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FOUR NEW PTEROPHORIDÆ.

BY T. BAINBRIGGE FLETCHER, R.N., F.E.S., F.Z.S.

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THE following descriptions of new Pterophoridæ were drawn up two years ago whilst working through the National Collection of Plume-moths, and, as I have already had occasion to refer to one species under its manuscript name (Trans. Ent. Soc. 1910, p. 141), and since the types are standing in the British Museum Collection under the names then given to them, it seems desirable to publish the descriptions.

The first three species have been placed more or less provisionally in the genus *Oxyptilus*, Z., but there is no doubt that this genus contains at present a very heterogeneous collection of exotic species, and that it will require subdivision in the near future. In the meantime, and until we have a larger knowledge of exotic forms, it seems premature to attempt to break it up, more especially as the number of species contained in it is at present moderate (about thirty).

The fourth species belongs to Walker's genus *Sochchora*, which Mr. Meyrick has regarded (Trans. Ent. Soc. 1907, p. 482) as a synonym of *Platyptilia*, Hb., a view in which I am unable to concur, as *Sochchora*, Wlk., appears to me to be quite a distinct genus, more nearly allied to *Oxyptilus* than to *Platyptilia*.

Oxyptilus erythroductylus, n. s.

♂. Exp. 15.5 mm. Palpi porrect, rather long; second joint longer than the diameter of eye, rather roughly scaled, slightly expanded apically with a few minute spinous hairs; terminal joint about two-thirds length of second, filiform, acuminate, smoothly scaled, fuscous; third joint and centre of second joint darker. Antennæ dark fuscous lined with whitish. Head fuscous, a slight ridge of scales between bases of antennæ. Thorax fuscous irrorated with blackish. Abdomen fuscous, slightly tinged with reddish-brown, with a slight admixture of whitish scales and considerable admixture of blackish; anal tuft light brown. Fore leg fuscous, irrorated externally with blackish, and narrowly lined on femur and

tibia with white. Mid legs and hind legs wanting. Fore wing cleft to about one-half, segments moderately broad; first segment without posterior angle, apex pointed and slightly falcate; second segment as broad at base as first, slightly expanded posteriorly, tornus well marked, termen oblique and concave, anterior angle produced. Reddish chocolate-brown; a few scattered whitish scales along costa from base to just beyond one-half, a few black scales form an indistinct inwardly oblique subcostal bar bordering base of cleft, discal area narrowly suffused between about one-half and one-fourth with whitish-ochreous, giving the appearance of a narrow paler ill-defined streak running inwards from base of cleft to base of wing; first segment at one-third of its length with an ill-defined but rather conspicuous inwardly oblique whitish-ochreous bar extending across segment from costa to hinder margin, and very indistinctly produced inwards along hinder margin to base of cleft, at two-thirds of its length with an indistinct narrow outwardly curved transverse whitish-ochreous bar, the area between these two bars slightly irrorated with blackish; second segment with an indistinct transverse whitish-ochreous bar before one-half of its length. Cilia and costa chocolate-brown, darker exteriorly, lighter opposite bars; on hinder margin of first segment light fuscous, with a few blackish scales especially evident at about one-half, and a slight black scale-tuft at about five-sixths length of segment; on fore margin of second segment fuscous with a few scattered black scales, at anterior angle blackish, on termen fuscous, rather lighter basally (of cilia); on dorsum fuscous, with a few scattered black scales and slight black scale-teeth at two-thirds, five-sixths, and tornus, cilia between the latter scale-teeth blackish. Hind wing cleft from about one-third and from near base; segments linear; dark chocolate-brown. Cilia fuscous; fore margin of third segment occupied on outer third with short closely-crowded black scales, preceded by a few pale scales, area between these latter and base of segment with a few scattered black scales; dorsum with a minute apical scale-tooth, a small triangular black scale-tooth at about three-fourths, and a few scattered black scales between this and base.

One specimen. TRANSVAAL (A. J. Cholmley), 1906/265. The register states that these specimens are from "Transvaal and British East Africa."

This specimen may possibly be a *Tetraschalis* (I have not been able to examine the neurulation), but is apparently undescribed.

Oxyptilus stenodactylus, n. s.

♂. Exp. 20 mm. Antennæ long, porrect, extending length of head beyond it, smoothly scaled, fuscous, dark fuscous beneath; second joint about as long as diameter of eye, slightly enlarged apically; third joint as long as second, cylindrical, blunt at apex. Antennæ finely ciliated, dark fuscous, minutely sprinkled with whitish. Head fuscous, greyish on vertex. Thorax fuscous, sprinkled with blackish posteriorly, greyish on patagia. Abdomen whitish at base, posteriorly reddish brown mixed with whitish, and irrorated with blackish, the black scales forming longitudinal black shades and

