to distinguish them more readily.

A. Lower eyelid scaly, no transparent disc.
  B. Limbs well developed.
    C. Preanal scales enlarged ..... *Hinulia*
    CC. Preanal scales not enlarged ..... *Dasia*
  BB. Limbs not well developed, rudimentary ..... *Riopa*
AA. Lower eyelid with an undivided transparent disc surrounded by scales.
    D. Supranasals present ..... *Emoa*
    DD. Supranasals absent ..... *Liolepisma*

Section Hinulia.

Main Characters.—Lower eyelid scaly. Limbs well developed, pentadactyle, the length of the hind limb greater than the distance from the centre of the eye to the fore limb. Tympanum distinct. No supranasals. Frontal not broader than the supraocular region. Frontoparietals distinct. Preanal scales enlarged.

Key to the species of *Hinulia.*

24-26 rows of scales round body, 4-6 pairs of enlarged nuchals, 15-17 lamellæ under fourth toe ..... *solomonis*

34 rows of scales round body, no enlarged nuchals, 18 lamellæ under the fourth toe ..... *woodfordi*

40-42 rows of scales round body, no enlarged nuchals, 20-25 lamellæ under fourth toe ..... *concinnatum*

Lygosoma (Hinulia) solomonis *Boulenger.*

(Pl. xv, fig. 4.)

Lygosoma solomonis Boulenger, Proc. Zool. Soc. London, 1887, p. 334. *Id.* Brit. Mus. Cat. Liz., iii, 1887, p. 510.

Sphenomorphus solomonis Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 105.

Main Characters.—Body elongate, limbs short. The distance between the end of the snout and the forelimb is contained once and three-fifths to once and two-thirds in the distance between the axilla and the groin. Snout short, obtuse. Lower eyelid scaly. Nostril pierced in a single nasal; no supranasal, a single anterior loreal. Frontonasal broader than long, forming a narrow suture with the rostral and with the frontal. Frontal about as long as the frontoparietal and interparietal together, and in contact with the first and second supraoculars. Seven supraciliaries. Frontoparietals and interparietal distinct, the latter a little smaller than the former. Parietals forming a suture behind the interparietal, and bordered by four to six pairs of nuchals. Fourth or fifth upper labial behind the eye and entering the orbit. Ear opening oval, a little smaller than the eye opening; no auricular lobules. Scales smooth, in 22 to 26 rows round the middle of the body, the two vertebral series largest. Preanal scales enlarged. Limbs widely separated when adpressed; the length of the hind limb equals the distance between the anterior border of the orbit and the fore limb. Digits short, subdigital lamellæ smooth, undivided, 15 to 21 under the fourth toe. Tail thick, once and one-third the length of the head and body.

Colour.—Brown above, with blackish dots. The under surfaces are pale brown, dotted with a darker shade.

The lengths of the specimens examined range from 80 mm. to 140 mm. from snout to tip of tail.

Distribution.—This species has not been found outside the Solomon Islands. Boulenger recorded it from Faro Island; Barbour from Auki, Malaita; while Heffernan collected for this Museum six specimens, two from Hivo, three from the Government Station, both on Ysabel Island, and one from the south-west of this island.

Lygosoma (Hinulia) woodfordi *Boulenger.*

(Pl. xv, fig. 2.)

Lygosoma woodfordi Boulenger, Proc. Zool. Soc. London, 1887, p. 335. *Id.* Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 511, Pl. xxv, fig. 4.

Sphenomorphis woodfordi Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 105.

Main Characters.—Body elongate. Limbs rather short. The distance between the end of the snout and the fore limb is contained once and three-fifths in the distance between the axilla, and the groin. Snout moderately elongate, truncate. Lower eyelid scaly. Nostril pierced in a single nasal, no supranasal; a single loreal. Rostral forming a broad, straight suture with the frontonasal,

which is broader than long. Prefrontals forming a median suture. Frontal as long as the frontoparietals and interparietal together, in contact with the first supraciliary and the two anterior supraoculars. Four supraoculars followed by a very small fifth, first longest. There are ten supraciliaries, the first largest. Frontoparietals and interparietal distinct, the former much larger than the latter. Parietals forming a suture behind the interparietal. No nuchals. Nine upper labials, the seventh below the centre of the eye. A series of rather large suborbitals separates the orbit from the labials. Ear opening oval, a little smaller than the eye opening, no auricular lobules. Scales smooth, in 34 rows round the middle of the body; dorsals largest, the laterals very small. A pair of enlarged preanals. The adpressed limbs just meet. Digits rather short, slightly compressed; there are 18 smooth lamellæ under the fourth toe.

Colour.—Dark brown above with a strong metallic gloss. The sides bear curved or oblique black bars. The lower surfaces are yellowish. Boulenger's type, the species being described from a single specimen, measures 166 mm., total length.

