REVIEWS

BIOGEOGRAPHY AND ECOLOGY IN NEW ZEALAND, edited by G. Kuschel. 1975. xvi + 680 pp., 171 figs., 37 tables, 4 maps, 12 plates and 10 fold-out pages. Obtainable through booksellers or direct from the publisher, Dr W. Junk, P.O. Box 3713, The Hague, Netherlands. Price 200 Dutch guilders (NZ$83).

This book is Volume 27 of a world series on biogeography and ecology titled Monographiae Biologicae. Not surprisingly, with that background, it claims to have been written for overseas readers. If indeed it is read by such they will know considerably more of the developmental natural history of New Zealand than most who live here. It is ironic that such a high quality book about New Zealand should have needed to be commissioned and published overseas. And that there is not even a distribution agent for it in New Zealand.

The book sets out "to convey a past and present overall picture of the natural history of New Zealand with emphasis on its ecology and biogeography". Seventeen chapters, each written individually by a leading New Zealand worker in the field, cover the geological history of New Zealand, its climate, soils, vegetation, limnology and marine ecology, terrestrial and freshwater insects, amphibians, reptiles, fishes, birds and mammals, together with its indigenous people and the recent influence of man.

To the reviewer, its great value is that it presents a rarely available, up-to-date, authoritative review of a number of areas in which knowledge and interpretation have changed considerably in the last 20 years. A prime example is the chapter "The geological history of New Zealand and its biota" by Sir Charles Fleming, which the author describes as his "third attempt to describe the history of life in New Zealand". The book warrants purchase for that chapter alone by any forester with an interest in the development of New Zealand's biota.

Space does not permit a chapter-by-chapter description — suffice it to say that most chapters have relevance to the forester in today's broad concept of forest management, and those few which don't, have interest. The subject matter generally complements that in G. R. Williams' *Natural History of New Zealand,* but throughout the emphasis is more on evolutional developments, which to the reviewer is a major attraction.

The book (as perhaps it should be for the price) is well bound, and printed on high quality paper. The approach of the different authors is closely parallel, making a book which reads easily as a whole. One might expect some contradiction between chapters

in their coverage of overlapping material, but the only example found by the reviewer was a reference to the gourd brought to New Zealand by the Maoris as *Lagenaria* in one chapter and *Cucurbita* in another. A tribute to the editing.

One thing which will irritate many foresters is the Editor's Introduction in which, after stating that some 95% of the fauna of the lowland biota of New Zealand are confined strictly to the indigenous forests and thus "have no chance of survival without this plant cover", he says: "Thus the clearing of vast and continuous land areas for farming and the replacement of indigenous forest with exotic trees, particularly with pines and other conifers, is absolutely catastrophic for the native fauna."

One should resist being turned away by this example of editorial prejudice. The book itself is first class: mandatory reading for the educated forest — and for the uneducated one looking to change. But, at the price, see if the office will buy it.

G. B. Sweet

BIOLOGY OF EUCALYPTS, by L. D. Pryor. Studies in Biology No 61. Edward Arnold (Publishers) Ltd., 1976, 82 pp.

Any forester worthy of the name will find this booklet completely absorbing, and the eucalypt fan will acquire a copy as soon as he can. As a clear and stimulating compendium of Dr Pryor's knowledge of this genus, it is worth every cent of its price (current N.Z. equivalent $4.80).

The title should not be interpreted too narrowly: the chapters cover geographic distribution, the many peculiar features of morphology and classification of this remarkable group; breeding; hydridisation; site adaptation and ecological associations; physiology (with a separate chapter on the influence of fire); and the introduction of eucalypts to alien lands. This last section is somewhat perfunctory and New Zealand (perhaps appropriately?) rates a mention only as an example of the influence of insect attack (in this case *Paropsis*) on growth. One would have liked to see, in a book about such a widely planted genus, much more about its behaviour in overseas habitats, to complement the brief notes that are relegated to a two-page appendix.

However, these are a silviculturist's preferences. The Institute of Biology, which sponsors these "Studies in Biology", states that the aim is to provide a series of booklets to enable teachers and students to keep abreast of research on selected topics. Given these educational objectives, it is a pity that the editorial standards are not up to those of Dr Pryor's text. At least one of the illustrations (Fig. 2.4) is incomplete and there are typesetting or grammatical errors on the third line of the preface, as well as