Art. II.-The Lizards indigenous to Victoria. (With Plate II.)

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[Read 13th April, 1893].
The arrangement which we have adopted is that followed by Mr. G. A. Boulenger in the Catalogue of the Lizards in the British Museum, 2nd Edition, London, 1885. The characters of the Families, of the Genera, and of most of the Species have been taken from that work, in some cases verbatim, and in others in a slightly modified form. In all cases we have carefully verified the descriptions by the examination of as many specimens as we could obtain, and the modifications and additions which we have made have been suggested by our own observations, frequently made upon the living animals. We have included all the information which we have been able to gather as to the habits and the distributions of the lizards. The colouration of adult lizards we find to vary within wide limits in the case of many of the species, but the colour and pattern of the adults can often be explained and understood if considered as derived from the colour and pattern of young individuals, in which they are usually much more marked and constant. We have therefore, when able, described in some detail the colouration of young specimens. We have had the advantage of studying all the specimens preserved in the National Museum of Victoria, and we have to acknowledge, gratefully, the kindness and courtesy of Sir Frederick McCoy in placing the collection at our disposal for examination. We desire also to thank the following gentlemen who have assisted us in obtaining material: Professor W. B. Spencer, Dr. Dendy, C. French, Esq., F.L.S., Dudley Le Souëf, Esq., Assistant Director of the Melbourne Zoological Gardens, W. von Fremersdorff, Esq., Director of the Maryborough School of Mines, Thomas Steel, Esq., F.C.S., the Rev. E. H. Hennell, Geo. Lyell, Junr., Esq., C. C. Brittlebank, Esq., F. Reader, Esq., C. French, Junr., Esq., G. Morton, Esq., C. Martin, Esq., H. Giles, Esq., and R. Embleton, Esq.

## GECKONID $\mathbb{A}$.

## Characters of the Family.

## External Form.

Head and body more or less depressed, sometimes bordered by cutaneous expansions. Tongue fleshy, moderately elongate, very feebly incised anteriorly, capable of protrusion out of the mouth.

Tail presenting almost every possible shape, sometimes prehensile, almost always extremely fragile and rapidly reproduced. If reproduced it generally assumes an abnormal form and scaling.

Limbs, both pairs well developed, pentadactyle. The digits vary considerably and furnish the characters upon which the systematic arrangement is based.

Eye and Ear.-The eye generally large, with vertical pupil, covered as in Snakes, by a transparent lid under which it moves freely, the valvular lids being in most cases rudimentary. The tympanum usually more or less exposed.

## Teguments.

Skin nearly always soft, with numerous tubercles or granules on the dorsal surface, and small, imbricated, cycloid or hexagonal scales on the ventral surface. Plate-like scales of the head only around the margin of the gape. The skin of the head usually free from the skull-bones.

## Endo-skeleton.

Skull generally much depressed, with thin bones. Distinct nasals. Jugal rudimentary, the orbit not being bounded posteriorly by a long arch. No postfronto-squamosal arch. Pterygoids widely separated, without teeth. A columella cranii. Mandible of five bones, the angular and articular having coalesced.

Teeth pleurodont, small, numerous, closely set, with long, slender, cylindrical shaft and obtuse point. The new teeth hollow out the base of the old ones.

Vertebra amphicœlous. Ribs long, and so prolonged as to form more or less ossified hoops across the whole abdominal region.

Limb-arches.-Clavicle dilated, perforated proximally. Interclavicle subrhomboidal to cruciform. Bones of the limbs, including those of the digits, well developed.

Mode of reproduction.
Oviparous. Eggs round, with a hard shell.

## Gymnodactylus, Spix.

Digits not dilated, clawed, cylindrical or slightly depressed at the base ; the two or three distal phalanges compressed, forming an angle with the basal portion of the digits ; the claw between two enlarged scales, (a superior and an inferior), of which the inferior is more or less deeply notched under the claw ; digits inferiorly with a.row of more or less distinct transverse plates.

Body variously scaled. Pupil vertical. Males with or without preanal or femoral pores.

The genus as defined ranges over Australia; the islands of the Pacific ; Tropical America; the borders of the Mediterranean; Southern Asia. The species with greatly swollen or broadened tails, forming the section Phyllurus, Fitzing, are confined to Australia.

## Gymnodactylus miliusii, Bory.

Phyllurus miliusii, Gray, Cat., p. 176.
Phyllurus miliusii, Bory de St. Vincent, Dict. Hist. Nat. vii., p. 183, pl.-fig. 1 ; Gray, Zool. Erebus and Terror, pl. xvii., fig. 2 ; McCoy, Prodr. Zool. Vict., pl. 132.

Cyrtodactylus nilii, Gray, Griff, A.K. ix. Syn., p. 52.
Gymnodactylus miliusii, Dum. and Bibr. iii., p. 430, pl. xxxiii., fig. 1 ; Peters, Mon. Berl. Ac., 1863, p. 229.

Gymnodactylus (Anomalurus) miliusii, Fitz. Syst. Rept., p. 90.
Description.-" Head large oviform ; snout a little longer than the diameter of the orbit, as long as the distance between the eye and the ear-opening; forehead and loreal region concave ; earopening elliptical, vertical, about three-fifths the diameter of the eye. Body moderate. Limbs long, slender ; digits rather short, subcylindrical. Snout covered with granules of unequal size; hinder part of head with minute granules intermixed with round tubercles ; rostral subquadrangular, three times as broad as high; nostril directed posteriorly, separated from the rostral and first labial by two nasals ; labials small, eleven to fourteen upper and ten to twelve lower ; mental broadly trapezoid ; no regular chin-
shields ; gular granules minute. Body and limbs covered above with small granules intermixed with small round conical tubercles ; belly covered with flat granules. Tail short, thick, swollen, and nearly as broad as the body in its anterior half, depressed, tapering to a fine point posteriorly ; it is covered with small granules, and, on the upper surface, small conical tubercles arranged in transverse series. Colour. -Chestnut-brown above, with white cross bands on the back and tail; head and limbs white-spotted; lower surfaces white.


Distribution.-Victoria: Bendigo, Kangaroo Flat, Castlemaine, Mount Tallangower (Melb. Museum) ; Maryborough, Dimboola, Baringhup (L. and. F.).

Range outside Victoria.-Western Australia (Melb. Mus.) ; Sydney, Champion Bay, N.W. Australia (Brit. Mus.).

## Phyllodactylus, Gray.

Digits more or less slender, free, all clawed, with transverse lamellæ or tubercles inferiorly; the extremity more or less dilated, with two large plates inferiorly, separated by a longitudinal groove in which the claw is retractile ; the distal expansion covered above with scales strongly differentiated from those on the basal portion of the digit.

Upper surfaces covered with juxtaposed scales, uniform or intermixed with larger tubercles; abdominal scales generally imbricate.

Pupil vertical.
Males with neither preanal nor femoral pores.
The genus extends over Australia; Africa; islands of the Mediterranean ; Tropical America.

## Phyllodactylus marmoratus, Gray.

Diplodactylus marmoratus, Gray, Cat., p. 149.
Diplodactylus marmoratus, Gray, Zool. Erebus and Terror, pl. xv., fig. 6 ; McCoy, Prodr. Zool. Vict., pl. 132.

Phyllodactylus porphyreus, part, Dum. and Bibr. iii., p. 393.
Phyllodactylus peronii, Fitz. Syst. Rept., p. 95.
Description.-" Head oviform, much longer than broad ; snout rounded, a little longer than the distance between the eye and the ear-opening, once and two-fifths the diameter of the orbit; forehead very slightly concave ; ear-opening small, roundish or oval, its diameter one-third to one-half that of the eye. Body rather elongate ; limbs moderate. Digits not much depressed ; digital expansions moderate, rounded, subtrapezoid ; the diameter of the disk of the fourth toe equals two-thirds the diameter of the eye ; the slender part of the digit with regular transverse lamellæ inferiorly, which are broken up into small scales a short distance in advance of the distal expansion ; seven or eight entire lamellæ under the fourth toe. Upper surfaces covered with uniform small granules, largest on the snout, smallest on the hinder part of the head. Rostral pentagonal or hexagonal, the posterior angle being truncate, the latero-superior angles touching the nostril ; the latter is pierced posteriorly to the suture of the rostral and first labial, and between the latter and three nasals; eight or nine upper and as many lower labials ; mental trapezoid or pentagonal, not larger than the adjacent labials; no regular chin-shields, but small polygonal scales, passing gradually into the minute granules of the gular region. Abdominal scales moderate, smooth subhexagonal, slightly imbricate. Tail long, cylindrical, tapering in its posterior half, covered with uniform small smooth scales, rather large inferiorly, arranged in rings. Colour.-Greyish or reddish-brown above, variegated with dark-brown ; whitish inferiorly.


Habits.-Usually met with under logs and flat stones.
Distribution.-Victoria: Heathcote, Goulburn Valley, Murray District, Pyramid Hill, Gunbower, Murchison, Echuca, Western District (Melb. Mus.) ; Castlemaine, Maryborough, Dimboola, Grampians (L. and F.).

Range outside Victoria.-Western Australia, Houtman's Abrolhos, Kangaroo Island (Brit. Mus.).

## Diplodactylus, Gray.

Digits free, not dilated at the base, slightly at the apex, all clawed, the claw retractile between two plates under the extremity of the digits ; the basal portion of the digits inferiorly with transverse lamellæ or tubercles; the upper surface of the digits covered with uniform small tubercular scaies.

Upper surfaces covered with juxtaposed scales, uniform or intermixed with larger tubercles ; abdominal scales juxtaposed.

Pupil vertical.
Males with or without præanal pores, without femoral pores.
The genus extends over the whole of Australia, but is not met with outside of the Continent.

Diplodactylus strophurus, Dum. and Bibr.
Phyllodactylus strophurus, Dum. and Bibr., iii., p. 397, pl. xxxii., fig. 1 .

Discodactylus (Strophurus) dumerilii, Fitz. Syst. Rept., p. 96.
Description.-Head oviform, convex ; snout rounded, rather longer than the distance between the eye and the ear-opening, longer than the diameter of the orbit; eye large; ear-opening small, roundish. Body and limbs moderate. Digits much depressed, with large transverse lamellæ inferiorly, about seven under the fourth toe, the middle ones chevron-shaped, the distal one heart-shaped, the basal ones divided into two rounded plates; the plates under the apex of the digit large, together cordiform. Upper surfaces covered with minute granules, with two somewhat irregular longitudinal series of large very obtusely conical tubercles along the back and tail. Rostral pentagonal, completely divided medially ; nostril pierced between the rostral, the first labial and
three or four nasals ; thirteen or fourteen upper labials, about the same number of lower labials; mental small, trapezoid, scarcely larger than the adjacent labials ; no chin-shields. Lower surfaces covered with small juxtaposed granules. Males with a doubly arched series of eleven to fourteen preanal pores, and three or four large conical tubercles at the base of the tail. Tail short, subcylindrical, prehensile, covered with small granules; on each side of its upper surface the series of tubercles abovementioned. Colour.-Upper surfaces olive-grey, speckled or pencilled with black; tubercles brown ; head with dark undulations of which two are longitudinal on each side of the snout, one passing through the eye, the other meeting its fellow above on the snout.

Distribution.-Victoria: Kewell, near Dimboola, Murray District (Melb. Mus.) ; Lake Albacutya (L. and F.).

Range outside Victoria.-New South Wales, Sydney (Brit. Mus.).

## Diplodactylus vittatus, Gray.

Diplodactylus vittatus, Gray, Cat., p. 148.
Diplodactylus ornatus, Gray, Cat., p. 149.
Diplodactylus vittatus, Gray, P.Z.S., 1832, p. 40 and Zool. Erebus and Terror, pl. xvi., fig. 3.

Phyllodactylus vittatus, Dum. and Bibr. iii., p. 400.
Diplodactylus furcosus, Peters, Mon. Berl. Ac., 1863, p. 229.
Diplodactylus ornatus, Gray, Zool. Erebus and Terror, pl. xvi., fig. 2.

Description.-"Head short, very convex; snout roundedacuminate, measuring the diameter of the orbit or the distance between the eye and the ear-opening; latter rather small, round. Body short; limbs moderate. Digits short, depressed, with small apical dilatation, inferiorly with a series of transversely oval tubercles, some of them breaking up into two rounded tubercles; the extremity of the digit is raised and bears inferiorly two roundish plates separated from the large tubercles of the basal part by three or four rows of small granules. Upper surfaces covered with uniform small granular scales. Rostral four-sided, twice as broad as high, with median cleft above;
nostril pierced between the rostral, the first labial and five or six nasals, the anterior or upper largest and generally in contact with its fellow, the others granular ; ten or eleven upper and as many lower labials; mental trapezoid, a little larger than the adjacent labials; no chin-shields. Abdominal scales granular, scarcely larger than those on the upper surfaces. Tail short, swollen, root-shaped, with rings of uniform small squarish scales. Male with a small group of conical tubercles on each side the base of the tail. Colour.-Brown above ; a light dark-edged festooned vertebral band, bifurcating on the nape, sometimes broken up into angular spots; sides and limbs with light spots; lower surfaces dirty-white.

| Total length | $\ldots$ | $\ldots$ | 88 | mm. |
| :--- | :--- | :--- | :--- | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 15 | , |
| Width of head | $\ldots$ | $\ldots$ | 12 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 40 | , |
| Fore-limb | $\ldots$ | $\ldots$ | 19 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 24 | , |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 33 | , |

Habits.-This lizard is usually met with under thin flat stones near the tops of mountains.

Distribution.-Victoria: Bendigo, Upper Murray, Dimboola (L. and F.).

Range outside Victoria.-Western Australia, Champion Bay, Houtman's Abrolhos, Sydney (Brit. Mus.) ; Deniliquin, New South Wales (Melb. Mus.).

## Diplodactylus tessellatius, Günther.

Stenodactylopsis tessellatus, Günth., Zool. Erebus and Terror, p. 16.

Description. - "Head large, oviform, very convex; snout rounded, as long as the diameter of the orbit or the distance between the eye and the ear-opening; latter small, round. Body short; limbs long, slender. Digits rather long, slender, feebly depressed, not dilated at the end, inferiorly with small granules ; apical plates small, oval. Head with small granular scales ; rostral four-sided, emarginate above, more than twice as broad as
high, with trace of median cleft; nostril pierced between the rostral, the first labial, and six nasals ; latter, anterior large, posterior very small granules ; nine upper and ten lower labials ; mental elongate, not larger than the adjacent labials ; no chinshields. Back covered with flat tessellated juxtaposed scales, much larger on the middle of the back. Abdominal scales flat, subimbricate, not half the size of the larger dorsal scales. Male with a group of conical tubercles on each side of the base of the tail. Colour.-Greyish-white above, with faint irregular brownish variegation ; white beneath.

| Total length | $\ldots$ | $\ldots$ | 69 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\quad \ldots$ | $\cdots$ | $\cdots$ | 14 | $"$ |
| Width of head | $\ldots$ | $\cdots$ | 9 | $"$ |
| Body | $\cdots$ | $\cdots$ | $\cdots$ | 34 |

Distribution. - Victoria: Kewell, near Dimboola, Western District (Melb. Mus.) ; Dimboola (L. and F.)

## Gehyra, Gray.

Digits strongly dilated, free or webbed at the base, inferiorly with undivided or medially divided transverse lamellæ ; distal phalanges free, elongate, compressed, clawed, raised from within the extremity of the dilatation ; inner digits without free distal phalange, clawless, or with a very indistinct retractile claw.

Upper surfaces covered with granular scales; belly with cycloid imbricated scales.

Pupil vertical.
Male with femoral or preanal pores.
The genus extends over the East Indies ; Australia ; islands of the Indian and South Pacific Oceans; while one species, $G$. mutilata, Wiegm., reaches Western Mexico.

Gehyra variegata, Dum. and Bibr.
Peripia variegata, Gray, Cat., p. 159.
Hemidactylus variegatus, Dum. and Bibr., iii., p. 353.

