The chewing-apparatus might be said to consist of a great number of teeth of various sizes. The lowest ones, five in number, one above another, are very much larger than the rest; above these are two, side by side, about half the size of the preceding, which are the commencement of the two series which bound the cluster of minute teeth (tooth-papillæ) on either side; and they gradually diminish in size upward. The teeth or papillæ between these series are very small and arranged above in four vertical rows, then lower down in three and two series, and gradually diminish downwards within the mouth to a single papilla. The mouth-papillæ are very small indeed, short, cylindrical, and vary from three to five on each side of each of the five mouth-angles or tooth-columns. They are hardly distinguishable from the tooth-papillæ, as they are situated close together near the apex of the column.

EXPLANATION OF PLATE XV.

Fig. 1. Upper surface, of natural size.
Fig. 2. Lower surface.
Fig. 3. Part of underside of an arm, enlarged.
Fig. 4. Part of upperside.
Fig. 5. A Madreporic shield: *b*, *c*, two forms of oral shields.

XXVII.—*The* Vates Ashmolianus *of Westwood, the Type of a new Genus of* Mantidæ. By Prof. J. Wood-Mason.

Æthalochroa, gen. nov.

♂ ♀. Sexes alike. Body greatly elongated, linear. Head small, rather higher than broad; vertex of considerable antero-posterior extent, its lateral lobes produced into a conoidal boss behind each eye, the central division of its median lobe with a low transversely convex elevation (answering to the well-developed process seen in *Blepharis* and *Phyllocrania*) ending abruptly over the ocelli; eyes much as in *Blepharis mendica*, but not quite so forwardly projecting; ocelli slightly oval, conspicuous, prominent, mounted on short pillars, in the male distinctly differentiated into pupil and iris; facial shield broader than high, pentagonal, inclining to be trefoil-shaped, its upper margin slightly produced to a projecting point in the middle, with a faint ridge on each side near and parallel to the lateral margins; "chaperon" strongly transversely carinate. Antennæ short and setaceous. Prothorax greatly elon-

gated, strongly carinate or roof-shaped above, the two sides of the disk being almost plane and very steep, covered above and below and on the edges with minute sharp granules, slightly and gradually widening from the supracoxal dilatation, not only to its base but also to its apex, which is broadly rounded off; supracoxal dilatation large, rounded-angulate. Organs of flight well and equally developed in both sexes, but when closed hardly extending beyond the apex of the fourth segment of the abdomen; their marginal areæ subcoriaceous, opaque; their posterior areæ membranous and hyaline; tegmina with the basal third of the marginal area rather suddenly dilated and covered with dense, sharply defined, and prominent polygonal reticulation; the discoidal nervure of the wings simple. Legs short and stout: the anterior ones a little weaker than the rest; the coxæ triquetrous, with the posterior angle rounded off, and the anterior developed into a slight foliaceous lobe at the apex, as in *Danuria*; femur curved, its upper margin being concave, convex both on the inner and on the outer face, but especially on the latter, its lower margin spined along the apical three fourths (five spines set wide apart on the outer edge and on the inner), and angulated at about the junction of the basal and middle third of its length, the joint gradually increasing in depth, both from the apex and from the base, up to this point; tibia slender, slightly curved, faintly crested towards the apex along its upper margin, armed with eight or nine spines on the inner edge, the basal half of which is unarmed, and with five on the outer, the apical fifth only of which is armed; terminal claw acuminate, rather abruptly hooked: four posterior legs strongly cristate and furnished with foliaceous lobes; femora prismatic, the angles of the the prisms crested, three of the crests (the two lower ones and one of the upper ones) developed into a foliaceous lobe close to the apex, the lateral knee-lobes short and stout, but sharply pointed; tibiæ triquetrous, the angles strongly crested, especially the upper one, which is developed into a foliaceous lobe along its basal half; femora equal in length to the tibiæ in all four posterior legs. Abdomen linear; the ventral segments all with a short sharp carina, ending in a sharp point at the middle of their hinder margins, and with their surface symmetrically wrinkled, the terminal one extending by about a third of its length beyond the supraanal plate; dorsal segments with a raised median line, which is produced to a point at the hinder end of each, and increases in strength to the extremity of the abdomen; supraanal plate short, twice as broad as long, rounded at the extremity. Cerci broadly foliaceous, truncate at the apex.

Æthalochroa Ashmoliana, Westwood.

Vates Ashmolianus, Westwood, Ann. & Mag. Nat. Hist. vol. viii. p. 272 ; Arcana Entomol. 1843, vol. ii. p. 52 (note †).

"Fuscus, capitis vertice rotundato, antennis gracillimis, prothorace longissimo (long. unc. $1\frac{2}{3}$) angusto, lateribus serrulatis ; tegminibus et alis abdomen haud tegentibus, illis pallidis griseo et fusco parum variis nubecula fusca basin versus, venisque nigro strigatis ; alis hyalinis, costa maculisque nubeculaque basin versus brunneis ; cercis analibus latis foliaceis ; pedibus 4 posticis brevibus, femoribus fere ad apicem 3-foliatis tibiisque ante medium supra parum foliatis. Long. corporis unc. $4\frac{1}{3}$. Habitat in India orientali."

The following are the measurements of a dried specimen of the male and of a female preserved in alcohol :—

Total length, ♂ 100, ♀ 115 millims. ; length of prothorax ♂ 33, ♀ 40—of which the neck is respectively, ♂ 7·6 and ♀ 9·5 ; width of prothorax at supracoxal dilatation, ♂ 4·5, ♀ 5·6—at hinder extremity, ♂ 3·6, ♀ 4·5 ; length of abdomen, ♂ 46, ♀ 52 ; width of abdomen at middle, ♂ 3·5, ♀ 5 ; length of tegmina, ♂ 45, ♀ 55 ; width of tegmina across middle, ♂ 9, ♀ 11 ; length of wings, ♂ 42, ♀ 52 ; of fore coxa, ♂ 15, ♀ 16·5 ; of femur, ♂ 16·5, ♀ 19·75 ; of tibia (from base to insertion of tarsus), ♂ 12, ♀ 15 ; of immediate femur, ♂ 12·5, ♀ 15·5 ; of tibia, ♂ 12·5, ♀ 15·5 ; of posterior femur, ♂ 15, ♀ 19 ; of tibia, ♂ 15, ♀ 19 ; of antennæ, ♂ 23, ♀ 18 ; of cerci, ♂ 7·5, ♀ 8·5 ; width of cerci, ♂ 2, ♀ 2·6.

Hab. I am indebted for the female of this fine and remarkable insect to my friend Dr. T. R. Lewis, who captured it in the garden attached to the General Hospital in Calcutta ; for the male to Mr. C. V. Marshall, by whom it was taken at Berhampur, near Murshidabád, in Lower Bengal.

XXVIII.—*Hermaphroditism in the Parasitic Isopoda. Further Remarks on Mr. Bullar's Papers on the above subject.*

By H. N. Moseley, Fellow of Exeter College, Oxford.

Mr. Bullar does not appear to strengthen his position materially in his reply to my remarks on his paper on the "Generative Organs of the Parasitic Isopoda" (Journ. of Anat. and Physiol., Oct. 1876, p. 118), in the March number of this Journal.

There seems to be no proof that the small masses of tissue figured by Mr. Bullar as testes are in reality organs of such