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HERPETOLOGICAL NOTES.

No. 2.*

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(Figures 1-3.)

Brachyaspis curta Schlegel.

(Figure 1.)

After an examination of nine young and eight adult specimens of this species, I am able to make the following observations. In the adults the frontal shield is a little wider than the supraocular, but in the young this difference is hardly noticeable; it varies slightly in length and shape generally, but the remaining characters do not differ to any extent from those noted by Boulenger in his description. In the very young specimens the head appears to be much flatter and more swollen than in the adult, but this is due to the bulging of the eyes, a condition that may be caused by the preservative. In one specimen the frontal is rounded posteriorly and in another sharply pointed, and this would cause a slight difference in its length in comparison with its distance from the snout, the variation throughout the series being from a little longer to one and one-half times as long as its distance from the snout. In another, the frontal is very distorted and is broken up into four distinct shields. As a general rule the frontal is one and one-half times as long as broad, about half as wide again as the supraoculars, longer than its distance from the end of the snout, about as long as the parietals but longer than the suture between them. The internasals are only about half the size of the prefrontals.

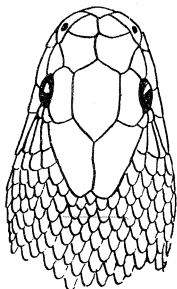


FIGURE 1.

The eye is larger than its distance from the mouth. The rostral is about one-third broader than deep, the part visible from above being shorter than the suture between the internasals.

In the eight specimens examined the nasal forms a suture with the single preocular. There are two postoculars and six upper labials, though Boulenger noted that there may be six or seven upper labials. There are seven lower labials, three of which are in contact with the anterior chin shields. Scales in 19 rows round the centre of the body; ventrals 131-138; subcaudals 31-41, all single; temporals 2 + 2 or 2 + 3, in one example 2 + 3 on the left side and 3 + 3 on the right.

* For No. I see RECORDS OF THE AUSTRALIAN MUSEUM, Vol. xvii, No. 2, 1929, pp. 76-89.

The colour is reddish brown above and yellowish beneath, and there may be some mottlings or indistinct stripes over the angle of the jaw and on the side of the neck and snout. The specimens, apart from the very young, vary in length from 160 mm. to 550 mm.

The distribution of the species, according to Mr. L. Glauert, is the north-west district of Western Australia, besides the following localities: Muchea, Perth district, Denmark, Albany, Laverton, Warredar Station, all in that State.

The stomachs of three specimens contained the remains of frogs, while that of the largest contained a lizard (*Lygosoma*). One snake only seven inches in length had a *Lygosoma* three and three-quarter inches in length in its stomach.

The oviducts of one contained eight eggs.

In the specimen with the abnormal frontal there are several other abnormalities worthy of mention. There is a small azygous scale under the left eye between the third and fourth upper labials, and two small azygous scales between the third and fourth labial under the right eye. As the fourth labial is somewhat smaller than it should be, I would consider that the azygous shield is part of that labial.

The illustration is drawn from specimen, registered number R.2403, National Museum, Melbourne.

Chersydrus granulatus Schneider.

This species may now be added to the herpetological fauna of the Solomon Islands, three specimens having been collected at north Malaita by Mr. G. S. White in November, 1928. Previously it was not known further east than Papua and on the north-east coast of Queensland as far south as Cairns.

Demansia guttata Parker.

(Figure 2.)

Through the courtesy of the Director, Mr. J. A. Kershaw, of the National Museum, Melbourne, I recently examined specimens of this species and made a drawing, which I publish here, the species not having been figured previously. The specimen differs from the typical in having 19 scales round the body; it was collected at Avon Down, Queensland, by Mr. H. J. Lloyd in March, 1927.

National Museum collection, registered number R.11846.

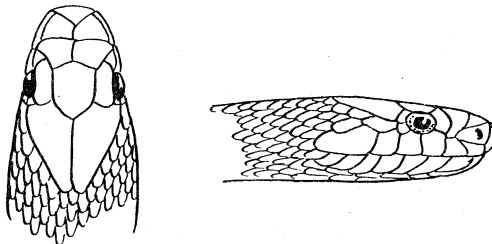


FIGURE 2.

Denisonia maculata var. *devisii*, Waite and Longman.