Distribution.—Restricted to the Solomon Islands, the type coming from Faro Island. Barbour records one from Uji and six from Wainone Bay, San Cristoval. There are no specimens in the Australian Museum.

Lygosoma (Hinulia) concinnatum *Boulenger.*

(Pl. xv, fig. 1, and Fig. 31.)

Lygosoma concinnatum Boulenger, Proc. Zool. Soc. Lond., 1887, p. 335. *Id.* Brit. Mus. Cat. Liz., iii, 1887, p. 511, Pl. xxvi, fig. 4.

Sphenomorphus concinnatus Barbour, Proc. New Eng. Zool Club, vii, 1921, p. 105.

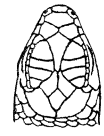

Fig. 31.—*Lygosoma* (*Hinulia*) *concinnatum* Boulenger (after Boulenger).

Main Characters.—Habit lacertiform. The distance from the end of the snout to the fore limb is equal to about one and one-fifth to one and one-fourth the distance between the axilla and the groin. Snout short, obtuse. Supraocular regions swollen. Lower eyelid scaly. Nostril pierced in a single nasal; no supranasal, a single anterior loreal, or a very small shield above it. Rostral forming a broad, straight suture with the frontonasal, which is much broader

than long. Prefrontals forming a median suture. Frontal much narrowed posteriorly, as long as, or shorter than the frontoparietals and interparietal together, in contact with the first and second supraoculars. Four supraoculars, the first longest. Eight or nine supraciliaries, first largest. Frontoparietals and interparietal distinct, the former longer than the latter. Parietals forming a suture behind the interparietal. No enlarged nuchals. Fifth upper labial largest and situated below the orbit. Ear opening oval, nearly as large as the eye opening, no auricular lobules. Scales smooth, or dorsals and laterals indistinctly pluricarinate, laterals smallest, disposed in 40 to 42 rows round the middle of the body. A pair of enlarged preanals. The hind limb reaches to the elbow or the axilla of the adpressed fore limb. Digits rather elongate, slightly compressed, subdigital lamellæ smooth, 22 to 25 under the fourth toe. Tail about once and one-half the length of the head and body.

Colour.—Dark brown above with a strong metallic gloss. Back spotted with black and whitish spots elegantly arranged. There is a black band on each side of the head, passing through the eye and sometimes becoming diffused behind the eye. A large and conspicuous white-edged black spot is usually present on the sides of the neck. Lower surfaces brownish white, clouded, or longitudinally streaked with a darker.

Distribution.—The species is restricted to the Solomon group and has been recorded from Faro Island, New Georgia, Malaita, Tulagi, and there are ten specimens in the Museum collected by Mr. Heffernan from the Government Station, Ysabel Island.

Section Dasia.

Main Characters.—Lower eyelid scaly. Limbs well developed, pentadactyle, overlapping when adpressed, digits compressed distally. Ear opening small, but distinct. Frontal not broader than the supraocular region. Frontoparietals distinct. Supranasals present or absent.

Lygosoma (Dasia) smaragdinum *Lesson.*

(Pl. xiii, fig. 1.)

Scincus smaragdinus Lesson, Voy. "Coquille," Zool. ii, 1830, p. 43, Pl. iii, fig. 1.

Lygosoma smaragdinum Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 250.

This species has been divided into several subspecies or geographical races by several authors, Dr. Barbour listing them for the convenience of other workers. This splitting up has been done on colour and markings, which appears to be quite a distinctive feature of the specimens from different geographical areas.

Dasia smaragdinum perviridis *Barbour.*

Dasia smaragdinum perviridis Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 106.

Main Characters.—Habit lacertiform. The distance between the snout and the fore limb is contained once and one-fifth to once and one-third in the distance between the axilla and the groin. Snout long, pointed, much depressed. Lower eyelid scaly. Nasals widely separated, usually divided into a postnasal and a nasal. Frontonasal as long as broad, or slightly broader than long, its anterior border convex and forming a suture with the rostral. Frontonasal frequently forming a suture with the frontal. Frontal large, as long as, or a little longer than the frontoparietals and parietals together, in contact with the first three supraoculars, of which there are four. Supraciliaries numerous, all with the exception of the first two very small. Frontoparietals and interparietal distinct, the latter much smaller than the former. Parietals forming a suture behind the interparietal and bordered by a large temporal and one to three pairs of nuchals. There are five labials anterior to the suboculars. Ear opening small, usually with one or two small anterior lobules. Scales smooth, in 22 to 24 rows round the middle of the body, dorsals largest, especially the two median series. Preanal scales not enlarged. The hind limb reaches the elbow or nearly to the axilla of the adpressed fore limb. Digits slender, with long, sharp claws, the basal phalanges tetragonal, the distal strongly compressed. Subdigital lamellæ smooth, 28 to 35 under the fourth toe. Heel with an enlarged suboval scale. Tail once and one-third to once and one-half the length of the head and body.

