

FRIDAY, 14TH NOVEMBER, 1884.

HON. A. C. GREGORY, C.M.G., F.R.G.S., ETC., IN THE CHAIR.

The following were duly elected Members of the Society, viz., Richard E. Sexton, Esq., Stud. Inst. C. E., Pine Hill; J. W. Anderson, Esq., M.A., L.L.D., Rockhampton; E. A. Phillips, Esq., Pine Hill.

The following donations were announced :—

1. "Reports on the exhibits at the Crystal Palace Electrical Exhibition, 1882." Washington, 1882. From the Smithsonian Institution.

2. "Reports of Geological Explorations, during 1883—84." Wellington, 1884. "Meteorological Report 1883." Wellington, 1884. From the Director, Colonial Museum and Geological Survey of New Zealand.

3. "The Higher Branch of Science or Materialism Refuted by Facts," by H. J. Browne. Melbourne, 1884. From the Author.

4. "Russkago Geographicheskago, Obshtchestva," Transactions, Vol. XX. Pt. 1 and 2, and Proceedings 1883. St. Petersburg, 1884. From the Imperial Geographical Society.

5. "Rendiconto delle sessioni dell'accademia delle scienze dell'Istituto di Bologna, 1882-83." Bologna, 1883. From the Institute of Bologna.

6. "Report of Progress 1880-81-82." Montreal, 1883. "Maps to accompany Report of Progress, 1880-81-82." Montreal, 1883. "List of Publications of the Geological and Natural History Survey of Canada." Ottawa, 1884. From the Director Geological and Natural History Survey of Canada.

7. "Australian Irrigationist, No. 3." Melbourne, 1884. From the Editor.

The following papers were read :—

A CONSPECT OF THE GENUS HETEROPUS.

By C. W. DE VIS., M.A.

(*Read on the 14th November, 1884.*)

The members of this genus of small ground lizards appear to form a very natural group, and one more closely allied to the *mokos* (*Mococa*) than to the *Tropidolepismas* with which they have been associated by Drs. Gray and Günther. Their mutual affinity

is apparent throughout their characters but nowhere more plainly than in the similarity of their head shields. The fifth upper labial is generally, if not always the largest and under the orbit. The nasals are distant from one another, and the nasal orifice central or in the hinder half of the shield, sharply edged posteriorly, without any curvilinear groove replacing the margin. The postfrontals approximate only: the vertical and interparietal differ but moderately from each other in size and shape: the interoccipital is very small. The paired shields following the single postmental are three to four, of which the first two are sub-equal. The legs are moderately strong and by no means far apart. The genus is not entirely confined to Australia, but it would appear from Mr. Macleay's discoveries, and from the species represented in the Queensland Museum, that its chief developement has been within Australian limits.

HETEROPUS, *Fitzinger*.

"Muzzle conical: nostrils lateral, in the middle of a nasal plate: supranasal none, naso-frontal single, teeth conical, simple: palate not toothed, with a deep triangular notch behind: ears distinct, open: lower eyelid transparent: body elongate, cylindrical: sides rounded: scales keeled: legs 4, far apart: toes 4-5 elongate, rather compressed, simple, clawed: hinder unequal; tail conical, pointed."

KEY TO THE SPECIES

Scales of the back.

2 keeled—

- | | | | | | |
|----------------|-----|-----|-----|-----|---------------------|
| a. keels sharp | ... | ... | ... | ... | <i>lateralis</i> . |
| b. „ obtuse | ... | ... | ... | ... | <i>blackmanni</i> . |

3 keeled—

- | | | | | | |
|---|-----|-----|-----|-----|----------------------|
| a. ears without projecting scales in front | | | | | |
| i beneath uniform | ... | ... | ... | ... | <i>schmeltzii</i> . |
| ii „ particoloured | ... | ... | ... | ... | <i>pectoralis</i> . |
| b. ears with three projecting scales in front | | | | | |
| i the upper scale largest | ... | ... | ... | ... | <i>rubricatus</i> . |
| ii several above small | ... | ... | ... | ... | <i>longipes</i> . |
| iii small ones all round the edge | ... | ... | ... | ... | <i>rostralis</i> . |
| c. ears with 5-6 projecting scales in front | | | | | |
| i distinctly white spotted | ... | ... | ... | ... | <i>maculatus</i> . |
| ii apparently dark lined | ... | ... | ... | ... | <i>sexdentatus</i> . |

