

BOOK REVIEW

Menzel, F. & Mohrig, W. 2000. Revision der paläarktischen Trauermücken (Diptera: Sciaridae) [A revision of the Palaearctic black fungus gnats (Diptera: Sciaridae)]. *Studia Dipterologica, Suppl. 6* (1999): 1-761. Ampyx-Verlag, Halle. (In German). ISBN 3-932795-07-5, price 90.00 EURO.

Sciaridae or black fungus gnats is one of the largest and poorly studied families of Diptera. The monograph by Dr. Frank Menzel (Deutsches Entomologisches Institut, Eberswalde) and Prof. Werner Mohrig (Greifswald), two leading experts in systematics of Sciaridae, is of great interest for insect taxonomists and morphologists, as well as for ecologists and faunists, who are interested in reliable identification of sciarids.

The book consists of the following main chapters. In the preface, the history of investigations of Sciaridae is concisely considered. The next chapter, "Vorkommen und Verbreitung der Sciaridae", briefly summarizes data on the zonal distribution of sciarid genera. The third chapter is a review of the main biological features of the family and the role of its representatives in nature, with the special attention to agricultural pests and their control. In the fourth chapter, a morphological characteristic of the family is given, and the position of Sciaridae within Sciaroidea is considered. In the fifth chapter, the materials used in the revision are listed and, in addition, information about inaccessible, not located or lost type material is presented. The sixth chapter is a review of methods (sampling, extraction, preparation and determination) used by the authors in the study of Sciaridae. In the seventh chapter, the morphology and morphological terminology for three stages (larvae, pupae and imagines) is considered in detail and well illustrated. The eighth chapter gives a list of 161 principal morphological characters of Sciaridae (all characters except five are imaginal), with the character states arranged from the plesiomorphic to the relatively advanced, according to the authors' hypothesis. In the ninth chapter, a list of the recent sciarid genera, subgenera and groups of species (including synonyms) is given. The tenth chapter is a key to the Palaearctic genera of Sciaridae.

The eleventh chapter comprises more than 2/3 of the book size and contains the main results of the work. All Palaearctic genera are treated; for each genus a description, nomenclatural notes, discussion of phylogeny, key to subgenera and species-groups, list of Palaearctic species and extensive bibliography are given. Diagnoses and taxonomic notes are presented for all the subgenera and the accepted species-groups as well. A total of 389 species of 28 genera are specially considered. For 158 species, descriptions are presented, including redescriptions of many "old" species based on the type material; in addition, morphological notes on some other species contain differential diagnoses. Five species and one subgenus are described as new. Of species considered, 148 are illustrated.

In the 14th chapter, the phylogenetic analysis and cladogram of the family (up to the subgeneric level) are proposed. The 15th chapter is a discussion consisting of four parts; these parts are devoted, respectively, to (1) the estimation of material and methods, (2) absolute and relative species number in sciarid taxa in Palaearctic and different regions, (3) the phylogeny and classification of Sciaridae including the fossil taxa, and (4) geographic distribution of sciarid taxa and features of the sciarid fauna in the majority of large regions.

As an addition, 29 non-Palaearctic species belonging to 17 genera are considered (mostly re-described).

Undeniably, the revision is one of the most serious contributions to the knowledge of the family since the works of Lengersdorf (1924-1957) and Tuomikoski (1957-1967).

In the book under review, many taxonomic and nomenclatural changes are made. The lectotypes are designated for 375 species. A total of 143 new combinations and 3 status changes are proposed; 199 new synonyms are established. As a result, the recent Palaearctic fauna of Sciaridae includes 836 presently known valid species (with 412 synonyms), 24 species incertae sedis and 41 nomina dubia.

The monograph is well illustrated (612 figures, 4 diagrams and 3 tables).

Summarizing: The book is indispensable to sciarid researchers and necessary for any further study of Sciaridae. However, its practical use as an identification guide is somewhat restricted, as the book does not contain the identification keys to species.