

ANIMAL IDENTIFICATION

A Reference Guide

Volume 3

Insects

Edited by

D. Hollis

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INTRODUCTION TO VOLUME 3

The insects form a large and diverse group of animals, the 800 000 or so species currently recognized representing three-quarters of the total number of animal species. Even so the group is poorly known and the real number of insect species is variously estimated at between two and four million. Each year about 7000 new insect species are discovered, a remarkable figure when compared with the total known species of mammals (about 4500) or of birds (about 8600). In recent years approximately 8000 papers on insect systematics have been published annually, indicating how difficult it is even for the specialist to keep abreast of the relevant literature; for the non-specialist the task is almost impossible. The main objective of this volume is to provide a list of primary references which will enable non-specialists to set about identifying insects from any part of the world.

When the specialists at the British Museum (Natural History) began collaborating on this volume they were asked to list the references of which they would have liked to have been aware when they first started work on their particular group and which they have subsequently found useful. They were also asked to bear in mind the non-specialist readers for which this guide is intended. The user could be a forest or agricultural entomologist wishing to identify the families of insects found in trap catches; a young post-graduate researcher wishing to identify the major groups living in a particular habitat; or an amateur entomologist who wants to identify the constituent species of his local fauna. The primary aim is to cite only principal references which, if not enabling direct identification, will at least contain extensive bibliographies listing other useful references. For many groups of insects no suitable primary references are available and a choice is made from several publications. In these cases the final selection was influenced by several factors, in particular the presence of identification keys, the adequacy of descriptions and illustrations, the size and scope of any included bibliography, the date and availability of the publication and sometimes the language in which it was written. For a few groups a whole series of papers is required and a simplified reference is given e.g. Small, B 1948-1967. In these cases users will have to consult the *Zoological Record* for the author and dates mentioned. Because of the limitation of space available for this volume it was decided, in general, to exclude references to revisions of individual genera and species-groups. Usually these papers are written by specialists solely for other specialists and are of little value to the user for whom this guide is intended.

Many of the publications cited will be found only in major scientific libraries and it is assumed that the user has access to these or to a photocopy service. In the United Kingdom a photocopy service is available at the Science Museum Library, London SW7 2RL, and photocopies can be provided by the British Library Lending Division, Boston Spa, Wetherby, West Yorkshire. Comparable services exist in many countries and users should enquire at national, large municipal or university libraries for information about the facilities available.

The first chapter of this volume contains references to general introductory works

such as comprehensive text books, keys and bibliographies to the insects as a whole, regional faunal works, texts on special aspects of entomology, abstracting journals and nomenclature. Each order of insects is then treated separately and within each order the references are grouped into separate sections. There is first a general section citing papers dealing with the order on a wide geographical basis, followed by sections arranged according to the major biogeographical regions. The larger orders are then subdivided under superfamily and family headings and an index to all the group names used is provided at the back of this volume. Within each section references are cited by author in alphabetical order.

The biogeographical regions are set out as follows:

Palaearctic

Europe, Mediterranean Basin, North Africa, Middle East, Central Asia and the U.S.S.R., Japan

Afrotropical

Continent of Africa (south of the Sahara), Madagascar and western islands of the Indian Ocean, coastal areas of the Arabian Peninsula

Oriental

Pakistan and India, Ceylon, Burma, Thailand, Indo-China and China, occasionally Japan.

Australo-Oriental

Malaysia and south-east Asian islands eastwards to New Guinea.

Australasian

Australia.

Polynesian

New Zealand and Pacific islands east of New Guinea to Hawaii.

Nearctic

North America north of Mexico.

Neotropical

Mexico south to Tierra del Fuego.

Antarctic

Variations on this pattern will be found but this is made clear by the headings.

The titles of all journals listed are abbreviated in accordance with the style of the *List of serial publications in the British Museum (Natural History) Library* (London: British Museum (Natural History), 1975); they are generally those used in the *World list of scientific periodicals* (London: Butterworths, 1964). Reports of expeditions, catalogues and some other widely known works which were issued in a number of parts are also treated as serial publications. Book references cite the name of the author or editor, date, title, volume number (if applicable), place of publication, publisher and pagination. If a title has been translated then the original language of publication is quoted between square brackets thus []. Other information given between square brackets after a reference is comment by the compilers on the content and value of the reference cited, or a cross-reference to a publication cited elsewhere in the volume.

Finally a note of caution. Few identification keys are perfect or all-embracing, and the insect faunas of many regions of the world, especially the tropics, are poorly described. The publication of incorrect identifications, and lack of reference to the *International Code of Zoological Nomenclature* (see p. 2) can and often does cause considerable taxonomic and nomenclatural confusion.

CONTENTS

ACKNOWLEDGEMENTS

Acknowledgements	Page
Introduction to volume 3	vi
Insecta, General	vii
Thysanura	1
Diplura	3
Protura	3
Collembola	4
Ephemeroptera	5
Odonata	6
Plecoptera	8
Orthopteroid Orders	9
Grylloblattodea	10
Phasmida	10
Blattodea	10
Mantodea	11
Orthoptera	12
Dermaptera	17
Embiopoda	18
Isoptera	19
Zoraptera	20
Psocoptera	21
Phthiraptera	22
Hemiptera	23
Thysanoptera	43
Megaloptera	44
Neuroptera	45
Coleoptera	47
Mecoptera	88
Siphonaptera	89
Diptera	90
Lepidoptera	120
Trichoptera	138
Hymenoptera	139
Index to group names	156

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