5 keeled—

- | | | | | | |
|---|-----|-----|-----|-----|---------------------------|
| a. ears with one projecting scale in front | | | | | <i>rhomboidalis</i> . |
| b. ears with three projecting scales in front | ... | ... | ... | ... | <i>quinquecarinatus</i> . |

Indistinctly keeled—

- a. ears with one strong scale in front, one
or two small ones on each side of it *variegatus*.
- b. ears with three projecting scales in front *cheverti*.
- c. ears simple edged or nearly so ... *mundus*.

HETEROPUS LATERALIS, N.S.

Scales of the back and tail strongly bicarinate, the keels continued nearly to the tip of the tail. Ear orifice with a single long and low scale on the fore edge, sometimes divided; scale rows 30, labials $\frac{7}{8}$, the fifth upper one the largest and under the orbit, second and third postmentals sub-equal, tail short.

*Length of the head	... 1.05	Length between the limbs	1.85
" " gape	... 0.75	" of hind limb	... 1.70
" " trunk	... 2.95	" " fore limb	... 1.25
" " tail	... 4.80	Breadth of the head	... 0.70

Above bronze-brown. On the upper edge of the flanks between the limbs a bright copper-red stripe. Beneath bronze, blue, and yellow. Average adult length 3in. Locality, Moreton Bay district.

HETEROPUS BLACKMANI, N.S.

Scales of the back more or less faintly ridged, anteriorly more or less sharply: distinctly bicarinate posteriorly; ear orifice longitudinally elliptical, narrow, fringed with small free scales on the upper edge. Scale rows 32, labials $\frac{7}{7}$, the fifth upper one the largest and under the orbit. Second and third postmentals sub-equal. Tail moderately long.

Length of the head	... 0.95	Length between the limbs	1.7
" " gape	... 0.65	" of hind limb	... 1.5
" " trunk	... 2.55	" of fore limb	... 1.15
" " tail	... 4.65	Breadth of the head	... 0.6

Pale to dark olive brown, speckled with white and darker brown: a distinct white line along the upper lip and through the ear to the shoulder is continued brightly or faintly along the flanks. A lateral line from above the ear appears as a line of pale specks or distinct line on the edge of the back. Head bronze green.

Locality, Port Curtis. Collected by Mr. F. A. Blackman.

HETEROPUS SCHMELTZII, Peters.

" Agreeing with *H. schlegelii*, and therefore distinct from *H. fuscus* and *peronii*, in having but 7 supralabials, the prefrontals separated, the nuchal scales distinctly more keeled, and the

* The measurements are in centimetres.

dorsal scales three keeled. The ear orifice has no projecting scales on its front edge, but is furnished with one or two short but high rounded scales conspicuous from their pale colour. Scales of the body in 36 longitudinal rows. Of the two examples sent to me by Hr. J. D. E. Schmeltz from the Museum-Goddeffroyi, the larger (total length .0123 m., to the base of the tail .051 m.) is uniform olive brown above, on each side of the back with a rather distant bright stripe, below yellow (that colour relatively narrow), above dark olive green with small black and white specks. On the side of the body and upper surface of the limbs speckled with black and white, and from the nasal runs a yellowish white line, which passing under the eye goes through the middle of the ear orifice and loses itself on the side of the body over the fore limb. The under side is greenish white, and from the hinder part of the lower lip runs a dark line which dies out on the side of the throat between the longitudinal rows of scales." From Rockhampton, North Australia.

Mon. Akad. Berl., 1867, xiii.

HETEROPUS PECTORALIS, N.S.