Colour.—Uniformly green above and yellowish green below.

Distribution.—The subspecies is restricted to the Solomon Islands.

Section Riopa.

Main Characters.—Lower eyelid scaly, or with a transparent disc. Limbs short or rudimentary. Supranasals present. Ear distinguishable. Prefrontals well developed. Frontal not broader than the supraocular region.

Lygosoma (Riopa) albofasciolata *Günther.*

(Fig. 32.)

Eumeces albofasciolatus Günther, Ann. Mag. Nat. Hist., (4), x, 1872, p. 370.

Lygosoma albofasciolatum Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 302, Pl. xxiv.

Riopa albofasciolata Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 107.

Lygosoma striatofasciatum Ogilby, Rec. Austr. Mus., i, 1890, p. 5.

Main Characters.—Body elongate, stout, the distance between the end of the snout and the fore limb contained once and two-fifths to once and three-fourths in the distance between the axilla and the groin. Snout short, obtusely rounded. Eye nearer to the tip of the snout than to the ear; lower eyelid scaly. Nostril pierced between the nasal and a very small supranasal. Rostral broader than deep. Frontonasal slightly broader than long, forming an equally broad suture with the rostral and frontal. Prefrontals small, but larger than the nasal and supranasal combined. Frontal in contact with the first and second supraoculars, longer than its distance from the end of the snout, as long as its distance from the posterior border of the parietals. Five supraoculars, the fifth very small. Eight supraciliaries, the first largest. Frontoparietals paired, interparietal distinct, as large as or slightly smaller than

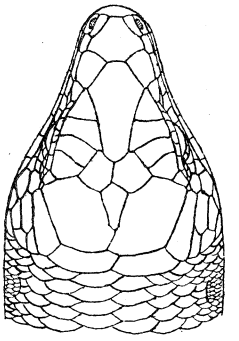

Fig. 32.—*Lygosoma* (*Riopa*) *albofasciolata* Boulenger (after Boulenger).

one of the frontoparietals. Parietals forming a short suture behind the interparietal. A pair of nuchals and a pair of temporals border the parietals. Sixth upper labial under the eye, from which it is separated by a row of small scales. Ear opening smaller than the eye opening, with a series of small lobules anteriorly. Scales smooth, in 33 to 36 rows round the centre of the body, the dorsals largest and laterals smallest. Preanals not enlarged. The adpressed limbs fail to meet, or only just touch each other. Digits short, compressed, subdigital lamellæ smooth, 17 to 22 under the fourth toe. Tail longer than the head and body.

Colour.—Dark brown above, with a distinct opaline gloss and more or less distinct, irregular, light cross bands. The labials are dark barred, and there is usually a dark streak from the angle of the mouth to the under part of the shoulder, and another parallel

with it and further forward on the throat. The lateral edges of the scales are dark, and in some specimens tend to form longitudinal lines.

Distribution.—The range of this species is from north Australia to New Ireland and the Solomon group. The specimens in the Museum collection are from Ysabel, Uji, and St. Anna Islands in the Solomon group.

Affinities.—I have examined Ogilby's type of *Lygosoma striatofasciatum* and seven other specimens ranging in size from 3,010 mm. to 4,130 mm. in total length; the head and body from 1,600 mm. to 1,900 mm., and the tail from 1,500 mm. to 2,500 mm.

Throughout the series, including Ogilby's type, there is no great variation from the description and figure of Boulenger's *Riopa albofasciolatum.* The differences enumerated by Ogilby are not quite as he supposed; for instance he must have bent his specimen to make the limbs overlap, while the other characters given by him I have found to be variable, and there are intermediate forms, proving beyond doubt that his species is synonymous with Günther's *albofasciolata.*

Section Emoa.

Main Characters.—Limbs well developed, pentadactyle, overlapping when pressed against the body. Lower eyelid with an undivided transparent disc. Tympanum distinct. Supranasals present. Rostral forming a suture with the frontonasal. Frontal not broader than the supraocular region. Preanals not or scarcely enlarged.

Key to the species.

A. Less than 34 rows of scales round the body.

B. No interparietal shield; 26 to 32 rows of scales; 40 to 60 lamellæ under the fourth toe ..... *cyanurum*

BB. Interparietal shield present; 24 to 26 rows of scales; 70 to 90 lamellæ under the fourth toe ..... *cyanogaster*

AA. More than 34 rows of scales round the body.
36 to 40 rows of scales; 32 to 40 lamellæ under the fourth toe .. *nigrum*

Lygosoma (Emoa) cyanurum *Lesson.*

(Fig. 33.)

Scincus cyanurus Lesson, Voy. "Coquille," Zool., ii, p. 49, Pl. iv, fig. 2.

Lygosoma cyanurum Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 290. *Id.* Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 103.

