

Review — New Zealand Butterflies

GIBBS, G. W. 1980 : *New Zealand Butterflies, identification and natural history*. 207 p., 197 colour plates, 65 monochromes, drawings, maps. William Collins Ltd, Auckland. ISBN 0 00 216955X. Price: NZ\$45.

G. W. Gibbs has written a thorough comprehensive account which amateurs, professionals, students, or teachers alike will find useful and enjoyable. The price is a drawback, for \$45 is rather more than most of us can afford. A slightly less lavish production, within soft covers, at a lower price would give a wider ownership of this outstanding contribution.

The book aims not only at allowing the reader to identify butterflies — whether as adults, pupae, or caterpillars — but provides an additional stimulus by discussing physiological, evolutionary, or ecological topics exemplified by this or that butterfly species. Thus an apparently simple account of *Zizina otis* becomes a concise series of discussions on evolutionary biology, population genetics, effects of plant chemistry on plant eaters, and suggestions for experimentation. The whole effect is to make you get out and do something.

There is no species list, but the “Table of Contents” serves as one. Dr Gibbs introduces our butterflies to us, dealing squarely with the question “Why so few?” distinguishing moths from butterflies, “dissecting” the representation in New Zealand, and evaluating doubtful or “non-acceptable” records.

As our butterfly fauna is 52% adventive (12 out of 23), migration is covered in a separate chapter. Other chapters deal with Pieridae, Nymphalidae (Danaiinae, Satyrinae, Nymphaline), and Lycaenidae. Chapter 6 discusses the study of butterflies, and is a very helpful account. There is a simple glossary and a full index.

The book is crammed with a great deal of new information, particularly on biology and ecology. A key to each group is given, and is comprehensively illustrated. Characters used are easily evaluated.

Genitalia are figured only for *Zizina*; for endemic species the reader will consult papers by Craw, Miller, Sabatini, and Field in the “References”. Dr Gibbs’ lack of emphasis on these structures probably stems partly from the fact that genitalic studies are not compatible with the resources available to most readers, and partly from the fact that relationships of the endemic butterflies seems little clearer now than in Hudson’s day.

The colour illustrations are superb, although Plates 178 and 181 seem repetitious. The reproduction in the copy before me is excellent. The S.E.M. photographs of cuticular structures are particularly instructive, and should prompt further examination of other structures.

The maps are not always successful, and would have been better if the printer had reversed the symbols, using shade for land over 900 m, and lines or solid circles for insect distribution. Figure 24 (*Argyrophenga harisii*) shows an almost invisible distribution, and South Island records of *Danaus chrysipus* are hard to pick up on Figure 12.

George Gibbs pays tribute to his grandfather, G. V. Hudson, with this book, and it is a worthy tribute. Like his grandfather, Dr Gibbs has provided us with a comprehensive, stimulating, readable reference work. This reader acknowledges his debt to both these observant and persevering natural historians of our Lepidoptera.

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