
Book Reviews

Thysanoptera: an identification guide. 2nd edn. By L.A. Mound & G. Kibby (Wallingford: CAB International, 1998). 70 pp. Soft cover £19.95. ISBN 0 85199 211 0.

This is a very practical, easy to use identification guide to one of the world's major crop pests: Thysanoptera (thrips). It is aimed mainly at students, but with its clear visual keys to genera, it also provides a useful tool for applied entomologists and crop protection specialists involved in thrips control.

The book's main focus is thus on describing techniques used in preparing a thrips specimen on slides for identification and the means to identifying the slide-mounted specimen. However, it also provides a general introduction to the general biology and range of thrips morphological types, as well as giving a brief overview on their economic importance: in terms of damage as well as beneficial effects. Brief notes on each genus (described within their families) provide an overview of specific identification characteristics and information on distribution and habitats. Supplementary keys are included for the four main genera which comprise the major pest species (*Caliothrips*, *Frankliniella*, *Scirtothrips* and *Thrips*). The glossary of technical terms is aimed specifically at students trying to find their way into thrips terminology making the guide essential for helping non-specialists in identifying thrips to species.

Anja Rott

The identification of worker castes of termite genera from soils of Africa and the Middle East. By W.A. Sands (Wallingford, CAB International, 1998). vii + 475 pp + 18 plates. Hard cover £75.00 (US\$140.00). ISBN 0 85199 225 0.

Being eusocial insects, termites possess three distinct castes; worker, soldier and reproductive (or adult). Morphological characters found in soldier and adult castes are more diverse, and more 'hard characters' can be found in these two castes than workers. Consequently, identification of termite specimens is usually based on soldiers and adults. This practice has posed problems for termitologists who have to deal with soldierless species, and for many field biologists who cannot be in the right location and timing to collect soldiers or adults. Because the worker caste is most abundant in any termite population, frequently the only available specimens that can be collected in the field are termite workers. William Sands tackled this problem early on in 1970s (Sands, 1972), and taught us that not only the 'hard' characters such as mandibles, wings and cerci, but also the 'soft' characters such as the alimentary tract of termite workers can be used

for identification. The impact of W.A. Sands' contribution can be measured by numerous works of termite taxonomy that adopted his pioneering method (Johnson, 1979; Fontes, 1985; Uys, 1993). This book is the hard-copy counterpart of the expert system CD-ROM software published earlier by Sands (1997) for using worker caste to identify soil-dwelling termites of Africa and the Middle East. This monumental volume provides a key to the worker castes of all genera of termites found in soils from Africa and the Middle East, and is invaluable to those engaged in crop protection and entomology. The book contains original illustrations of superb quality and is well written and well organized. The key was composed with the assumption that the readers have a basic knowledge of termite anatomy, but the author also provides thorough descriptions of important characters used in the key, and even offers useful guidance in preparation, positioning and manipulation of specimens when looking for such characters. The key provided in Chapter 2 is one of the best I have used, but could be more useful for a novice like myself if the major diagnostic characters were emphasized or highlighted over other minor ones. The last five chapters contain descriptions of worker castes of Hodotermitidae, Rhinotermitidae, Macrotermitinae, Apicotermitinae, Termitinae, and Nasutitermitinae, and I found the 'Biology, economic status' section especially informative. In this brief section, the author vividly summarizes the 'lives' of these termites in their habitats; a striking contrast to the bone-dry description of morphological characters. Without a doubt, this superbly written book is an instant classic in termitology, and a must-have for students of termite biology, and anyone in crop protection and entomology in Africa and the Middle East.

References

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N.-Y. Su

Soft scale insects; their biology, natural enemies and control. World crop pests, 7A. Edited by Y. Ben-Dov and C.J. Hodgson. Series Editor-in-Chief M.W. Sabelis. (Amsterdam: Elsevier, 1997). xxiv + 452 pp. Hard cover US\$ 270. ISBN 0-444-89303-2.

Soft scale insects; their biology, natural enemies and control. World crop pests, 7B. Edited by Y. Ben-Dov and C.J.