Main Characters.—Habit lacertiform. The distance between the end of the snout and the fore limb is contained once to once and one-third the distance between the axilla and the groin. Lower

eyelid with a transparent disc. Nostril situated between a nasal, postnasal, and a supranasal; both of the latter are broader than long. Postnasal much smaller than the frontonasal, the latter forming a suture with the frontal, which is longer than broad and shorter than the frontoparietal. Frontoparietal and the interparietal fused into a single large shield. Parietals broader than long, the centre suture usually shorter than the frontonasal. Four supraoculars, the first two forming a suture with the frontal. Seven or eight supraciliaries. A pair of nuchals and a pair of temporals border the parietals. Seven upper labials, the fifth large and situated under the eye. Ear opening oval, about as large as or a little larger than the transparent palpebral disc; with one to three small, obtuse, anterior lobules. There are from 26 to 32 smooth scales round the body, of which the dorsals are the largest and the laterals smallest. Preanal scales hardly enlarged. The hind limb when stretched forward reaches to about the elbow. Digits somewhat depressed, elongate, with 40 to 60 lamellæ under the fourth toe.

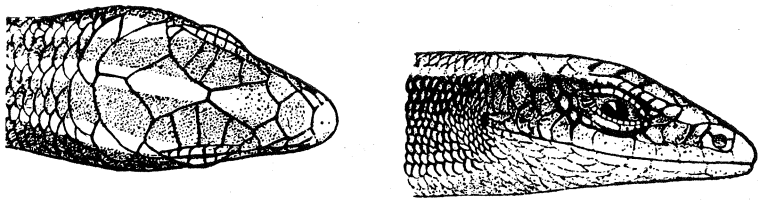

Fig. 33.—*Lygosoma* (*Emoa*) *cyanurum* Lesson (after de Rooij).

Colour.—Brownish olive to blackish above, with from three to five longitudinal golden lines. Three of these lines start from the snout, one extends down the centre of the head and back, and the other two one on each side of the head, over the eye, and down the dorso-lateral region.

Distribution.—This species has a very wide range, and extends from the Moluccas through Papuasia, Polynesia, and Australia.

Twenty-five specimens were examined from the Solomon Islands, fourteen of which were collected by Mr. N. S. Heffernan at Cape Marsh, Karamula Island, and on Ysabel Island.

Lygosoma (Emoa) cyanogaster *Lesson.*

Scincus cyanogaster Lesson, Voy. "Coquille," Zool., ii, p. 47, Pl. iii, fig. 3.

Lygosoma cyanogaster Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 292.

Emoa cyanogaster Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 102.

Main Characters.—Snout long, depressed, the distance from the eye to the snout being equal to the distance from the eye to the ear. Lower eyelid with an undivided transparent disc. Nostril pierced between the nasal, supranasal, and a postnasal. Rostral much broader than long, forming a suture with the frontonasal, which is usually broader than long. Frontal longer than broad, narrowly in contact with, or, most generally, separated from the frontonasal by the large prefrontals. Frontoparietal about as broad as long. Interparietal distinct, not much longer than the supranasal. Parietals broader than long, bordered by a pair of nuchals and a pair of temporals. Four supraoculars, the first two in contact with the frontal. Eight upper labials, the sixth band-like and entering the orbit. Mental small, followed by a very large chin-shield, and three or four large shields border the lower labials on each side. Preanals not, or only slightly enlarged. Scales in 24 to 26 rows round the middle of the body, the dorsals largest and laterals smallest. Digits long, somewhat flattened except at the distal end, which is compressed. There are from 70 to 90 small smooth lamellæ under the fourth toe, the last few becoming more or less enlarged. The hind limb when stretched forward reaches to about the shoulder. Tail about twice as long as the head and body.

Colour.—From brownish to olive green above, with small dark and light spots. There may be a broad dark lateral band from the nostril through the eye, becoming broken and diffused on the sides. This band is usually bordered by a series of light spots.

Distribution.—The species has a wide range from the Moluccas through Papuasia, New Ireland, New Hebrides, and the Solomons.

Specimens in the Museum collection, many of which were collected by Mr. Heffernan, come from Tunabuli Harbour, Ysabel Island; Uji Island; South-East Cape, Papua; Murray Island, Torres Strait; Paneiti, Louisiade Archipelago; Hawaiian Islands; New Hebrides.

LYGOSOMA (EMOA) NIGRUM *Hombron and Jacquinot.*

(Fig. 34.)

Eumeces niger Hombron and Jacquinot, Voy. au Pole Sud, iii, 1853, p. 11, Pl. iv, fig. 2.

Lygosoma nigrum Boulenger, Brit. Mus. Cat. Liz., 1887, p. 297.

Emoa nigrum Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 103.

Main Characters.—Habit lacertiform. The distance between the end of the snout and the fore limb may be contained once and one-quarter to once and one-half in the distance between the axilla and the groin. Snout obtuse, long, narrow, its length being equal to the distance between the posterior border of the eye and the posterior border of the ear. Lower eyelid with a transparent disc.

