

Measurements

Measurements of whole specimens were made to the nearest 0.05mm. Smaller material, such as the genitalia was mounted on slides and measured to the nearest 0.01mm.

Illustrations

All drawings were made with the help of a squared ocular.

CLASSIFICATION

At present the family Blepharoceridae is divided into four subfamilies (Kitakami, 1950; Alexander, 1958 and 1963); Edwardsiniinae Edwards, 1929, Blepharocerinae Bezzi, 1912, Paltostominae Bezzi, 1912 and Apistomyiinae Bezzie, 1912. This division, which is used here, is based primarily on the wing venation and head structure of adults.

Stuckenburg (1958) believes that the family should be primarily divided into Edwardsiniinae and Blepharocerinae, and that because the present Blepharocerinae, Paltostominae and Apistomyiinae are not of equal rank either one with another, or with the Edwardsiniinae, they should be reduced to the status of tribes within the Blepharocerinae.

On the basis of wing venation (M_3 and m-cu both absent) and the mouthparts (labial palpi long and slender) all known New Zealand Blepharoceridae, with the exception of *Neocurupira campbelli* and *Nothohoraia micrognathia*, undoubtedly belong to the subfamily Apistomyiinae.

Neocurupira campbelli and *Nothohoraia micrognathia* both possess short labial palpi but the pupal sheaths of these palpi are long. Dumbleton (1963a) considered that in *N. campbelli* this indicated a relatively recent reduction of the labial palpi. The same is probably true for *N. micrognathia*. For this reason both these blepharocerids are considered to belong to the Apistomyiinae and not the Paltostominae.

New genera and species of Blepharoceridae are usually based on adult characteristics (Alexander, 1958) with little importance assigned to the larval or pupal instars. Tonnoir (1923c) believed that larval characteristics of blepharocerids were unreliable taxonomically, but Edwards (1929) considered larval and adult characteristics to be of the same importance in taxonomy. Van Emden (1957) reviewed the general principles involved in the use of larval characteristics in taxonomy and came to a conclusion similar to that of Edwards. Using the principles outlined by Van Emden and those of Hennig (1953), Stuckenburg (1958) analysed the relationship of *Paulianina* to *Edwardsina*.

In this paper equal taxonomic importance is given to larvae, pupae and adults, and diagnostic characters for all three stages are provided in the key to the Australasian Genera and Subgenera of Blepharoceridae.

KEYS

To minimise confusion the following keys are similar to those of Dumbleton (1963a).

KEY TO THE AUSTRALASIAN GENERA AND SUBGENERA OF BLEPHAROCERIDAE

1. Adult maxillary palpus 4-5 segmented; eye not divided, dichoptic in both sexes; wing with veins R_s and M three-branched. Pupal gills complex and with more than 4 lamellae. Larval head capsule projecting from cephalothorax; prolegs not distinct; body divisions separated by intercalary regions; tracheal gills on intercalary regions.

Edwardsina Alexander.