Peropus (Dactyloperus) variegatus, Fitzing, Sंyst. Rept., p. 103. Peripia torresiana, Günther, A.M.N.H. (4), xix., 1877, p. 415.
Description.-"Head longer than broad; snout longer than the distance between the eye and the ear-opening, about once and a half the diameter of the orbit; forehead with a median groove ; ear-opening moderately large, suboval. Body and limbs moderately elongate, depressed, without cutaneous folds. Digits short, free or with a very slight rudiment of web: the inferior lamellæ angular, divided by a median groove. Tail depressed, tapering, the sides rounded. Upper surfaces and throat covered with very small granular scales; abdominal scales moderate. Rostral quadrangular, broader than high, with a median cleft superiorly; nostril pierced between the rostral, the first labial, and three nasals ; seven to nine upper and six to eight lower labials ; mental moderately large, pentagonal ; chin-shields three pairs, inner largest, elongate, outer small, frequently broken up into small scales ; these shields considerably shorter than in $G$. mutilata. The upper surface of the tail covered with very small flat scales, the lower surface with a median series of large transversely dilated scales."-Boulenger.

A short angular series of preanal pores, ten to sixteen altogether (in the males).

Colouration of half-grown specimen (in spirit).-Greyish-lavender above, browner on the head and limbs, with a pattern formed by darker narrow longitudinal and transverse wavy bands. One of these bands commences at the nostril, passes along the canthus rostralis and over the orbit, then curves inwards towards its fellow at the back of the head; these bands are darker and more definite on the snout, and are connected by a transverse band just above the nostrils, and by a second commissure less well defined higher up on the snout; the median surface included between the two curved bands is vermicularly marked and spotted. A second band on either side passes along the side of the snout below the first, crosses the eye, and continues as a longitudinal dorso-lateral band along the whole length of the trunk, becoming indistinct along the tail. A third much broken band still lower down on the side is indicated by a streak below the orbit, another through the ear-opening, and by a fainter more or less continuous band on the trunk and tail, below and parallel
to the dorso-lateral band. A number of transverse wavy bands are plainly marked across the back and proximal portion of the tail, becoming broken up on the sides into lines and spots. The upper surfaces of the limbs are variegated with irregular wavy bands and spots. The lower surfaces are of a nearly uniform greyish-white, the lamellæ of the digits darker.

In adult specimens of the dark markings the most persistent are the two upper bands on the sides of the head and neck, and the bands across the back.

Distribution.-Victoria: A single half-grown male specimen (with fourteen præanal pores) found by Dr. Dendy on the steamboat between Swan Hill and Mildura, which may have come on board from either the Victorian or New South Wales bank of the Murray. The species at all events reaches the borders of Victoria.

Range outside Victoria.-Houtman's Abrolhos, Champion Bay, Peak Downs, islands of Torres Straits, Murray I., Sunday I. (Brit. Mus.) ; Queensland (L. and F.).
[Since writing the above, two specimens of this lizard have been obtained from under the bark of a tree in the public park at Echuca.]

## PYGOPODID风.

## Characters of the Family.

## External Form.

Body elongate, snake-like. Tongue fleshy, papillose, elongate, more or less feebly incised anteriorly, extensible.

Tail long and fragile.
Limbs extremely reduced; no fore-limbs; hind-limb visible externally only as a scaly flap without distinct digits.

Eye and Ear.-The eye rather small, with broadly elliptical, vertical pupil, not protected by movable lids, usually with a circular scaly rudimentary lid. The tympanum either exposed or concealed under the scales.

## Teguments.

The body is covered with roundish, imbricate scales, and the head is more or less regularly plated with larger scales. The skin of the head quite free from the subjacent skull-bones.

## Endo-skeleton.

Skull rather depressed. Præmaxillary single, narrowed, much produced posteriorly between the nasals. Nasals distinct. Frontal single. Præfrontals and postfrontals in contact, separating the frontal from the orbit. Jugal rudimentary, there being no postorbital arch. No postfronto-squamosal arch. Pterygoids widely separated, without teeth. Mandible of four bones, the angular, supra-angular and articular having coalesced.

Teeth pleurodont, small, numerous, closely set.
Limb-arches.-Pectoral arch very rudimentary. The ischium appears externally as a small spur on each side behind the anal cleft. Bones of hind-limb, including phalanges of five toes, present but small.

## Pygopus, Merr.

Parietal bones distinct. Tongue slightly nicked at the tip, with rows of large round papillæ inferiorly. Ear exposed. Rudiments of hind-limbs externally. Head with large symmetrical plates. Scales cycloid-hexagonal, imbricate, those on the back keeled, the two median series on the belly and the median series under the tail transverely enlarged, hexagonal. Præanal pores in both sexes.

The distribution of this monotypic genus is the same as that of the single species, Australia and Tasmania.

Pygopus lepidopus, Lacépède.
Pygopus lepidopus, Gray, Cat., p. 67.
Pygopus squamiceps, Gray, Cat., p. 68.
Bipes lepidopus, Lacép., Ann. Mus. iv., 1804, p. 209, pl. lv., fig. 1 ; Guérin, Icon. R. A., Rept., pl. lxi., fig. 1 ; Duvern. R. A., Rept., pl. xxii., vis. fig. 2.

Sheltopusik nova-hollandia, Oppel. Ordn., p. 40.
Pygopus lepidopus, Merr. Tent., p. 77 ; Günther, Ann. Mag. N.H. (3) xx., 1867, p. 45 ; McCoy, Prodr. Zool. Vict., pl. 152, 153.

Hysteropus nova-hollandia, Dum. and Bibr. v., p. 828, pl. lv.
Pygopus squamiceps, Gray, Zool. Erebus and Terror Rept., pl. viii., fig. 3.

Description.-"Snout scarcely prominent, rounded, as long as the distance between the orbit and the ear-opening; canthus rostralis obtuse ; eye small, with rudimentary circular scaly lid; ear-opening oval, oblique. Tail, when intact, at least twice as long as the body. Rudimentary hind-limbs measuring about the distance between the eye and the end of the snout in females, more than the distance between the posterior border of the eye and the end of the snout in males. Ten to fourteen preanal pores. Rostral low, from twice and a half to thrice and a half as broad as high ; nostril between the first labial and three nasals, the two anterior of which are band-like and extend across the upper surface of the snout, where they form a suture with their fellows, or are separated by one or two small azygos plates; a large polygonal prefrontal, separated from the nasals by two (or one) pairs of small transverse plates, its transversely truncate posterior border forming a suture with the frontal, which is pentagonal and about once and two-thirds as long as broad ; the posterior angle of the latter plate wedged in between the pair of parietals, which are nearly as large as the frontal, and subhexagonal ; sometimes a narrow band-like plate on the outer side of the parietals; two large supraorbitals; loreal region with numerous small polygonal plates, from four to seven in a row, between the orbit and nasal ; five to seven upper labials, separated from the orbit by a row of scales ; mental large, broadly trapezoid; four to six lower labials, the first or the first two much dilated vertically. Keels of the dorsal scales forming regular lines on the body, alternate on the tail. Twenty-two or twenty-three (in one specimen twenty-one) longitudinal series of scales round the middle of the body, ten smooth and twelve or thirteen (or eleven) keeled. The enlarged ventral scales twice as broad as long, in seventy to eighty-five longitudinal series. Two enlarged anal scales separated from the perforated preanal scales by one or two
rows of scales. Colour.-Coppery-grey above, uniform or with three or five longitudinal series of blackish dots or elongate quadrangular spots; lower surfaces more or less marbled or pulverated with grey.


Distribution.-Victoria: Kewell in Western District, Gippsland (Melb. Mus.) ; common in northern part of the colony (McCoy) ; Murray District (L. and F.).

Range outside Victoria.-New South Wales, North and NorthWest Australia, Tasmania.

## Delma, Gray.

Parietal bones distinct. Tongue slightly nicked at the tip, with rows of large round papillæ inferiorly. Ear exposed. Rudiments of hind-limbs externally. Head with large symmetrical plates. Scales smooth, cycloid hexagonal, imbricate, the two median series on the belly and the median series under the tail transversely enlarged, hexagonal. No preanal pores.

Both species of the genus are confined to Australia.

## Delma fraseri, Gray.

Delma fraseri, Gray, Cat., p. 68.
Delma fraseri, Gray, Zool. Misc., p. 14, and in Grey's Travels Austral. ii., p. 427, pl. iv., fig. 3 ; Günth. Ann. and Mag. N. H. (4) xii., 1873, p. 145 ; McCoy, Prodr. Zool. Vict., pl. 153.

Delma grayii, Smith, Ill. S. Afr. Rept., pl. lxxvi., fig. 2.
Delma mölleri, Lütken, Vidensk. Meddel., 1862, p. 296, pl. i., fig. 2.

Nisara grayii, Gray, Liz. Austr., p. 3.
Description.-"Snout not prominent, as long as the distance between the orbit and the ear-opening ; canthus rostralis obtuse ;
eye with distinct circular scaly lid; ear-opening elliptical, oblique, its diameter equal to that of the eye. Tail, when intact, three or four times as long as the body. The rudimentary hindlimbs measure about the length of the snout in males, considerably less in females. Rostral triangular or pentagonal, nearly twice as broad as high ; nostril pierced between the first labial and three nasals (two in the specimen described as D. mölleri, in which the naso-rostral and upper nasal have fused) the two anterior of which form a suture with their fellows on the snout; exceptionally, however, the upper nasal is separated from the nostril ; a pair of fronto-nasals ; præfrontal large, a little broader than long, seven-sided, the antero-lateral sides very short, in contact with a large loreal ; frontal as broad as or a little narrower than the præfrontal, longer than broad, seven-sided, its posterior angle wedged in between the pair of parietals, which are considerably larger than the frontal ; a pair of enlarged scales on the outer side of the parietals; two large supraorbitals; a large loreal and four or five small plates between the orbit and the nasal ; five or six upper labials, fourth much elongate and situated under the orbit from which it is separated by a row of small scales ; mental large, triangular, broader than long; four lower labials, the two anterior much dilated vertically, the first forming a suture with its fellow behind the mental. Sixteen longitudinal rows of scales round the middle of the body. The enlarged ventral scales vary considerably in width, being sometimes not quite twice as broad as long, whilst in most specimens they are more than twice as broad as long ; they form forty-five to sixty pairs. Two large and a smaller median anal scales. Olive above; head generally with four more or less confluent black cross bands, which may be separated by whitish bands ; in two specimens these bands are indistinct, and the sides of the head and body are vertically barred with darker and whitish; one specimen uniform olive without any markings. Lower surfaces yellowish.


Habits.-Found a few inches below the surface of the ground where it is often turned up by the plough.

Distribution.-Victoria: Melbourne, Wimmera, Kewell, near Dimboola (Melb. Mus.) ; Murray District (L. and F.).

Range outside Victoria.-Western Australia: Perth, Champion Bay, Nichol Bay; Queensland.

## Delma impar, Fischer.

Pseudodelma impar, Fischer, Arch. f. Naturg., xlviii., 1882, p. 287, pl. xvi., figs. 1-4 ; McCoy, Prodr. Zool. Vic., pl. 161.

Description.-"Tail twice as long as head and body. Rudimentary limbs small. Rostral pentagonal ; nostril pierced in the lower portion of the nasal, which forms a suture with its fellow on the snout ; a pair of large plates between the nasals and the præfrontal ; latter seven-sided, a little larger than the frontal, which is also seven-sided and smaller than the parietals ; a bandlike plate on the outer side of the latter ; two supraorbitals ; a large loreal and four small plates between the orbit and the nasal ; seven upper labials, fourth elongate and situated below the orbit, from which it is separated by a row of small scales ; mental large, triangular ; six lower labials, the first forming a suture with its fellow behind the mental. Fifteen longitudinal rows of scales round the middle of the body. Two enlarged preanal scales. Colour.-Olive-green, lighter beneath; on each side of the back two light, dark-edged longitudinal lines. From snout to vent 80 mm .; tail 167 mm ."-Boulenger.

Habits.-Found coiled up like a snake under stones in Spring. Large numbers were turned up by the pick and shovel in removing the surface soil in the construction of the sewers at Werribee.

Distribution.-Victoria: Melbourne district, Werribee River (Melb. Mus.) ; Maryborough (L. and F.)

Not recorded from outside Victoria.

## Aprasia, Gray.

Parietal bones distinct. Tongue rounded and slightly nicked at the tip. Ear concealed. Slight rudiments of hind limbs externally. Head with large symmetrical plates; no parietal
plates. Scales smooth, cycloid, imbricate, those on the belly scarcely enlarged. No preanal pores.

The single species is confined to Australia.

## Aprasia pulchella, Gray.

Aprasia pulchella, Gray, Cat., p. 68.
Aprasia pulchella, Gray, Ann. and Mag. N. H. ii., 1839, p. 332, and in Grey's Trav. Austral. ii., pl. iv., fig. 2 ; Lütken, Vidensk. Meddel., 1862, p. 300, pl. i., fig. 3 ; Günther, Ann. and Mag. N. H. (4), xii., 1873, p. 145 ; McCoy, Prodr. Zool. Vict., pl. 161, fig. 1.

Description.-" Head very small, with very prominent rounded snout; eyes well developed, with circular scaly rudimentary lid. Body calamiform. Tail shorter than the body, of subequal diameter throughout, its end obtuse, rounded. Rudiments of hind limbs extremely small, hardly distinct. Rostral very high, narrow, the portion seen from above the snout triangular ; nostril pierced between the first labial and a very large nasal, which forms a suture with its fellow on the snout; a pair of large præfrontals, forming a suture with the second labial; a large hexagonal frontal, the posterior angle of which is rounded off; four or five enlarged occipital scales, but no parietals ; a supraorbital ; a narrow præorbital ; no loreal ; five or six upper labials, third and fourth entering the orbit; mental large, broadly trapezoid; two or three lower labials, anterior very large. Twelve series of scales round the body. Three slightly enlarged anal scales. Colour.-Yellowish or pinkish, with eight dark-brown lines above following the longitudinal series of scales, or with series of brown dots arranged in four widely separated longitudinal series on the back and very crowded on the sides.

| Head | $\ldots$ | $\ldots$ | $\ldots$ | 6 mm. |
| :--- | :---: | :---: | :---: | :---: |
| Body |  | .. | $\ldots$ | 112 |
| Tail | $\ldots$ | $\ldots$ | $\ldots$ | 64 |
| Diameter of | Body | $\ldots$ | $3.5, "$, |  |
| "_-Boulenger. |  |  |  |  |

[^0]
## Lialis, Gray.

Parietal bones coalesced. Teeth sharply pointed, directed backwards. Tongue elongate, narrowing towards the end, bifid. Ear exposed. Slight rudiments of hind limbs externally. Head covered with small plates. Scales soft, smooth, cycloid, imbricate, the two median series on the belly and the median series under the tail transversely enlarged, hexagonal. Præanal pores in both sexes, frequently indistinct in females.

This monotypic genus is found in Australia and in New Guinea.

## Lialis burtonii, Gray.

> Eialis burtonii, Gray, Cat., p. 69.
> Lialis bicatenata, Gray, Cat., p. 69.
> Lialis punctulata, Gray, Cat., p. 69.
> Lialis burtonii, Gray, Proc. Zool. Soc., 1834, p. 134 ; Dum. and Bibr. v., p. 831 ; Gray in Grey's Trav. Austral. ii., p. 437, pl iii., fig. 1, and Zool. Misc., p. 52, and Zool. Erebus and Terror Rept., p. 5, pl. viii., fig. 2 ; A. Dum. Cat. Méth. Rept., p. 194 ; Günther, Ann. Mag. N. H. (3) xx., 1867 p. 46 ; McCoy, Prodr. Zool. Vict. pl., 162.

Lialis bicatenate, Gray, Zool. Misc., p. 52, and Zool. Erebus and Terror, p. 5 ; Peters, Mon. Berl. Ac., 1873, p. 606.

Lialis punctulata, Gray, Zool. Misc., p. 52, and Zool. Erebus and Terror, p. 5, pl. viii., fig. 1 ; Günther, l.c.

