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HERPETOLOGICAL NOTES.

No. I.

By

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These notes concern specimens in the Australian Museum reference collection.

Hylophorbus robustus Boulenger.

Mantophryne robusta Boulenger, Proc. Zool. Soc. Lond., 1898, p. 476 and p. 480, pl. xxxviii, fig. 4.

Gnathophyrne robusta v. Mehely, Termesz. Füzetek, xxiv, 1901, p. 225, pl. vi, figs. 1-3 (skull), pl. ix, figs. 6-9 (eggs and embryo).

Hylophorbus robustus Van Kampen, Amphibia Indo-Australian Archipelago, Leiden, 1923, pp. 143-144.

Hylophorbus sp. Kinghorn, Rec. Austr. Mus., xvi, 6, 1928, p. 289.

When I made my first note on this species only three specimens were available, but I have since received three more from the collection of the late Professor Launcelot Harrison; all were collected in the Mount Lamington district, Northern Division, Papua, by Mr. C. T. MacNamara. While the specimens agree in all major characters with *H. robustus*, some of them have minor characters in common with *H. microtis* and these are worth noting.

The interorbital space may be from once and one-third to once and four-fifths as broad as the upper eyelid, and the tympanum is almost as large as the eye.

The skin of five specimens preserved in Bles solution is quite smooth, and the general colour is greenish black above and grey below, the central area of the back being much faded, almost to pinkish grey. On the lateral and dorsal areas are a number of black spots each with a yellowish white centre, forming a kind of ring, each spot being on a slightly raised area. The whitish patch in the groin may be small and almost circular in shape, or large

and irregular. The undersurface is finely speckled with white dots. The spirit specimen has a somewhat rugose skin; the colour is brown above and yellowish white below. There is a large whitish patch in the groin, and the sides are white spotted, but the dark brown spots of the dorsal surface, which are raised up, have not the white centres common to the specimens preserved in the Bles solution.

CERAMODACTYLUS DAMAEUS Lucas and Frost.

Ceramodactylus damaeus L. and F., Proc. Roy. Soc. Victoria (n.s.), viii, 1896, p. 1, and Rept. Horn. Sci. Exped., pt. ii (Zoology), 1896, p. 119, pl. ix, fig. 2. *Id.*, Boulenger, Ann. Mag. Nat. Hist., (6), xviii, p. 233.

When Boulenger described his new species Diplodactylus steno-dactylus in the work quoted, he made the following note which attracted my attention and led to this examination: "This new species, described from a single male specimen without tail, is allied to and appears to connect Diplodactylus steindachneri, Blgr., and Ceramodactylus damaeus, Lucas and Frost, the latter probably bearing no real affinity to the genus to which it has been referred."

I have examined the paratypes, from Charlotte Waters, Central Australia, together with several other specimens, and find that the species is not referable either to *Ceramodactylus* Blanf., or *Diplodactylus* Gray. In the general shape of the body, limbs and the swollen palmar surfaces it resembles *Rhynchoedwra*, but it is so constantly different from any of these in other characters that I feel it should be placed in a new genus, and I would suggest the name *Lucasius* after one of its founders, Mr. A. H. S. Lucas.

As in the genus *Rhynchoedura*, the digits are granular inferiorly, but each granule is spine-like. The mental and rostral are normal, not nail-shaped, and the labials are distinct, while in *Rhynchoedura* they are absent.

Lucasius, gen. nov.

Generic definition.—Digits cylindrical, covered above with imbricate scales and on the sides and undersurfaces with small spine-like tubercles. The claw is retractile beneath a nail-like scale, and surrounded below and at the sides by a rosette of small spine-like tubercles. Body covered with imbricate scales; tail with squarish imbricate scales.

Genotype.—Ceramodactylus damaeus Lucas and Frost.

		Total Length.	Body.	Tail.	Snout to	Width of	Length of Limbs.	
					Ear.	Head.	Fore.	Hind.
B C D E G H		69 81 95 91 90 85 74 90	45 34 49 42 48 47 45 38 44	35 43 53 43 43 43 40 36 46	12 9 7 12 12 11.5 11.5 11.5	8·5 6·5 9 10 10 9·5 9	15 15 15 18 17 16 5 16 14	20 18 21 22·5 22 21 19·5 17·5 20

The measurements of the specimens examined are given below:

The specimens before me are from the following localities: Five from Charlotte Waters, Central Australia (these include the paratypes); two from the vicinity of Perth, Western Australia; one from Ooldea, South Australia; one from Pooncarie, on the Darling River, New South Wales. The last reached me while I was writing and constitutes a new record in the distribution of the species. This specimen is beautifully marked, the typical white spots being on brick-red markings.

