Book Review

Biologie des Coleopteres Chrysomelides. Pierre Jolivet. Boubee Publsher, Paris, 1997, 280 pp. (USA $57.00)

The main biological aspects of this economically important group of beetles, the Chrysomelidae, are summarized in this new work by the internationally known author, Dr. Pierre Jolivet. Around 37,000 species are now described and more remain to be named. The size and diversity of the family are less than those of the weevils (Curculionidae), but probably there will be a total of 40 to 50 thousand species once the canopy fauna is better known. For instance, we still know nothing about the biology and the host plants of the Madagascaran leaf beetles and surely many more species from that region await description.

The importance of the group is mostly agricultural as might be expected from a group almost entirely leaf, stem, and root feeders. Members range in length from 1 mm, or less, up to 27 mm. Many species are brightly colored.

Probably the family is polyphyletic,, *i.e.,* composed of morphologically similar but phylogenetically distinct groups, and with Bruchidae as its sister group, all have Cerambycoid ancestors. Unquestioned chrysomelid fossils date from the Jurassic.

The book covers the palaeontology, evolution, development, and adaptations of the family. Mimicry, defensive reactions, pathogens and parasites, and every aspect of the biology and ecology of the beetles are discussed.

The classification adopted for this book is not that of cladists. Jolivet recognizes 20 extant subfamilies, and one extinct subfamily, probably the direct Jurassic ancestor of the Aulacoscelinae. The larvae of several subfamilies were still unknown at the time this book was written, such as the those of the Megascelinae and Aulacoscelinae, but recently, I am told by the author, these larvae have been obtained and are now being described.

The author believes that the recently proposed monophyletic classifications do not reflect the real relationships within the family. He disagrees with the fusion of Alticinae and Galerucinae, of Hispinae and Cassidinae, and Synetinae and Megascelinae, included with the Eumolpinae, as well as the elevation to family rank of some subfamilies. *Syneta,* for instance, has its wings and male genitalia completely different from those of the Eumolpinae. In the book he argues strongly that the relationships recognized within the Chrysomelidae be based on their food-plant selection when these are known, wing venation, and male genitalia, and use both physiological and mechanical characters of the plants.

Line drawings illustrate the book and six colored plates show the beetles in various tropical settings in both the Old and New World. Three other plates include some water color drawings of spectacular species.

The author, with several collaborators, has written five specialized books on the biology of Chrysomelidae prior to this volume. Here, the author presents a new synthesis of the topic, including many aspects not found in the previous volumes. The collected works were noted on pages 260 and 316 of volume 10, 1996, of *Insecta Mundi.*

R. H. Arnett, Jr.