streaks, especially laterally; anal tuft short, fuscous. Fore and mid legs broken. Hind leg reddish brown; tibia white on basal third, slightly dilated at two-thirds and apex with scale-tufts, which each emit a pair of moderate whitish black-tipped spurs, of which the inner are the longer, tibia transversely banded with white at one-half and three-fourths; tarsi dark reddish-brown, joints banded basally with white, bands broadest on first and fourth joints. Fore wing cleft to a little beyond one-half, segments narrow; first segment with subfalcate apex and no posterior angle; second segment very slightly dilated posteriorly, tornus almost obsolete, termen oblique. Colour light reddish-brown; a longitudinal greyish discal shade from base of wing to one-fourth, and prolonged less conspicuously into first segment, a minute black subbasal costal dot, a small black discal dot at one-fourth, dorsal area suffused with blackish fuscous from base to one-fourth; first segment with indications (especially evident on costa) of darker inwardly oblique transverse bars before and beyond one-half, the areas following these spaces lighter, and a few scattered blackish scales; second segment slightly suffused with blackish. Cilia on costa dark fuscous mixed with whitish, before and beyond three-fourths narrowly dark brown, followed by narrow patches of ochreous-whitish, black at and before apex; on hinder margin of first segment dark fuscous, blackish subterminally; on fore margin of second segment dark fuscous, with a few scattered black scales, blackish preterminally; on dorsum dark fuscous, cut with narrow streaks of ochreous-fuscous; on termen with a moderate black scale-tooth beneath anterior angle. Hind wing cleft from about one-third and from near base; segments linear; dark fuscous. Cilia dark fuscous; on dorsum with a large broad black scale-tooth at two-thirds, a small black apical scale-tooth, remainder of dorsum thickly strewn with scattered large black scales.

One specimen labelled "MASHONALAND: H. B. Dobbie: 1903/174." The register gives these specimens as from Mashonaland and Beira.

The very narrow segments of the wings, combined with the long palpi, seem to separate this from *Oxyptilus*. It may possibly be a *Tetraschalis*, but wants the apical scale-teeth on segments of hind wing usually characteristic of species of that genus. As I am unable to examine the neuration, I will not erect a new genus for this species, although such will probably be required.

(To be continued.)

NOTES ON ODONATA OBSERVED IN GREAT BRITAIN DURING THE SUMMERS OF 1909 AND 1910.

BY E. R. SPEYER, F.E.S.

AFTER last year's success in dragonfly collecting the expected reaction took place this summer, but not to such a degree as had

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Oxyptilus wallacei, n. s.

♀ ? . Exp. 15 mm. Palpi upturned, long, thin, acuminate, sickle-shaped, projecting length of head beyond it, second joint much longer than diameter of eye, third slightly shorter than second; dark reddish-brown, whitish at joints and beneath. Antennæ dark ferruginous, spotted with white. Head dark ferruginous; a few erect scales on back of vertex. Thorax ferruginous-yellow, black anteriorly and posteriorly. Abdomen long, stout, bright golden orange; some whitish-ochreous suffusion on sides at base, third segment with a transverse apical black bar across dorsal area, sixth segment blackish apically, seventh and succeeding segments blackish; a pair of long, narrow, parallel ochreous-brown anal hair-pencils. Legs bright golden orange; posterior tibia slightly dilated, with short blackish spines at one-half and apex, and emitting pairs of long blackish spurs, of which the inner are the longer; posterior tarsi lined above with black, except in middle of first tarsal joint. Fore wing rather broad, cleft from beyond two-thirds (within three-quarters), both segments slightly dilated posteriorly; first segment subparallel-sided, both angles well-marked, termen slightly oblique; second segment as broad basally as first, slightly dilated posteriorly, tornus well-marked, termen oblique, concave, anterior angle rather produced. Colour black; costa dotted with white on its middle third; patches of bright ferruginous-orange as follows: (i) a few small ill-defined basal patches; (ii) an elongate discal patch between about one-fourth and one-half, enclosing a small black spot, not reaching costa, and only reaching dorsum at base of patch; (iii) an inwardly oblique bar from costa at three-fourths, extending over basal half of first segment, around base of cleft, and into basal half of second segment, becoming obsolete towards dorsum; first segment crossed at two-thirds of its length by a narrow white inwardly oblique line parallel to termen, and with a few white dots on hinder margin on basal half of segment; second segment cut beyond one-half of its length by a narrow white inwardly oblique line. Cilia on costa black, except opposite outer orange patch and transverse line, where they are ochreous-whitish, on termen of first segment whitish, black around both angles, within cleft whitish on basal three-fifths, black on terminal two-fifths of segments, on termen of second segment whitish, black at base, very narrowly so in centre of termen, broadly so around angles, on dorsum whitish, with small black scale-teeth at beyond one-half, about two-thirds (rather within a line drawn from base of cleft), and five-sixths (exactly below transverse white line), blackish, and gradually decreasing in length between last scale-tooth and tornus. Hind wing cleft from about two-fifths and from near base, segments linear, third segment about one-half length of first; bright golden orange, first two segments blackish beyond one-fourth.