Labials, 7. Prefrontal single, postfrontals approximate, nasals distant. Nostrils small, subcentral. Palpebral disk large. Ear orifice with one small (on one side), or a few minute (on the other side) free scales on the edge. Postoccipital scales nearly smooth; a few rows of nuchal scales quadricarinate; the rest, the dorsal scales, and those of the outer surface of the hind-limb narrowly and sharply tricarinate; those of the fore-limb nearly smooth. Habit stout. Scales in 32 rows.

Length of the trunk	...	5.2	Length between limbs	...	2.15
(Tail reproduced)			„ of hind limb	...	2.0
Length of head	...	1.2	„ fore limb	...	1.4
„ gape	...	0.85	Breadth of head	...	0.85

Olive grey above, each scale narrowly black-edged all round. A bright red lateral stripe on the edge of the back. Lower surface of fore-limb, side of chest, and flanks red. A large patch on chest and upper part of abdomen cream color (orange in life). Upper surface of head pale golden green spotted with black, throat and side of head pale blue, brightly varied with a broad black hinder edge to each scale.

Locality, Warro, Port Curtis. Collected by Mr. F. A. Blackman; one specimen.

HETEROPUS MACULATUS, N.S.

Labials, 6. Prefrontal single, postfrontals approximate, nasals distant, nuchal scales faintly ridged, dorsals tricarinate, scale rows 36. Habit short and stout, head short, tail very long;

ear with a row of 5-6 free scales fringing the fore edge, gradually diminishing in size from the topmost one.

Length of trunk	...	2.75	Length between the limbs	...	1.55
" head	...	1.15	" of hind limb	...	2.1
" gape	...	0.9	" fore limb	...	1.55
" tail	...	8.2	Breadth of head	...	0.75

Above bronzy brown with a vertebral stripe and a broader lateral one on each side black, the latter running over the ear and through the eye to the snout. From the upper lip a fainter dark stripe runs below the ear to the shoulder. Upper surface of the body studded with black-edged greenish white spots which run in pairs along the base of the tail. Head without spots, beneath yellowish bronzy-blue, anteriorly pinky, yellow posteriorly.

Locality, Cape York. Collected by Mr. K. Broadbent.

HETEROPUS RUBRICATUS, N.S.

Scales of the back very faintly tricarinate. Ear orifice with three free scales on the fore-edge, the upper one the largest. Scale rows 36. Labials $\frac{7}{6}$, the fifth upper one the largest and under the orbit. Second and third postmentals the largest. Tail long.

Length of the head	...	1.55	Length between the limbs	2.05
" " gape	...	1.2	" of hind limb	3.1
" " trunk	...	3.7	" fore limb	1.9
" " tail	...	9.75	Breadth of the head	0.8

Above uniform brown. On the sides and limbs rather bright rufous brown. A stripe of the ground colour, edged above and below with white, runs through the eye from the snout to the shoulders. Beneath yellowish, tinged with blue anteriorly.

Locality, Cape York. Collected by Mr. K. Broadbent.

HETEROPUS LONGIPES, Macleay.

"Nasal plates small and distant, the internasal forms a broad straight suture with the rostral, and is rounded in the middle of its base where it joins the frontal; frontal-nasal large and nearly contiguous; frontoparietal single, with a small rounded interparietal behind. The fifth upper labial is the largest. Ear openings slightly ovate, with acute denticulations, the three in front large and several above small. Legs, especially the anterior pair long and weak, the toes elongate and unequal. Scales very indistinctly 3 keeled, those on the back in 8 or 10 series. Color olive-brown above with a darker streak on each side; beneath yellowish white; central preanal scale large; tail long and taper; total length, six inches. Endeavour River." Proc. Lin. Soc., N.S.W., ii, 66.

HETEROPUS ROSTRALIS, N.S.

The posterior nuchal scales with 3 very obtuse keels which grow more distinct on the back and vanish on the tail. Ear orifice small, semicircular, with 3 free scales on its fore-edge, the upper one much the largest, and a series of smaller ones round its circuit. Scale rows 32. Labials $\frac{7}{6}$, the fifth upper one the largest, and under the orbit. Second and third postmentals subequal. Tail moderate.

