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BOOK REVIEW

JOLIVET P. & VERMA K.K.: BIOLOGY OF LEAF BEETLES. Intercept Ltd, Andover, 2002, 332 pp. ISBN 1-898298-86-6. Price GBP 52.50.

This book is intended to be a "guided tour" through the massive literature on Chrysomelidae, and not an extensive treatise. It contains 56 chapters grouped into 12 broad topics: Introduction; Classification; Palaeontology: Food plants and evolution; Food and feeding; Developmental stages; Ecology; Biogeography: Island faunas; Defence strategies; Anatomy; Reproduction; Association with other organisms; Phylogeny of subfamilies.

The introductory chapter briefly summarizes the data on the taxonomy and evolution of chrysomelids, and comments on the most important topics of the book. The chapter „Classification" deals with distinguishing characters of the family Chrysomelidae and presents the arrangement of subfamilies used in this book. The review of the literature dealing with fossil chrysomelids from the Palaeozoic, Mesozoic and Cenozoic periods is presented in the following chapter. The different concepts about the evolution of the host plant relations of the beetles are discussed. The host plants, and choice of host plants and leaves is mainly discussed in the chapter "Food and feeding", with a special insight into individual subfamilies. Cannibalism, entomophagy, coprophagy and nematophagy are also briefly reviewed. The fifth part is devoted to the description of the developmental stages: Eggs (including oviposition), larvae and larval biology, and pupae.

Part 6 (Ecology) is arranged according to habitat. Besides the classical themes, such as aquatic and semiaquatic chrysomelids, the morphological, physiological and developmental adaptations for life in deserts, alpine environments, polar regions, caves and the canopy of tropical rainforests are discussed. Several pages are also devoted to niche separation in leaf beetles, and to diapause. Biogeography (chapter 7) is discussed mainly in terms of the island fauna. The defence strategies are the main topic of chapter 8 and are presented under the following categories: Use of waste material for defence; Chemical defence; Behavioural defence; Structural defence; Parental care and subsociality; Concealed feeding. In the chapter "Anatomy", only those anatomical features that are of special interest and helpful for determining the phylogenetic relations between leaf beetles are discussed. The features of special interest include: Wings and wing venation; Tarsal vestiture and digitiform sensilla on the maxillary palp; Rhabdoms and rhabdomeres; Abdomen; Digestive canal; Cryptonephric arrangement of Malpighian tubules; Ventral nerve cord; Male and female reproductive systems.

The section „Reproduction" consists of an extensive review of the literature on mating behaviour in chrysomelids. Several topics are treated in the chapter "Association with other organisms": Social commensalism (myrmecophily and termitophily), symbiosis, pathogens, parasites, commensals, predators and phoretics. This section also deals with biological control, either the use of chrysomelids to destroy invading plants or the use of pathogens and parasites to reduce the numbers of pest chrysomelids. The last part of the book is devoted to the phylogeny of subfamilies. This chapter was previously published in the book "Some Aspects on the Insight of Insect Biology" (Sobti & Yadav, 2000), and is reproduced here with some minor changes.

The extensive bibliography presents an invaluable source of information on the relevant literature. The book concludes with a subject index and taxonomic indices of animals and plants, which increase its readability. Both original and redrawn reproductions are technically perfect and well arranged graphically. The book is very stimulating to read, and of interest not only for specialists on Chrysomelidae, but inspirational for entomologists in general. The authors are renowned specialists in the biology of Chrysomelidae and their great knowledge of this group makes this book very authoritative. As mentioned at the end of the Preface: "Such a work could only have been realized in the final stages of a lifetime's study".

Reference

SOBTI R.C. & YADAV J.S. (eds) 2000: *Some Aspects on the Insight of Insect Biology*. Narendra Publishing House, Delhi, 312 pp.

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