

BOOK REVIEW

NARTSHUK E.P. & ANDERSSON H. 2013: THE FRIT FLIES (CHLOROPIDAE, DIPTERA) OF FENNOSCANDIA AND DENMARK. *Fauna Entomologica Scandinavica*, vol. 43, Brill Academic Publishers, Leiden, 277 p. ISBN 978-90-04-16710-0 (hard back), ISBN 978-90-04-19066-5 (e-book). Price: EUR 181.00, USD 248.00.

Emilia P. Nartshuk and the late Hugo Andersson, two well respected specialists on Chloropidae (Diptera, Acalyptrata), wrote this very interesting and popular publication about a relatively little known group of flies. It is an important source of information not only for the general public but also for entomologists who are not specialists on this family.

The book can be divided into three main parts. The first informs readers of previous studies on Chloropidae in Fennoscandia and Denmark, collecting methods, preparation and preservation, and also describes the morphology and anatomy of adults and preimaginal stages. Many illustrations complement the text.

In the second part Nartshuk and Andersson present an account of the bionomics and ecology of these interesting flies, their parasitoids, seasonal occurrence, distribution, zoogeography and their roles in land ecosystems. The study of the relationships between plants and their phytophages is not only important for protecting plants from pests, but also for using phytophages as bioregulators of undesirable vegetation. Therefore, the family Chloropidae is part of an economically important group. Many species are pests of crops and, therefore, more detailed knowledge of their distributions and bionomics is likely to greatly increase the effectiveness of plant protection.

The third section, the longest and most interesting part of this book, is on taxonomy. Nartshuk and Andersson include all the genera and species of frit flies found in Fennoscandia and Denmark. All known species are keyed and their main diagnostic characters are illustrated. Information on the bionomics and zoogeographical distribution of each species is provided. One new genus and thirteen new species are described, five synonyms and one new combination are proposed, and two lectotypes are designated.

The book has a few failings which could be improved in a possible future edition. Illustrations vary in quality; many pictures are from older publications of Nartshuk and Andersson and only a few were drawn for this book. Species of the family Chloropidae are not easy to identify and reliable species determination is possible only if pictures of male genitalia are provided. However, for some of the newly described species there are no figures of male genitalia (e.g., *Gaurax fungivorus*) or they are of poor quality (e.g., *Gaurax suecicus*). *Oscinella* (*Cyclocercula*) *norrbotica* sp. n. is not included in the key to the genus *Oscinella*.

In conclusion, this book is an ideal guide for all dipterologists beginning to study the family Chloropidae and all field scientists. This book is successful in providing an insight into the complex biology and diversity of frit flies of Fennoscandia and Denmark and every dipterist should include a copy in his/her private library.

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