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$1 \cdot 30(33)$, length of zygomatic arch $1 \cdot 20(30)$, inside above 1 (25), below $0.62(155)$, extent of range from 2 nd premolar to last molar in upper jaw $0.62(15.5)$, of molars and premolars in lower jaw 0.60 ( 15 ), width outside at 2nd molar-upper jaw 0.56 (14), lower jaw $0.45(11)$, length of mandible from condyle 1.35 (34), height to point of ascending ramus $0.8(20)$, extent of symphysis of lower jaw 0.35 (9), length of free portion of lower incisors $0.35(9)$, anterior palatal foramen opposite canine and first premolar, length 0.15 (4), canines tubercular, equal in size to first premolar, three incisors of the upper jaw $0 \cdot 2$ (5), space between last upper incisor and first premolar 0.28 (7), between canine and first premolar $0 \cdot 1(2 \cdot 5)$.

This species approaches most nearly to Petaurides volans, var. minor of Oldfield Thomas. (Brit. Mus. Cat. C.)

Two specimens were obtained by Messrs. Cairn and Grant in 1889, on one of the spurs of the Bellenden-Ker Range, N.E. Queensland.

ON I'ARMELLA ET'HERIDGEI, BliAZIER.

By C. Hedley, F.L.S., Zoologist, Queensland Museum, Brisbane. (Communicated by J. Brasier.)<br>(Plate xi.)

In Mr. Etheridge's account of the Museum Expedition to Lord Howe Island, published last year- hy the Trustees of the Australian Museum, we read (p. 26) that "A fine new species of Vitrina was found on the stems and leaf sheaths of the palms growing on the lower grounds (Kentia belmoreana the curly palm, and Kentia forsteriana the thatch palm), and is called by Mr. Brazier Vitrina etheridgei.
A specimen of this mollusk was courteously communicated to me for anatomical examination by Mr. Brazier, who pointed out how closely it answered to the figure and description of Parmella planata, H. Adams, from Fiji (P.Z.S., 1867, p. 308, pl. xix., fig. 20). The smaller size and lighter colour of the shell, added to the difference in habitat, though stress must not be laid upon the latter, incline me to rank Mr. Brazier's species apart from that of Adams'. Whilst the very peculiar shell with its veil of epidermis, like gold beater's skin, descending from the periphery confirms me in Mr. Brazier's opinion that we have here a second species of this long lost genus.

Fischer states (Man, de Conch., p. 160) that no information of the animal has ever been recorled, and that its systematic position
is uncertain. My study of the animal induces me to classify Parmella as a distinct and well defined genus of the Melicarionine, allied to Parmarion and Parmacochlea but more closely to Cystopelta. The slender foot and the bas-like visceral hump give it externally a strong resemblance to the latter.

The length of the animal (a spirit specimen) from muzzle to tail is 14 mm ., from muzzle to posterior end of visceral hump 16 mm . Visceral hump rery large, detached from and overlapping in length and breadth the slender foot, above protected by the shell, which gives to it a flattened outline, beneath enclosed in a thin transparent membrane through which the liver and intestines are plainly visible. Mantle reddish-brown dotted with black, finely papillate entire, free anterior to the pulmonary orifice, with a loose fold on the neck, covering the shell for 4 mm . anteriorly and for 2 mm . on either side ; posteriorly the shell is bare to the periphery. A few millemetres below the shell the mantle loses its papiliate aspect. hecomes thimer and about the periphery of the visceral mass merges into the thin membrane. The tail is furnished with a terminal mucous pore not cleft to the sole and apparently overhung by a horn, but the shrunken specimen did not permit this detail to be clearly observed. A pedal line runs from this pore to the lips Anterior to the pore the tail is (apparently) keeled, and then broadens into the usual saddle-like space. The tail and muzzle are reddish-brown, a black line runs from beneath the anterior angle of the mantle to the mucous pore and another along the pedal line. Of the shell I add a rough sketeh, but I leave the deseription to the abler pen of Mr. Brazier. So limp is the fringe of epidermis that I could not extract it untorn, and to expand it for drawing I had to float it out in water. Ifricarion ater, Austen (L. \& F. W. Moll. of India, pl. 57. fig. 4), possesses a similar fringe. The initial whorls were occupied by the testicle.

