

## NOTES ON AUSTRALIAN DIPTERA. XXXI.

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(Communicated by Dr. G. A. Waterhouse.)

[Read 29th June, 1932.]

Family TACHINIDAE.

Subfamily DEXIINAE.

Genus PROSENA St. Fargeau and Serveille.

In a recent paper in this series I dealt with the species of this genus known to me from Australia, basing my identifications of previously described species upon the descriptions as no type material of species recently described by Curran was available to me. Recently I applied to Dr. Walther Horn for a loan of species represented by types in the collection in Berlin, and have received from him types or paratypes of four species of the genus. Between the date of completion of my paper and its appearance in print a second paper by Curran appeared dealing with some additional species of *Prosenia*, and this further complicates the identification of members of the genus, as practically no structural characters are cited, either in the keys or descriptions, that can be used as reliable guides to definite identifications. The acquisition of the type material above referred to, however, does give me a basis for certain changes in published identifications, and these are dealt with below.

It now appears entirely probable to me that this genus is more abundantly represented in Australia than I had suspected.

I present below an amended key to the species before me, but as the Curran species are represented by but one sex in all cases, I am not able to give keys to both sexes.

### Key to the Species.

- |  |                             |
|--|-----------------------------|
| 1. Femora black or almost entirely so .....  | 2                           |
| Femora either entirely fulvous yellow or darkened only apically .....  | 8                           |
| 2. Males .....   | 3                           |
| Females .....  | 7                           |
| 3. Hind tibiae very noticeably attenuated on basal fourth or more, longer than usual, and slightly sinuous, the length about equal to that of slender portion of proboscis .....                                   | 4                           |
| Hind tibiae normal in form, not noticeably attenuated except at immediate base, and straight, the length much less than that of the slender portion of the proboscis .....   | 6                           |
| 4. Mid tibia without a submedian anterodorsal bristle, fore tibia without a bristle beyond middle on that surface; fourth wing vein not undulated beyond the preapical angle, slightly and regularly arcuate ..... | <i>arcuata</i> , n. sp.     |
| Mid and fore tibiae each with an anterodorsal bristle beyond middle; fourth wing vein distinctly undulated beyond the preapical angle .....  | 5                           |
| 5. Presutural dorsocentral bristles three; slender portion of the proboscis with very many fine erect and extremely short black hairs .....  | <i>varia</i> Curran, var. ? |
| Presutural dorsocentral bristles two; slender portion of the proboscis bare or almost so .....   | <i>varia</i> Curran ?       |