Lialis leptorhyncha, Peters, l.c., p. 605.
Description.-"Snout narrow, depressed, long, acuminate, truncate at the tip, with angular canthus rostralis ; eye small, with circular scaly rudimentary lid; ear-opening elliptical, oblique. Tail, when intact, nearly as long as head and body, gradually tapering to a fine point. Rudiments of hind-limbs extremely small, scarcely distinct, especially in females. Four or five preanal pores, frequently indistinct in females. Snout covered with small plates, variable in number and arrangement ; three supraorbitals, median large ; loreal region covered with numerous small scales ; the rest of the head with equal scales ; rostral very low ; nostril pierced in the posterior portion of a nasal ; thirteen to seventeen upper labials, all very small, separated from the
orbit by two or three rows of scales ; mental rather large, trapezoid or pentagonal ; twelve to sixteen lower labials ; a series of dilated gular scales on each side, separated from the lower labials by one or two rows of scales. Nineteen or twenty-one (occasionally twenty, according to Peters) longitudinal rows of scales round the middle of the body; the dilated ventral scales in seventy to one hundred pairs. Three or five anal scales. Colour. - Ground-colour brown, gray, reddish, or yellowish, variously marked or uniform.

| Head | $\ldots$ | $\ldots$ | $\ldots$ | 27 | mm. |
| :--- | :--- | :--- | :--- | ---: | :--- |
| Body | $\ldots$ | $\ldots$ | $\ldots$ | 220 | , |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 270 | , |

This lizard varies extremely in the degree of elongation of the snout, in the scutellation of the head, in the number of rows of scales, and in colour ; but I am satisfied that the several forms hitherto described should be united into one species, which I divide into numerous varieties of colouration."-Boulenger.

Distribution.-Victoria: Wimmera.
Range outside Victoria. - Distributed over the whole of Australia and adjacent islands.

## AGAMIDA.

Characters of the Family.

## External Form.

Somewhat variable but usually with large Head and Body and long much tapering tail. Ornamental appendages, such as crests, gular pouches, braids and frills, are often present, either in males only or in both sexes. Tongue thick, entirely attached or slightly free in front, not or but slightly nicked anteriorly.

Tail usually long and not fragile.
Limbs, both pairs well-developed, almost always pentadactyle. The digits are usually keeled inferiorly or denticulated laterally.

Eye and Ear.-The eye small with circular pupil, protected by well-developed upper and lower movable eyelids. The tympanum exposed or concealed under the skin.

Teguments.
The skin always covered with scales, of which some are often conical or spinose. The head is not plated. The skin of the head quite free from the bones of the skull.

## Endo-skeleton.

Skull not much depressed, strongly ossified. Premaxillary single. Nasals distinct. Frontal single. Parietal single. Postorbital arch present. Postfronto-squamosal arch present. Pterygoids widely separated, without teeth. A columella cranii and os transversum. Mandible.

Teeth acrodont, usually of three kinds, viz., incisors, canines and molars.

Limb-arches well-developed. Clavicle not dilated. Interclavicle T-shaped or anchor-shaped, frequently small. Sternum usually presents two fontanelles. Bones of limbs including those of digits, well developed.

Mode of reproduction.-Oviparous.

Amphibolurus, Wagler.
Tympanum distinct. Body more or less depressed. Dorsal crest absent or feebly developed. No gular sac ; a strong transverse gular fold. Tail round or feebly compressed. Præanal and femoral pores.

Australia.

Amphibolurus adelaidensis, Gray.
Grammatophora angulifera, var. 2, Gray, Cat., p. 253.
Grammatophora muricata, var. adelaidensis, Gray in Grey's Trav. Austr: ii., p. 439.

Grammatophora adelaidensis, Gray, Zool. Erebus and Terror Rept., pl. xviii., fig. 2.

Descriptoon.—" Habit stout. Head short; snout nearly as long as the diameter of the orbit; nostril equally distant from
the eye and the end of the snout; tympanum scarcely half the diameter of the orbit; upper head-scales strongly keeled ; small spinose tubercles on the back of the head ; sides of neck strongly plicate ; a more or less distinct dorso-lateral fold. Gular scales smaller than ventrals, keeled. Body much depressed, covered with irregular strongly keeled scales, largest on the vertebral region, intermixed with enlarged trihedral spinose scales forming very irregular longitudinal series; a more or less regular vertebral series of enlarged scales ; ventral scales keeled. Limbs short, the adpressed hind-limb reaching the shoulder or the neck in females, the tympanum or a little beyond in males ; scales on upper surface of limbs unequal, strongly keeled. A series of twenty to thirty pores extending on more than the proximal half of the thighs, continuous or interrupted on the preanal region. Tail round, depressed at the base, not once and two-thirds the length of head and body ; scales strongly keeled at the base with four or five longitudinal series of enlarged ones, the outer series, on the side, composed of large trihedral tubercles. Colour.-Pale olivegrey above, with a regular series of angular dark-brown, whiteedged spots on each side of the vertebral region, and another more or less regular along each side ; head with symmetrical dark markings ; limbs with irregular dark cross bars ; tail with two series of dark spots ; lower parts white, the throat marbled with black in the male, less distinctly with grey in the female ; in the male an elongate black spot on the chest and blackish variegations on the chest and belly.


Distribution.-Victoria : Dimboola (L. and F.).
Range outside Victoria.-Western Australia (Swan River); var. tasmanensis, from Tasmania (Brit. Mus.).

## Amphibolurus pictus, Peters.

Amphibolurus ornatus (non Gray) Peters, Mon. Berl. Ac., 1863, p. 230.
—— pictus, Peters, Mon. Berl. Ac., 1866, p. 88.
Grammatophora picta, Günth., Zool. Ereb. and Terr. Rept., p. 18.
Description.-" Habit stout. Head very short, snout shorter than the diameter of the orbit ; nostril equally distant from the eye and the tip of the snout ; tympanum large, nearly two-thirds the diameter of the orbit; upper head-scales subequal, tubercular, smallest on the supraorbital region ; a series of enlarged scales from the nostril to above the tympanum, passing below the eye. Sides of neck strongly plicate; no dorso-lateral fold. Gular scales smaller than ventrals, smooth. Body much depressed, covered with very small uniform feebly keeled scales smallest on the sides ; a slight ridge along the middle of the back ; ventral scales smooth. Limbs and digits rather short, the adpressed hind-limb reaching the tympanum or between the latter and the orbit; scales on upper surface of limbs small, equal, keeled. A series of thirty-two to forty-five pores extending along the whole length of the thighs, continuous or interrupted on the preanal region. Tail round, a little depressed at the base, not twice as long as head and body, covered with equal, feebly keeled scales. Colour.-Grey-brown above, with small darker and lighter spots; a series of transverse black spots on the back separated or connected by a black vertebral line ; throat and chest mottled with blackish."-Boulenger.

| Total length | $\ldots$ | $\ldots$ | 150 | mm |
| :--- | :--- | :--- | :--- | ---: |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 15 | , |
| Width of head | $\ldots$ | $\ldots$ | 13 | $"$ |
| Body | $\ldots$ | $\ldots$ | $\ldots$ | 42 |
| Fore-limb | $\ldots$ | $\ldots$ | $\ldots$ | 23 |
| Hind-limb | $\ldots$ | $\ldots$ | $\ldots$ | 42 |
| Tail | $\ldots$ | $\ldots$ | $\ldots$ | 93 |

Habits.-A single female specimen of this lizard was obtained by Mr. F. M. Reader, of Dimboola. On dissection, the oviduct was found to contain three eggs, in none of which was there any trace of an embryo.

Distribution.-Victoria : Dimboola.
Range outside Victoria.—South and West Australia.

## Amphibolurus angulifer, Gray.

Grammatophora angulifera, var. 1, Gray, Cat., p. 252.
Grammatophora muricata, var. diemensis, Gray, Grey's Trav. Austr. ii., p. 439.

Agama calaticeps, Smith, Ill. S. Afr. Rept., pl. lxxiv.
Grammatophora angulifera, Gray, Zool. Erebus and Terror, pl. xviii., tg. 3.

Description-" Habit stout. Head short, snout as long as the diameter of the orbit; nostril equally distant from the eye and the tip of the snout, tympanum measuring nearly half the diameter of the orbit, upper head-scales rough, strongly keeled. Sides of neck strongly plicate and studded with small spines ; a distinct dorso-lateral fold. Gular scales a little smaller than ventrals, keeled. Body much depressed, covered above with very irregular strongly keeled scales intermixed with enlarged spinose ones ; the latter form a zig-zag series on each side of the vertebral region, the scales of which are not enlarged, and a longitudinal series following the dorso-lateral fold ; they are irregularly scattered on the flanks; ventral scales strongly keeled and mucronate. Limbs and digits short ; the adpressed hind-limb reaches the tympanum or between the latter and the orbit ; spinose scales scattered on the limbs. Femoral pores four to six on each side, not extending beyond the basal half of the thighs; preanal pores two to five on each side. Tail round, depressed at the base, once and twothirds to once and three-fourths as long as head and body, above with five longitudinal series of strongly enlarged spinose scales. Colour.-Brown above, sides darker; a festooned dark-brown, black-edged band along the back; lower surfaces pale-brown, usually dotted or reticulated with darker.

| Total length | $\ldots$ | $\ldots$ | 199 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 20 | , |
| Width of head | $\ldots$ | $\ldots$ | 17 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 56 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 32 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 47 | $"$ |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 123 | ,,$\quad "-B o u l e n g e r . ~$ |

Habits.-Met with amongst rocks at considerable elevations in the mountains.

Distribution.-Victoria : Mount Wellington in N. Gippsland, Walhalla, Harrietville in Australian Alps (L. and F.).

Range outside Victoria.-Tasmania, Sydney, Port Denison (Brit. Mus.); Mt. Lofty, South Australia.

Amphibolurus muricatus, White.
Grammatophora muricata, Gray, Cat., p. 251.
Lacerta muricata, White, Journ. N. S. Wales, App., p. 244, pl. xxxi., fig. 1; Shaw, Zool. iii, p. 211, pl. lxv., fig. 2.

Agama muricata, Daud, Rept. iii., p. 391.
Agama jacksoniensis, Kuhl, Beitr. Zool. Vergl. Anat., p. 113 ; Guérin, Icon. R. A. Rept., pl. iii.

Grammatophora muricata, Kaup, Isis, 1827, p. 261; Dum. and Bibr. iv., p. 475 ; McCoy, Prodr. Zool. Vict., pl. 111.

Amphibolurus muricatus, Wiegm. Herp. Mex., p. 17 ; Girard, U. S. Expl. Exp. Herp., p. 414.

Amphibolirus maculiferus, Girard, Proc. Ac. Philad., 1857, p. 198, and U. S. Expl. Exp. Herp., p. 417.

Description.-" Habit moderate. Head rather elongate, snout longer than the diameter of the orbit; canthus rostralis angular ; nostril equally distant from the eye and the end of the snout; tympanum measuring nearly half the diameter of the orbit; upper head scales strongly keeled ; back of head and borders of the tympanum with small spines. Sides of neck strongly plicate ; a more or less distinct dorso-lateral fold frequently disappearing altogether in the adult. Gular scales a little smaller than ventrals, feebly keeled. Body moderately depressed, covered above with very irregular small keeled scales intermixed with some very numerous, enlarged, strongly keeled, spinose scales, some of which form regular series along the back; a low serrated vertebral ridge or crest; ventral scales feebly keeled, shortly mucronate. Limbs moderately elongate, the adpressed hind-limb reaching the eye or between the latter and the tympanum ; limbs with strongly keeled scales of unequal size. Femoral pores three or four on each side, not extending beyond the proximal half of the thigh, preanal pores two on each side. Tail round, twice or more than twice as long as head and body, covered above with strongly keeled scales of unequal size. Colour.-Brown above, with
a series of angular darker spots along the middle of the back; sometimes a lighter band along each side of the latter; lower surfaces lighter brown, uniform or indistinctly spotted with darker.

| Total length | $\ldots$ | $\ldots$ | 307 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 29 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 24 | , |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 73 | , |
| Fore-limb | $\ldots$ | $\ldots$ | 41 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 76 | , |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 205 | ,$"$, Boulenger. |

Habits.-Usually met with on the trunks or branches of trees and shrubs. In colour closely resembles the bark. Very common in the sandy districts on the south coast, especially on the Leptospermum scrub. "It is fond of basking in the sun on sandy paths . . . . In confinement feeds readily on flies.""The eggs are laid in the sand."-(McCoy).

Distribution.-Victoria : Melbourne, Caulfield, Plenty River, Upper Yarra, Damper Creek, Gippsland, Goulburn River, Stawell (Melb. Mus.); Drysdale, Tallarook, Rutherglen (L. and F.).

Range outside Victoria.-Western Australia, Tasmania, Sydney (Brit. Mus.).

## Amphibolurus barbatus, Cuvier.

Grammatophora barbata, Gray, Cat., p. 252.
Agama barbata, Cuv. R. A. 2nd ed. ii., p. 35 ; Duvern. R. A., Rept., pl. xiv., fig. 1.

Grammatophora barbata, Kaup. Isis, 18ะ7, p. 621 ; Dum. and Bibr. iv., p. 478; Gray, Zool. Erebus and Terror Rept., pl. xviii., fig. 1 ; McCoy, Prodr. Zool. Vict., pl. 121.

Amphibolurus barbatus, Wieg. Herp. Mex., p. 7.
Description.-" Habit stout. Head large, swollen at the sides ; snout a little longer than the diameter of the orbit, with angular canthus rostralis ; nostril large, directed backwards, nearly equally distant from the eye and the end of the snout; tympanum nearly halt the diameter of the orbit; upper head-scales keeled, largest on the snout; a transverse series of larger scales borders the head posteriorly, forming a right angle
with another series above the ear. Sides of neck with group of spines ; no distinct dorso-lateral fold. Gular scales as large as ventrals, feebly keeled, more or less mucronate, somêtimes produced into spines. Body much depressed ; scales on the middle of the back largest, unequal, keeled, the enlarged ones sometimes forming transverse series ; on the sides, the scales almost granular and intermixed with numerous erect conical spines; ventral scales feebly keeled. Limbs, and especially digits, short ; the adpressed hind-limb reaches the axilla or the shoulder ; four or five femoral and two or three preanal pores on each side. Tail round, depressed at the base, once and a half to twice as long as head and body, above with large unequal strongly keeled or spinose scales forming more or less regular cross series. Colour.-Brown above, uniform or with symmetrical darker markings ; usually a black spot on each side of the neck; lower surfaces brown or brownish, uniform or with lighter or darker spots ; the throat blackish in the adult male.

| Total length | $\ldots$ | $\ldots$ | 530 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 67 | , |
| Width of head | $\ldots$ | $\ldots$ | 65 | , |
| Body $\ldots$ | $\ldots$ | . | 163 | , |
| Fore-limb... | $\ldots$ | $\ldots$ | 92 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 123 | $"$ |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 300 | ,$"$, "-Boulenger. |

Habits.-Usually found on the ground, or fallen trees and fences. When irritated, it raises its head, opens its mouth and extends the frill, at the same time expanding its ribs so that the body assumes almost the form of a disk. It will then bite savagely, but the result is rarely more than a hard pinch.

Mode of reproduction.-Eggs usually twelve or fourteen. The oviduct of one captured in October contained fourteen full-size eggs with definite groups of two other sizes, one the size of small peas and the other about the size of millet seed. This seems to point to three consecutive layings.

Distribution.-Victoria: " Rare near Melbourne but becomes gradually more abundant in all the more northern warm localities up to the Murray boundary" (McCoy, Prod. Zool. Vict.); North of the Divide (L. and F.)

Range outside Victoria: New South Wales, Queensland, West and North West Australia.

Tympanocryptis, Peters.
Tympanum hidden. Body depressed, covered above with heterogeneous scales. No dorsal crest. No gular sac ; a strong transverse gular fold. Tail round. A preanal pore on each side, sometimes absent in the female ; no femoral pores.

Australia.
Tympanocryptis lineata, Peters.
Tympanocryptis lineata, Peters, Mon. Berl. Ac., 1863, p. 230 ; McCoy, Prodr. Zool. Vict., pl. 181.