This is an inland species usually regarded as being distributed throughout the northern half of New South Wales and up to about central Queensland. A

specimen in the National Museum, from Longreach, Queensland, has 19 scales round the centre of the body instead of the usual 17; otherwise it is typical.

Rhinophlocephalus bicolor Mueller.

(Figure 3.)

Recently I had the opportunity of examining two specimens of this species. One, in the National Museum, Melbourne, is illustrated here, the species being figured for the first time, while the other is in the Western Australian Museum, and from it I offer the following description:

Snout broad, truncate. Eye equal in size to its distance from the mouth. Rostral from above, one and one-half times as broad as long. Frontal a little longer than broad, as long as its distance from the end of the snout, shorter than

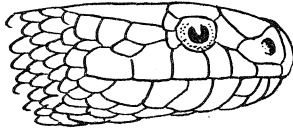
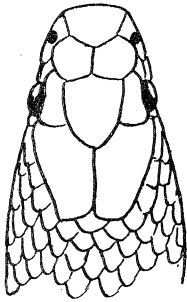


FIGURE 3.

the parietals but longer than the suture between them; twice as broad as the supra-ocular scales. Prefrontal slightly smaller than the rostral; no internasals; nasal in contact with the preocular; two postoculars; temporals 2 + 2. Six upper labials, the third and fourth under the eye. Seven lower labials. Anterior chin shields longer than the posterior and

separated by a large scale. Three lower labials in contact with the anterior chin shields. Total length 322 mm. Tail 47 mm.; 15 scales round the centre of the body; 149 ventrals; 1 anal; 29 subcaudals.

Locality: Wagin, Western Australia. The stomach contained the remains of a frog.

The specimen in the National Museum measures 345 mm. It has 15 scales; 31 subcaudals; 156 ventrals; temporals 1 + 2. It is from Western Australia, and is figured above.

Delma fraseri Gray.

A beautiful specimen in full breeding colour was recently added to the collection from East Cannington, Perth, Western Australia. It is olive brown above and whitish below, the head being somewhat darker than the back. There is a conspicuous brick-red streak on each side of the body from behind the ear to the tail, but this is broken up along the posterior portion, the centre of each scale being red, the tip black, and the base white.

Between the ear and the eye the red is missing, the scales being black and white. The colours have faded in spirits and now after several months have become very dull, though still distinct.

An abnormal specimen in the National Museum is worthy of note, though it is without data. The frontal shield is smaller than the prefrontal instead of larger, and the third upper labial is situated under the eye.

Egernia whitei carnaræ sub-sp. nov.

Differs from the typical in that the fronto-nasal is not in contact with the frontal, the prefrontals forming a suture which separates the two shields. The frontal is much longer than the fronto-parietal. There are four temporals and three pairs of nuchals. The adpressed limbs meet but do not overlap. There are 34 scales round the centre of the body. The colour is rich brown above, the typical longitudinal lines being broken up into series of white dark-edged longitudinal spots. The sides are marked with white dark-edged ocelli.

Total length 230 mm.; body 85 mm.; axilla to groin 48 mm.

As I have only one specimen I refrain from giving this new lizard full specific rank.

Locality: Between Canara district and North West Cape, Western Australia. Collected in August, 1929, by Mr. David G. Stead.

Australian Museum collection, registered number R.9981.

Tiliqua occipitalis auriculare sub-sp. nov.

This *Tiliqua* differs from the typical *T. occipitalis* in several characters, but, as only one specimen is available, these are not considered to be of sufficient importance to warrant its being described as a distinct species. The most outstanding character is the enormous ear opening, after which I have named the sub-species.

Distinguishing characters: ear opening about twice as long as the eye opening, with five inconspicuous blunt lobules. There are forty-five scales round the centre of the body. The interparietal shield at its broadest is nearly as broad as the parietal. The feet and toes are small and weak in comparison with those of *T. occipitalis*. The general colour above is pale brown with twelve reddish brown cross bands on the body and eleven on the tail.

The measurements, in comparison with three typical specimens of *T. occipitalis*, are given below in millimetres.