6. Mesopleura almost entirely yellow-haired; first visible abdominal tergite without apical central bristles ..... *nigripes* Curran.  
 Mesopleura entirely black-haired; first visible abdominal tergite with a pair of quite long apical central bristles ..... *bisetosa*, n. sp.
7. Mesopleura largely pale-haired; interfrontal stripe reddish-yellow .. *nigripes* Curran.  
 Mesopleura black-haired; interfrontal stripe black ..... *bisetosa*, n. sp.
8. Males ..... 9  
 Females ..... 16
9. Hind tibiae not noticeably attenuated except at extreme base, normal in form, almost entirely straight; mid tibia with a short anteroventral bristle near middle ..... 10  
 Hind tibiae markedly attenuated on basal third or more and slightly sinuate; mid tibia without an anteroventral bristle near middle ..... 13
10. One or both of the bristles on the costa at apex of auxiliary (subcostal) vein much longer than usual, about as long as inner cross-vein; disc of scutellum with a pair of well developed bristles, the hairs shorter and less dense than usual; small species, 5-7 mm. in length ..... *parva* Malloch.  
 Neither of the bristles at apex of auxiliary vein nearly as long as the inner cross-vein ..... 11
11. Bases of the superior hypopygial forceps quite abruptly differentiated from the apical slender portion, and with longer and more abundant brown hairs than in the other species, appearing tufted when seen in profile; humeri with quite dense black hairs on more than the upper three-fourths, pale-haired only on lower margin ..... *tenuis* Malloch.  
 Bases of the superior hypopygial forceps tapered gradually into the slender apical portion, and not appearing at all tufted in profile ..... 12
12. Inferior hypopygial forceps deeply cleft, furcate ..... *sibirita* Fabricius.  
 Inferior hypopygial forceps not cleft, more or less shoe-shaped .. *confusa* Malloch.
13. Frontal orbits densely silvery-white dusted, touching for some distance in front of anterior ocellus and thus obliterating the interfrontal stripe; mesonotum densely silvery-white dusted, when seen from behind with the disc dark grey or fuscous both before and behind the suture, on the former area with traces of vittae, the posterior dark patch not extending to posterior margin; bases of superior hypopygial forceps with quite long, dense, slightly curled brown hairs ..... *albifrons*, n. sp.  
 Frontal orbits not as conspicuously white, and separated on entire length; mesonotum not coloured as above ..... 14
14. Scutellum entirely velvety-black, with changeable brownish dust when seen from varied angles; apical half of wing distinctly darker than basal half; mesonotum with a black fascia immediately behind suture which extends entirely across surface and down over the pleura, and a less evident fascia on anterior margin ..... *argentata* Curran.  
 Scutellum not entirely black, largely or entirely grey or yellowish dusted and appearing pale on all or most of the disc; mesonotum not marked as above .. 15
15. Mesonotum with a dark brown or fuscous fascia behind suture which extends more than midway to posterior margin but does not reach the sides; scutellum dark brown or blackish at base, pale brown or yellowish at apex .. *bella* Curran.  
 Mesonotum with the dark postsutural markings consisting of four partial blackish vittae; scutellum blackish only on sides at base, the disc with yellowish or brownish grey dusting which is slightly darker at bases of the hairs ..... *indecisa* Malloch.
16. Scutellum entirely velvety-black, with brownish dusting on disc which varies in accordance with the various angles from which it is viewed; mesonotum with a broad black fascia behind suture which extends entirely across disc and down over pleura but not to posterior margin of mesonotum, and a less conspicuous anterior marginal fascia of same colour; wings conspicuously browned on apical halves; tibiae largely dark brown ..... *argentata* Curran.  
 Scutellum pale brown or grey on at least a large portion of its extent; mesonotum and pleura not marked as above, and the wings less noticeably browned, not distinctly so on apical halves ..... 17
17. At least one of the bristles at apex of the auxiliary vein as long as inner cross-vein ..... *parva* Malloch.  
 Neither of the two bristles at apex of auxiliary vein as long as inner cross-vein ..... 18



18. Fore tibia with a series of very short, moderately strong bristles on almost the entire extent of the anterodorsal surface which terminates in a noticeably longer and stronger bristle near apex ..... 19  
 Fore tibia with a much less extensive series of less regular short bristles which ceases at or near middle of anterodorsal surface beyond which there are usually two much longer and stronger bristles, the apical one about one-third of the length of tibia from apex ..... 20
19. Thorax and abdomen with whitish-grey dusting, and third and fourth abdominal tergites with conspicuous black lateral apical marks; fore femur with the bristles on the posteroventral surface longest apically ..... sp. ?  
 Thorax and abdomen with yellowish-grey dusting, the third and fourth abdominal tergites with brown or inconspicuous dark lateral apical marks; fore femur with the posteroventral bristles complete, generally longest near middle of the surface ..... *sibirita* Fabricius.
20. Scutellum when viewed from behind with the basal half or more blackish-brown, tapering off apically into yellowish-brown; postsutural dark vittae fused into a broad blackish-brown fascia which does not extend to sides or the posterior margin; all tibiae quite distinctly infuscated apically ..... *bella* Curran.  
 Scutellum darkened on the sides basally, not in centre of base; postsutural dark vittae not fused; at most the hind tibiae slightly darkened at apices ..... 21
21. Basal visible tergite without strong apical central bristles; second tergite when viewed from behind with a rather broad central vitta and a narrow anterior marginal fascia of dense yellowish-grey dust; interfrontal stripe immediately in front of the grey-dusted ocellar triangle very slightly wider than either orbit ..... *indecis*a Malloch.  
 Basal visible abdominal tergite with a pair of strong apical central bristles; second abdominal tergite with a broad entire basal fascia of dense yellowish-grey dust when seen from behind, the central vitta not developed; interfrontal stripe immediately in front of the grey-dusted ocellar triangle very distinctly wider than either orbit at same point ..... sp. ?

PROSENA ARCUATA, n. sp.

♂.—This species belongs to the black-legged group in which the hind tibia is quite markedly attenuated on the basal third or more and slightly undulated.