DIPLODACTYLUS VITTATUS Gray.

Diplodactylus vittatus Gray, Brit. Mus. Cat. Liz., 1845, p. 148. Id., Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 100.

Diplodactylus polyophthalmus Günther, Ann. Mag. Nat. Hist., (3), xx, 1867, p. 49. Id., Boulenger, loc. cit., p. 101.

I have examined a series of seventy specimens of this species ranging from 43 mm. to 95 mm. in length, and cannot find any variations which prove sufficiently constant to warrant the separation of *D. polyophthalmus* from *D. vittatus*.

Some specimens which have the typical colour markings of *D. vittatus* have the snout longer than the distance from the eye to the ear, while in others the snout may be equal to, or even slightly shorter than that distance. The tubercles under the digits are also very variable as to size and shape, and I cannot attach any importance to them as specific characters.

Before me are five specimens from the same locality near Sydney; two have the typical markings of *D. vittatus*, the third has the vertebral stripe more or less broken up, in the fourth there are distinct round paired spots on the dorsal line and smaller spots on the side, while the fifth is greyish with indistinct light spots. In all of these specimens the tubercles under the digits are large oval in shape, the snout is longer than the distance from the eye to

the ear, and the digits vary a little in length and stoutness. There are occasional specimens throughout the series which vary so much within the limits of the so-called two species that I cannot place them either as the *polyophthalmus* or *vittatus* variety.

DIPLODACTYLUS TÆNICAUDA De Vis.

Diplodactylus tænicauda De Vis, Proc. Linn. Soc. N.S.W., (2), i, 1886, p. 169.

Diplodactylus twniocauda Boulenger, Brit. Mus. Cat. Liz., iii, 1886, p. 483.

There are six specimens of this interesting species in the Australian Museum collection, of which three are from Cardwell, one from Dawson River, and two from Eidsvold, Burnett River; all these localities are in Queensland.

Examination shows that the external characters do not vary to any extent within the series, nor do they differ much from already published descriptions. As regards colour, the species is very distinctly marked, and the specimens before me exemplify this to a marked degree. The whole of the body, arms and legs are finely spotted with dark brown on a yellowish ground. The typical reddish brown band, which commences at the base and extends to the tip of the tail, is, in my specimens, bordered by darker bands, chocolate brown in colour and spotted with irregular white markings.

DIPLODACTYLUS PULCHER Steindachner.

Diplodactylus pulcher, Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 102.

The collection has lately been enriched by six specimens of this beautiful and comparatively rare species from Western Australia. While the structural characters and scaling agree with Boulenger's description, the colour of my specimens is very variable. In four specimens from Perth, and one from Malcolm, the general colour is reddish brown above and there is a dark line across the occiput, besides the usual irregular, transverse, light, dark-edged spots on the back. In the remaining specimen from Boulder, which is only half-grown, the colours are particularly bright. The band on the neck and that behind the shoulders are narrower than usual, and two on the centre of the dorsal area are divided into roundish spots, below which are several large white spots, and a row of smaller ones along the lateral line.

DIPLODACTYLUS SPINIGERUS Gray.

Strophura spinigera Gray, Brit. Mus. Cat. Liz., 1845, p. 148.

Diplodactylus spinigerus Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 99.

Diplodactylus ciliaris Boulenger, loc. cit., p. 98, pl. vii, fig. 2.

Diplodactylus intermedius Ogilby, Rec. Austr. Mus., ii, 1892, p. 10.

Diplodactylus spinigerus Zietz, Rec. South Austr. Mus., i, 3, 1920, p. 185.

When Zietz published his catalogue of the Australian lizards, he included a number of species in the synonymy of *D. spinigerus*, but, while I agree that *D. ciliaris* and *D. intermedius* are synonymous with *D. spinigerus*, I am convinced that *D. strophurus* is a separate species.

I have examined a very large series of specimens and find that, while the dorsal tubercles of D. spinigerus and D. ciliaris are almost identical, the spines on the tail of the former are much shorter and there are no spines on the supraciliary border, the latter being a feature of D. ciliaris only. The dorsal tubercles may be in two distinct rows, which may be regular or irregular through the presence of scattered ones breaking the lines at intervals. These tubercles are never so scattered or irregular as in D. strophurus.

The spines of the supraciliary border and the tail appear to be much more highly developed in the more northern forms, and would suggest the possibility of a geographical variety or race. It might be convenient to regard the specimens from the far north and northwest Australia as varieties, but I do not think there are sufficient grounds to warrant them being placed in a separate species.