To my great regret 1 destroyed the jaw in dissecting it out, but succeeded in preserving it remarkable radula. This is longer than broad, somewhat cordate in outline, the rows nearly flat until on reaching a central crest they eurve to meet at an acute angle. The graceful rachidian rather resembles that of Duryella Whasich, as figured by Col. (fodwin-Austen; the basal plate is lidden by the reflection which arises in an oval, then contracts and again expanding presents a tricuspid cutting point. The laterals are much curved, armed with a round blunt point and a small proximal cusp, they retreat from the rachidian at an angle of 45 , and after a series of fifteen, pass through a few transition forms into the minute marginals. These liave a straight cusp, and are so contorted that the base of each is beneath the blade of its distal neighour. I estimated that the odontophore contained 145 rows, whose formula was 300.15 .1 .15 .300 , making
a total of over ninty thousand. The accompanying sketches show firstly the general disposition of the teeth upon the lingual ribbon, as viewed under a 2 -inch lens, then the structure of the individual teeth as demonstrated by $\frac{1}{8}$ th power.

Of the genitalia the penis sac is subcylindrical, performing a half revolution at its apex, from which is continued a narrow tube containing the spermatophore at its junction with the vas deferens, and terminating in a flagellum. The genital bladder is small, seated on a short duct which communicates with the vagina near the common oritice.

DESCRIPTION OF IERMICELLAI BERTIIOLDI.
By J. Douglas Oghby.

Vermicella bertholdi, Jen. Icon. gén. des Ophid.
Scales in fifteen rows ; abdominal plates 122 ; two anal plates; sub-caudal plates in two rows, $21 / 21$. Body stout, rounded, the tail very slightly compressed and short, about one-tenth of the total length, and terminating in a hont conical scale. Head small, not distinct from the trunk. Rostral shield large, obtusely angulated posteriorly, and conspicuously produced backwards on the upper surface of the head : nostril oval, pierced in the middle, of an acutely angulated cuneiform nasal: anterior frontals* quadrangular or pentagonal, rounded, or very obtusely angulated anteriorly; posterior frontals pentagonal, bent downwards on the side of the head, so as to form a suture with the nasal, thus replacing the loreal: vertical hexagonal much longer than broad, obtusely angular in front and acutely so behind: supra-ocular large, pentagonal : one anterior and two posterior oculars: occipital shields large, pentagonal or hexagonal, much broader in front than behind : three temporal shields, the first the largest, in contact with the two posterior oculars, and produced downwards so much as almost to divide the two last upper labials: six upper labials, the third and fourth entering the eye, the last the largest: six lower labials, the first elongate, forming a broad suture behind the triangular mental, the second small, the third and fourth the largest: two chin shields on each side: numerous scales between the chin shields and the first abdominal plate. Scales smooth. Colors-All the anterior and lateral head-shields cream color with or without hack freckles; occipital shields with

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## EXPLANATION OF PliATE XI.

Fig. 1. Parmella etherilgei, Brazier, x $3 \frac{1}{2}$ diam.
, 2. Shell of ditto, x 5.
,, $3 a$. Radula of ditto, x 8 .
., 3b. Rachidian and lateral teeth of radula, x 1000.
,. 3c. Marginal teeth of radula, x 100 .
,, 1. Genital system of ditto, x 6 .
fo., common mifice; prs., penis-sat; s, sermatuphore; f, flagellum; ul., vas deferens; g.b, , wenital bladder; $p^{\prime \prime}$, prostrate; oe, oviduct.



[^0]:    * In one specimen the anterior and posterior frontal on the right side are fused into one large shield.