Rostral broader than deep. The nostril pierced between the pre-, post-, and supranasal. Frontonasal slightly broader than long, about as large as the frontoparietal. Prefrontals small, separated by the suture formed by the frontal and the frontonasal. Frontal narrow, longer than its distance from the snout, in contact with the first and second supraoculars, of which there are four, the second being the largest. Frontoparietal single. Interparietal, which is usually present, very small. Parietals not much larger than the frontoparietal, bordered by a pair of temporals and a pair of nuchals. The fifth, sixth, or seventh upper labial below the eye. Ear opening oval, larger than the transparent palpebral disc. Scales in 36 to 40 rows round the middle of the body, dorsals largest, laterals smallest. Preanals slightly enlarged. Digits elongate, compressed, with 30 to 40 lamellæ under the fourth toe. Hind limb when stretched forward reaches to about the shoulder.

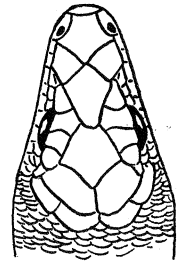

Fig. 34.—*Lygosoma* (*Emoa*) *nigrum* (Hombron and Jacquinot).

Colour.—Light to dark brown or almost black above, and greenish yellow to cream below; the under parts of the limbs and throat usually darkly mottled. In the lighter coloured specimens there are usually white spots on the dorso-lateral region from above the ear to about half way along the tail. The sides are blotched with very dark markings, while the dark mottlings on the back may form irregular cross bands. In the dark brown or black varieties the mottlings merge into the ground colour and become indistinct. The top of the head is generally somewhat lighter in shade than the back.

Distribution.—The specimens examined came from Ysabel Island, Furore, S.W. Ysabel Island, Gaudalcanar, all in the Solomon group; one from Samoa. The species has also been recorded from the Carolines; Banks Island; Fiji; New Ireland.

Section Liolepisma.

Main Characters.—Lower eyelid with a transparent disc. Limbs well developed, pentadactyle; the length of the hind limb exceeds the distance between the centre of the eye and the fore

limb. Tympanum distinct. No supranasals, rostral forming a suture with the frontonasal. Nuchals enlarged. Frontal not broader than the supraocular region.

Key to the species.

38 rows of scales round body, 5 supraoculars, ear small ..... *anolis*
26 rows of scales round body, 4 supraoculars, ear large ..... *noctua*

LYGOSOMA (LIOLEPISMA) ANOLIS *Boulenger.*

(Pl. xiii, fig. 3, and Fig. 35.)

Lipinia anolis Boulenger, Ann. Mag. Nat. Hist., (5), xii, 883, p. 161.
Id. Boulenger, Trans. Zool. Soc. Lond., xii, 1886, p. 40, Pl. vii, fig. 2.

Lygosoma anolis Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 253.

Liolepisma anolis Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 104.

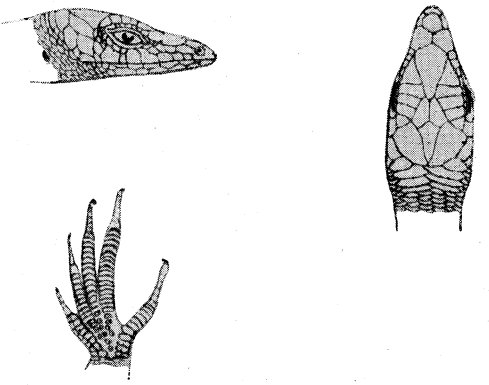

Fig. 35.—*Lygosoma* (*Liolepisma*) *anolis* Boulenger (after Boulenger).

Main Characters.—Habit lacertiform, slender. 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 the axilla and the groin. Snout long and pointed, much depressed. Lower eyelid with an undivided transparent disc. Nostril pierced in the middle of the nasal. No supranasal, anterior loreal as deep as the nasal. Frontonasal about as broad as long, forming a broad, straight, or slightly curved suture with the rostral. Prefrontals forming a median suture. Frontal kite-shaped, shorter than the frontoparietals and the interparietal together, in contact with two or three anterior supraoculars. Five or six supraoculars, the anterior the largest. Eight to ten supraciliaries, first large. Frontoparietals distinct, about as large as the interparietal. Parietals forming a suture behind the interparietals. Four or five pairs of nuchals. Eight or nine upper labials, the sixth or seventh entering

the orbit. Ear opening small, elliptical, oblique, with four small, round, projecting scales on its anterior border. Scales in 38 rows round the middle of the body, perfectly smooth, laterals smallest, those of the two vertebral series twice as broad as long. Two enlarged preanals. The hind limb reaches to about the level of the elbow. Digits moderately elongated, the basal portion strongly depressed, distinctly dilated, the distal slender and compressed; fourth toe a little longer than the third. Subdigital lamellæ smooth, 16 to 18 under the dilated and 7 under the compressed portion of the toe. Tail a little longer than the head and body.

