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NOTES ON AUSTRALIAN DIPTERA, No. vi.

By J. R. MALLOCH.

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

(Twelve Text-figures.)

[Read 27th May, 1925.]

In this paper I present some notes on and descriptions of Australian acalyptrate Diptera. As in the case of material dealt with in preceding papers on these insects, the types will be returned to Dr. Eustace W. Ferguson to deposit in some Australian museum where they may be available to subsequent workers.

Family Sciomyzidae.

This family is very closely allied to the Sapromyzidae and much more difficult to distinguish from it than one would expect if he judged relationships by existing catalogues and books on classification. The European fauna contains, for the most part, species which are readily assigned to one or other of these families by the use of characters listed for that purpose by Schiner and the earlier authors. But when one has before him species from all over the world, it is a much more difficult matter to separate the families. General habitus is a good index in Europe, but this fails in the Orient and Australasia. In fact the comparative size of the basal and anal cells of the wings, small in Sapromyzidae and large in Sciomyzidae, is of no value in many cases, and new characters must be discovered if we are to maintain both families. That the families ought to be kept separate is my personal opinion, based upon a knowledge of the habits and habitats of the adults. So far as I have seen, the larvae of the Sciomyzidae are found in water, and in some cases in molluscs as parasites, and the adults in marshy situations almost exclusively. On the other hand I have found no aquatic nor semiaquatic larvae of Sapromyzidae, and the adults are not found in marshy spots, but in woodlands.

It is possible that my attitude in the matter of separating these families is influenced by these biological factors, but in any case I have decided that until more data are available the families ought to remain separate. With this end in view, I have examined carefully the structural details of the species before me and find that they differ in the extent of the sixth wing vein more noticeably than in any other obvious character. This vein in Sciomyzidae is traceable to the margin while in Sapromyzidae it is not. Ordinarily the prosternal plate in the former is small, while in the latter it almost fills the space between the fore coxae. The mesopleura in Sapromyzidae usually has a strong bristle on its hind margin which is rarely present in Sciomyzidae. Both families lack vibrissae, have the auxiliary vein of wing complete and distinctly separated from first on its entire length, the discal and basal cells separated by a cross-vein, the

quent collecting would disclose the presence of other genera than the one I then had from this continent. I now present the description of a new species of *Canace* recently received from Dr. Ferguson. The dark facial stripe appears distinctive, though the structure of the head is also characteristic.

CANACE ALBICEPS, n. sp.

♀.—Frons opaque, olive brown, the orbits greyish anteriorly; face densely white pruinulent, with a narrow dark vertical stripe, cheeks silvery white; clypeus whitish grey; palpi tawny-yellow; antennae black. Dorsum of thorax olive-brown, with very faint brown vittae, the most obvious one in centre; pleura grey. Abdomen dark greyish on dorsum, paler below. Legs greyish fuscous, extreme apices of femora, bases and apices of tibiae, and most of tarsi yellowish. Wings slightly greyish, veins fuscous. Halteres pale yellow.

Eye about 1.75 times as long as high, narrowest part of cheek (at anterior margin of eye) about as high as eye; a long upcurved bristle on cheek below middle of eye and three along its lower margin on anterior half, the hindmost one upcurved; each orbit with four long bristles directed over eye; about four pairs of incurved interfrontal bristles present; ocellar bristles long, divergent, in line with anterior ocellus; postverticals divergent, small; centre of lower margin of face slightly angularly produced, not transverse. Thorax with four pairs of dorso-central bristles, the acrostichals sparse, paired; scutellum with two long apical, and two shorter basal bristles, and two discal setulae; pleura too much damaged to determine characters in type, but the sternopleura has no strong bristles. First visible abdominal tergite elongate; genital thorns two in number. Fore femur without anteroventral comb of bristles; fore tarsus dilated apically, basal segment longer than next three combined, each of latter broader than long, neither of them as long as fifth, the claws long and curved. Last section of fifth vein subequal in length to penultimate section of fourth; veins 3 and 4 parallel apically; penultimate and ultimate sections of costa subequal.

Length, 2 mm.

Type, Sydney, 10.9.21.

Family Drosophilidae.

DROSOPHILA POECILITHORAX, n. sp.

♀.—Head fuscous, frontal orbits, triangle, face and cheeks densely grey pruinulent, palest on frons, anterior half of frons pale orange yellow, posterior half of interfrontalia brownish-red; second antennal segment brownish, third black, mouth-parts fuscous; a faintly indicated dark spot surrounding bases of orbital bristles. Thorax black, densely bluish-grey pruinulent on dorsum and with rather large dark brown dots at bases of hairs and bristles; humeri and scutellum concolorous with disc, the scutellum with a curved dark brown streak on each side of median line extending the entire length. Abdomen shining fuscous, without distinct markings in type. Legs fuscous yellow, darkest on middle of femora. Wings clear.

Facial keel rounded, becoming broad and disappearing before reaching mouth; labrum quite prominent; cheek fully one-third of the eye height, slightly produced at vibrissal angle, with a series of marginal bristles; arista with three hairs above and one below; anterior two orbital bristles at almost same point; postvertical bristles long. Only two series of acrostichal setulae between dorsocentrals, the prescutellar pair quite pronounced; basal pair of scutellar bristles much smaller

than apical pair. Legs normal. Second costal division twice as long as first and but little longer than third, the latter fully three times as long as fourth; penultimate section of fourth vein not more than one-third as long as ultimate and nearly as long as ultimate section of fifth; outer cross-vein not more than one-third as long as apical section of fifth vein.

Length, 1.25 mm.

Type, Sydney, 26.2.24.

This species belongs to the same section as *obsoleta* Malloch, *repleta* Wollaston, and *hydei* Sturtevant. It differs from the first-named species in having a distinct facial keel, only two series of intradorsocentral setulae, and entirely different wing venation. From the other two species it differs in its smaller size, less robust form, unspotted abdomen, venation of wing, and several other respects.

Dr. Ferguson has suggested to me that *australis* Duda is probably the same as *obsoleta* Malloch. The descriptions agree very well, the venation given by Duda being in accord with that of my species and the thoracic characters similar. There are, however, a few points of difference and without an examination of the type of *australis* it were better to leave the matter in abeyance, though there is a very great probability that the species are the same.

Family Agromyzidae.

Subfamily MILICHIINAE.

Genus STOMOSIS Melander.

Related to *Desmometopa*, differing in having the frons without an M-shaped black mark; hind tibiae not dilated; mesopleura bare. I figure the head showing the long geniculated proboscis and other features (Fig. 3).

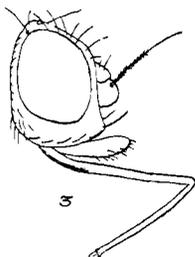


Fig. 3. *Stomosis flavoscutellata*, head from side.

The genus *Stomosis* was erected for the reception of *luteola* Coquillett which had been previously placed in *Desmometopa*. I have compared the following species with the type of Coquillett's species and find that they agree in generic characters though specifically distinct. *Luteola* is American.

STOMOSIS FLAVOSCUTELLATA, n. sp.

♀.—Head orange-yellow, upper half of orbits, frontal triangle, and occiput black; third antennal segment brown above; arista fuscous; proboscis brown. Thorax glossy black, broadly yellow along lateral margins of mesonotum from humeri to base of scutellum; pleura black; scutellum yellow. Abdomen glossy black. Legs yellow, all femora black except at bases and apices. Wings clear. Halteres yellow.