Similar in general coloration to typical forms of *sibirita*, the thorax and abdomen with dense grey dusting, the former with four narrow dark-grey or fuscous vittae which do not extend to posterior margin of mesonotum and are most evident when seen from behind; scutellum entirely black, with dense grey dust which has a blackish dot at base of each hair when seen from behind. Abdomen yellowish testaceous on sides of basal three tergites, when seen from behind with dense yellowish-grey dust over the entire area of each tergite except on the narrow dark apex of third and less noticeably of second. Apices of femora reddish-brown. Wings hyaline, with very faint indication of yellowish tinge in marginal cell. Calyptrae white. Halteres yellow.

Frons at vertex about one-fifth as wide as either eye, the narrow yellowish-grey-dusted orbits separated on entire extent by the brown interfrontalia, the latter reduced to a mere line in front of ocelli; slender portion of proboscis entirely black and with minute but not dense erect black hairs. Presutural dorsocentrals three, the acrostichals on same area well developed, two; humeri and mesopleura entirely black-haired, the lower fine hairs on pteropleura also black. Abdomen subcylindrical, tapered apically, first visible tergite with a pair of strong apical central bristles, the fifth also with a strong pair projecting from below apex of fourth; superior hypopygial forceps similar to those of *sibirita*, not conspicuously haired; fifth sternite feebly haired. Legs moderately long; fore tibia with two posteroventral bristles and no bristles on anterodorsal surface; mid femur attenuated on apical half; mid tibia without anterodorsal or anteroventral bristles, and



with three or four posterior bristles; hind femur slightly attenuated on apical third or more and with the usual series of four or five uneven bristles on basal halves of anteroventral and posteroventral surfaces; hind tibia with about four anterodorsal bristles, one anteroventral bristle, and a setula on or near middle of posteroventral surface. Fourth wing-vein quite evenly arcuate beyond preapical angle; outer cross-vein curved outward in front and inward behind. Length, 10.5 mm. Type, "Allowrie", Killara, N.S.W., Feb. 5, 1921.

PROSENA VARIA Curran ?

*Ann. Ent. Soc. Amer.*, Vol. 22, 1929, p. 509.

Very similar to the preceding species, but differing in the characters listed in the foregoing key. The tibiae are also more or less distinctly reddish-brown at least centrally, and in most specimens the veins of the wings are slightly clouded with pale brown. I have not seen the type material of this species and have some doubts as to the correctness of my identification.

Localities, "Allowrie", Killara, and Austinmer. Described from New South Wales without more definite locality.

PROSENA NIGRIPES Curran.

I have now before me the type male of this species and have discovered that I was in error in my previous identification, as it belongs to the group in which the hind tibiae are normal in structure. I have no other examples before me that appear to be referable to the species, so that my previous records of localities must be disregarded. For further data on the characters see under the next species.

Locality, Palmerston, N. Aust. [The township of Palmerston is now non-existent.—Ed.]

PROSENA BISETOSA, n. sp.

♂, ♀.—A darker species than *nigripes*, the dark dorsal vitta on the abdomen broader, though diffuse on sides, and the pleural hairs practically all black in both sexes. The female has the abdomen broader than the male, with the apices of the tergites dark brown merging into deep black on some parts, a less evident dark central vitta, and the grey dust more checkered. The wings are hyaline in *nigripes*, but in *bisetosa* they are slightly browned, more distinctly on costa beyond apex of auxiliary vein.

Structurally the presence of a pair of strong apical central bristles on the first visible abdominal tergite readily distinguishes the male from that of *nigripes*, but these bristles are lacking in the female which I place here. The fore tibia has a rather irregular series of very short setulae on the entire extent of the anterodorsal surface terminating in a slightly longer one near the apex as in other species in which the hind tibiae are not attenuated basally and distinctly undulated. Both sexes have an anterodorsal and a ventral submedian bristle on the mid tibia, and also three or four posterodorsal bristles on the basal half or more of the hind tibia. The type specimen of *nigripes* lacks the middle legs, so that I cannot say whether in the armature of these it differs from *bisetosa*. The latter has the outer cross-vein of the wing curved outward at anterior and inward at posterior extremity, while in *nigripes* it is merely slightly curved outward centrally. Length, 8–9 mm.

Type, male, and allotype, Cairns, Queensland (Dodd). One headless female from Sydney, N.S.W., 14.1.1923 (Health Dept.), appears to be referable here or to a closely allied species. Material will be returned to Australia.



