

THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

[FOURTH SERIES.]

No. 108. DECEMBER 1876.

XLIV.—*Description of a new Species of Mantidæ with Pointed Eyes.* By Prof. JAMES WOOD-MASON.

THE curious little insect described below presents the rare combination of foliaceous *cerci anales* and pointed eyes. Numerous species have been described wherein the eyes are armed with a spine or produced to a point, on which the faceted corneal membrane fails to be developed. *Hymenopus bicornis*, Serv., *Schizocephala bicornis*, Linn., *Heterochæta tenuipes*, Westw., *Toxodera denticulata*, Serv., *Oxythespis senegalensis*, *O. turcomaniæ*, and *O. granulata*, Sauss., &c., all have the eyes thus fashioned. But in three only of these, viz. in *Toxodera denticulata*, *Oxythespis turcomaniæ*, and *Heterochæta tenuipes*, do we also meet with foliaceous anal appendages.

With the first two of these it has very little besides in common; but it so closely resembles the last in the relative proportions of the different parts of the body, in the structure and texture, and even in the style of coloration of the organs of flight, and in its very short supraanal plate, that I can refer it to the same genus with some degree of confidence—a course which is, I think, much to be preferred to making for it a new generic name while we are in ignorance of the structural details of the head in Westwood's species. The new species in this respect closely approaches the interesting form recently described by M. de Saussure under the name of *Compsiothespis anomala*.

Heterochæta tricolor, sp. nov.

♀. Body slender and filiform. Head pentagonal, much as in *Compsiothespis anomala*, except that it is a little broader than

high, that the vertex is hardly so elevated, and that the eyes are more produced laterally and are armed with a conspicuous bluntish spine; vertex divided by four slight impressions into three lobes, the two median ones of which impressions pass down on to the front round the elevation that carries the ocelli to the bases of the antennæ; "chaperon" scarcely twice as broad as long, transversely carinate, with its sides slightly convergent below, and with its upper and lower margins almost straight, divided off from the upper part of the face by a well-marked groove; the facial shield, or the part of the face intervening between the "chaperon" on the one hand and the ocelli and the bases of the antennæ on the other, is marked with two shallow pits placed symmetrically one on each side of the middle line, is deeply emarginate at its upper angles for the insertion of the capillary antennæ, and has its lower angles produced downwards, so that its inferior margin is concave.

Prothorax shaped just as in *Heterochaeta tenuipes*, long and slender, fully as wide at its hinder extremity as it is at the setting-on of the fore legs, with its lateral margins very minutely denticulate, especially in front, with scattered minute granules and a sharp, fine, longitudinal raised line on its disk; its supracoxal dilatation feeble, rounded at the sides.

Organs of flight tolerably well developed, extending a little beyond the third abdominal segment. Tegmina narrow, of uniform width, narrowly rounded at the extremity, pale luteous, semiopaque; basal half of the anterior margin gently arcuate. Wings tricolorous, being coloured red, yellow, and brown with amethystine reflections; subhyaline, their anterior margin pale luteous; the discoidal nervure simple, the membranous spaces on either side of it each with a longitudinal row of minute brown blotches on a pure sulphur-yellow ground; posterior area pale rose-red at the base, then brown, and finally barred with concentric alternate bands of bright sulphur-yellow and brown, the yellow bands being by far the broader, and all becoming gradually narrower and less distinct towards the posterior margin, and all being everywhere broken up into blotches occupying only the membranous interspaces between the nervures.

First pair of legs tolerably long and slender; the coxæ unarmed, their three strong crests being only a little scabrous, about half the length of the prothorax, uniform in width, straight; femora rather longer, shaped like those of *H. tenuipes*; tibiæ straight, armed on the inner edge with fourteen spines, with nine on the outer edge, the base of which is unarmed, exclusive in both cases of the relatively enormous and very strongly curved terminal claw.

There is nothing remarkable about the rest of the legs, except that they are slightly scabrous.

Abdomen slender, filiform, wider than the prothorax; the supraanal plate short, transverse, fully twice as broad as long, truncate-rounded at the free end; terminal cleft portion of the infragenital plate strongly and suddenly compressed, and projecting wholly beyond the abdomen, but hardly reaching the extremities of the *cerci*; these are oval, broadly foliaceous, scarcely thrice as long as broad, indistinctly articulated at the base, where they are formed of a number of very short joints all ankylosed together, but showing three tolerably distinct large apical joints, the terminal one of which is obliquely truncate, so that the upper margin of the appendage appears strongly convex, while the lower is almost straight.

Colour of the living insect, with the wings closed, pale luteous grey; the tegmina slightly yellower than the body.

Male unknown.

Total length 50 millims.; length of prothorax $14\frac{1}{2}$, of which the neck is $4\frac{1}{2}$, width of prothorax at supracoxal dilatation 2; length of abdomen 26, width of abdomen $2\frac{2}{3}$; length of tegmina $23\frac{1}{2}$, width of tegmina 5; length of wings $22\frac{1}{2}$, of fore coxa $7\frac{1}{2}$, of fore femur 9.

Hab. A single specimen of this beautiful little insect was captured by my wife on a dinner-table in Calcutta. It flew in at the window, attracted by the bright lights. Westwood's *H. tenuipes* is said to have come from Senegal.

XLV.—On some new and little-known Amphipodous Crustacea.

By the Rev. T. R. R. STEBBING, M.A.

[Plates XIX. & XX.]

Amphilochnus concinna, n. sp. Pl. XIX. figs. 1, 1 a, 1 b.

Amphilochnus concinna was dredged in or near Torbay in April 1876.

The antennæ are subequal in length; the superior the more robust, with the first joint longer than the other two and the flagellum as long as the peduncle; several articulations of the flagellum are furnished with long hairs. In the lower antennæ the penultimate joint is the longest; the flagellum has only three articulations, together equalling in length the last joint of the peduncle. The head has a depressed rostrum; each side also is produced into a sharp point between the upper and