

ABSTRACT

A general survey is made of the Australian flies of the family Platystomatidae on the basis of large collections of preserved material and type specimens in European museums. Some information is provided on the biology and habits of the group. The distribution and abundance of the family in the zoogeographic regions of the world is described and particular attention paid to the distribution of genera occurring in Australia, both within and outside the Australian continent.

The external morphology of the Platystomatidae is described in some detail and the principal trends in morphological diversity are outlined. The apparent relationships of the Platystomatidae to other families of Diptera are given together with their morphological basis. The family is defined and a scheme is presented for the division of the Platystomatidae into five subfamilies.

A key to the Australian genera of Platystomatidae is given and a list of the known Australian species is presented. The genera *Mesoctenia*, *Plagiostenoptera*, *Lamprogaster*, *Duomyia*, and *Euprosopia* are defined. Keys to the 139 recognized Australian species of these five genera are provided together with descriptions of the species. Distributional data and, when available, habitat data are recorded for each species.