Description.-_"Habit very stout. Head short; nostril nearer to the eye than the tip of the snout; upper head-scales moderately large, very strongly keeled, with slightly enlarged ones on the occiput. Dorsal scales very strongly keeled, the enlarged ones nail-shaped, raised, not or scarcely mucronate ; gular and ventral scales indistinctly keeled. The adpressed hind-limb reaches the shoulder or the neck. Tail rather slender, covered with very strongly keeled scales, not more than once and a half the length of head and body. Colour.-Brownish above, with regular darker transverse spots, and five interrupted longitudinal light lines, three on the back and one on each side ; limbs and tail with dark bars.

| Total length | $\ldots$ | $\ldots$ | 122 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 15 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 14 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 43 | $"$ |
| Fore-limb... | $\ldots$ | $\ldots$ | 23 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 33 | $"$ |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 64 | $"$ |

Habits.-"Inhabiting stony plains and retreating into small holes, like those of the 'Trap-door Spider,' in the ground when alarmed." (McCoy, l.c.) Often met with under loose basalt boulders.

Distribution. - Victoria: Salt-water River, Maryborough, Rutherglen (F. and L.); Sunbury (McCoy).

Range outside Victoria. - South Australia: Kangaroo I. (Brit. Mus.)

## Physignathus, Cuvier.

Tympanum distinct. Body more or less compressed. Nuchal and dorsal crests present. No gular sac, a strong transverse gular fold. Tail more or less compressed. Toes not lobate. Femoral pores present, at least in the male.

Australia and Papuasia ; Siam and Cochin China.

Physignathus lesueurif, Gray.
Physignathus lesueurii, Gray, Cat., p. 248.
Lophura lesueurii, Gray, Griff., A. K., ix., Syn., p. 60.
Istiurus lesueurii, Dum. and Bibr., p. 384, pl. xl.
Amphibolurus heterurus, Peters, Mon. Berl. Ac., 1866, p. 86.
Physignathus lesueurii, Günth., Ann. Mag. N.H. (3) xx., 1867, p. 51.

Physignathus lesueurii, var. howittii, McCoy, Prodr. Zool. Vict., pl. 81.

Description.-" Head moderately elongate, large and thick in the male; snout slightly longer than the diameter of the orbit; nostril nearer the end of the snout than the orbit; canthus rostralis, supraciliary and supraorbital borders forming slight ridges ; tympanum half the diameter of the orbit; upper head-scales very small, very strongly keeled; occiput and temple with numerous conical and compressed tubercles. Gular scales subimbricate, indistinctly keeled, intermixed on the sides with enlarged suboval tubercles forming irregular longitudinal series; some of the hindermost of these tubercles conical ; a row of slightly enlarged shields on each side, parallel with the infralabials. Nuchal crest composed of a few trianguiar compressed spines ; dorsal crest a serrated ridge. Dorsal scales minute, granular or subimbricate, keeled, intermixed with enlarged, roundish, keeled tubercles forming irregular transverse series; ventral sicales larger than dorsals, imbricate, keeled. Limbs long, scaled like the back; the adpressed hind-limb reaches between the eye and the end of the snout. Sixteen to twenty-two femoral pores on each side. Tail strongly compressed, crested like the back, twice and a half times as long as the body ; superolateral scales very small, intermixed at the base of the tail with enlarged
tubercles ; lower scales larger. Colour.-Dark-olive above, with darker and lighter cross bands ; a broad black band from the eye to above the shoulder, involving the tympanum ; belly pale-olive, dotted with black; throat with black longitudinal lines in the young."-Boulenger.

| Total length | $\ldots$ | $\ldots$ | 466 | mm |
| :--- | :--- | :--- | :--- | ---: | :--- |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 46 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 39 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 120 | $"$ |
| Fore-limb... | $\ldots$ | $\ldots$ | 80 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 150 | $"$ |
| Tail $\quad .$. | $\ldots$ | $\ldots$ | 330 | $"$ |

Habits.-Semi-aquatic; found basking in the sun on rocks and fallen $\log$ s at the water-side.

Distribution.-Victoria: Aberfeldie, Buchan, Upper Wellington, and Snowy Rivers.

Range outside Victoria :-Queensland.

## VARANIDÆ.

Characters of the Family.
External Form.
Tongue smooth, very long and slender, bifid, retractile into a sheath at the base.

Tail very long, not fragile.
Limbs, both pairs well developed, pentadactyle.
Eye and Ear.-Eyelids well developed. Ear-opening distinct.
Teguments.
Head covered with small polygonal scales. No dermal cranial ossifications. Dorsal scales roundish, juxtaposed, surrounded by rings of minute granules. Ventral scales squarish, arranged in cross rows. No femoral or preanal pores. (The skin of the head attached to the skull-bones.)

## Endo-skeleton.

Skull.-Præmaxillary single, narrowed and much prolonged posteriorly. Nasal kones coalesced, narrow. Two frontals ; a single parietal. A supraorbital bone. Postorbital arch incomplete.

A bony postfronto-squamosal arch. Pterygoids and palatines widely separated. Infraorbital fossa bounded by the pterygoid, palatine and transverse bone, the maxillary being excluded.

Teeth large, dilated at the base which is fixed to the inner side of the jaws. Palate toothless.

Limb-arches.-Clavicle slender. Interclavicle anchor-shaped.

> Mode of Reproduction.

Oviparous.

## Varanus, Merrem.

The only genus. Characters those of the Family.

Varanus varius, Shaw.
Hydrosaurus varius, Gray, Cat., p. 12 ; McCoy, Prodr. Zool. Vict., pl. 41.

Lacerta varia, Shaw in White's Voy. N.S. Wales, p. 246, pl. iii., fig. 2, and Zool. Misc. iii., pl. lxxxiii.

Tupinambis variegatus, Daud., Rept. iii., p. 76.
Varanus varius, Merr. Tent., p. 58 ; Dum. and Bibr. iii., p. 491.
Hydrosaurus variegatus, Wagl. Syst. Amph., p. 164.
Monitor varius, Gray, Griff. A.K. ix., Syn., p. 25 ; Schleg. Abbild., p. 78.

Varanus (Hydrosaurus) mustelinus, De Borre, Bull. Ac. Belg. (2), xxix., 1870, p. 125.

Description.-"Teeth acute, compressed. Snout depressed at the end, measuring the distance from the anterior border of the orbit to the ear ; canthus rostralis obtuse. Nostril suboval, twice nearer the tip of the snout than the orbit. Digits long. Tail compressed, keeled above. Scales of head small, larger than those on the temples ; supraocular scales equal, very small, granular. Scales on upper surfaces small, oval, tectiform. Abdominal scales feebly keeled, in one hundred and twenty to one hundred and thirty transverse series. Caudal scales keeled ; the caudal keel with a very low, doubly-toothed crest. Colour. Upper surfaces black, with yellow punctulations arranged in transverse bands on the back and lunate bands on the neck; limbs with large spots or annuli ; lower surfaces yellow or greenish, with transverse black bands ; tail alternately black and yellow in its posterior half.

| Total length | ... | ... | 1480 | mm |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Head | $\ldots$ | ... | 90 | , |  |
| Neck | $\ldots$ | $\ldots$ | 130 | , |  |
| Body | $\ldots$ | $\ldots$ | 330 | " |  |
| Fore-limb | $\ldots$ | $\ldots$ | 190 | " |  |
| Hind-limb |  | $\ldots$ | 250 | " |  |
| Tail |  | $\ldots$ | 930 | , |  |

Habits.-"Although the Lace Lizard is generally arboreal, climbing the forest trees with ease, and running well on the ground, it can swim nearly as well as a crocodile."-McCoy, Prodr. Z.V.
"They are very voracious, and eat living or dead animals." The particular food may be the smaller or even larger (if dead) mammals, birds, other lizards, and especially, as the settlers find to their cost, the eggs and young birds of the poultry yard.
"They lay about a dozen large, tough, flexible, white eggs, about two-and-a-half inches long, and one-and-a-half inches wide, the young in which are nine or ten inches long."-McCoy, l.c.

Distribution.-Victoria: In forest country whether in the warm Murray region or in Gippsland and the south ; replaced in the Wimmera by $V$. Gouldii.

Localities.-Rutherglen, Beechworth, Walhalla, Moe, Cabbage Tree Creek, Anderson's Inlet (L. and F.).

Range outside Victoria: New South Wales, Queensland (Gayndah) (Brit. Mus.).

Varanus varius, var. bellii.
Hydrosaurus bellii, Gray, Cat., p. 13.
Varanus bellii, Dum. and Bibr., iii., p. 493, pl. xxxv.
" Black, with a few very broad yellowish cross bands, generally black-dotted ; belly uniform yellowish."

Varanus gouldil, Gray.
Monitor gouldiiu, Gray, Cat., p. 12.
Hydrosaurus gouldii, Gray, Ann. N.H., i., 1838, p. 394, and in Grey's Travels Austr., ii., p. 422.

Monitor gouldii, Schleg. Abbild., p. 78 ; Gray, Zool. Erebus and Terror Rept., pl. iii.; Peters and Doria, Ann. Mus. Genov., xiii., 1878 , pl. i., fig. 4 ; McCoy, Prodr. Zool. Vict., pl. 151.

Varanus gouldii, A. Dum., Cat. Méth. Rept., p. 52.
Description.—"Teeth acute, compressed. Snout depressed at the tip, long, the distance from its end to the anterior corner of the eye equalling the distance from the latter point to the anterior border of the ear; canthus rostralis sharp. Nostril round, nearer the tip of the snout than the orbit. Digits strong, moderately elongate. Tail strongly compressed, keeled above. Scales of head, including supraoculars, subequal, very small, not larger than those on the temples. Scales of upper surface of body and limbs small, oval, tectiform. Abdominal scales smooth, in one hundred and twenty-five to one hundred and forty transverse rows. Caudal scales keeled ; the caudal keel with a very low doubly-toothed crest. Colour.-Brown above with more or less distinct round yellow spots or ocelli on the back and limbs and yellow annuli round the tail ; temple with two yellow streaks, separated by a black band ; these streaks extending more or less distinctly along the sides of the neck ; lower surfaces yellowish, uniform or with small blackish spots. Young with the markings much accentuated.

| Total length | $\ldots$ | $\ldots$ | 1300 | mm. |  |
| :--- | :--- | :--- | :--- | ---: | :--- |
| Head | $\ldots$ | $\ldots$ | $\ldots$ | 80 | $"$ |
| Neck | $\ldots$ | $\ldots$ | $\ldots$ | 130 | $"$ |
| Body | $\ldots$ | $\ldots$ | $\ldots$ | 340 | $"$ |
| Fore-limb... | $\ldots$ | $\ldots$ | 200 | ", |  |
| Hind-limb |  | $\ldots$ | 220 |  |  |
| Tail | $\ldots$ | $\ldots$ | $\ldots$ | 750 | ", "-Boulenger. |

Habits.-"Found only in the north-west part of the colony, in the hot mallee-scrub country, where it is common, far away from water, running swiftly about the herbage, and sheltering in holes in the ground." Hisses loudly if disturbed. "When irritated it inflates the skin of the body, swelling to a considerably greater size than before, and then the wrinkles disappear."

Distribution. - Victoria: Wimmera (McCoy), Rutherglen (L. and F.).

Range outside Victoria: W. Australia, N.W. Australia, Dirk Hartog I., Thursday I., Port Essington, Gayndah (Queensland), (Brit. Mus.).

## SCINCIDÆ.

## Characters of the Family.

## External Form.

Head slightly depressed ; body more or less round. Tongue moderately long, free, and feebly nicked in front ; covered with imbricate scale-like papillæ.

Tail usually long, cylindrical, covered with scales similar to those on the body, rather fragile, slowly reproduced.

Limbs very various, from well-developed to rudimentary.
Eye and Ear.-Eye moderately large, pupil round, eyelids usually well developed, movable-except in Ablepharus-scaly or with a transparent disk. Tympanum, usually more or less exposed.

## Teguments.

Skin covered with cycloid-hexagonal rarely rhomboidal imbricate scales, which may be either smooth or keeled, dorsals usually the largest, and laterals smallest. Head covered with symmetrical shields. No femoral pores.

## Endo-skeleton.

Skull slightly depressed, præmaxillary bones two, sometimes incompletely separated ; nasal double ; frontal single or double ; parietal single ; postorbital and postfronto-temporal arches complete, osseous; interorbital septum and columella cranii welldeveloped ; infraorbital fossa present, bounded by the maxillary, the transverse bone, the palatine, and often also by the pterygoid. Skull with bony dermal plates over-roofing the supratemporal fossa.

Dentition pleurodont; the teeth conical, bicuspid, or with sphæroidal or compressed crowns ; the new teeth hollow out the base of the old ones. Pterygoid teeth may be present.

Vertebra.

Limb-arches.-Pectoral and pelvic arches constantly present. Clavicle dilated and usually perforated proximally ; interclavicle cruciform. Ossified abdominal ribs are absent.

## Mode of reproduction.

Oviparous or viviparous ; eggs oval, shell membranous, flexible.

## Egernia, Gray.

Palatine bones not meeting on the middle line of the palate. Pterygoid teeth few or absent. Lateral teeth with compressed obtusely tricuspid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal which may be divided by a vertical groove; no supranasals; prefrontals well developed; frontoparietals and interparietal distinct. Limbs well developed, pentadactyle ; digits cylindrical or compressed, with transverse lamellæ inferiorly.

This genus, which is confined to Australia, is represented by nine species, three of which occur in Victoria.

## Egernia whitio, Lacép.

Hinulia whitei, Gray, Cat., p. 79 ; McCoy, Prodr. Zool. Vic., pl. 191.

Scincus whitii, Lacép., Ann. Mus., iv., p. 192 ; Quoy and Gaim., Voy. Uranie, Zool., pl. xlii., figs. 2 and 3.

Tiliqua leucopsis, Gray, Ann. N. H., ii., 1838, p. 291.
Lygosoma molinigera, Dum. and Bibr. v., p. 736.
Lygosoma whitei, Peters, Mon. Berl. Ac., 1863, p. 230.
Euprepes whitei, Steindachn, Novara, Rept., p. 49.
Description.-"Head moderate. Curved groove behind the nostril absent or feebly marked; a vertical suture below the nostril ; frontonasal in contact with the rostral and frequently also with the frontal; prefrontals sometimes forming a median suture ; frontal not twice as long as broad, as long as or a little longer than the frontoparietal ; four or five supraoculars, second largest ; eight or ten supracilliaries ; fifth and sixth, or sixth and seventh upper labials below the eye; three large temporals; one or two pairs of nuchals. Ear-opening nearly as large as the eyeopening, with three or four obtuse lobules anteriorly. Scales
smooth, laterals a little smaller than the dorsals and ventrals, thirty-two to forty round the middle of the body. The adpressed limbs overlap. Digits moderately elongate. Tail more or less distinctly compressed, once and two-fifths to once and two-thirds the length of head and body; caudal scales smooth. Colour.-Upper surfaces usually brown or olive-brown, with two dorsal black bands, each bearing a series of yellowish-white or pale-brown spots ; sides with similar black-edged spots or oceili; lower surfaces pale-olive, throat sometimes with black markings." -Boulenger.

In hilly country specimens are after met with on which the markings of the upper surfaces have entirely disappeared. The edge of the eyelids and ear lobules are constantly yellow.

| Total length | $\ldots$ | $\ldots$ | 295 | mm |
| :--- | :--- | :--- | ---: | ---: |
| Head $\quad \ldots$ | $\ldots$ |  | 25 | $"$, |
| Width of head | $\ldots$ | $\ldots$ | 18 | $"$, |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 85 | $"$, |
| Fore-limb | $\ldots$ | $\ldots$ | 33 | $"$, |
| Hind-limb | $\ldots$ | $\ldots$ | 48 | $"$, |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 185 | $"$, |

In Victoria this lizard rarely exceeds 250 mm . in length.
Habits.-This lizard is usually met with on open stony ground, and dry rocky hills. When disturbed it rapidly disappears under logs or stones. In confinement it makes an interesting little pet, soon becoming tame and readily taking insects from the hand. Its food consists chiefly of insects, although in captivity it will feed on smaller lizards, and in one instance within our knowledge one was known to swallow its own tail.