	<i>T. o. auriculare.</i>	<i>T. occipitalis.</i>		
Head and body	230 ..	240	260	240
Length of head	56 ..	60	61	55
Width of head	47 ..	44	45	40
Width of body	60 ..	52	45	51
Fore limb	47 ..	51	51	51
Hind limb	51 ..	51	53	51
Axilla to groin	141 ..	152	150	136
Ear opening	13 ..	8	8	6
Eye opening	7 ..	7	7	5

The specimen was collected at Broome, north-western Australia, in 1929 by Mr. A. A. Livingstone of this Museum. Registered number R.10080.

Hatching of Lizards.

Very little is known regarding the hatching of lizards' eggs in their natural surroundings, but the following notes will show that the transportation of the same does not always interfere with incubation.

Lygosoma Liolepisma metallicum O'Shannessy.

Several eggs were submitted to me during February, 1929, but I was not able to determine the species, so I left them for some days in a tobacco tin on my

table. On opening the tin again I found that the eggs had hatched and, except for two dead lizards, the rest of the young were extremely lively.

Lepidodactylus woodfordi Boulenger.

Occasionally exotic species have been recorded from the Australian mainland, particularly near some sea port, and these are usually transported in bunches of bananas, copra, or other produce, by island steamers. An interesting case came before me some time towards the end of the year 1928. A Sydney resident found a gecko egg in an orchid which he had imported from Fiji; this hatched out while he was bringing it to the Museum, and proved to be the above rare species.

Interesting Additions to the Collections.

The Rev. H. E. Warren and staff of the Mission Station at Groote Eylandt, Gulf of Carpentaria, collected and forwarded to the Museum the following species, which can be regarded as new records and added to the fauna of that area.

Chersydrus granulatus, 1; *Pseudelaps harriettae*, 2; *Natrix mairii*, 1; *Acanthophis antarcticus*, 1; *Typhlops minimus*, 2¹; *Tiliqua scincoides*, 1; *Varanus punctatus*, 1; *Chlamydosaurus kingii*, 1; *Amphibolurus muricatus*, 7; *Diporophora bilineata*, 12; *Ablepharus boutonii*, 4; *Lygosoma Hinulia lesueurii*, 5; *L. Lygosoma mandum*, 9; *Hyla phyllochroa*, 3; *Limnodynastes ornatus*, 1; *Hyla peronii*, 3; *Hyla nigrofrenata*, 5; *Hyla nasuta*, 5.

At Hinchinbrook Island, Mr. A. S. Le Souef collected the following: *Rana papua*, *Lygosoma Liolepisma albertisii*, and *Lygosoma Homolepida punctulatum*. *L. albertisii* is a new record, not only from the island, but, as far as I am aware, from Queensland. The late Dr. W. E. J. Paradise secured a specimen at Observation Island, Gulf of Carpentaria in 1925, and recently Mr. M. Ward found it on Lindeman Island, Whitsunday passage, and Messrs. G. P. Whitley and W. Boardman collected one at Lake Barrine, north Queensland. Previously the species was recorded only from Papua and the islands of Torres Strait.

Mr. Ward was successful also in securing a large collection of reptiles at Cape York, and it contained the following rare lizards: *Lygosoma Emoa atrocostatatum*; *L. Hinulia elegantulum*; *L. Hinulia lesueurii* var. *inornatum*; and *L. Liolepisma fuscum*; the latter, which is found mainly in the Moluccas and Papua, is regarded as exceptionally rare in Queensland.

The Mating Ceremonial of the Bearded Dragon.

***Amphibolurus barbatus* Cuvier.**

The following valuable, and perhaps unique, note was sent to me by Dr. C. S. Sullivan, from Moree, New South Wales, and I am recording it in his own words, with very few alterations:

"One afternoon in August, 1929, I was wandering in the scrub near Moree, when I came upon a pair of Bearded Dragons whose appearance and attitude were so unusual that I retired quickly and watched developments by the aid of field glasses from a spot some six or eight yards away. What I took to be the female was coloured a dull slaty-black with a few faint mottlings of greyish-white. The only bright touch about her was a patch of dull red on the side of the body near

¹ Described and figured by me as a new species in RECORDS OF THE AUSTRALIAN MUSEUM, Vol. xvii, No. 4, 1929, p. 190.

the base of the tail and opposite the inner side of the thigh. This sexual colour patch was only seen later on, however, when she moved.

