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[Plates xxxvi-l.]

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NOTES ON AUSTRALIAN DIPTERA. No. vii.

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(Communicated by Dr. E. W. Ferguson.)

(Twenty-three Text-figures.)

[Read 30th September, 1925.]

In this paper I present notes on some previously described species and descriptions of some others that appear to be new to science. With the exception of one species which belongs to the British Museum, all the types will be sent to Dr. E. W. Ferguson, from whom most of them were received for identification.

Family Sepsidae.

The members of this family have a characteristic ant-like appearance that readily distinguishes them from most of their allies. Hendel's most recent papers dealing with the acalyptrate Diptera give prominence to the presence or absence, divergence or convergence, of the postvertical pair of bristles as characters for the separation of the families. While one must admit that these bristles are quite important as criteria in grouping the insects, a careful scrutiny of the families discloses the fact that, just as is the case with other characters, there are some departures from the general rule here. Hendel ascribes to Sepsidae divergent postvertical bristles, but in one of his papers he parenthetically refers *Eurychoromyia* Hendel to the family, despite the fact that it lacks these bristles. I rather incline to doubt the propriety of assigning this genus here, but have not seen it, so cannot give a definite opinion on the point. However, there is one undoubted sepsid amongst the Australian material before me, which lacks the postverticals, and for which I herein propose a new genus. The preapical tibial bristle is stated to be absent by Hendel, but I am confident that in some species it is present, though small and weak, as I can detect a setula or short bristle in practically the normal position in these.

Strictly speaking the family is distinguished from its nearest allies by the distinct auxiliary vein, which is complete and well separated from the first vein; the presence of vibrissae; bare, or almost bare, arista; absence of presutural dorsocentral bristles; presence of one or more long setulose hairs on lower margin of metathoracic spiracle; incomplete sixth wing vein; lack of pteropleural and sternopleural bristles; and the vestigial palpi. The postvertical bristles are absent or present; when present they are divergent; orbit with, at most, one distinct bristle.

In 1906 de Meijere published a revision of the Indo-Australian species of *Sepsis* in which he recorded two species from Australia (*Ann. Mus. Nat. Hungar.*, vol. 4, p. 165). I have both of these species before me, as well as one he described from Singapore, but did not record from Australia, and in addition have three related forms as yet undescribed, for two of the latter having to propose new genera in this paper.

DOHRNIPHORA NIGRITA, n. sp. Text-figure 19.

Male.—Shining black. Antennae except apex of third segment, the palpi, and proboscis, fulvous-yellow. Abdomen opaque-black, the apices of tergites narrowly clay-coloured. Legs obscure tawny-yellow. Wings greyish hyaline, slightly infuscated on apical half of costal margin. Halteres yellow.

Frons wider than long, the setigerous punctures sparse in centre, postantennal bristles strong and divergent, the frontal bristles as in previous species; head otherwise as in that species. Thorax differing from last in having about four bristles on lower margin of propleura, and the median pair of scutellar bristles longest. Hypopygium large, with a few long fine lateral bristles. Fore tibia as in *setitibia*; mid tibia without the short anterodorsal setulae; hind tibia with but one subbasal short bristle, and with many series of diagonal laminate setulae on the flattened dorsal stripe. Wing as in Figure 19.

Length, 3.5 mm.

Type, Sydney, N.S.W., 28.10.23.

DOHRNIPHORA ATRATULA, n. sp. Text-figure 20.

Male.—Black, shining. Antennae fuscous, palpi yellow. Abdomen with very faint pale hind margins to tergites. Legs fuscous, more yellowish on fore coxae and tibiae and tarsi. Wings greyish hyaline. Halteres yellow.

Frons subquadrate, slightly, evenly convex, almost impunctate, and sparsely haired, bristles as in previous species, but the upper series practically straight, head otherwise much as in *nigrita*. Thorax with two bristles on lower margin of propleura, the scutellum with a strong bristle on each side, and basad of each of these a weak short hair. Fore tibia with two or three short anterodorsal bristles; hind tibia without a flattened dorsal stripe; these characters link the species with *mordax* Brues, described from Formosa, to which it is closely allied, but it differs very strikingly in colour from that species. Wing as in Figure 20.

Length, 1.75 mm.