Distribution. - Victoria: Mordialloc, Caulfield, Sunbury, Keilor, Upper Yarra, Jan Juc, Mt. Hope, Grampians, Beaufort (Melb. Mus.). This species is distributed over the whole of the colony (L. and F.).

Range outside Victoria: South Australia, West Australia, Houtman's Abrolhos, Tasmania, King Island, Kent Group, Kangaroo Island, New South Wales, Queensland.

Egernia striolata, Peters.
Tropidolepisma striolatum, Peters, Mon. Berl. Ac., p. 642.
Description.-"Head moderate. A curved groove behind the nostril ; frontonasal in contact with the rostral ; præfrontals forming a median suture ; frontal not twice as long as broad, as large as or smaller than the interparietal ; four supraoculars, second largest ; seven supraciliaries ; fifth or sixth upper labial entering the orbit ; two or three pairs of nuchals. Ear-opening as large as the eye-opening, with three pointed lobules anteriorly. Twenty-eight to thirty-two scales round the middle of the body; dorsals largest, quadri- or quinquecarinate, laterals smallest, tricarinate. The adpressed limbs overlap. Digits moderate. Tail cylindrical, a little longer than the head and body; a series of large, transversely dilated scales on the upper as well as the lower surface of the tail, the former pluricarinate. Colour. Brown above with lighter dots and a lighter dorso-lateral band ; longitudinal, more or less confluent blackish streaks on the vertebral region; a blackish lateral band ; upper head-shields black edged ; labials yellowish, black-edged; lower surfaces yellowish or greyish ; throat spotted or reticulated with blackish."

The above colouring applies to specimens from the northern parts of the colony, but on the rocky hills and mountains further south, the colour is uniform blackish-brown or with light dots. The upper labials constantly greyish-white.

| Total length | $\ldots$ | $\ldots$ | 190 | mm |
| :--- | :--- | :--- | ---: | ---: |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 21 | $\prime \prime$ |
| Width of Head | $\ldots$ | $\ldots$ | 15 | $"$, |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 69 | $"$, |
| Fore-limb | $\ldots$ | $\ldots$ | 27 | $"$, |
| Hind-limb | $\ldots$ | $\ldots$ | 36 | ", |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 100 | ", |

Habits.-This lizard is usually found amongst the rocks on hills and mountains.

Mode of reproduction.-Young developed within the body of the parent, three or four being brought forth at a time.

Distribution.-Victoria: Gunbower, Pyramid Hill, Upper Yarra, Lilydale, Gippsland (Melb. Mus.) ; Dimboola, Croajin-
golong, Grampians, Pyramid Hill, Gembrook, Tynong (L. and F.).
Range outside Victoria.-Northern Queensland, Gayndah.

## Egernia cunninghami, Gray.

Egernia cunninghami, Gray, Cat., p. 105.
Tiliqua cunninghami, Gray, Proc. Zool. Soc., 1832, p. 40.
Egernia cunninghami, Gray, Ann. N.H., ii., 1838, p. 288, and in Stokes, Discov. in Austral., i., p. 499, pl. ii.

Tropidolepisma cunninghami, A. Dum., Cat. Méth. Rept., p. 177 .

Egernia krefftii, Peters, Mon. Berl. Ac., 1871, p. 30.
Description.-"Head moderate. A curved groove behind the nostril ; frontonasal in contact with the rostral ; prefrontals usually forming a median suture; frontal not twice as long as broad, as large as or a little larger than the interparietal ; four or five supraoculars, second largest ; seven or eight superciliaries ; sixth and serenth, or seventh and eighth upper labials entering the orbit ; two or four pair of nuchals. Ear-opening as large as, or a little larger than the eye-opening, with four or five pointed lobules anteriorly. Nuchal scales pluricarinate, dorsals and laterals sharply unicarinate, ending in a point, the keel and the point becoming stronger towards the tail ; dorsal scales largest, laterals smallest ; thirty-six to forty-two scales round the middle of the body. The adpressed limbs largely overlap. Digits moderate. Tail cylindrical, a little longer than the head and body; upper caudal scales strongly unicarinate, ending in a spine." Colour.-Olive-brown above with irregular spots or blotches of a darker colour; in the young speckled with light dots, which usually disappear in the adult; head-shields edged with black; lower surfaces whitish or pale-olive spotted or blotched with darkbrown ; throat whitish-olive.

| Total length | $\ldots$ | $\ldots$ | 330 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head | $\ldots$ | $\ldots$ | 35 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 25 | $"$, |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 115 | $"$ |
| Fore-limb... | $\ldots$ | $\ldots$ | 46 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 62 | $"$ |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 180 | $"$ |

Habits.-Found in rocky places.
Distribution. - Victoria: Melbourne, Sunbury, Brighton, Castlemaine, Beechworth, Mt. Stanley.

Range outside Victoria.-West Australia, Sydney, Queensland.

## Trachysaurus, Gray.

Palatine bones in contact on the middle line of the palate. Pterygoids toothless. Lateral teeth with subconical crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in a single nasal, with a curved groove behind ; no supranasals; a complete series of shields between the orbit and the upper labials; præfrontals well developed; frontoparietals and interparietal distinct, the latter shield in contact with an azygos occipital. Dorsal scales rhomboidal, rugose. Limbs short, pentadactyle ; digits cylindrical ; subdigital lamellæ mostly divided. Tail short, stump-like.

This genus, which is represented by only one species, extends over the whole of Australia to which it is confined.

## Trachysaurus rugosus, Gray.

Trachydosaurus rugosus, Gray, Cat., p. 102.
——asper, Gray, l.c., p. 103.
Trachysaurus rugosus, Gray, in King's Voy. Austral., ii., p. 430, Dum. and Bibr., v., p. 754 ; McCoy, Prodr. Zool. Vict., dec. xi., pl. 102 ; Haake, Zool. Anz., 1885, p. 435.
—— peronii, Wagl., Icon. Amph. (nec fig.)
Brachydactylus typicus, Smith, S. Afr. Quart. Journ., ii., 1835, p. 144, pl.-

Trachysaurus typicus, Gray, in Grey's Journ. Austral., ii., p. 423.
——asper, A. Dum., Cat. Méth. Rept., p. 179.
Description.-" Head large, very distinct from neck; snout short, obtuse. Head-shields convex, more or less rugose. Finntonasal the largest head-shield; præfrontals forming a median suture; two or three supraoculars and five to seven supraciliaries ; frontal and interparietal varying much in length; ear-opening about as large as the eye-opening, without lobules. Dorsal scales very large, rough, strongly imbricate, suggestive of the fruit of a pine; ventrals much smaller, smooth; twenty to thirty scales
round the middle of the body. Limbs widely separated when adpressed ; digits very short. Tail about as long as the head, stump-like, scaled like the body. Colour.-Dark-brown above, with yellowish spots or irregular cross-bands; lower surfaces yellowish, spotted or marbled with brown, or with longitudinal and transverse brown streaks.

| Total length | $\ldots$ | $\ldots$ | 353 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 60 | , |
| Width of head | $\ldots$ | $\ldots$ | 58 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 230 | , |
| Fore-limb... | $\ldots$ | $\ldots$ | 56 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 57 | , |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 63 | ,$"$, Boulenger. |

Habits.-Found in dry open country; movements very sluggish.
This lizard appears to subsist on a vegetable diet, the stomach of one found on the Grampians contained nothing but fungus and Styphelia berries.

Mode of reproduction.-Young developed within the body of the parent. "Brings forth in March a single young one of surprising size, about half the length of the parent."-McCoy, Prod. Zool. of Vict.

Distribution.—Victoria: Kewell, (Melb. Mus.).; Northern parts of the Colony, (McCoy) ; Grampians, Wimmera (L. and F.).

## Tiliqua, Gray.

Palatine bones in contact on the middle line of the palate. Pterygoids toothless. Lateral teeth with spheroidal crowns.* Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in a single nasal, with a curved groove behind ; no supranasals; a complete series of shields between the orbit and the upper labials ; prefrontals well developed ; frontoparietals and interparietal distinct. Limbs short, pentadactyle; digits subcylindrical or slightly compressed with undivided transverse lamellæ inferiorly.

The genus contains five species which range over Australasia, from Tasmania to the Indo-Malayan Islands. Three of the species occur in Victoria.

[^1]
## Tiliqua scincoides, White.

Cyclodus gigas, Gray, Cat., p. 103.
Lacerta scincoides, White Jour., Voy. N.S. Wales, p. 242, pl.-; Shaw, Nat. Miscell., v., pl. clxxix.

Scincus crotaphomelas, Lacép., Ann. Mus., iv., 1804, pp. 192, 209.
-_ tuberculatus, Merr. Tent., p. 73.
Tiliqua tuberculata, Gray, Ann. Phil. (2) x., 1825, p. 201, and in Gray's Voy. Austr. ii., p. 429.
_scincoides, Fitzing, N. Class Rept., p. 52.

- whitii, Gray, Griff. A.K., ix., Syn., p. 67.
- crotaphomelas, Gray, l.c., p. 68.

Cyclodus boddoertii, part., Dum. and Bibr. v., p. 752 .
—— gigas, Girard, U.S. Explor. Exped., Herp., p. 233 ; Strauch, Bull. Ac. St. Pétersb., x., 1866, p. 454 ; McCoy, Prod. Zool. Vict., dec. viii., pl. lxxi.

- boddoertii, Peters and Doria, Ann. Mus. Genova, xiii., 1878, p. 366.

Description.-" Frontonasal in contact with the rostral ; præfrontals forming a median suture; four supraoculars, second largest; six or seven supraciliaries; interparietal narrower than the parietals ; scales on the occiput not or but slightly broader than long ; anterior temporals much larger than the others, about as long as the interparietal ; ear-opening about as large as the eye-opening, with two or three large, obtuse lobules. Scales smooth, laterals a little smaller than the dorsals and ventrals, thirty-four to ferty round the middle of the body. Fore-limb as long as or a little shorter than the head ; its length in the adult, contained from three to four times in the distance between axilla and groin. Tail cylindrical, shorter than the body." Colour.Olive above with seven or eight more or less distinct dark-brown cross bands ; fine dark-brown lines marking the intersection of scales along the upper surface of the neck; usually with a darkbrown band extending from above the fore-limb to the eye, broken above the ear-opening ; tail with six or seven dark-brown cross bands ; sides and under surfaces greyish, or yellowish, with blackish transverse marblings ; throat immaculate or with a few dark spots. Tongue bright Prussian-blue.

| Total length | $\ldots$ | $\ldots$ | 585 | mm |
| :--- | :--- | :--- | ---: | ---: |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 70 | ", |
| Width of head |  | $\ldots$ | 58 | $"$, |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 265 | $"$, |
| Fore-limb... | $\ldots$ | $\ldots$ | 68 | ", |
| Hind-limb | $\ldots$ | $\ldots$ | 67 | $"$, |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 250 | ", |

Habits.-Met with in sandy heath country, and on the hill sides in lightly timbered districts. Movements very sluggish.

Mode of reproduction.-Oviparous, eggs round, twelve to fifteen laid about December. A female specimen captured in November, on dissection was found to contain fifteen full-size eggs, in none of which was there any trace of an embryo.

Distribution.-Victoria: Sunbury, Pyramid Hill (Melb. Mus.); Kew, Woodend, Werribee Gorge (L. and F.).

Range outside Victoria.-Tasmania, King Island, New South Wales, Port Essington, Cape York.

## Tiliqua nigro-lutea, Gray.

Cyclodus nigroluteus, Gray, Cat., p. 104 ; Quoy. and Gaim., Voy. Uranie Rept., pl. xli.

Tiliqua nigroluteas, Gray, Griff. A. K., ix., Syn., p. 68.
Cyclodus nigroluteus, Dum. and Bibr., v., p. 750 ; Strauch, Bull. Ac., St. Petersb., x., 1866, p. 457.

Description.-"Frontonasal in contact with the rostral, and sometimes with the frontal; four supraoculars; four or five supraciliaries ; interparietal narrower than the parietals; scales on the occiput not broader than long; anterior temporals not larger than the others; ear-opening smaller than the eye-opening, with two obtuse lobules ; twenty-eight to thirty scales round the middle of the body, dorsals largest, rather rugose. Fore-limb as long as or slightly longer than the head, its length contained thrice to thrice and a half in the distance between axilla and groin. Tail not quite half the length of head and body, cylindrical." Colour.-Upper surfaces of head and tail olive-brown, body dullyellow with blackish-brown irregular longitudinal dashes and transverse bands, leaving the ground colour in from five to seven irregular patches extending from the neck to the base of the tail ;
tail with from five to seven irregular dark-brown bands ; sides and limbs greyish-olive, marbled with dark-brown; under surfaces yellowish ; throat immaculate, belly variegated with dark-brown reticulations. Tongue bright Prussian-blue.


Habits.-In its habits this lizard is similar to T. scincoides but is much more active ; when irritated it opens its mouth and snaps from side to side, at the same time making a sound similar to that made by blowing with a bellows. If allowed to seize one's hand it is some time before it can be made to relax its hold. Its food consists of insects, fungus, and probably the fruit of small shrubs. In confinement it will feed on bread and milk and bits of raw meat.

Mode of reproduction.-Young developed within the body of the parent, twelve or fourteen being brought forth at a time.

Distribution. - Victoria: Ringwood, Mordialloc, Frankston (Melb. Mus.); Oakleigh, Phillip Island, Plenty Ranges, Fernshaw, Grampians (L. and F.).

Range outside Victoria.-South Australia, Tasmania.

## Tiliqua occipitalis, Peters.

Cyclodus occipitalis, Peters, Mon. Berl. Ac., 1863, p. 231; Strauch, Bull. Ac., St. Petersb., x., 1866, p. 456.

Cyclodus fasciatus, Lütken, Vidensk., Meddel., 1862 (1863), p. 292, pl. i., fig. 1 ; Strauch, l.c.

Description.-" Frontonasal in contact with the rostral and with the frontal ; three (or two) supraoculars, first largest ; four or five supraciliaries ; interparietal narrower than the parietals ; scales on the occiput longer than broad ; anterior temporals not larger than the others ; ear-opening a little larger than the eyeopening with three obtuse lobules. Scales smooth, forty to fortytwo round the middle of the body, laterals a little smaller than
the dorsals and ventrals. Fore-limb slightly longer than the head, its length contained twice and a half in the distance between axilla and groin. Tail not quite half the length of head and body, very slightly compressed." Colour.-Yellowish above with four or five dark-brown bands across the body, and three or four others encircling the tail, a broad dark-brown band from the eye to above the ear, limbs and under surfaces yellowish, the distal part of limbs darker above. Tongue bright Prussian-blue.

| Total length | $\ldots$ | $\ldots$ | 388 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 50 | , |
| Width of head | $\ldots$ | $\ldots$ | 34 | , |
| Body .. | $\ldots$ | $\ldots$ | 204 | , |
| Fore-limb... | $\ldots$ | $\ldots$ | 52 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 54 | $"$ |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 134 | , |

Distribution.-Victoria: Western district (Melb. Mus.)
Range outside Victoria.-South Australia, Swan River.

## Lygosoma, Fitzing.

Palatine bones in contact mesially; pterygoid bones usually also in contact anteriorly, the palatal notch not extending forwards to between the centre of the eyes; pterygoid teeth minute or absent. Maxillary teeth conical or obtuse. Eyelids well developed. Ear distinct or hidden ; if distinct, tympanum more or less sunk. Nostril pierced in the nasal ; supranasals present or absent. Limbs more or less developed, rudimentary, or absent.

There are already over 150 known species belonging to this genus, which extends over the whole of Australia, East Indies, China, North and Central America, Tropical and South Africa.

## Lygosoma.

## Sub-genus Hinulia, Gray.

Limbs well-developed, pentadactyle; length of the hind-limb exceeds the distance between the centre of the eye and the forelimb. Lower eyelid scaly. Tympanum distinct. No supra-
nasals. Frontal not broader than the supraocular region. Frontoparietals distinct. A pair of enlarged preanals.