The specimens examined are from the following localities, and for convenience I am recording them under their original names:

- D. spinigerus.—New South Wales: Tamworth (8), Lachlan River (3), Yandembah (2), Barmedman (1), Coonamble (2), Wyalong (3), Hillston (1). Western Australia: Esperance (1), Perth (1). Queensland: Bowen (1).
- D. intermedius.—New South Wales: The interior (3 types), Boggabri (3), Lachlan River (2), Carinda (1). Locality unknown: (8).
- D. ciliaris.—Queensland: Sylvania (2). North Australia: Darwin (3), King Sound (1). Western Australia: Malcolm (1).

DIPLODACTYLUS STROPHURUS Dumeril and Bibron.

Diplodactylus strophurus Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 100.

Diplodactylus spinigerus part Zietz, Rec. South Austr., Mus. i, 3, 1920, p. 185.

As stated in my remarks concerning the previous species, I do not agree with Zietz in placing this species in the synonymy of *D. spinigerus*. It is evidently a very rare species, and, despite the fact that it is recorded from Sydney (in the British Museum Catalogue), I think some mistake was made, for it appears to be restricted to localities in the vicinity of the Murrumbidgee River, and particularly south-western New South Wales.

There are three specimens only in the Australian Museum collection, two being from Hillston, and one from Leeton, in the Murrumbidgee Irrigation Area; the latter was collected by me in November, 1927.

The head of *D. strophurus* is shorter and deeper than that of *D. spinigerus*, there are small and large tubercles scattered over the dorsal area, but nothing to resemble spines. The tail of the Leeton specimen is long and thin, without tubercles; in the two from Hillston, in which the tail is rejuvenated, the new part is very short and thin, suggesting to me that the originals were like those of the Leeton specimen.

Notes on three allied species of Diplodactylus.

In the following notes I wish to discuss the characters and affinity of the following species:

Diplodactylus hilli Longman, Mem. Qld. Mus., iii, 1915, p. 32, Diplodactylus conspicillatus Lucas and Frost, Proc. Roy. Soc. Vict., new ser., ix, 1897, p. 55, and Diplodactylus platyurus Parker, Ann. Mag. Nat. Hist., (9), xvii, 1926, p. 665.

Through the kindness of Mr. H. A. Longman, Director of the Queensland Museum, I have been able to examine the holotype of his species and compare it with Parker's description of *D. platyurus* and several previously unnamed specimens in the Australian Museum collection. The three species are undoubtedly closely allied and strikingly alike in general appearance. It was the following statement by Parker which led me to make the examination:

"This species appears to be closely allied to *D. hilli*, Longman, and *D. conspicillatus*, Lucas and Frost; from the former it may be distinguished by its longer snout and broader rostral, from the latter by its broader rostral, large upper caudal scales, and the coloration."

As an examination of the specimens shows that the upper caudal scales of both D. hilli and D. conspicillatus are quite four times as large as the dorsal body scales, and evidently like those of D. platyurus, this character is common to all, and of no specific value. There may not be as much difference between D. hilli and D. platyurus as the respective descriptions would imply. measuring the length of the snout Longman has evidently taken the distance from the anterior border of the eye to the end of the rostral, and has compared that with the distance from the same starting point to the ear, and not from the posterior border of the eye to the ear as one might assume. The absence or presence of the median cleft in the rostral is not a constant character, as one of my specimens shows a short cleft in the rostral while another has none. The following table of measurements should help in sorting out some of the most outstanding characters, though, apart from the long narrow head of D. hilli, measurements alone do not provide much of a guide to the species:

	D. platyurus. From Description.	D. conspicillatus. Three Specimens.			D. hilli. Holotype and Two Others.		
Length Snout to vent Snout to ear Head, width Fore limb	60 44 10 9 13 16	61 46 9·5 8·5 16 18	61 42 8·5 16 18·5	73 54 9 16 18	60 44 · 5 10 7 · 5 13 · 5 16 9 · 5	68 48 10 8 14 15	66 50 9 8 14 15

I find that the only conspicuous differences lie in the body scaling, and they might be summed up as follows:

- D. hilli, 1 shield between the nasals, dorsal and mid-ventral scales about equal in size, laterals smallest.
- D. conspicillatus, 1 shield between the nasals, dorsal scales largest, laterals smallest.
- D. platyurus, 2 shields between the nasals, dorsal scales largest, ventrals and laterals equal, smaller.

Very few specimens are known, and it will be seen from the above that, were a large series available, the results of an examination would prove most interesting, more particularly because of the widely separated localities of those already known.

