

1. Abstract

The book presents an exhaustive review of clearwing moths (Sesiidae) of Poland. Thirty-two species are examined in detail. Although the number of species hitherto confirmed in Poland is only 31, *Chamaesphecia annellata*, as one of the erroneously recorded species, is also redescribed.

Adults of all the species, their genitalia, pupae, and larvae of 27 species are described and comparatively illustrated with drawings, photographs and scanning electron micrographs.

Keys based on morphology of adults and their genitalia as well as keys to the pupae are included. Additionally, a key to larvae of 27 species is presented for the first time. Descriptions of larval stages of 14 species are presented for the first time, their setal maps are also provided.

The number and arrangement of crochets on the larval prolegs were studied in detail, and were found to be of taxonomic significance. The results of the studies demonstrate that the division of crochets into anterior and posterior bands can differ significantly, and that the number of crochets in the anterior bands is usually higher than that in the posterior bands. Measurements of eggs of 31 species and egg morphology of selected species are given.

Many new observations on various aspects of biology of clearwing moths are provided. Information on the overall and temporal effectiveness of male attractants are given.

In addition to morphological and biological aspects, this work analyses faunistic data and includes a synthesis of more than 20-year long investigation of this family of moths in different parts of Poland. Distribution records in Poland are shown on maps based on the UTM-grid system, they contain both literature information and unpublished data, new records are given for 26 species of Sesiidae.

Molecular (COI) data of *Synanthedon spuleri* and closely related species indicate that *S. spuleri* is more closely related to *S. cephiiformis* than *S. tipuliformis*.

The latest taxonomical changes, such as the proposal to include Sesiidae in the superfamily Cossoidea, are discussed.