## Hinulia lesueurii, Dum. and Bibr.

Hinulia australis, Gray, Cat., p. 77.
Tiliqua australis, Gray, Ann. N.H., ii., 1838, p. 291.
Lygosoma lesueurii, Dum. and Bibr., v., p. 733.
——australe, (non Gray), Peters, Mon. Berl. Ac., 1863, p. 231.
-_schomburgkii, Peters, l.c.
Euprepes australis, Steindachn, Novara, Rept., p. 49.
Lygosoma (Hinulia) pantherinum, Peters, Mon. Berl. Ac., 1866, p. 89.

Hinulia spaldingi, Macleay, Proc. Linn. Soc. N.S.W., ii., 1877, p. 63.

Description.-"Habit slender; the distance between the end of the snout and the fore-limb is contained once and a half to twice in the distance between axilla and groin ; snout moderate, obtuse; loreal region nearly vertical. Lower eyelid scaly. Nostril pierced in a single nasal, no supranasal ; no postnasal ; rostral usually in contact with the frontonasal ; latter broader than long ; præfrontals forming a median suture ; frontal as long as or a little longer than the frontoparietals and parietals together, in contact with three anterior supraoculars ; four supraoculars; eight supraciliaries ; first largest ; frontoparietals distinct, as long as or shorter than the interparietal ; parietals forming a median suture behind the interparietal ; two to four pairs of nuchals; fifth and sixth or sixth and seventh upper labials below the eye. Ear-opening oval, about as large as the eye-opening, the anterior border with a fringe of four or five lobules. Twenty-four to thirty-four smooth scales round the body; dorsals, especially the two vertebral series, largest, laterals smallest. Two large preanals. The hind limb reaches the wrist or the elbow of the adpressed fore-limb. Toes long and slender, compressed ; subdigital lamellæ feebly unicarinate, twenty-two to twenty-six under the fourth toe. Tail more than twice the length of head and body. Colour.-Brown or olive-brown above, with a black, white-edged vertebral band, and a white, black-edged dorso-
lateral streak ; sides blackish, with regular series of white spots ; a white streak from above axilla to groin. The ground colour may be black, with the usual white markings. Lower surfaces white.

| Total length | $\ldots$ | $\ldots$ | 275 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 16 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 10 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 69 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 24 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 40 |  |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 190 | $"$ |

Habits.-This lizard is usually found hidden under logs and stones, where it often forms channels in the soft ground.

Distribution.- Victoria: Prahran, Sunbury, Pyramid Hill (Melb. Mus.) ; Grampians, Bendigo, Brown's Plains, Castlemaine, Beechworth, Mount Stanley (L. and F.).

Range outside Victoria.-Fairly well distributed over the whole of Australia and adjacent islands.

## Hinulia teniolata, White.

Hinulia teniolata, Gray, Cat., p. 78.
Lacerta teniolata, White, Journ. N.S.W., p. 245, pl.-; fig. 1.
Scincus actolineatus, Daud., Rept., iv., p. 285.
——teniolatus, Merr. Tent., p. 72.

- undecimstriatus, Kuhl, Beitr. z. Zool. u. Vergl. Anat., p. 129 .
- multilineatus, Lesson, Voy. Coquille, Zool., ii., p. 45, pl. iii., fig. 2.

Tiliqua taniolata, Gray, Griff. A. K., ix., Syn., p. 68.
Lygosoma teniolata, Dum. and Bibr., v., p. 733 ; Hallow, Proc. Ac. Philad., 1860, p. 490.

Hinulia taniolata, Girard, U.S. Explor. Exped., Herp. p. 258.
Euprepes taniolata, Steindachn. Novara, Rept., p. 49.
Description.-" Habit slender ; the distance between the end of the snout and the fore-limb is contained once and a half to once and four-fifths in the distance between axilla and groin. Snout moderate, obtuse ; loreal region nearly vertical. Lower eyelid scaly. Nostril pierced in a single nasal ; no supranasal;
no postnasal ; rostral sometimes in contact with the frontonasal ; latter broader than long, forming a suture with the frontal; frontal as long as or a little longer than the frontoparietals and parietals together, in contact with the three anterior supraoculars; four supraoculars ; seven to nine supraciliaries, first largest; frontoparietals distinct, as long as or shorter than the interparietal; parietals forming a suture behind the interparietal ; three to five pairs of nuchals ; fifth and sixth upper labials largest and below the eye. Ear-opening oval, a little smaller than the eye-opening, with a fringe formed by three to tive lobules anteriorly. Twenty-four to twenty-six smooth scales round the middle of the body ; dorsals, especially the two vertebral series, largest, laterals smallest. Two large preanals. The adpressed limbs slightly overlap, or the hind limb reaches the elbow. Toes long and slender, compressed ; sub-digital lamellæ feebly unicarinate, twenty to twenty-six under the fourth toe. Tail about twice the length of head and body. Colour.-Yellowish-brown above, with three broad black bands and four white streaks along the back; sides without any spots, with alternating black and white longitudinal streaks ; altogether eight white streaks on the body, the two on each side broadest; limbs with longitudinal black lines. Lower surfaces white."

| Total length | $\ldots$ | $\ldots$ | 230 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 14 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 9 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 61 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 19 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 33 | $"$ |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 155 | $"$ |

Habits.-Movements very quick. Found in open stony districts. Distribution.-Victoria: A single specimen found at Beechworth.

Range outside Victoria.-Sydney, Parramatta.

Hinulia quoyi, Dum. and Bibr.
Quoy and Gaim., Voy. Uranie, Zool., pl. xlii., fig 1.
Lygosoma quoyii, Dum. and Bibr., v., p. 728.
Hinulia gastrosticta, Günth., Zool. Ereb. and Terr. Rept., p. 11.

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Description.-"Body slightly depressed ; the distance between the end of the snout and the fore-limb is contained once and onefourth to once and a half in the distance between axilla and groin. Snout moderate, obtuse. Lower eyelid scaly. Nostril pierced in a single nasal; frontonasal broader than long, forming a narrow suture with the rostral ; prefrontals forming a median suture or in contact with their inner angles; frontal as long as frontoparietals and interparietal together, in contact with the two or three anterior supraoculars ; four supraoculars, usually followed by a very small fifth; nine supraciliaries; frontoparietals and interparietal distinct, equal, or latter a little shorter than former ; parietals forming a suture behind the interparietal ; three enlarged shields on each side, bordering the parietals; sixth upper labial largest and below the eye. Ear-opening oval, nearly as large as the eye-opening ; no auricular lobules. Thirtysix to forty scales round the middle of the body ; ventrals largest, laterals smallest ; dorsal scales smooth or tricarinate (young). A pair of large præanals. The hind-limb reaches the wrist or the elbow. Digits slightly compressed ; subdigital lamellæ smooth, divided, twenty-seven to thirty-two under the fourth toe. Tail about $t$ wice as long as head and body. Colour.-Brown or olive-brown above, with small scattered black spots ; sides black, with small whitish spots; a yellow dorso-lateral line; lower surfaces whitish; throat, and sometimes also belly, with longitudinal series of black dots."

| Total length | $\ldots$ | $\ldots$ | 285 | mm. |
| :--- | :--- | :--- | ---: | ---: |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 24 | , |
| Width of head | $\ldots$ | $\ldots$ | 15 | ,. |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 71 | , |
| Fore-limb | $\ldots$ | $\ldots$ | 30 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 46 | , |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 190 | ,$"$, Boulenger. |

Habits.-Usually found in open flats and gullies, often in or under hollow logs. In confinement it will feed on flies, termites, worms, caterpillars, and also on smaller lizards.

Whilst on a trip to Noojee recently, where this species is fairly numerous, a female, which appeared to contain ova, was selected and placed in a bag. A few days after, on opening the
bag it was found she had given birth to four young ones. These with the parent were placed in a box containing some earth and flat stones, and covered partly with glass and partly with wire gauze. After a few days the young ones began to take food; they would readily seize anything moving, in the shape of a small grub or caterpillar, but were alarmed at the fluttering of a large moth. When the parent had made a capture the young ones would timidly approach and make a grab at whatever she held in her mouth, but she always seemed disinclined to surrender any portion of it. She showed no anxiety when the young ones were separated from her. Sometimes when trying to capture a fluttering moth, if one of the young ones appeared in front of her she would seize it, but having discovered her mistake, after a few seconds she would drop it unhurt.

What appears to be a remarkable exhibition of intelligence on the part of this lizard occured about this time. A large moth was placed in the cage and was immediately set upon by the lizard which it managed to elude for some time. At length the lizard seized it by the end of the abdomen. The wings being free it continued to flutter in spite of the efforts of the lizard to crush the life out of it by pushing it against the stones ; at last she carried it to the end of the cage where there was a dish of water into this she plunged the moth and held it there for about twenty seconds; this completely damped the ardour as well as the wings of the moth, and for a time the fluttering ceased. She then carried it to the top of one of the stones, when the young ones, who had disappeared beneath during the struggle, emerged from their hiding places and timidly approached ; presently one of them made a snap at the moth's leg and pulled it off, causing another flutter. The same method of crushing it against the stones and sides of the cage was again tried but without success. Failing in this she carried it to the water a second time, and held it under for about half-a-minute, after which she swallowed it, pushing the wings off in the operation.

Distribution.-Victoria: St. Kilda, Sunbury, Keilor, Upper Yarra, Yarragon, Toora, Gunbower (Melb. Mus.) ; distributed all over the Colony (L. and F.).

Range outside Victoria.-Kangaroo Island, Rockhampton, Queensland.

## Lygosoma.

Sub-genus Liolepisma, Dum. and Bibr.
Limbs well developed ; the length of the hind-limb exceeds the distance between the centre of the eye and the fore-limb. Lower eyelid with an undivided transparent disk. Tympanum distinct. No supranasals. Rostral forming a suture with the frontonasal. Frontal not broader than the supraocular region. One or more pairs of enlarged nuchals.

## Liolepisma mustelinum, O'Shaughn.

Mocoa mustelina, O'Shaugn., Ann. and Mag. N.H. (4), xiii., 1874, p. 299, and (5). iv., 1879, p. 300.

Lygosoma (Mocoa) lacrymans, Peters and Doria, Ann. Mus. Genova, xiii., 1878, p. 348.

- (-) sonderi, Peters, Sitzb. Ges. Nat. Freunde, 1878, p. 191.
- (-) orichalceum, Boettg. Ber. Offenb., Ver. Naturk., xvii.-xviii., 1878, p. 2, pl. i, fig 1.

Description.-"Habit slender, body elongate. The distance between the end of the snout and the fore-limb is contained once and two-thirds to twice in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal, which is quite lateral ; no supranasal ; frontonasal broader than long, forming a very broad suture with the rostral, and a narrower one with the frontal ; latter shield as long as or a little shorter than the frontoparietals and interparietal together, in contact with the two anterior supraoculars ; four supraoculars, second largest ; six or seven supraciliaries; frontoparietals normally distinct (united in some specimens), as long as or a little longer than the interparietal; parietals forming a suture behind the interparietal, bordered by a pair of nuchals and a pair of temporals; fourth upper labial largest and entering the orbit. Ear-opening oval, not larger than the transparent palpebral disk. Twenty-two to twenty-four smooth scales round the middle of the body ; dorsals largest. Præanals not or but feebly enlarged. The adpressed limbs fail to meet. Digits cylindrical ; subdigital lamellæ smooth,
sixteen to nineteen under the fourth toe. Tail twice as long as head and body. Colour.-Pale brown or yellowish-brown above, golden on the sides and on the tail ; each dorsal scale with three or more brown lines; sides usually with interrupted brown longitudinal lines ; a white brown edged spot or streak below the posterior border of the eye; lips brown dotted; lower surfaces yellowish-white, sides of throat and belly with fine brown lines or series of dots ; two longitudinal lines of confluent brown dots under the tail.

| Total length | $\ldots$ | $\ldots$ | 135 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 10 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 6 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 35 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 11 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 16 |  |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 90 | ,$"$ |

Habits.-This lizard is usually found under logs, and amongst the herbage on the hillsides.

Distribution.—Victoria: St. Kilda, Mulgrave, Dandenong Ranges, Upper Yarra, Waterloo, Lakes Entrance (Melb. Mus.); Ringwood, Ferntree Gully, Healesville, Croajingolong (L. and F.).

Range outside Victoria.-South Australia, New South Wales.

Liolepisma entrecasteauxii, Dum. and Bibr.
Mocoa entrecasteauxii, Gray, Cat., p. 82.
Lygosoma entrecasteauxii, Dum. and Bibr., v., p. 717.
Mocoa pseudocarinata, O'Shaughn., Ann. Mag. N.H. (4), xiii., 1874, p. 300.

- pseudotropis, Günth., Zool. Ereb. and Terr. Rept., p. 13.

Description.-"The distance between the end of the snout and the fore-limb is contained once and two-fifths to once and three-fourths in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with a very large transparent disk, nearly the whole of the eye being visible when the lid is closed. Nostril pierced in the nasal ; no supranasal ; frontonasal broader than long, forming a suture with the rostral and with the
frontal ; latter shield as long as or a little shorter than frontoparietals and interparietal together, in contact with the first and second supraoculars; four supraoculars, second largest ; five or six supraciliaries ; frontoparietals distinct, longer than the interparietal; parietals forming a suture behind the interparietal; two or three pairs of nuchals ; fifth, rarely sixth, upper labial largest and entering the orbit. Ear-opening roundish, smaller than the transparent palpebral disk, without distinct lobules. Twenty-eight to thirty-two scales round the middle of the body; dorsals largest and usually more or less distinctly striated or obtusely pluricarinate. Preanals not or scarcely enlarged. The adpressed limbs usually meet or overlap. Digits cylindrical ; subdigital lamellix smooth, seventeen to twenty under the fourth toe. Tail once and one-third to once and two-thirds the length of head and body." Colour.-Olive above, with three black longitudinal bands, laterals broadest and edged above and below by a light streak; in some specimens both bands and streaks are absent, in which case the ground colour is much lighter and more or less spotted with dark brown or black. Lower surfaces greyish or greenish, sometimes dull reddish-orange.

| Total length | $\ldots$ | $\ldots$ | 124 | mm |
| :--- | :--- | :--- | ---: | ---: |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 10 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 7 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 41 | $"$, |
| Fore-limb | $\ldots$ | $\ldots$ | 14 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 18 | $"$ |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 73 | $"$ |

Habits.-Usually met with amongst the grass and herbage in open scrubby districts. Movements very quick.

Mode of reproduction-Oviparous, eggs oval, three to five laid in January.

Distribution.-Victoria : Melbourne (Melb. Mus.) ; Sandringham, Carrum, Tynong, Mt. Baw Baw (L. and F.).

Range outside Victoria.-Tasmania.

> Liolepisma trilineatum, Gray.

Mocoa trilineata, part., Gray, Cat., p. 81.
Tiliqua trilineata, Gray, Ann. N.H., ii., 1838, p. 291.

Lygosoma duperreyi, Dum. and Bibr., v., p. 715 ; A. Dum., Cat. Méth. Rept., p. 167.

Euprepes duperreyi, Steind. Novara, Rept., p. 47.
Description.-" Body much elongate ; the distance between the end of the snout and the fore-limb is contained once and a half to twice and a half in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal ; no supranasal ; frontonasal forming a suture with the rostral, the width of which suture is considerably less than the width of the frontal, and a narrower one with the frontal ; latter shield as long as, or shorter than, the frontoparietal, in contact with the two anterior supraoculars ; four supraoculars, second largest ; five or six supraciliaries ; frontoparietal single (rarely divided) ; a very small interparietal, behind which the parietals form a suture; a pair of nuchals and a pair of temporals border the parietals; fifth upper labial largest and entering the orbit. Ear-opening oval, about as large as the transparent palpebral disk, without or with one or two obtuse lobules. Twenty-six or twenty-eight scales round the middle of the body; dorsals largest and sometimes feebly striated. Præanals not or scarcely enlarged. The adpressed limbs usually fail to meet. Digits cylindrical ; subdigital lamellæ smooth, nineteen to twenty-three under the fourth toe. Tail once and one-third to once and three-fourths the length of head and body. Colour.-Bronzy-olive above, with a black, light-edged lateral band; frequently the light lateral streaks are again edged with black, and a vertebral black streak is present; lower surfaces grayish or greenish white.

| Total length | $\ldots$ | $\ldots$ | 173 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 12 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 8 | $"$ |
| Body | $\ldots$ | $\ldots$ | $\ldots$ | 51 |

Habits.-Habits similar to L. entrecasteauxii, to which it is very closely allied.

