

The New Flora

Flora of New Zealand, Vol. I, by H. H. Allan. Government Printer, Wellington, 1961, pp. liv + 1085. £5 5s.

THE most important event in New Zealand floristic botany for many years is the publication of this eagerly awaited book. It contains the indigenous pteridophyta (ferns, lycopods, etc.), conifers, and dicotyledons; monocotyledons are to constitute vol. 2, and introduced plants vol. 3. The present volume has been about 12 years in the making, and represents an enormous amount of detailed work. Naturally, then, it is by no means a new edition of its predecessor, Cheeseman's "Manual", but a new work, and those who are accustomed to the older flora must prepare for a period of reorientation before they will be familiar with the new.

This has happened before—about once in a generation. The need arises primarily from the results of botanical research—the finding of new species, the more critical examination and discrimination of those imperfectly known, the extension of recorded distributions. 1457 species are now recognised, as compared with 1363 in the corresponding portion of Cheeseman's Manual, i.e. excluding monocotyledons. In addition, many of the names used by Cheeseman were invalid under the modern Code of Botanical Nomenclature, and corrections had become available rather sporadically in various genera. It was time to have these consolidated in an authoritative flora which could be accepted as standard. That the pohutukawa should be called *Metrosideros excelsa* instead of *M. tomentosa* was already widely known; that the genus *Suttonia* is re-absorbed into *Myrsine* will be easy to accept as the latter name was kept familiar by the synonyms quoted in Cheeseman's Manual as well as by the family name Myrsinaceae. It gives us more of a jolt to find that a well-known genus like *Nothopanax* must be renamed *Neopanax*, or that *Olea* disappears from the New Zealand flora in favour of the unfamiliar *Gymnelaea*. Fern collectors who have mastered Copeland's nomenclature for filmy ferns with the aid of Dobbie and Crookes' New Zealand Ferns may be disappointed to find them all returned to *Hymenophyllum* and *Trichomanes*, but the non-specialist will be relieved, for these two genera can now be recognised at a glance, if fertile, and some of Brownlie's work at Canterbury University supports the more conservative treatment. We cannot ignore a correction like that in *Raoulia*, where the scabweed, hitherto called *R. lutescens*, turns out to be the original *A. australis*, and the species we have been calling *R. australis* is therefore given a new name, *R. hookeri*. We may have more doubt about the propriety of any New Zealand botanist sinking *Leucopogon* in *Cyathodes* on the strength of our few species when there are well over 100 in Australia. It remains to be seen whether Australian botanists will agree.

Botanists are often criticised for their apparently capricious changing of names, but the only hope of stability lies in strict application of the International Code, and New Zealand is now certainly much nearer to this ideal than most countries. On almost every page one can find evidence of meticulous care in matters of nomenclature. Even so, we must not be too optimistic, as the supplementary notes (pp. 1009—1035) contain numerous amendments which have come to light after the relevant parts of the text have been printed, and others will certainly be found in the future. These supplementary notes, by the way, are so essential that no serious user of the flora should neglect the recommendation to enter them, or at least references to them, at the appropriate places in the text. Use a fine pen and indian ink, not ordinary writing ink.)

The flora's primary purpose is (in its own words) "to provide a means of identifying plants", and for this it will be found better than its predecessor. Cheeseman provided good description but bad keys—in any large genus one was offered a choice between several groups of species, and then had to read and compare the references to every species in the chosen group; in the new flora the keys are dichotomous, i.e., at every step one is offered a choice between two alternatives—a very much better and easier system. There are also general keys to the families and genera of dicotyledons (pp. 115—134). The full descriptions of species are still necessary, and make up the bulk of the text as in any flora. Some readers will not like them so well as those of Cheeseman, for the need to compress more information into less space has been met by terseness, and the amateur botanist and the potterer will miss Cheeseman's word pictures and occasional chatty remarks which provided a short-cut to identification. This is more of a botanist's flora, making fewer concessions to the amateur except the very important one of workable keys.

A second declared objective of the flora is to facilitate further research by pointing out where it is most needed, and by collecting a mine of information on specimens and literature of importance for such work. In this respect the book is surely outstanding among the floras of the world, and a fitting memorial to a great taxonomist.

That much of this more specialised material is in small 6-point type is part of the price we pay for getting all this information into a handy-sized book less than half as thick as Cheeseman's Manual and less than a third of its weight—roughly $1\frac{1}{4}$ lbs as compared with almost 4 lbs. But the chief device for reducing bulk and weight is the use of extra-thin paper, and the pros and cons of this choice will no doubt be freely debated, for the user notices the paper before he has had time to notice anything else. It is certainly not so easy to handle as normal book paper, especially when referring to the index or locating a desired page; it may even encourage finger-licking and one wonders whether much-used copies

will be durable. The paper is of good quality, very white and opaque, but the idea may have been carried a little too far. The current Flora of the British Isles by Clapham, Tutin and Warburg also uses thin paper, but not so thin as this. It is a rather thick volume, but it contains more than 400 additional pages; reduced to the same number as in Allan's Flora it becomes quite a handy little book and the pages are firm enough to be turned quite easily. It may represent the best compromise. The ideal solution is to have a library edition, and a field edition reduced in size by omission of reference material, but that would be economically impracticable with a population as small as ours, so we must be grateful that such a detailed flora has been made so portable.

Commendable features include the end-paper maps, the inch-and-metric scale at the front, and the drawings by Nancy Adams—not portraying general appearance of plants, but critical details like leaves and fruits which are used in the keys. The same artist has provided an attractive dust cover. Desirable additions would include page references in the general keys to families and genera, though one can see several difficulties, and a generic name at the beginning of each left-hand page in the index. (It is worth while adding these names when entering the supplementary notes.)

The book is expensive, but not in relation to the time and labour that have gone into its production. Such an undertaking requires experience and knowledge which very few people possess, so New Zealand botanists are fortunate that Dr. Allan was able to take it as far as he did and that such an able colleague as Miss Moore was available to see it to completion. The result is a credit to both, and to the others whose essential help is acknowledged, no matter what criticisms or disputes on specific questions may later arise. A full appraisal of the book's accuracy and usefulness cannot, of course, be made except after extensive use; the proof of the flora will be in working with it, but what a joy to be brought up to date with a flora which provides such a stimulus to further work!

H. D. GORDON.

Roadside Scrub Near Cape Runaway

L. B. Moore, Lincoln

ON the coastal route from Opotiki to Gisborne the road runs mostly within sight of the sea. Along the Bay of Plenty there are many pohutukawa trees and the shingly or sandy bays are separated by rocky points with broad intertidal platforms of hard, almost black greywacke. The soft pale-coloured papa rocks of the east coast from Te Araroa southwards weather to quite different shapes and to a less intended, rather bare coastline. Between these contrasting sections, from Whangaparaoa to Hicks Bay, the road runs inland inside the Matakaoa range that ends in a 900-foot peak above Cape