

*THE DRAGONFLIES OF GREAT BRITAIN AND IRELAND.* By Cyril O. HAMMOND, F.R.E.S. 115 pp., 23 figs., 20 col. pls., 44 maps incl. Curwen Books (The Curwen Press Ltd., North Street, Plaistow, London, W13 9HJ), 1977. – Price: £9.75.

The publication of a new book on dragonflies is a rare event in any part of the world. This fact and Cynthia Longfield's opening statement in her Foreword to Cyril Hammond's book that "This is the Dragonfly book of the Century" combine to quicken the odonatologist's pulse. I hasten to add that mine returned rapidly to its slow measured rhythm after the initial thrill of opening the book. The book's meagre 115 pages would be expensive reading at the published price of £9.75 even if it were full

of new information. Unfortunately, eighteen pages are accounted for by a republication of A.E. Gardner's Key to Larvae, which was first printed in the Entomologist's Gazette in 1954 and which was later to appear in the Collins New Naturalist volume "Dragonflies" by Corbet, Longfield and Moore in 1960. As good as this key is, I do not think it should have appeared yet again in the present book, even if the untimely death of Eric Gardner robbed us of a Part II volume on the larvae which has been planned. A further three pages based largely on Fraser's 1956 key in the Royal Entomological Society of London's Handbooks for the Identification of British Insects, is devoted to the determination of the imaginal stages. In such a slim volume it is astonishing to find that the valuable distribution maps produced by the

Biological Records Centre, Huntingdon, all appear twice, once as small scale maps two or three to a page accompanying the colour plates and later in the more usable form in a separate section. The small maps could easily have been omitted and replaced by the larger ones printed alongside the relevant species text and figures.

The book is divided into Foreword by Cynthia Longfield; Preface; Introduction; External Features, Classification and Check List; Flight Period; The Plates and Description; A Key to Larvae by A.E. Gardner; The Maps; and Index. The Introduction is an elementary and very general account of the biology of the British species. It contains a number of misleading statements and bad practical advice for collectors. For example, it is said that "the average life (apart from predators) may be from four to eight weeks, according to the species". In fact, the *average* length of life (which *must* include predation to be meaningful at all) certainly never approaches 4-8 weeks in any of the several species which have been researched in detail. The use of small glass tubes with corks or plastic stoppers is suggested as the most suitable form of transport for damselflies from the field to indoors. Apart from the difficulties in carrying many small glass tubes in the field, this is also likely to result in wing damage and wetting of the insect from condensation. The conventional small paper envelopes are greatly to be preferred for transporting living dragonflies.

The chapter on External Features, Classification and Check List is in general well executed and useful, but the author uses the family names Coenagriidae and Agriidae instead of the more acceptable Coenagrionidae and Calopterygidae. Cynthia Longfield's original aim to provide all the British species with an English name has been taken a step further, so that, for example, the Green Lestes is also called the Emerald Damselfly and the Southern Coenagrion becomes the Southern Damselfly. Only time can tell whether this innovation will help popularize the Odonata amongst young budding entomologists. The figure on Flight Periods of

all the species is mostly a restatement of the information in Cynthia Longfield's "The Dragonflies of the British Isles". It is unfortunate that no use was made of the relative wealth of information which has accumulated since 1950 about the life histories and emergence times of at least a dozen species in Britain. For example, this would have been a perfect opportunity to bring Philip Corbet's outstanding work of the 1950's to the notice of a new and young generation of entomologists.

The colour plates with accompanying text comprise the major section (some 40 pages) and the most useful part of the book. The colour plates are mostly of a high standard of draughtsmanship and coloration, but a few have printed too dull (for example, *Anax imperator* and *Ischnura elegans* f. *rufescens*). The careful use of these plates should ensure that any species on the British list could be identified accurately and this is a primary need fulfilled. However, the brief text accompanying each plate is less useful. The notes under Status and Distribution simply duplicate to an unnecessary extent the information in the Maps, which is itself presented twice. The use of the term "normal form" (females) in relation to the other named forms in the coenagrionids is confusing. In fact, they are all normal, but illustrate certain colour and pattern polymorphs. In the New Forest of Hampshire, f. *melanogastrum* of *Ceriagrion tenellum* is as "normal" as the so-called normal form. That is to say, virtually none of the mentioned "forms" is in any way abnormal or aberrant. The information with the figures of *Ischnura elegans* is especially disappointing and misleading. This species has been the subject of at least three detailed studies since 1961 and the manifestation (if not the probable genetic control mechanism) of the female colour and pattern polymorphism is now well understood. The age-determined colour changes of both sexes are also well documented, yet we find that f. *violacea* is acknowledged to be "possibly" a transitional colour form only and f. *rufescens* is not recognized as a young form of *infuscans*.

-*obsoleta* at all. In *I. elegans*, the violet form may mature into either *infuscans* or the so-called "normal" form (andromorphic); *rufescens* always matures into *infuscans-obsoleta*. These facts have been demonstrated both in the laboratory and in the field. The thoracic ground colour of males passes through green, blue-green and blue phases, the transitions between which occur roughly after six and seventeen days of imaginal life. According to the information given on *I. elegans*, *violacea*, *infuscans*, *infuscans-obsoleta* and *rufescens* forms occur in both sexes, but this may be purely a collection of typographical errors, although a similar mistake occurs under *I. pumilio*, where the female f. *aurantiaca* is also recorded for males. The descriptions and plates of *Enallagma* females present a much simpler situation than which, in fact, exists. The female colour polymorphism and age-determined colours are very complex and need a detailed study to unravel.

It seems odd that the plates of the corduliids (*Cordulia*, *Oxygastra* and *Soma-*

*tochlora*) are placed in the middle of the libellulid species, between *Libellula* and *Leucorrhinia*. The arrangement of the zygopteran is also inconsistent with the Check List.

The absence of any reference to the premier society in the world devoted to the study of dragonflies, *Societas Internationalis Odonatologica* (S.I.O.) and its journal, *Odonatologica*, is a serious omission.

In summary, this book will disappoint experienced odonatologists and will positively mislead new-comers and young entomologists if the price has not already deterred them from obtaining it. That this book has been published at all, merely underlines the lack of any currently available competitors, and other British odonatologists must shoulder a considerable proportion of the blame for having allowed this situation to develop.

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