Distribution.-Victoria: Melbourne, Ringwood, Keilor, Brandy Creek, Western Port, Western District (Melb. Mus.) ; Melbourne, Kew, Carrum, Myrniong, Castlemaine, Grampians (L. and F.).

Range outside Victoria.-Kent Group, Tasmania, New South Wales, West Australia.

Liolepisma metallicum, O'Shaughn.
Mocoa ocellata, part., Gray, Cat., p. 82.
Mocoa metallica, O'Shaughn, Ann. and Mag. N.H. (4), xiii., 1874, p. 299.

Description.-"The distance between the end of the snout and the fore-limb is contained once and two-fifths to once and twothirds in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal ; no supranasal ; frontonasal broader than long, forming a suture with the rostral and with the frontal ; latter shield shorter than frontoparietal and interparietal together ; in contact with the first and second supraoculars ; four supraoculars, second largest ; six or seven supraciliaries ; frontoparietal single (in one specimen divided) ; interparietal distinct; parietals forming a suture behind the interparietal ; a pair of nuchals and a pair of temporals border the parietals; fifth upper labial largest and entering the orbit. Ear-opening roundish, as large as or a little larger than the transparent palpebral disk, without distinct lobules. Twenty-four to twenty-eight scales round the middle of the body ; dorsals largest and usually more or less distinctly striated or pluricarinate. Præanals not or but feebly enlarged. The adpressed limbs meet or slightly overlap. Digits cylindrical ; subdigital lamellæ smooth eighteen to twentytwo under the fourth toe. Tail about once and a half the length of head and body. Colour.-Bronzy-olive above, with small darkbrown spots, sometimes with a dark-brown vertebral streak; sides dark-brown, light-dotted, often with a more or less distinct light streak from ear to groin ; lower surfaces greenish or greyish, uniform or with darker dots.

| Total length | $\ldots$ | $\ldots$ | 133 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 11 | , |
| Width of head | $\ldots$ | $\ldots$ | 8 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 42 | , |
| Fore-limb | $\ldots$ | $\ldots$ | 14 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 19 | , |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 80 | , |

Habits.-Usually found moving about in open scrub country. Food, insects and worms.

Distribution.-Victoria: Port Albert (Melb. Mus.); Melbourne, Croajingolong (L. and F.).

Range outside Victoria.-Tasmania, Kangaroo Island, Loyalty Islands, New Hebrides.

## Liolepisma guichenoti, Dum. and Bibr.

Mocoa guichenoti, Gray, Cat., p. 80.
Mocoa trilineata, part., Gray, l.c., p. 81.
Lygosoma guichenoti, Dum. and Bibr., v., p. 713.

- (Mocoa) guttulatum, Peters, Sitzb. Ges. Naturf. Freunde, 1881, p. 83.
- (—) platynotum, Peters, 1.c., p. 84.

Description.-"The distance between the end of the snout and the fore-limb is contained once and one-third to once and twothirds in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal, which is quite lateral ; no supranasal ; frontonasal forming a broad suture with the rostral, the width of which suture equals the width of the frontal, and a narrower one with the frontal ; latter shield narrower and not longer than the frontoparietal, in contact with the two anterior supraoculars ; four supraoculars, second largest ; seven or eight supraciliaries ; frontoparietal single ; a small interparietal, behind which the parietals form a suture ; a pair of nuchals and a pair of temporals border the parietals ; fifth upper labial largest and entering the orbit. Ear-opening oval, about as large as the transparent palpebral disk, without projecting lobules. Twentysix to thirty scales round the middle of the body ; dorsals largest and sometimes feebly striated. Præanals not or but feebly
enlarged. The adpressed limbs overlap, meet, or fail to meet. Digits cylindrical ; subdigital lamellæ smooth, twenty to twentysix under the fourth toe. Tail about once and two-thirds the length of head and body. Colour.-Bronzy-olive or brownish above, with or without small darker and lighter spots ; vertebral region sometimes darker; a dark-brown lateral band, edged above and below by a light streak; greenish-white inferiorly sometimes with blackish dots.

| Total length | $\ldots$ | $\ldots$ | 97 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 9 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 6 | $"$ |
| Body | $\ldots$ | $\ldots$ | $\ldots$ | 31 |

Habits.--Usually found running about amongst the grass and herbage on dry sandy ground and stony hill sides. Soon becomes tame in captivity and will feed readily on flies, caterpillars, worms, bits of bread and potato.

Mode of reproduction.-Oviparous; eggs oval, three, laid in the ground.

Distribution.-Victoria : Melbourne, Ringwood, Upper Yarra, Mitta Mitta (Melb. Mus.) ; Kew, Ringwood, Carrum, Loch, Myrniong, Healesville, Beaconsfield, Ferntree Gully, Grampians (L. and F.)

Range outside Victoria.-New South Wales, South Australia, West Australia.

Liolepisma pretiosum, O'Shaughn.
Mocoa pretiosa., O'Shaughn., Ann. and Mag. N.H. (4), xiii., 1874, p. 298.
— microlepidota, O'Shaughn., l.c., p. 299.
Description.-"The distance between the end of the snout and the fore-limb is contained once and two-fifths in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal ; no supranasal ; frontonasal broader than long, forming a
suture with the rostral and with the frontal ; latter shield a little shorter than frontoparietal and interparietal together, in contact with the two anterior supraoculars; four supraoculars, second largest ; seven or eight supraciliaries ; frontoparietal single ; a small interparietal, behind which the parietals form a suture ; a pair of nuchals and a pair of temporals border the parietals ; fifth upper labial largest and entering the orbit. Ear-opening oval, larger than the transparent palpebral disk. Thirty-four to thirty-eight scales round the middle of the body ; dorsals largest, striated or feebly pluricarinate, præanals not enlarged. The adpressed limbs meet or overlap. Digits cylindrical ; subdigital lamellæ smooth, twenty to twenty-two under the fourth toe. Tail a little longer than head and body." Colour.-Olive-brown above with small darker and lighter spots, a blackish light dotted lateral band extending from the eye to the groin, often edged above with pale-brown; a blackish vertebral streak may be present; lower surfaces greenish or greyish-salmon, lips and throat black dotted.

| Total length | $\ldots$ | $\ldots$ | 119 | mm |
| :--- | :--- | :--- | ---: | ---: |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 11 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 8 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 43 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 16 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 22 | $"$ |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 65 | $"$ |

Habits.-Met with under logs and stones in moist and thickly timbered country and dense gullies.

Mode of reproduction.-Young developed within the body of the parent ; three brought forth in January or February.

Distribution.-Victoria : Upper Yarra, Mount Baw Baw, South Gippsland.

Range outside Victoria.-Tasmania, Kent Group.

Liolepisma tetradactylum, O'Shaughn.
Mocoa tetradactyla, O'Shaughn., Ann. and Mag. N.H. (5), iv., 1879, p. 300.

Description.-"The distance between the end of the snout and the fore-limb is contained once and one-third in the distance
between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal ; no supranasal ; frontonasal broader than long, broadly in contact with the rostral, prefrontals, inner angles touching; frontal much shorter and narrower than the frontoparietal, in contact with the first and second supraoculars ; four supraoculars; seven supraciliaries ; frontoparietal single, followed by a minute interparietal ; parietals forming a median suture; a pair of nuchals and a pair of temporals border the parietals; four labials anterior to the subocular. Ear-opening oval, smaller than the transparent palpebral disk, with a short obtuse lobule anteriorly. Thirty-four scales round the middle of the body, all perfectly smooth ; dorsals largest, laterals smallest. Præanal scales not enlarged. The hind-limb reaches the wrist. Fingers four, toes five; subdigital lamellæ smooth, twenty under the fourth toe. Tail a little longer than head and body." Colour.,-Olive-brown above, head with a few black specks ; five interrupted black lines along the middle of the back, the median extending all along the tail, each alternate scale along the line being streaked with the pale ground colour, the black lines on the back often merged into a single broad band, within the area of which, alternate scales are streaked with the pale ground colour ; a dorso-lateral series of black dots, separated from the median dorsal lines by a band of pale ground colour ; sides immaculate, with two bright rosycarmine (dull yellow in spirit specimens) stripes, the lower of which extends from axilla to groin, lower surfaces greenish.

| Total length | $\ldots$ | $\ldots$ | 117 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 14 | , |
| Width of head | $\ldots$ | $\ldots$ | 10 | , |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 41 | , |
| Fore-limb | $\ldots$ | $\ldots$ | 16 | , |
| Hind-limb | $\ldots$ | $\ldots$ | 22 | , |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 62 | , |

Habits.-This elegant little lizard is found amongst the grass and herbage on the dry, open plains near the Murray. Food consists of insects, chiefly locusts and grasshoppers.

Distribution.-Victoria : Brown's Plains, Barnawartha.
Range outside Victoria.-New South Wales, Queensland.

## Lygosoma.

Sub-genus Emoa, Gray.
Limbs well developed, pentadactyle, overlapping when adpressed. Lower eyelid with an undivided transparent disk. Supranasals present.

> Emoa spenceri, sp. nov.
> (Plate 2, fig. 1, 1a.)

Description.-Head and body slightly depressed. Limbs well developed, pentadactyle. The distance between the end of the snout and the fore limb is contained once and one-third in the distance between axilla and groin. Snout obtusely pointed. Ear-opening about midway between the end of the snout and the fore-limb; eye about midway between the ear-opening and the tip of the snout. Lower eyelid with a very large transparent disk, nearly as large as the eye. Nostril pierced in a small nasal. Supranasals narrow, widely separated by the frontonasal; a narrow postnasal often fused with the supranasal ; frontonasal much broader than long, forming a suture with the rostral and with the frontal ; prefrontals well developed; frontal slightly longer than the frontoparietals, in contact with the first and second supraoculars ; four supraoculars, second much the largest; seven supraciliaries ; frontoparietals and interparietal distinct; parietals forming a suture behind the interparietal ; a pair of nuchals and a pair of temporals border the parietals; seventh upper labial largest and entering the orbit. Ear-opening oval, oblique, smaller than the transparent palpebral disk, with three or four small lobules anteriorly. Forty-two to forty-four smooth scales round the middle of the body, dorsals largest, especially the two vertebral series, laterals smallest. A marginal row of slightly enlarged preanals. The adpressed limbs slightly overlap. Digits moderate, slightly compressed ; subdigital lamellæ smooth, about twenty-two under the fourth toe. Tail slightly longer than head and body. Colour.-Dark-brown above with pale greenish-white markings of which the most constant is a dorsolateral band commencing above the eye and lost on the tail ; usually with regular longitudinal series of light spots ; sides blackish-brown light dotted, a narrow longitudinal line of the
above pale colour extending from the ear above the fore-limb to the groin. Lower surfaces bluish-green.

| Total length | $\ldots$ | $\ldots$ | 104 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 10 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 7 | $"$, |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 39 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 13 | $"$ |
| Hmd-limb | $\ldots$ | $\ldots$ | 18 | $"$ |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 55 | $"$ |

Distribution-Victoria: Brandy Creek, Dandenong Ranges (Melb. Mus.) ; Dimboola, Gisborne, Croajingolong (L. and F.).

We have named this elegant little lizard after Prof. W. B. Spencer, M.A., Professor of Biology at the Melbourne University, to whom we are indebted for assistance in many ways during the preparation of this work.

## Lygosoma.

## Sub-genus Hemiergis, Wagl.

Limbs very short, with less than five digits. Lower eyelid with an undivided transparent disk. Ear covered with scales. No supranasals, præfrontals well developed. Frontal not broader than the supraocular region.

## Hemiergis peronii, Fitz.

Tetradactylus decresiensis, Gray, Cat., p. 86.
Seps peronii, Fitzing, N. Class, Rept., p. 53 ; Gray, Griff. A.K., ix., Syn., p. 72.

Tetradactylus decresiensis, Cuv., R.A., 2nd ed., ii., p. 64 ; Dum. and Bibr., v., p. 764 ; Gray, Zool. Ereb. and Terr. Rept., pl. vi., fig. 4 (and details of head, fig. 1).

Hemiergis decresiensis, part., Steind, Novara, Rept., p. 50.
Description.-"Body much elongate; limbs very weak, tetradactyle ; the distance between the end of the snout and the forelimb is contained twice to twice and two-thirds in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal;
no supranasal ; frontonasal broader than long, forming a narrow suture with the rostral and with the frontal ; latter shield scarcely longer than the interparietal ; in contact with the first and second supraoculars; four supraoculars, second largest; seven or eight supraciliaries ; frontoparietals distinct, nearly as long as the interparietal ; parietals forming a suture behind the interparietal ; two or three pairs of nuchals; fifth upper labial below the centre of the eye, from which it is separated by a series of suboculars. Ear covered with scales, indicated by a depression. Eighteen or twenty smooth scales round the middle of the body; dorsals largest. A pair of enlarged preanals. The length of the hind-limb equals the distance between the centre of the eye and the fore-limb ; third toe longest. Tail thick, once and a half to once and two-thirds the length of head and body. Colour.-Palebrown or golden above, with or without minute brown dots; a black dorso-lateral line ; sides grey, speckled with black; lower surfaces whitish, black spotted.

| Total length | $\ldots$ | ... | 152 mm . |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Head. ... |  |  | 9 " |  |  |
| Width of head | ... | $\ldots$ | 6.5 , |  |  |
| Body | ... | $\ldots$ | 48 |  |  |
| Fore-limb | $\ldots$ |  | 7. |  |  |
| Hind-limb |  | $\ldots$ | 13 , |  |  |
| Tail | $\ldots$ |  | 95 ", |  | -Boulenger. |

Habits.-Found under logs and flat stones on the hillsides and in gullies. Movements very slow.

Distribution.-Victoria: Dandenong Ranges (Melb. Mus.).
Range outside Victoria.-Kangaroo Island, Albany.

Hemiergis decresiensis, Gray.
Hemiergis decresiensis, Gray, Cat., pp. 87 and 272.
Zygnis decresiensis, Fitzing, N. Class, Rept., p. 53.
Tridactylus decresiensis, Cuv. R.A., 2nd. ed., 64; Gray, Griff. A.K., ix., Syn., p. 72.

Hemiergis decresiensis, Dum. and Bibr., v., p. 766 ; Gray, Zool. Ereb. and Terr. Rept., pl. vi., fig. 5.
decresiensis, part., Steind, Novara, Rept., p. 50.

Hemiergis polylepis, Günth., Ann. and Mag. N.H. (3), xx., 1867, p. 48 .

Description.- "Body much elongate; limbs very weak, tridactyle ; the distance between the end of the snout and the fore-limb is contained twice and one-fourth to twice and a half in the distance between axilla and groin. Snout short, obtuse. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal; no supranasal ; frontonasal broader than long, forming a narrow suture with the rostral and with the frontal ; latter shield not longer than the interparietal ; in contact with the first and second supraoculars ; four supraoculars, second largest; seven or eight supraciliaries; frontoparietals distinct, nearly as long as the interparietal; parietals forming a suture behind the interparietal; no enlarged nuchals; fifth upper labial below the centre of the eye, from which it is separated by a series of suboculars. Ear covered with scales, indicated by a depression. Twenty-four smooth scales round the middle of the body, subequal. A pair of enlarged præanals. The length of the hind-limb equals the distance between the centre of the eye and the fore-limb; second toe slightly longer than the third. Colour.-Pale-brown above, four longitudinal series of black dots, sometimes confluent into lines, on the back; a black dorso-lateral line ; sides grey, black dotted ; lower surfaces yellowish, throat and tail black spotted." -Boulenger.

| Total length | $\ldots$ | $\ldots$ | 102 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 8 | , |
| Width of head | $\ldots$ | $\ldots$ | 5 | , |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 39 | , |
| Fore-limb | $\ldots$ | $\ldots$ | $6 \cdot 5$, |  |
| Hind-limb | $\ldots$ | $\ldots$ | 10 | , |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 55 | , |

Habits.-Similar to former species.
Distribution.-Victoria: Ferntree Gully, Beechworth.
Range outside Victoria.-South Australia, Kangaroo Island.