Length of the head	...	1.55	Length between the limbs	2.55
„ „ gape	...	1.05	„ of hind limb	... 3.35
„ „ trunk	...	4.65	„ fore limb	... 2.15
„ „ tail	8.20	Breadth of head 1.00

Above shining olive-brown, uniform. A short pale line on the edge of the neck above a rather broad dark stripe from the ear to the shoulder. Beneath pale bluish-brown on the tail and limbs, becoming pure pale-blue on the throat, upper lip, and rostral shield.

Locality, Cardwell.

HETEROPUS SEXDENTATUS, *Macleay*.

"Head short, the supraorbital regions rather elevated; nostril in the middle of the nasal plate; fifth upper labial largest; other head plates as in the last described species. Ear openings oblongovate, with six denticulations in front. Legs, moderate; toes, elongate; scales indistinctly tricarinated, those on the back in 8 series. Tail, fine tapering, a little longer than the body. Colour, olive-brown above and greenish-white beneath. The scales of the back and sides have their lateral angles tipped with dark-brown, which gives the appearance of a number of dark longitudinal lines. Length, 6 inches. Cape Grenville." *Proc. Lin. Soc., N.S.W., ii, 67.*

HETEROPUS RHOMBOIDALIS, *Peters*.

"Scales smooth or very indistinctly 5 keeled, in 32 longitudinal rows, ear orifice round, moderate, with one projecting scale in front, nasal entirely lateral, internasal nearly twice as broad as long, prefrontal divided, frontal truncated before and behind. The entire frontoparietal united with the interparietal into a single rhomboidal shield, besides the 4 supraorbitals a small fifth one behind. The transparent disk of the lower eyelid large, 7 supralabials of which the fifth and largest is under the eye. The fore limb reaches to the front edge of the eye, the hinder with the fourth toe to the armpit, above brown with an ill-defined black band on either side beginning at the ear orifice; on either side of the back a row of black specks,

beneath altogether yellowish green, or with the region of the chin bluish. Examples of this species from Port Mackay, N.E. Australia, are in the Goddefroy collection." *Mon. Akad. Berl.* 1869, p. 446.

HETEROPUS QUINQUECARINATUS, *Macleay*.

Head rather blunt, nostril near the middle of the nasal plate, the sixth upper labial largest, the other head plates as in the two last species (*H. longipes* and *variegatus*). Ear openings oblong-oval, with three denticulations in front, legs moderate, toes slightly elongated, scales each with five keels, the lateral ones short and indistinct, and those on the back in about six series, tail scarcely longer than the body, colour dark brown above and white below, with a light black-edged side streak. Length 6in. Hab. Darnley Island. *Proc. Lin. Soc., N.S.W.*, ii, 67.

HETEROPUS VARIEGATUS, *Macleay*.

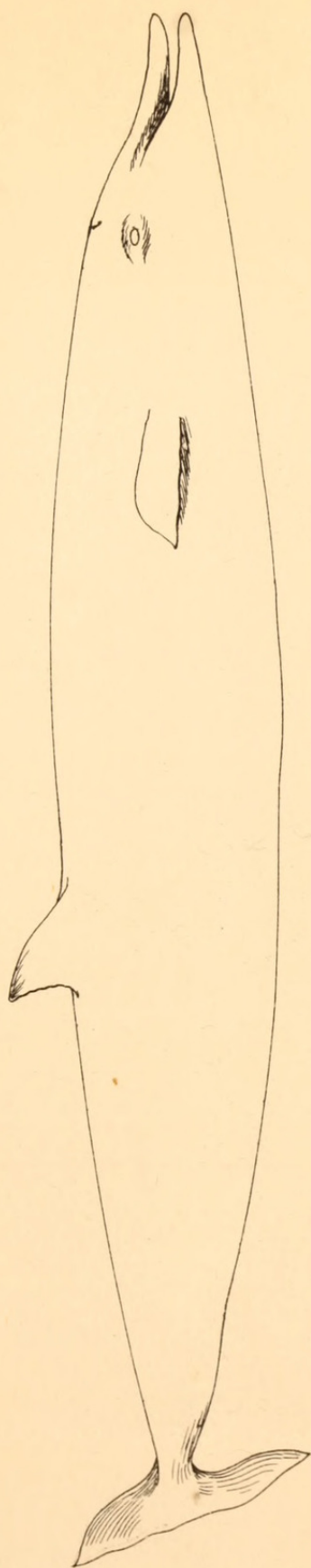
Plates of the head as in the last species (*H. longipes*); nostril on the hinder part of the nasal plate, ear openings oval, with a strong denticulation in front, and one or two minute ones on each side of it. Legs stronger and shorter than in the last species, the toes much shorter, tail long and taper. Scales indistinctly keeled, those on the back in 8 series. Colour, dark olive brown on the back with a few distant lighter-coloured spots representing obsolete stripes, and a broad black band along each side, edged with yellow, under surface yellowish. Length 5 inches. Darnley Island. *Proc. Lin. Soc., N.S.W.*, ii, 67.