Cilia yellowish-grey, blackish-fuscous on outer half of first two segments; third segment with a small apical scale-tooth, composed of black scales, short and of uniform length on fore margin, longer basally on dorsum, and decreasing in length to tornus.

One specimen. ARU (Wallace), *ex* Stainton Collection.

In the general appearance of its fore wings this species appears to be a *Platyptilia*, but the long sickle-shaped palpi, ornamented abdomen, and linear-segmented hind wing, with a scale-tooth on fore margin of third segment, seem to bring it within the genus *Oxyptilus* as at present understood. There is no doubt that, in the near future, this and other species will have to be removed from the genus *Oxyptilus*, but until further material for study is accumulated it seems to me that no good purpose will be served in attempting to differentiate new genera.

O. wallacei will probably form the type of a new genus, which (though I cannot examine the neuration) will be somewhere intermediate between *Oxyptilus* and *Sochchora*.

Sochchora albipunctella, n. s.

♂. Exp. 15 mm. Labial palpi long, very slender, erect, smoothly scaled; second joint curved, ferruginous-brown; third joint acuminate, about two-thirds length of second, ferruginous-brown, paler at base; third joint equals diameter of eye. Antennæ ciliated, blackish-ferruginous, dotted with whitish above. Head bright ferruginous; top of crown with some erected scales. Thorax bright ferruginous, ferruginous-golden on patagia and posteriorly. Abdomen large and stout; bright ferruginous-golden, dorsal region mixed with whitish anteriorly, posteriorly ferruginous; anal tuft dark ferruginous; venter whitish. Fore leg ferruginous-golden, tibia dilated with scales at apex, last two tarsal joints blackish. Mid leg ferruginous-golden, tibia with apical tuft emitting a pair of long spurs; tarsal joints whitish, last two blackish. Hind legs broken. Fore wing rather broad, cleft from within three-fourths, segments broad, apex slightly flaccate, termen on first segment concave, on second undulate; bright ferruginous-brown; base indistinctly marked with yellowish, an ochreous dorsal dot at one-fourth, an ochreous subcostal elongate spot at one-fourth, followed by an ochreous subcostal longitudinal streak, a transverse black streak opposite base of cleft at two-thirds, preceded and followed by pale ochreous suffusion continued obliquely downwards to dorsum, where it becomes whitish; first segment with an inwardly-curved whitish-ochreous line near base from costa to near hinder margin, area between this line and discal black streak irregularly suffused with pale ochreous, at two-thirds length of first segment a transverse incurved whitish-ochreous line; second segment cut at two-thirds by an inwardly-oblique whitish-ochreous line interrupted in centre. Cilia on costa blackish, with four short whitish-ochreous streaks on first segment, at apex blackish; on termen whitish-grey, black at base; within cleft whitish-grey; on dorsum whitish-grey, with slight blackish wisp at three-fifths, a narrow black wisp at four-fifths, area beyond this tinged with ochreous. Hind

wing cleft from about three-fifths and one-fourth; first segment narrowly expanded posteriorly, sharply cut off terminally; second segment short, with distinct tornal angle, termen oblique, subconcave; third segment linear; pale ferruginous, first two segments blackish beyond two-thirds of wing, first segment conspicuously pure white on outer third of segment, third segment irrorated with blackish on outer third of its length. Cilia on costa blackish, on termen white, within first cleft blackish, mixed with white near base of cleft, on hinder margin of second segment greyish-white, on third segment pale ferruginous; on hinder margin of second segment blackish tufts at two-thirds (length of hinder margin of segment) and hinder angle; on third segment a small blackish apical scale-tuft on both margins, and a few blackish scales on dorsum beneath base of second cleft.

Hab. EGA (Bates). Type in British Museum Collection.

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ON SOME RECENT ATTEMPTS TO CLASSIFY THE COLEOPTERA IN ACCORDANCE WITH THEIR PHYLOGENY.

BY C. J. GAHAN, M.A.

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(Continued from p. 314.)

At no point, perhaps, does the classification of the Coleoptera present greater difficulties than in the attempt to determine the true relationships between the various families that enter into the group Diversicornia. One of the difficulties arises no doubt from the fact that some of these families have not received their due share of attention, and that less is known about them and their life-histories than there is about many less interesting families belonging to more attractive groups. Conclusions that may be drawn from a study of the external morphology of the imagines alone are sometimes apt to be upset, or at least not completely borne out by a study of the corresponding larval forms. Certainly it is sometimes very surprising to see what great differences there are between the larvæ of certain families which otherwise would be considered to be very nearly related. And these differences are nowhere more marked than in the case of some of the families placed in the group Diversicornia. For this and for other reasons one is inclined to suspect that it is not a monophyletic group, but must have evolved from common ancestors in more than one direction, and ought therefore to be capable of being split up into two or more well-marked groups. But while admitting this, I confess to finding serious difficulties in accepting the groups proposed