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† A NEW CERIOIDES WITH FOLDING WINGS (Diptera-Syrphidae).

By G. H. HARDY.

(Received 18th October, 1944; accepted for publication, 27th November, 1944; issued separately, 25th June, 1945.)

GENUS CERIOIDES ROND.

Between 1922 and 1927, Shannon divided this genus giving names that do not appear applicable to the Australian fauna. Ferguson (1926) applied three of these names, pointing out that not all characters cited by Shannon are present and there now seems to be no justification for separating *C. breviscapa* Saund. from *C. subarmata* C. & B. on characters used for the purpose; indeed they evidently form a natural group together with the new species described below. Thus only two groups can be retained to accommodate the Australian *Cerioides* until such times as the world's forms become better known. Of the twelve species hitherto described, six belong to the *breviscapa*-group, distinguished by the constriction near the base of the abdomen being excessive and wasp-like, and to this group the new species is added below. The *ornata*-group has but a slightly constricted abdomen.

Cerioides breviscapa-group.

The two species which I myself have captured in the bush, had their wings folded longitudinally when at rest, a character reported by me in 1933, and I would suggest that all species with the character belong to one natural group, but it is uncertain as to how far this extends in the group as at present understood. The character is readily overlooked as the flexure neither occurs readily when in the relaxed condition, nor is the flexure retained at death. The wing is flexed upwards, bringing the halves, rear above fore, to lie in parallel planes and not touching. Seen from above, the line of flexure shows three straight lines meeting at two points, forming two obtuse angles. This line of flexure has been traced by Mr. Edgar Riek and myself, using a freshly captured specimen of *C. subarmata*, caught by Mr. Riek on the large swamp at Sunnybank in August 1944, and this assures that on all pinned specimens with a wing folded, the feature is identical with that of the living state.

The line of flexure runs at least half way along the anterior margin of the alula, which normally is hinged to turn upwards on many flies, then passes at an angle to a deep crease just behind the median vein,

and continues along this crease through the depression at the furcation of the median vein, continuing without altering its course out of the end of the crease passing over the intervening bend of the median vein to the wing margin; this last portion shows the wing to be, not angular as at the crease, but bowed, and leaves no mark to indicate the course; and further the surface is bowed between the alula and the crease, again leaving no mark when the wing is flattened.

KEY TO SPECIES OF THE BREVISCAPA-GROUP.

- | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------|
| 1. Wings with the normal dip in the radial vein | 2 | |
| Wings without this dip in the radial vein. Male with the short form of antennal tubercle and the long form of the second abdominal segment. Female with the long form of antennal tubercle and the short second abdominal segment | | <i>aliplicata</i> n.sp. |
| 2. With the brown in the radial area covering the dip.. | 3 | |
| With the brown of the wing much reduced and not entering the dip | 6 | |
| 3. Antennal tubercle and second abdominal segment short in both sexes | | <i>breviscapa</i>
Saunders. |
| Antennal tubercle long | 4 | |
| 4. Face black in the median area, but a thin greyish obscure median line may divide the black area longitudinally | 5 | |
| With the median facial line yellow. Second abdominal segment long. Male not known | | <i>fascialis</i>
Ferguson.
<i>subarmata</i>
Curran & Bryan.
<i>mastersi</i>
Ferguson. |
| 5. Second abdominal segment long; female not known .. | | |
| Second abdominal segment short; male not known .. | | |
| 6. Thorax with vittae. Frons pitted on female. Second abdominal segment long | | <i>macleayi</i>
Ferguson. |
| Thorax without vittae. Frons not pitted. Second abdominal segment short. Male not known .. | | <i>doddi</i> Ferguson. |

Characters given in the key are taken from descriptions, as the material available for study is insufficient for a full revision. It will be noted that not only does sexual dimorphism occur within the group, but also the males of three species are unknown, as also the female of one; hence it may be considered that *subarmata* and *mastersi* are opposite sexes of the same species, but colour marks and their respective habitats differ so widely that they cannot be conspecific.

CERIOIDES BREVISCAPA Saunders.

Ceria breviscapa Saunders 1845.—*Cerioides victoria* Curran 1925.

Ferguson overlooked this synonymy and neither he nor I had seen Victorian specimens, but judged the identity from specimens found in New South Wales. As markings are liable to variation in this group, such small discrepancies as those found in the descriptions are not important enough, nor sufficient in number, to permit acceptance of more than one species. Moreover, the genus is mainly a northern one,

ten of the thirteen known species being in Queensland and only four of these ten having yet been recorded from more southern States. It seems quite unlikely, therefore, that more than one species of the group here dealt with can occur in Southern Victoria, and none are to be expected from Tasmania, this being in conformity with other genera occurring mainly in Queensland.

Ferguson comments upon the type locality "Port Phillip, South Australia" as an apparent misstatement. Nevertheless this was quite correct, and the only alternative would have been "New South Wales" which, at that time, covered the eastern half of the continent which was just beginning division into States. The use of "South" referred to location in the sense of southern, not to the State of that name which was proclaimed a colony eight years earlier, 1836. Victoria, as a State, was inaugurated in 1851, six years after Saunders described this fly.

CERIOIDES ALAPLICATA n. sp.

Male.—The antennal tubercle is about as long as broad, light brown in the colour, which extends a considerable distance around the base, merging into the black-brown median stripe which occupies about one-third the width of the face that is otherwise yellow. Below the yellow occurs an upward sloping line from the oral margin to the eyes, below which the colour changes to black-brown, varying in intensity of the black, to brown below and without a definite pattern, and further extends a short distance at the rear of the head, and above this the area behind the eyes is black with a slight grey pulverulent overlay. The eyes are contiguous from the ocellar tubercle to two-thirds the distance towards the antennal tubercle, where the frons is yellow as on the face with a varying but narrow median brown area, this area forming part of the brown surrounding and on the antennal tubercle. The antennae are blackish brown with the first segment about as long as the remainder.

The thorax is black and quite normal, with two pairs of yellow dorso-lateral spots and the scutellum is margined with yellow, but these yellow areas are liable to discolouration and reduction in size.

The abdomen is black-brown with the long type of second segment. The apices of the second to fourth tergites are margined with yellow and these three tergites are equal in length.

The wings are quite normal in venation except that the fifth radial is only sinuous, the customary "dip" being absent. The brown of the anterior border extends over the whole radial area and also above the vena spuria from the radial median cross-vein to level with the furcation of the median vein. When at rest the wings fold as described above, and the characteristic crease that indicates the folding and lies adjacent to the median vein is present. The legs are yellow to light brown with the basal half of the femora black.

Female.—This sex differs by the antennal tubercle being about as long as the first antennal segment, four times longer than wide. The black-brown frons strongly diverges towards the antennae, averaging about one-third the head width, and is strongly corrugated over a large black area that is divided by a smooth and brownish median stripe, whilst a similar stripe lies adjacent to each eye, and a band likewise at the ocellar tubercle, all merging into the smooth brown summit. The yellow lateral spot at the transverse suture may become brown, reduced or entirely absent, and the scutellar margin may similarly become brown, as also the margins of the abdominal tergites. The second abdominal segment is of the short type, being only about as long as wide, and in general tone the female is slightly darker than the male.

Hab.—*Queensland*: Goondiwindi, 10 males and 13 females taken together at a flowering shrub, probably Wilga (*Geijera parviflora*) in November, 1935, and in company with two males of *C. opuntiae* Ferguson.

The name of this species reflects upon the habit of wing folding, and many of the specimens have one wing in the folded condition, care having been taken to restore and retain the position when mounting the specimens. The series will be distributed amongst various Museums and other collections.

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