## PROSENA ARGENTATA Curran.

Access to the female paratype of this species received from Dr. Horn proves that I was in error in my identification of this species also. It strikingly resembles in colour markings certain species of *Anthomyia* Meigen, and related genera in which the mesonotum has two deep black fasciae, one on the anterior margin and the other just behind the suture, with accompanying velvety-black scutellar markings. The abdomen also has deep black markings across the apices of the tergites. The very noticeably browned apical halves of the wings are also characteristic. Unfortunately, I have not seen the male, so draw my characters from but one sex. The specimen lacks the fore legs, so that the armature of the fore tibia cannot be stated, but the hind tibia is of the same form and has the same armature as *bisetosa*, which leads me to conclude that it is one of the typical group, with straight hind tibia and the fore tibia armed with a series of short setulae on the entire extent of the anterodorsal surface.

Localities, Cairns and Kuranda, Qld.

## PROSENA BELLA Curran.

Here again I must mark up an error in my identification of the species, as my female specimen recorded as this is the one listed in the last caption of the foregoing key without a specific name. It appears hardly possible that it belongs to *bella* as the characters by means of which it is separated from the latter in the key are very rarely of a variable nature. It will thus be seen that my attempts to identify Curran's species from his descriptions and key were all failures. I do not expect that the data put forward by me will prove infallible guides to specific identifications, but I do hope that they result in a greater percentage of correct names for species than I attained by other means.

This species belongs to the segregate in which the hind tibia is attenuated on the basal half and distinctly undulated. The females do not have this character as pronounced as do the males, but taken in conjunction with the armature of the fore tibia with its incomplete series of anterodorsal bristles, the less evident attenuation of the hind tibia may be distinguished the more readily. I have given sufficient data in the key to enable one to distinguish this species from the others now in hand.

Locality, Cairns, N. Qld.

## PROSENA PARVA Malloch; PROSENA INDECISA Malloch.

I have nothing new to add to my records of these species, but I note that I did not include the male of *parva* in my key to this sex when I described the species. I have now done so and hope that the present key will suffice for its identification.

## PROSENA DODDI Curran.

This species was described by Curran as listed in my catalogue of the Australian Tachinidae, but in his recent paper, referred to under *varia* Curran, he does not include it in his key to the Australian species. I have before me the allotype of *doddi* and am not able to distinguish it from *sibirita* Fabricius. I thus place it as a synonym of that species.

## PROSENA FACIALIS Curran.

This species name I find in Curran's paper in 1929 referred to under *varia*, but I cannot find a place in which the name has been proposed. In his 1927 key



that author distinguished *malayana* Townsend from *doddi* by the character of the haired parafacials of the former and the bare parafacials of the latter. Dr. Aldrich published a statement that *malayana* Townsend does not have haired parafacials, and some time afterwards Mr. Curran told me that he had inadvertently transposed the two species in his key. He marked them in my copy of his paper as requiring transposition in the key.

In view of this fact it was of interest to me to examine the specimen of *doddi*. I find that this has a few microscopic yellow hairs on the upper portion of the parafacials which are very difficult to make out except under a high power lens and by turning the head to various angles. These hairs, however, are visible in *sibirita* and some other species related closely to it, or at least in some examples of these species, and I attach no importance to them as a specific criterion. Without fuller information as to the status of the name, I accept *facialis* tentatively as a synonym of *sibirita*.

PROSENA ALBIFRONS, n. sp.

♂.—This is the species which I identified as *argentata* Curran in my paper on the genus in 1930 (These PROCEEDINGS, lv, 114). There is nothing necessary to add to the characters in the two keys which I have presented, and the notes on the species under the name *argentata*. These, coupled with the figure of the male hypopygium, should serve to identify the species.

Type and four paratypes, Eidsvold, Qld., January 23 and December, 1922 (Mackerras); one paratype, Glenreagh, N.S.W., 1.2.1923 (Health Dept.); one, Yeppoon, Qld., 4-7 Nov., 1924 (Goldfinch).

Type and three paratypes will be returned to Australia.

PROSENA VARIEGATA Curran.

This species is unknown to me. It evidently belongs to the same group as *albifrons*, but has black femora and reddish tibiae if the key is correct, but in the description the legs are given as "reddish, tarsi black". Which is correct cannot be decided without consulting the type.

Locality, Gravesend, Qld. (Mann).

Presumably the type would be returned to the collector.

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Malloch, John Russell. 1932. "Notes on Australian Diptera. XXXI." *Proceedings of the Linnean Society of New South Wales* 57, 127–132.

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