## Lygosoma.

Sub-genus Siaphos, Gray.
Limbs more or less developed. Lower eyelid scaly, or with a transparent disk. Ear covered with scales or very minute.

No supranasals. Præfrontals (in species with short limbs) minute or absent. Frontal not broader than the supraocular region.

> Siaphos maccoyi, sp. nov.

> (Plate 2, fig. 2, 2a.)

Description.-Body much elongate, limbs weak, pentadactyle ; the distance between the end of the snout and the fore-limb is contained about three times in the distance between axilla and groin. Snout short, obtusely pointed. Lower eyelid with an undivided transparent disk. Nostril pierced in the nasal ; no supranasal ; frontonasal very broad, forming a broad straight suture with the rostral, and a curved one with the frontal ; prefrontals absent; frontal not longer than the frontoparietals, in contact with the first and second supraoculars ; five supraoculars, second largest ; seven supraciliaries ; frontoparietals and interparietal distinct; parietals forming a suture behind the interparietal ; a pair of nuchals and a pair of temporals border the parietals; fourth upper labial below the centre of the eye. Ear opening distinct, minute. Twenty smooth scales round the middle of the body. Preanals not enlarged. The length of the hindlimb scarcely equals the distance between the centre of the eye and the fore-limb. Fourth toe not longer than the third, with six or seven smooth lamellæ inferiorly. Colour.-Brown or greyish-brown above, each dorsal scale with three or four minute dark longitudinal lines; a more or less distinct black dorsolateral line extending from the eye to the base of the tail; ground colour of lateral scales brownish, or greyish, sometimes nearly white, each with irregular minute darker streaks; throat ivory-white spotted with brown ;belly bright-yellow immaculate ; under surface of tail bright-yellow, more or less covered with blackish-brown blotches.

| Total length | $\ldots$ | $\ldots$ | 139 mm |  |
| :---: | :---: | :---: | :---: | :---: |
| Head | $\ldots$ | $\ldots$ | 8 | , |
| Width of head | ... | $\ldots$ |  | ," |
| Body ... | ... |  | 48 | " |
| Fore-limb |  |  | 6 | " |
| Hind-limb |  |  | 9 | " |
| Tail | $\ldots$ |  | 83 |  |

Habits.-Usually met with under $\log$ s and flat stones in moist places. Movements very slow.

Mode of reproduction.-Young developed within the body of the parent, eight or nine being brought forth in January or February.

Distribution.-Victoria: Brandy Creek, Trafalgar, Waterloo, Lakes Entrance, Ferntree Gully, Fernshaw, Dandenong Ranges, Goulburn Valley (Melb. Mus.) ; Ringwood, Dandenong Ranges, Berwick, Plenty Ranges, Upper Yarra, Croajingolong, North and South Gippsland (L. and F.).

We have named this graceful little lizard after Sir Frederick McCoy, K.C.M.G., \&c., through whose kindness and courtesy we have been able to examine a large number of specimens preserved in the National Museum of Victoria.

## Lygosoma.

Sub-genus Rhodona, Gray.
Limbs short or rudimentary. Lower eyelid with a transparent disk. Ear distinct, minute. No supranasals. Præfrontals very small and widely separated, or absent. Frontal not broader than the supraocular region.

## Rhodona bougainvillif, Gray.

Lygosoma bougainvillii, Gray, Cat., p. 85.
Riopa bougainvillii, Gray, Ann. and Mag. N.H., ii., 1839, p. 332.

Lygosoma bougainvillii, Dum. and Bibr., v., p. 716 ; Günth., Zool. Ereb. and Terr. Rept., p. 13.
—laterale, (non Say), Günth., Ann. and Mag. N.H. (3), xx., 1867, p. 46.

Description.-"Body much elongate, limbs weak ; the distance between the end of the snout and the fore-limb is contained twice to twice and a half in the distance between axilla and groin. Snout moderate, obtusely conical. Lower eyelid with an undivided transparent disk. Nostril pierced in a rather large nasal, which is in contact with its fellow, frontonasal large, broadly in contact with the rostral; præfrontals small, and
widely separated; frontal broader than the supraocular region, longer than the frontoparietals and interparietal together; in contact with the first and second supraoculars ; four supraoculars, second largest; fourth very small; six supraciliaries; frontoparietals and interparietal distinct, sub-equal ; parietals forming a suture behind the interparietal ; two or four pairs of nuchals; fifth upper labial entering the orbit. Ear-opening minute, not or scarcely larger than the nostril. Twenty-two or twenty-four smooth scales round the middle of the body ; dorsals largest. A pair of large preanals. The length of the hind-limb equals the distance between the nostril and the fore-limb; toes slender, slightly compressed, fourth much longer than third ; subdigital lamellæ feebly keeled, fifteen to eighteen under the fourth toe. Tail slightly longer than head and body. Colour.-Greyish above, with blackish dots or short lines along the series of scales; a black lateral band, passing through the eye; flanks white, black dotted ; lower surfaces white.

| Total length | $\ldots$ | $\ldots$ | 135 | mm. |
| :--- | :--- | :--- | ---: | :--- |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 9 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 6 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 54 | $"$ |
| Fore-limb | $\ldots$ | $\ldots$ | 8 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 14 | $"$ |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 72 | $"$ |

Habits.-Met with under logs and stones in moist places, where they frequently make excavations in the ground. Movements slow.

Distribution.-Victoria: Melbourne, Keilor, Pyramid Hill, Western District (Melb. Mus.) ; Carrum, Bacchus Marsh, Castlemaine, Grampians, Beechworth, Mt. Stanley (L. and F.).

Range outside Victoria.-South Australia, Kangaroo Island.

## Rhodona punctatovittata, Günth.

Rhodona punctatovittata, Günth., Ann. and Mag. N.H. (3), xx., 1867, p. 47.
——officeri, McCoy, Prodr. Zool. Vict., dec. vi., pl. li.
Description.-"Body much elongate; limbs very weak, anterior monodactyle, posterior didactyle; the distance between the end
of the snout and the fore-limb is contained more than three times in the distance between axilla and groin. Snout subcuneiform, with slightly projecting labial edge. Eye very small. Lower eyelid with an undivided transparent disk. Nostril pierced in a large swollen nasal, which forms a suture with its fellow ; frontonasal much broader than long, forming a broad suture with the frontal ; præfrontals small and widely separated ; frontal much broader than the supraocular region, in contact with the first and second supraoculars and with the interparietal ; supraoculars three, small, second largest; six supraciliaries; frontoparietals small, much smaller than the interparietal ; parietals forming a suture behind the interparietal; four pairs of nuchals; fourth upper labial entering the orbit. Ear-opening scarcely distinguishable. Eighteen smooth scales round the middle of the body, dorsals largest, ventrals smallest. A pair of enlarged præanals. Fore-limb nearly as long as the snout; hind-limb as long as the distance between the ear and the fore-limb ; second toe more than twice as long as first." Colour.-Rich brown above, each scale with a black spot, the spots forming six or eight longitu_ dinal rows; head-shields black-edged; lower surfaces pale yellow-ochre.

| Total length | $\ldots$ | $\ldots$ | 169 mm . |
| :--- | :--- | :--- | :---: |
| Head $\ldots$ | $\ldots$ | $\ldots$ | 10 |
| Width of head | $\ldots$ | $\ldots$ | $6 \cdot 5$ ", |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 75 |
| Fore-limb... | $\ldots$ | $\ldots$ | $3 \cdot 5$ |
| Hind-limb | $\ldots$ | $\ldots$ | 10 |
| Tail ", |  |  |  |
| Ta | $\ldots$ | $\ldots$ | 84 |

Habits.-Found in loose sandy soil, into which it burrows.
Distribution.-Victoria : Swan Hill.
Range outside Victoria.-Queensland.

Ablepharus, Fitzing.
Palatine and pterygoid bones in contact mesially, the palatal notch not extending forwards to between the centre of the eye; pterygoids toothless. Maxillary teeth conical. No movable eyelids, a transparent disk covering the eye. Ear distinct or
hidden. Nostril pierced in the nasal ; supranasal present or absent. Limbs more or less developed.

The genus extends over south-eastern Europe, south-western Asia, Tropical and South Africa, and Australia.

## Ablepharus boutonii, Desj.

Cryptoblepharus boutonii, Gray, Cat., p. 64.
Scincus boutoniu, Desjard, Ann. Sc. Nat., xxii., 1831, p. 298.
Ablepharus leschenaulti, Cocteau, Mag. de Zool., 1832, Rept., pl. i.
Ablepharus pacilopleurus, Weigm., N. Acta Ac. Leop.-Carol, xvii., 1835, i., p. 202, pl. viii., fig. l ; Günth, Proc. Zool. Soc., 1874, p. 296.

Cryptoblepharus peronii, Cocteau, Et. Scinc., p. 1.
—leschenaultii, Coct., 1.c.
Cryptoblepharus paciiopleurus, Gray, Ann. N. H., ii., 1839, p. 335, and Zool. Ereb. and Terr. Rept., pl. v., fig. 2.

Tiliqua buchanani, Gray, Ann. N. H., ii., p. 291.
Ablepharus peronii, Dum. and Bibr., v., p. 813 ; Peters, Mon. Berl. Ac., 1854, p. 619 ; Bavay, Cat., Rept., N. Caléd., p. 31.

Cryptoblepharus eximius, Girard, Proc. Ac. Philad., 1857, p. 195, and U. S. Explor. Exped., Herp., p. 222, pl. xxvi., figs. 25-32.

- plagiocephalus, Girard, U. S. Explor. Exped., Herp., p. 220, pl. xxvi., figs. 17-24.
(?) Ablepharus nigropunctatus, Hallow., Proc. Ac. Philad., 1860, p. 487.

Ablepharus boutonii, Strauch, Mél. Biol. Acad., St. Pétersb., vi., 1869, p. 566, and Bull, xii., p. 368 ; Günth, l.c.; Peters and Doria, Ann. Mus., Genova, xiii., 1878, p. 339 ; Peters, Reise, n. Mossamb., iii., p. 77.
-quinqueteniatus, Günth, 1.c.
Ablepharus rutilus, Peters, Sitzb., Ges. Nat. Freunde, 1879, p. 37.

- (Cryptoblepharus) boutonii, Bocourt, Miss. Sc. Mex., Rept., p. 463, pl. xxii., н., fig. 1.
- (-) leschenaultii, Bocourt, l.c.
- (—) peronii, Bocourt, l.c.

Ablepharus boutonii, var. cognatus, Boettg., Zool., Anz., 1881, p. 359 ; and A bh. Senck., Ges., xii., 1881, p. 454, pl. ii., fig. 4.

Description.-"Snout pointed, rostral not projecting. Eye entirely surrounded by a circle of granules; upper eyelid represented by three or four larger scales. Rostral largely in contact with the frontonasal; præfrontals either forming a suture or narrowly separated; frontal small, in contact with the first and second supraoculars, in contact with or separated from the interparietal; latter very large, formed by fusion with the frontoparietals ; five supraoculars, second largest, fifth smallest ; five or six supraciliaries, second largest ; a pair of large nuchals. Earopening roundish, about as large as the pupil. Scales smooth, or feebly striated ; twenty to twenty-eight round the middle of the body; dorsals largest; the two median series strongly dilated transversely in specimens with fewer (twenty or twentytwo) longitudinal series of scales. Limbs well developed, pentadactyle ; the hind-limb reaches the axilla, or not so far; digits long and slender, smooth inferiorly. Tail a little longer than head and body." Colour.-Greenish, or bluish above, strongly metallic, covered with small blackish spots, sides sometimes with irregular lighter and some darker bands ; lower surfaces greenish or bluish-white.

| Total length | $\ldots$ | $\ldots$ | 105 | mm |
| :--- | :--- | :--- | ---: | ---: |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 10 | $\prime \prime$ |
| Width of head | $\ldots$ | $\ldots$ | 6 | $"$, |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 33 | $"$, |
| Fore-limb | $\ldots$ | $\ldots$ | 15 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 19 | $"$ |
| Tail $\ldots$ | $\ldots$ | $\ldots$ | 62 | $"$ |

Habits.-Usually met with on fences, fallen trees, and treestumps, into the crevices of which it quickly disappears on the approach of an enemy. It soon reappears, when, by the exercise of a little patience, it may be easily captured.

Distribution.-Victoria: Grampians, Western District (Melb. Mus.) ; Dimboola, Swan Hill, Baringhup, Brown's Plains (L. and F.).

Range outside Victoria.-Trregularly distributed over the hotter parts of both hemispheres.

## Ablepharus lineo-ocellatus, Dum. and Bibr.

Cryptoblepharus lineo-ocellatus, Gray, Cat., p. 65.
Morethia anomalus, Gray, l.c.
Ablepharus lineo-ocellatus, Dum. and Bibr., v., p. 817; Strauch, Mél. Biol. Ac., St. Pétersb., vi., 1868, p. 569, and Bull, xii., p. 371 .

Cryptoblepharus lineo-ocellatus, Gray, in Grey's Trav. Austr., ii., p. 427.

Morethia anomalus, Gray, Zool. Ereb. and Terr. Rept., p. 4, pl. v., fig. 1.

Ablepharus anomalus, Strauch, 1.c., pp. 570, 571.
Morethia anomala, Günth, Zool. Ereb. and Terr. Rept., p. 10.
Ablepharus (Morethia) anomalus (adelaidensis), Peters, Mon. Berl. Ac., 1874, p. 376.

Description. -"Snout short, obtuse, rostral not projecting. Eye entirely surrounded by a circle of granules. Rostral largely in contact with the frontonasal, which is in contact with the frontal ; latter shield nearly as long as, but narrower than the interparietal, which is formed by fusion with the frontoparietals; four supraoculars, second and third largest, first and second in contact with the frontal ; six supraciliaries, third to fifth usually very large, sixth minute ; a pair of nuchals ; four (or five) labials anterior to the subocular; supranasals sometimes present. Ear-opening rather large, oval, with one or several projecting small lobules anteriorly. Scales subequal in size, twenty-four to thirty round the middle of the body. Limbs well developed, pentadactyle ; the hind-limb does not reach the axilla ; digits obtusely keeled inferiorly. Tail longer than head and body. Colour.-Olive or brownish above, black spotted, or with light black-edged ocelli ; a more or less strongly marked blackish lateral band, edged below by a white black-edged streak which extends from the eye or ear to the groin ; a white blackedged spot or streak between the thigh and the tail ; lower surfaces yellowish, or greenish-white.

| Total length | $\ldots$ | $\ldots$ | 108 | mm |
| :--- | :--- | :--- | ---: | :--- |
| Head $\quad \ldots$ | $\ldots$ | $\ldots$ | 9 | $"$ |
| Width of head | $\ldots$ | $\ldots$ | 6 | $"$ |
| Body $\ldots$ | $\ldots$ | $\ldots$ | 31 | $"$ |
| Fore-limb... | $\ldots$ | $\ldots$ | 11 | $"$ |
| Hind-limb | $\ldots$ | $\ldots$ | 17 | $"$ |
| Tail $\quad \ldots$ | $\ldots$ | $\ldots$ | 68 | ,$"$ |

Habits.-Habits similar to those of $A$. boutonii.
Distribution. - Victoria: Melbourne, Goulburn Valley, Western District (Melb. Mus.) ; Dimboola (L. and F.).

Range outside Victoria.--South Australia, Kangaroo Island, West Australia.

## DESCRIPTION OF PLATE II.

Fig. 1.-Emoa spenceri, L. and F.
1a. ", ", upper view of head.
2.-Siaphos maccoyi, L. and F.

2a. " ", upper view of head.

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Lucas, A. H. S. and Frost, C. 1894. "The lizards indigenous to Victoria." Proceedings of the Royal Society of Victoria 6, 24-92.

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[^0]:    Distribution.-Victoria: Portland, Lake Wallace (Melb. Mus.). Range outside Victoria.-Western Australia (Brit. Mus.).

[^1]:    * Except in T. alelaidensis, which has the teeth more conical.