D. hilli has already been recorded from Darwin and Queensland, D. conspicillatus from Charlotte Waters, central Australia, and D. platyurus from Torrens Creek, north Queensland. In the Australian Museum collection is one D. conspicillatus from Lawler, and two, which I place as D. hilli, from Kalgoorlie; both these localities are in Western Australia.

DIPLODACTYLUS TESSELLATUS Günther.

Diplodactylus tessellatus Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 103, pl. viii, fig. 6. Id., Stirling and Zietz, Trans. Roy. Soc. South Australia, xvi, 1893, p. 160.

I have examined a series of fifty-two specimens of this species from somewhere on the Darling River, New South Wales, collected during the flood of 1890.

There is practically no variation from type, except that the cones on the tail, which are not mentioned by Boulenger, but which were noted by Stirling and Zietz, may be in a paired series extending the whole length of the tail or may be confined to a few pairs near the extremity. The series ranges in length from 42 mm. to 75 mm. I collected a single specimen under a loose boulder on a small rocky ridge, in very dry country some thirty miles north of Broken Hill, in August, 1928.

LEPIDODACTYLUS GUPPYI Boulenger.

Lepidodactylus guppyi Boulenger, Proc. Zool. Soc. Lond., 1884, p. 210. Id., Kinghorn, Rec. Austr. Mus., xvi, 3, 1928, p. 158, fig. 28.

Since writing my paper on the herpetology of the Solomon Islands, when this species was unknown to me, a single specimen has been collected at Roviana, and presented to this Museum by Mr. M. S. Stanley in January, 1928. The locality constitutes a new record for the distribution of the species, as previously it was known only from Faro Island. It does not differ in any essential from Boulenger's description, but the colour is interesting. It is very pale, almost creamy white above and below; there is a dark marking through the loreal region and eye, which fades away near the shoulder. There are ten small dark spots along the median dorsal line, and the pale bars on the labials are formed by tiny dots; there also are some pale markings on the top of the head.

Mr. Stanley found this little gecko (a very rare species) crawling up the wire netting fence at night, outside the house in which he was a guest.

VARANUS GOULDI Gray.

An exceedingly beautifully marked young specimen of this species from Kootingal, New South Wales, was presented to the Museum by Mr. N. E. Campbell. The dorsal surface is a rich tan, crossed by dark bands, there being fifteen of these between the shoulder and the groin. The tip of the tail is tan, and the basal portion barred alternately with rich brown and lemon-yellow cross

bars. The head is tan above and yellow on the sides, with a dark brown band from the eye to the nape, and another from the nostril to the side of the neck, the space between these bands being lemonyellow. The underparts are whitish, the chin and throat dark spotted.

Demansia ornaticeps Macleay.

Elapocranium ornaticeps Macleay, Proc. Linn. Soc. N.S.W., ix, 1884, p. 560.

Diemenia? ornaticeps Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 324.

Having examined Macleay's specimen, the holotype, which is in the Macleay Museum, Sydney University, I can confirm Boulenger's identification, but as the synonymy has been changed since the compilation of his catalogue, the species now stands as *Demansia ornaticeps*.

Denisonia forresti Boulenger.

Demansia forresti Boulenger, Ann. Mag. Nat. Hist., (7), xviii, 1906, p. 440.

It appears to me that this species is synonymous with *Denisonia suta* Peters, the only outstanding difference being the number of scale rows. Unfortunately the type is not available to me, as, I understand, it is in the Berlin Museum. I would suggest that it be examined and compared with *D. suta*, in conjunction with a previous paper of mine in which I declared *D. frenata*, *D. frontalis*, and *D. stirlingi* to be synonymous with *D. suta*.¹

DIPSADAMORPHUS FUSCUS Gray.

Dipsas ornata Macleay, Proc. Linn. Soc. N.S.W. (2), iii, 1888, p. 416. Boulenger, Brit. Mus. Cat. Snakes, iii, 1896, p. 81.

Boulenger, in regarding Macleay's description as insufficient, was doubtful whether this species belonged to the genus *Dipsadamorphus*, though he felt that that was the genus to which it should be referred.

I have examined Macleay's specimen and find that it has 19 rows of scales and not 15, as in his description, probably a misprint. The dentition and all external characters show that, without any doubt, it is identical with *Dipsadamorphus fuscus* Gray.

Macleay's specimen is from King Sound, north-west Australia.

¹ Kinghorn.—Rec. Austr. Mus., xiii, 3, 1920, p. 110.

CORRIGENDA.

Page 76, line 11. For Gnathophyrne read Gnathophryne.

Page 178, line 22. For pumilis read pumilio.

Page 218, line 7. For Gnathopropsis read Gnathoprosopis.

Page 236, line 18. For nirgohirta read nigrohirta.