HETEROPUS CHEVERTI, *Macleay*.

"Head flat; nostril at the back part of the nasal plate; fifth upper labial largest; head plates as in all the other species, the interparietal perhaps being more pointed at the apex. Ear openings nearly round, with three denticulations in front. Legs moderate; toes elongate; scales very indistinctly carinated, the keels showing more as points on the edge of the scale than on it, those on the back in 8 series. Tail considerably longer than the body, and very acutely pointed. Colour greenish, olive above, bluish white beneath, the under side of the legs and tail being of a somewhat pinker hue. Length, 5 inches. Barrow Island." *Proc. Lin. Soc., N.S.W.*, ii, 67.

HETEROPUS MUNDUS, *N.S.*

Labials 7-7, the fifth upper beneath the eye. Nasals very small, orifice central. Ear simple edged, or with one or two



ZIPHIUS LAYARDI, FLOWER.



Labials 7-7, the fifth upper beneath the eye. Nasals very small, orifice central. Ear simple edged, or with one or two

minute scales in front, two small scales on the upper edge, scales of upper surface nearly smooth. Habit rather slender, scales in thirty rows.

Length of the trunk ...	3·7	Length between the limbs ...	1·8
(Tail reproduced) ...	0·0	„ of hind limb ...	1·5
Length of the head ...	1·0	„ „ fore „ ...	1·25
„ „ gape ...	0·75	Breadth of head ...	0·7

Olive, varied above with sublinearly disposed spots, anteriorly black, posteriorly white, on the loins the white marks become short rectangular bars, anterior upper labials white edged above, a white line from the preorbital to upper hinder edge of ear orifice, recommencing below it, forming a distinct white line to over the axil, then fading on the flanks: over the shoulders an indistinct pale line, the space between this and the lower line reddish. Throat black lined, mental shields broadly black edged.

Locality Warro, Port Curtis, collected by Mr. F. A. Blackman. Two specimens.

HETEROPUS FUSCUS, *Dum. et Bibr.*

“Lower eyelid transparent. Scales of neck smooth, of back three keeled. Inhab. Isle Waigiou and Rawach.” Gray, Brit. Mus. Cat. Liz. 107.

Other localities given are Torres Straits. Gth. An. Mag. N.H. (4) 19. 413. Murray Island, Gth. Loc. Cit. 1879-84. Peak Downs.

SUMMER HEAT AND HEALTH

BY

HENRY WYATT RADFORD.

Of which the following is an abstract :—

The origin of the heat of the body and the natural processes by which its normal degree of temperature is maintained, were treated of; also the attention to be given to our diet, clothing, exercise, and mode of living generally in order that these processes may be assisted in their operation. The many ill effects resulting from a neglect of the measures advocated for securing this condition of health were also exemplified by copious illustrations.



De Vis, Charles Walter. 1885. "A conspect of the Genus Heteropus." *The Proceedings of the Royal Society of Queensland* 1(4), 166–173.

<https://doi.org/10.5962/p.351028>.

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