"The male appeared to be totally black underneath the body and head, including the beard and the whole of the lower jaw, not the dull black of the female, but a rich glossy purplish-black. The upper surface was in marked contrast, varying from a light mottle grey and yellow on the back to a bright light green on the head, especially on the snout near the nostril. He had a conspicuous patch of light green on the spot which was red in the female. The basal half of the tail was grey and light yellow, but the last four or five inches were dull black, the junction between the yellow and black being clearly marked.

"The female when first seen was lying motionless and quite flattened out, and the male was lying across her, the midline of his body crossing her back about the region of the vent. There was no movement for about three minutes except that the male appeared to yawn once, opening wide his yellow mouth. Suddenly he became active. First he stamped loudly two or three times with one or both of his forelegs, making a much louder sound than one would have thought possible. Then he ran quickly round in front of the female, taking up a position almost at right angles to, and some two feet in front of her. He now stamped once with the left foot and proceeded to jerk his head up and down in a most ludicrous manner, each jerk being followed by a pause of perhaps a second (it looked as if the skull had been dislocated from the atlas, allowing a ventro-dorsal movement of the whole head upon the rigid vertebral column). The beard was stretched to its fullest extent, and the trunk raised high on the forelegs while the mouth was opened at intervals. Suddenly he moved forward with a swift little run until his head was held exactly over that of the female who was still crouched flat on the ground. This position was maintained for a few seconds when the male threw himself in a lightning-like leap, and when my eyes had recovered from the shock of trying to register so quick a movement, I saw that he now lay at full length on the female's back and was gripping with his jaws either the spines on the back of her head or the skin covering the nape.

"His forelegs were quite off the ground, and his hind ones barely touching. His body was no longer slim like that of the female but was widened out giving the round 'carapace' appearance so familiar to anyone who ever angered these reptiles by submitting them to the undignified ordeal of being held up by the tail. The female, now for the first time, gave indication that she was actually alive, till now she literally had not blinked an eyelid. She ran along keeping flat to the ground while the male's legs beat the air frantically as he hung on with his jaws, and his colour became even brighter than before. The female went about six feet before she stopped but the male continued to paw the air and lash his tail from side to side. After a minute or two he scrambled off and ran out of sight of the female behind a low bush. Here, with his trunk raised high off the ground on his forelegs, he began to jerk his head again, but after about thirty seconds quietened down, and in three or four minutes had almost regained his normal colour. Finally he ran about two feet up a small sapling while the female lay where he had left her without a movement of any sort.

"I was sitting down vigorously scribbling and trying to record what I had witnessed when I heard a rushing sound and looked up to see the male dragon charging towards me. He had changed colour again, and was really a most fear-

some sight as he pranced along, his purplish-black beard greatly expanded and glistening in the sun, his mouth wide open disclosing the bright yellow mucous membrane, contrasting strongly with the bright green above and the brilliant black beneath. Having no desire to be mistaken for a sapling I rose with considerable alacrity, but the dragon had stopped. Then he stamped once and ran round in front of the female again.

"After some preliminary 'showing off' by means of the head jerking, he went through the whole performance again. After about a minute his jaws relaxed their hold on his partner's occiput, and immediately she scuttled out from underneath and took refuge in a low, dense scrub. The male ran off and again took up his position on the sapling, where, after a little head jerking, he quietened down and regained his normal colour. After five or ten minutes he brightened up again, turned round and hung on head downwards while he stamped and jerked his head in the same manner as when he was on the ground. He then descended, pranced round a little and soon climbed about eight feet up another sapling, jerking his head and occasionally looking about as if trying to catch the eye of his mate.

"I waited in vain for further developments for half an hour after the female had gone to earth, then I lost patience and pulled aside the branches that hid her. I noticed that she had lost the reddish 'sexual' patch, she was very sluggish, and could only be persuaded to emerge with the aid of a stick; I threw her a few feet away, whereupon she ran up another branch of the tree in which her suitor was, taking up her motionless stance some five feet above him. In three or four minutes the male began to don his wedding garment again, stamped loudly a few times with his left fore foot on the back of the sapling, and jerked his head spasmodically once more, but the fair charmer paid no heed to him whatsoever, and after a few minutes he resumed his duller, normal colour. I waited another half-hour but nothing more eventuated, so I finally left them to the pleasure of their own society."