Colour.—Upper surfaces uniform pale olive or pinkish brown, the head frequently darker and more olive. Limbs sometimes pinkish. Lower surfaces whitish.

Barbour describes this species as "a most curious pallid wraith-like scinc, one of the very characteristic species of the Solomons."

Distribution.—As far as is known the species is confined to the Solomon Islands, and has been recorded from Santa Anna Island; Treasury Island; Shortland Island; Graciosa Bay, Santa Cruz; Uji Island; Malaita; and Wainone Bay, San Cristoval.

Lygosoma (Liolepisma) noctua *Lesson.*

Scincus noctua Lesson, Voy. "Coquille," Zool., ii, 1830, p. 48, Pl. iii, fig. 4.

Lygosoma noctua Boulenger, Brit. Mus. Cat. Liz., 1887, iii, p. 256.

Liolepisma noctua Barbour, Proc. New Eng. Zool. Club, vii, 1921, p. 104.

Main Characters.—Habit lacertiform. The distance from the tip of the snout to the fore limb is equal to once and one-quarter to once and three-quarters the distance between the axilla and the groin. Snout narrow, shorter than the distance from the posterior border of the eye to the ear. Lower eyelid with an undivided transparent disc. Nostril pierced in the nasal. Rostral broader than deep, forming a suture with the frontonasal, which is usually broader than long, and may or may not form a narrow suture with the frontal. Prefrontals small, not as large as the interparietal. Frontal narrow, longer than its distance from the snout and a little shorter than the frontoparietal and interparietal together; in contact with the first and second supraoculars, of which there are four. Interparietal distinct. Frontoparietal single or divided. Parietals large, forming a suture behind the interparietal, and bordered by two or three pairs of nuchals. Seven upper labials, the fifth under the eye. Ear opening without projecting lobules; smaller than the eye opening. Scales in 26 to 28 rows round the middle of the body, all smooth, dorsals the largest, laterals smallest. Preanal scales enlarged. The adpressed limbs overlap. Digits depressed at the base, compressed at the tips. Subdigital lamellæ

smooth, in 19 to 22 rows under the fourth toe. Tail longer than the head and body.

Colour.—Light to golden brown above, a whitish brown-edged spot on the nape usually very distinct. Continuous with this spot is a light vertebral stripe bordered by a diffused brown line of irregular spots, or a dark line with white spots. Under surface of body usually white, though in the smaller specimens there may be many small dark spots. Tail usually spotted on the under surface.

The series ranges in length from 62 mm. to 110 mm.

Comparative.—I have examined a series of fifty specimens in the Museum collection, thirty-seven of which are from Kiriwini, Trobriand Islands.

It is worthy of note that the frontoparietal may be either single or divided; in either case the shape of the extreme outline is the same, the only difference being a median suture. This is the only character by which some of my specimens differ from the original description, and I cannot consider it varietal. Three specimens from the Solomons, several from Raratonga and Fiji have the divided shield, while in the remainder it is single.

The remaining characters and colour of the entire series agree in detail with Boulenger's description.

Distribution.—The species has already been recorded from Fiji, Papua, New Hebrides, Friendly Islands, Hawaiian Islands, Tongatabu, Samoa, and the Solomons. Although it has till now been considered a rarity, I have, as stated above, thirty-seven specimens from Kiriwini, Trobriand Islands, collected by the Rev. S. B. Fellows in 1897. Two of the most interesting records before me are: one specimen, Flint Island, south of Tahiti, collected in 1900 by C. J. Merfield; and one from Funafuti, collected in 1904 by Professor Sir T. W. Edgeworth David.

CROCODILIA.

Genus CROCODILUS.

CROCODILUS POROSUS *Schneider.*

Crocodilus porosus Schneider, Hist. Amph., ii, 1801, p. 159. *Id.* Boulenger, Brit. Mus. Cat. Chel. and Croc., 1889, p. 284.

Main Characters.—This species has a very extensive distribution from India to China, through the Malay Peninsula and Archipelago to north Australia and the Solomon Islands. It is on record that, on one occasion only, a specimen was found, after very heavy weather, to have strayed as far as the Fiji Islands.

Among the specimens in the collection are six young ones, measuring from twelve to sixteen inches in length, and a number of eggs.

Mr. Heffernan informs me that frequently on moonlight nights, he has observed crocodiles digging up with their forepaws, and eating, the Sand Crab (*Ocypoda* sp.), which lives in its burrow at a depth of about twelve inches in the soft sand.

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EXPLANATION OF PLATE XIII.

Fig. 1. *Dasia smaragdinum* Lesson (after Barbour).

Fig. 2. *Lepidodactylus woodfordi* Boulenger (after Boulenger).

