

BOOK REVIEWS

The Synecology of the West Taupo Indigenous Forest. P. J. MCKELVEY. New Zealand Forest Service Bulletin 14. Pp. 127; 12 maps; 16 photographs. Govt. Printer, Wellington. Price 25 shillings.

This bulletin is the first of a series summarising the results of the National Forest Survey initiated by the Forest Service in 1947. It covers the forests of the Rangitoto and Hauhungaroa ranges west of Lake Taupo and those of the Pihanga-Kakaramea block to the south. There are summarised descriptions of 32 forest types, with maps, 7 aerial photographs, and 9 other photographs showing features of vegetation structure. The influence of man and animals on forest development is discussed and there are informative appendices on the geology, soils and climate.

This is a major contribution to our knowledge of North Island forests for the descriptive sections bring together a great deal of detailed information. An important chapter predicts the composition of future forests; but one of the most interesting chapters deals with forest development, and suggests a number of hypotheses to explain various features of the forest pattern. The distribution of dense podocarp forest nearest the lake, matai/rimu forests to the west and rata/rimu/tawa forests still further away are related primarily to centripetal succession following the devastating pumice eruptions of about 130 A.D. (carbon date). It is dangerous to equate spatial variation of this sort to temporal change when sites vary so greatly: this reviewer believes that more emphasis should have been given to the effects of soil parent material on forest patterns. Furthermore the centripetal succession explanation leaves unsolved a big question concerning the history of the dense podocarp forests. If, as certainly appears, they are composed of first generation even-aged trees, they cannot be older than 800 years. This leaves an interval of about 1000 years when for some unexplained reason the Taupo pumice was not colonised by forest. These comments are made not in criticism but rather to show that, as the author readily

New Zealand Forestry. N.Z. Forest Service. Information Series No. 41. Pp. 80; 14 text-figures, 2 tables, 6 maps; 126 photographic plates. Govt. Printer, Wellington. Price 30 shillings.

This book aims to explain to the general reader "how it is that this country has passed in just over a century from a land with an over-abundance of timber to one in which fine-quality native timber is in short supply, and . . . what exactly forestry is accomplishing."

It is essentially a book of photographs, mostly by the N.Z. Forest Service photographer J. H. G. Johns, but with a nice spattering of old-time photographs by way of contrast. These photographs are superb and it is to them rather than to the text that the general reader will first turn. Arranged in logical sequence, they tell their tale most eloquently. To be sure, "the New Zealand farmer is still enshrined in political rhetoric as the backbone of the country" (p. 17), but

admits, further investigation of the Western Taupo forests is needed before their dynamics and ultimately their management are understood.

As claimed in the preface, the writing is largely free of ecological jargon, but this has not prevented the appearance of such phrases as "soil-tolerant scrub hardwoods", "aggressive scrub hardwoods" and "appreciable overmaturity". The "wren" listed among the forest birds (p. 13) is presumably the rifleman, not otherwise mentioned. These minor criticisms do not detract from the value of the account, but attention must be drawn to two major faults.

Twelve maps show the distribution of each forest type in some detail, but they are uncoloured and lack a legend (although there is an enumeration of forest types on the enclosing envelope). Presumably the cost of colour reproduction was thought prohibitive, but until the reader has sat down with coloured crayons, paper and pencil and spent some hours on each map, it is practically impossible to comprehend the forest pattern, let alone details of distribution.

The second point is that the text could have been made more useful by increased citation of specific localities. For instance, the synthetic structural descriptions given in small type for each forest summarise the results of a varying, usually unstated, number of sample plots with no indication of locality. Since a generalised description is already given in the text, it would have been much more useful to have described one or two representative plots from particular localities. Some of the photographs also have no indication as to where they were taken.

The facts and hypotheses brought forward in this publication provide a foundation for detailed investigations of the Western Taupo forests. As some of the trends disclosed are by no means restricted to Western Taupo this will be a valuable reference work for anybody considering the dynamics of New Zealand forests, and particularly those of areas subjected to volcanic disturbance.

I.A.E.A.

It is right to point out that the backbone of the country is showing through here and there. Not all of New Zealand has been transformed "from primeval forest to smiling farm". There is a great future for forestry in New Zealand, and room for many more trees yet—for timber, shelter, soil conservation and, not least, to relieve the nakedness of so much of the land.

What with a foreword by the Minister of Forests, a preface, a list of illustrations, a glossary of technical terms (from 'autecology' to 'xerophytic', some of which could have been omitted), a list of scientific names of species mentioned in the text, metric equivalents of common measures (hardly necessary here), an index, and no less than seven entirely blank pages, we are left with 54 pages for nine chapters of text and six full-page maps. Two chapters ('Vegetation and Land Use', and 'Management of the Forests') extending to 10 pages apiece give adequate coverage; but the other seven chapters covering but 27 pages in all are either

too solid or too flimsy. The chapter on 'Research', for instance, which could have been exciting, is dismissed in a mere two and a half pages.

In the latter half of the last century, when "a pall of smoke hung over the North Island", the character of the vegetation in eastern parts of the South Island too "underwent such rapid changes that we have been left . . . with no detailed description of . . . the pre-existing vegetation". It is to the credit of the Forest Service that the remaining forests have now been so thoroughly surveyed. We are assured (p. 30) that, "There is unlikely to be any further reduction in the area of native forests"; yet (p. 39) "The current production of indigenous sawn timber involves the clear-felling of merchantable species on some 30,000 acres each year . . . the result . . . a substantial annual reduction of the indigenous production forest area."

The N.Z. Forest Service is touchy about the control of noxious animals. It may be over-optimistic to maintain that, "The rapidly growing force of virile young

New Zealanders, hunting in the mountains for pleasure and profit, could well be the decisive factor in bringing these noxious animals under effective control" (p. 18).

Economics figure rather prominently, and there is not much about the forests as forests. Even the full-page maps showing their distribution distinguish only between indigenous and exotic forests. More understandably, there is only passing reference to those other, scientific, aesthetic and recreational values of our forests; but we may be excused for squirming at being told (p. 41) that "the value of our protection forests is not wholly economic. They form a scenic backdrop to the New Zealand outdoors"! Is that all?

New Zealand Forestry is authoritative, and though a lay reader can pick a few minor blemishes (inconsistent spelling of 'Aorangi', some diagrams inappropriately placed), editing and production are good. Certainly, parts of the text are also good and readable; but it is the photographs that will live.

J.A.G.

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