Type, Sydney, N.S.W., 8.1.23.

DOHRNIPHORA NIGROSCUTELLATA, n. sp.

Male and female.—Fulvous-yellow, shining. Head black, antennae, face, palpi, and sides of mouth, yellow. Scutellum subopaque-black, the dark colour at times suffusing hind part of mesonotum and postnotum. Abdomen in male with paired black dorsal spots, which sometimes unite centrally leaving only the hind margins of the tergites yellow or testaceous; hypopygium black, apex of apical process yellow; in female the basal two or three tergites are fulvous-yellow, the remainder opaque-black, the black part without distinct chitinous plates on dorsum. Legs yellow, hind femora sometimes dark at apices posteriorly. Wings yellowish, their apices more or less infuscated.

Head similar to that of *nigrita*; the clypeus of female produced, and proboscis of same sex chitinous and elongated as is usual in females of this genus. Other characters much as in *nigrita*.

Length, 2.5-3.5 mm.

Type, male, allotype, 3 male and 1 female paratypes, Sydney, N.S.W.

Family Drosophilidae.

LEUCOPHENGIA FLAVOHALTERATA, n. sp.

Male.—Head testaceous-yellow, ocellar spot, upper half of frontal orbits, occiput except its lower third, and palpi, fuscous; frons reddish-brown posteriorly. Thoracic dorsum reddish-brown, darker behind; pleura stramineous; scutellum

fuscous, the apex narrowly yellow margined; postnotum fuscous. Abdomen shining black, base of first complete tergite yellow, that of second with a large transverse yellow spot on each side of anterior margin, broad at lateral curvature, not extending to lateral margins, and almost obsolete, or connected by a mere line, centrally; fifth tergite with a yellow central mark. Legs stramineous, knees of mid and hind pairs inconspicuously brownish. Wings brownish hyaline, costa quite obviously brown, most distinctly so at apex of first vein and along costa for some distance before apex of second vein. Halteres pale yellow.

Frons about one-third of the head width, narrower anteriorly; palpi not widened; facial carina subobsolete. Thorax normal. Wing normal.

Length, 2.5 mm.

Type, Cronulla, N.S.W., December, 1924; paratype, Waterfall, N.S.W., January, 1925 (H. Petersen).

This is the only Australian species known to me in which the wings are marked and the halteres unicoloured yellow.

Family Agromyzidae.

Subfamily OCHTHIPHILINAE.

PSEUDOLEUCOPIS FASCIVENTRIS, n. sp. Text-figure 21.

Male.—Black, densely whitish-grey pruinulent. Antennae and palpi black; frons entirely pruinulent. Thorax not vittate. Abdomen with a broad deep black fascia on basal half of each tergite which does not extend over the lateral curve, these fasciae very conspicuous when the abdomen is viewed from directly above, and from in front they appear greyish-brown and but little darker than the grey portions of tergites. Legs black, basal segment of fore tarsi and basal two segments of mid and hind tarsi yellow. Wings hyaline. Halteres yellow.

In structure and chaetotaxy similar to the two known species of the genus, but the third antennal segment is quite sharply angulate on upper apical extremity, and evenly rounded below.

Length, 2.5 mm.

Type and two paratypes, Waterfall, N.S.W., January, 1925 (H. Petersen).

A slightly larger male from Cronulla, N.S.W., taken in December, 1924, by the same collector, has the abdominal fasciae continued over the lateral curves of tergites to, or almost to, the extreme lateral margins of tergites. In other respects it agrees very well with the type, though it may represent a distinct species.

Both the previously described species have the abdomen shining-black, with only faint brownish dusting when seen from behind.

The subfamily Ochthiphilinae is very similar to Sapromyzidae, but in no species of the former are there distinct preapical tibial bristles, the arista is never plumose, and the mesopleura is normally bare.

Family Chloropidae.

Subfamily BOTANOBIINAE.

Genus *BATRACHOMYIA* Skuse.

Generic characters.—Differs from the other Australian genera in the sub-family in having the mesopleura with numerous long soft hairs on upper posterior part.

Two new species of this genus are in the material before me from Australia, and I have beside me two others from Tasmania. The species are very much the same in structure, but differ markedly in colour. I give below a diagnosis of the characters for distinguishing the new species from Australia.