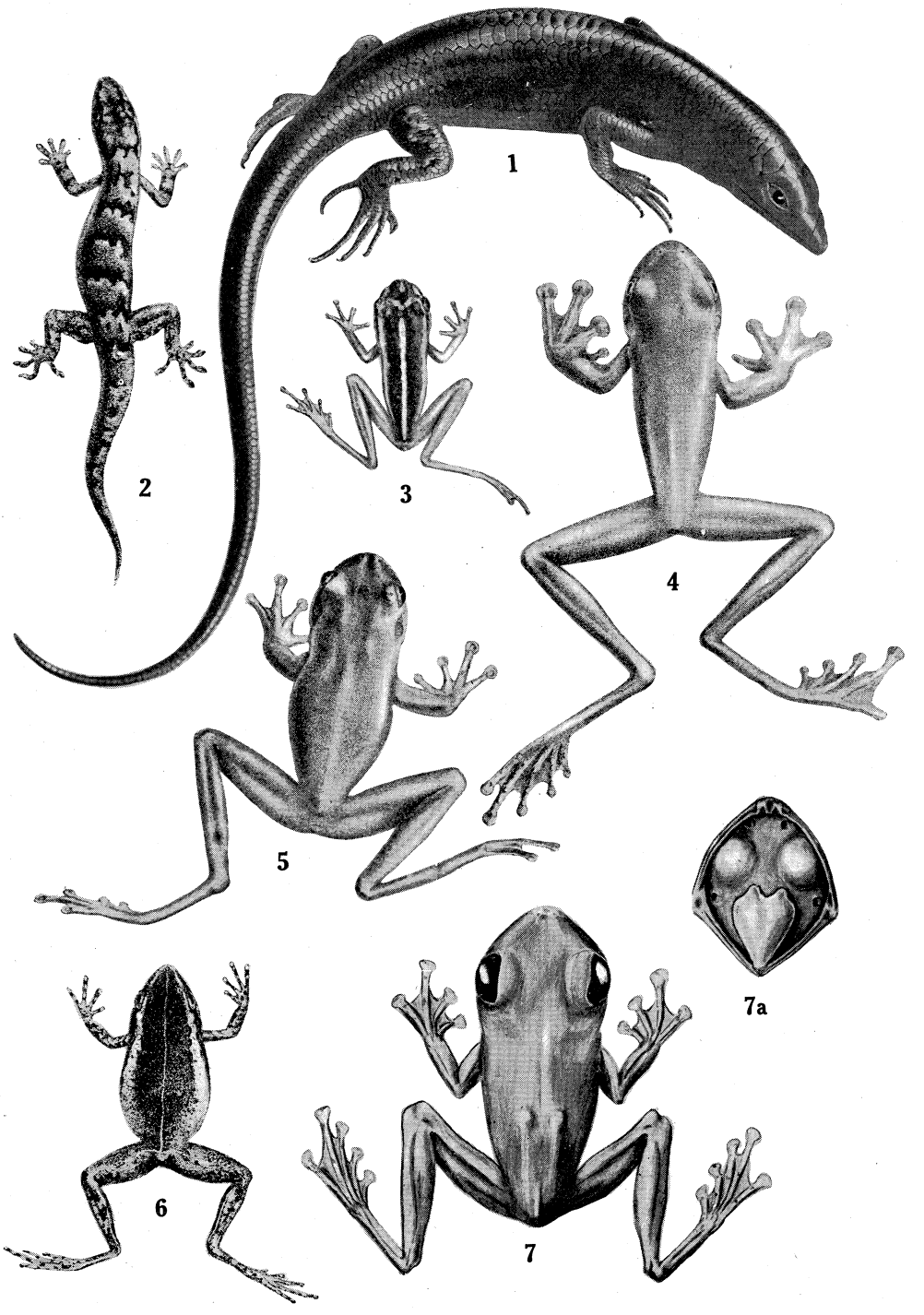
Fig. 3. *Hyla thesaurensis* Peters (after Boulenger).

Fig. 4. *Hyla lutea* Boulenger (after Boulenger).

Fig. 5. *Hyla macrops* Boulenger (after Boulenger).

Fig. 6. *Batrachylodes vertebralis* Boulenger (after Boulenger).

Fig. 7. *Hypsirana heffernani,* gen. et sp. nov.



G. C. CLUTTON Photo. (Figs. 1-6).

J. R. KINGHORN, del. (Figs. 7 and 7a).

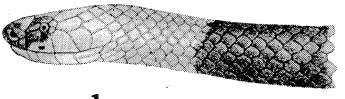
EXPLANATION OF PLATE XIV.

Fig. 1. *Micropechis elapoides* Boulenger (after Boulenger).

Fig. 2. *Denisonia par* Boulenger (after Boulenger).

Fig. 3. *Denisonia woodfordi* Boulenger (after Boulenger).

2



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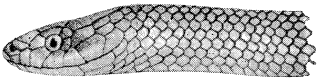

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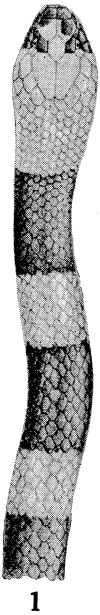

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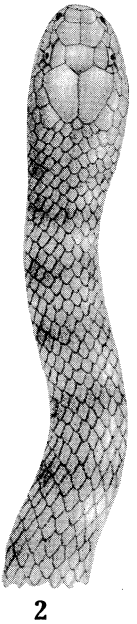

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G. C. CLUTTON Photo.

EXPLANATION OF PLATE XV.

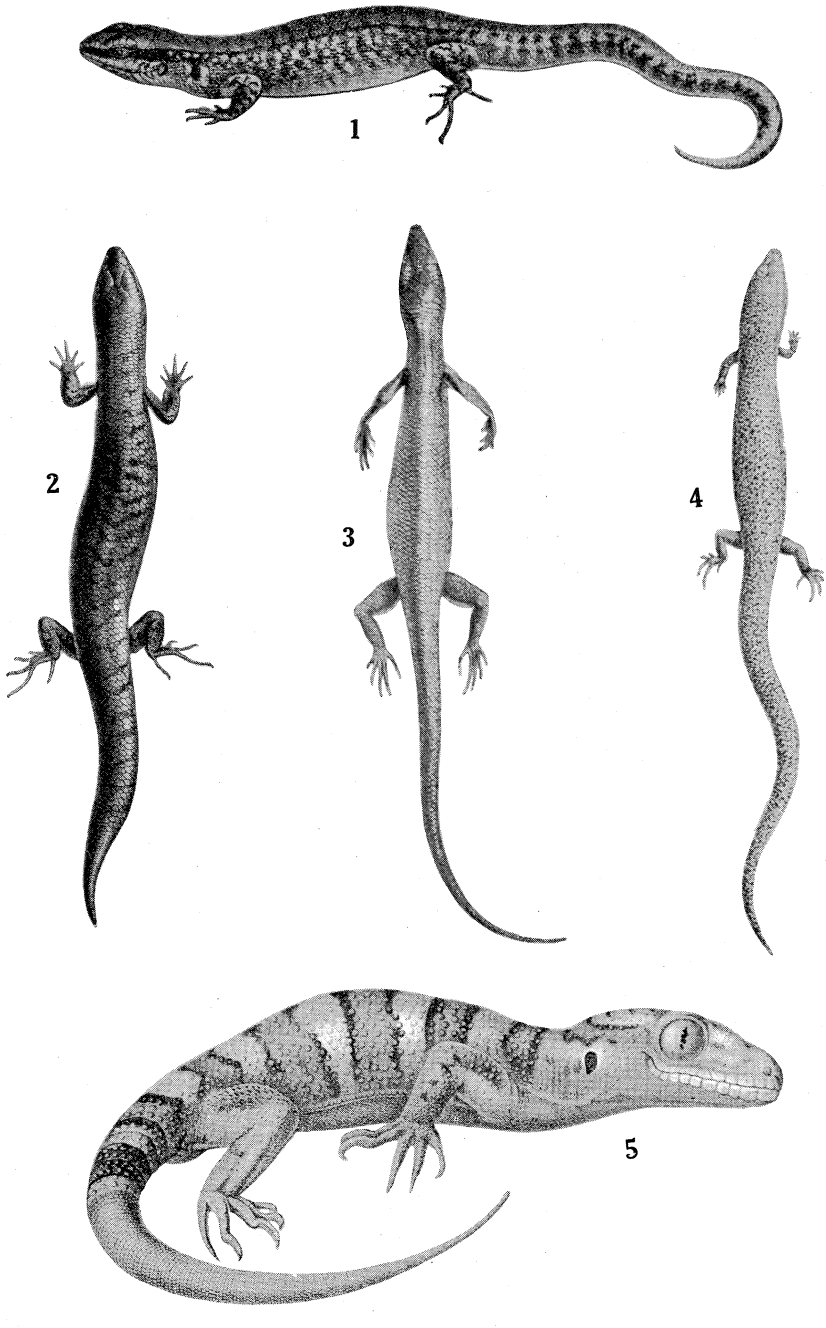
Fig. 1. *Lygosoma Hinulia concinnatum* Boulenger (after Boulenger).

Fig. 2. *Lygosoma Hinulia woodfordi* Boulenger (after Boulenger).

Fig. 3. *Lygosoma Liolepisma anolis* Boulenger (after Boulenger).

Fig. 4. *Lygosoma Hinulia solomonis* Boulenger (after Boulenger).

Fig. 5. *Gymnodactylus louisiadensis* De Vis (after Garman).



G. C. CLUTTON Photo.