

rata growing in similar positions, i.e., partial shade. In view of this variation in shape it is safest, and easiest for that matter, to distinguish southern rata from northern rata by the difference in venation seen on the under-surface of the leaf. For the most part in southern rata only the main veins are seen, whereas in northern rata copious net veins are visible. I have to thank Mr. R. R. Julian of the Soil Bureau for the photograph reproduced opposite which shows the striking difference in venation in the two species.

No doubt southern rata will be found elsewhere in the Tararuas and it may even turn out to be not as rare as it appears to be at present. On the other hand the large proportion of dead trees and the near absence of juveniles on Dobson's ridge suggests that the species may soon become extinct locally. The distribution as known at present may be summarized as follows: upper warm (not lower) temperate belt, i.e. 1,000-2,000 ft; northern Tararuas—Takomaru V. and near Ngapuketuru, southern Tararuas—near Dobson's hut and in four localities in the catchment of the Renata Stream (a tributary of the Hutt R.). Specimens in the Botany Division herbarium: Beddie, 65567, 69381; Druce, 86414.

Hard Beech in the Tararuas

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HARD beech (*Nothofagus truncata*) was not recorded from the northern and western parts of the Tararua Mountains by Zotov, Elder and Beddie, but is now known to occur in a few places. A short distance upstream from the hut in the south branch of the Ohau R. towards Girdlestone Saddle, where the track goes up to avoid a waterfall, there is a stand. The trees are growing on a sunny slope with a rather thin covering of soil on rock. This is the only occurrence of hard beech known to the writer in the Ohau V. The species occurs in the Otaki V. near the Waitewaewae forks and may occur further up this valley. It has not been seen by the writer in the Mangahao V. or elsewhere in the northern Tararuas, though Mr. Poole found a few trees associated with black beech (*Nothofagus solandri* var. *solandri*) a few miles south of the Manawatu Gorge. Can any reader supply further information on the occurrence of hard beech in the area?

[Ed. note: Mrs. F. C. Duguid some years ago found hard beech on a steep river cliff in Kimberley Reserve not far from Levin.]

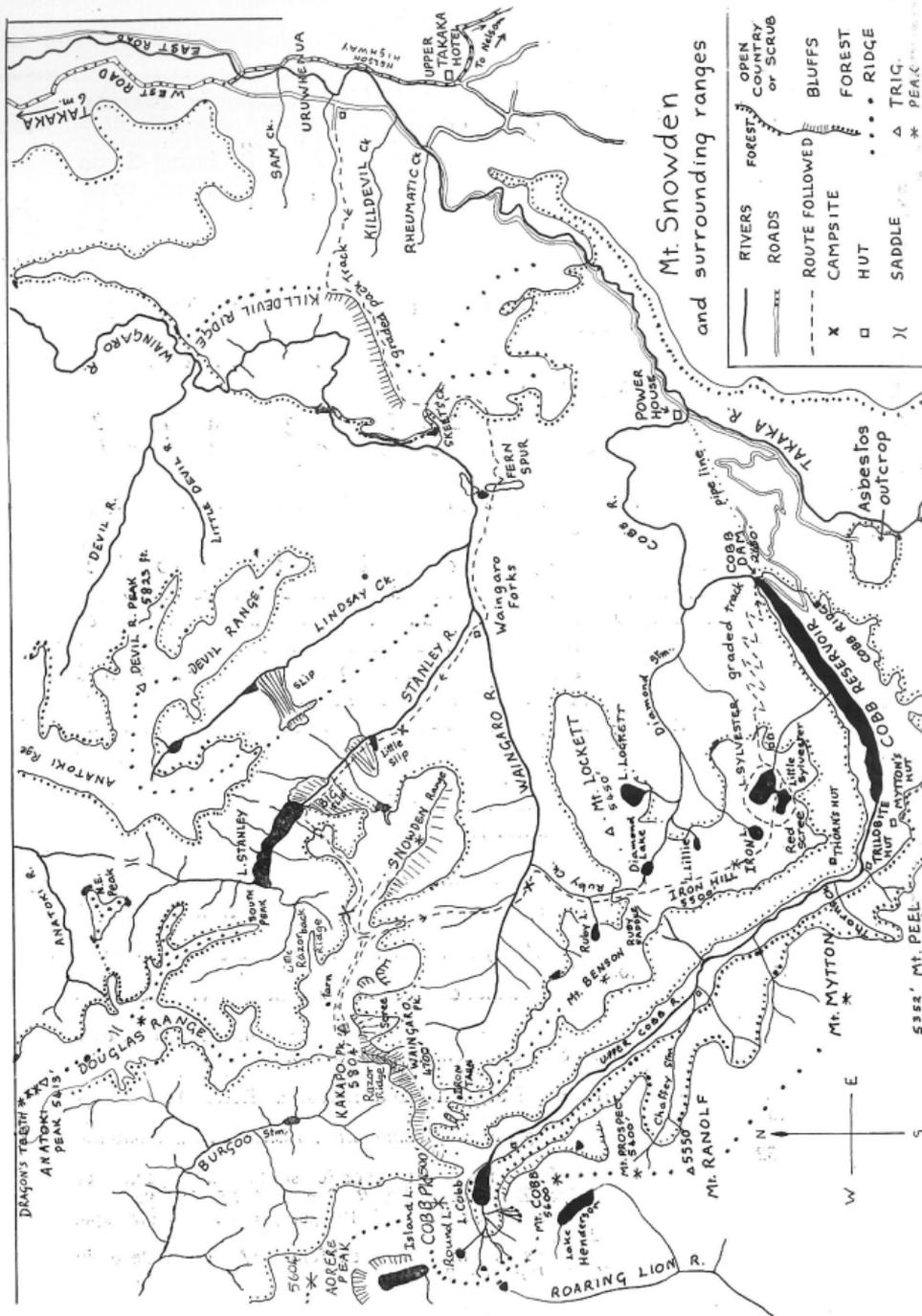


Fig. 1.—Locality map of the Mt. Snowden area.

linnaeoides also occur on the forest floor, along with the other herbs found lower down. The finely-cut fronds of *Hypolepis millefolium* form a broad, waist-high bank at about 3500 feet, and almost immediately there follows a curious formation, a pure stand of very old beech trees with pillar-like trunks and the canopy about 30 feet above—in Martin's words, "A cathedral-like piece of forest with hundreds of branchless pillars of silver beech supporting the canopy above . . . each pillar draped with a bilious moss . . ." Here again, in the deep dry litter of the forest floor, is to be found the big carnivorous snail. The "bilious moss" on the trees consists of bryophytes of several species, some of the commonest being *Porella stangeri* and *Trichocolea* sp. There is scarcely any undergrowth, only a few scattered colonies of *Blechnum discolor*.

This aged forest probably extends as a belt around the mountain, since Martin encountered it on his climb up the opposite side. He also described a dense growth of tupari and stunted beech "most easily negotiated by scrambling over the top" as occurring between this belt of forest and the fellfield of the summit; but on the west side the tall forest goes right to the summit, where it gives way abruptly to the fellfield, the only transition being the increasing occurrence of low bushes of tupari in the forest.

The fellfield area is about five acres in extent, with a convex slope downhill from west to east, so that it extends much lower on the eastern side than on the west, where the forest comes level with the ridge. The physiognomic plants of the formation are the snowgrasses, *Danthonia flavescens* and *D. rigida*, except in a boggy, low-lying part at the northern end, where *Oreobolus pectinatus* is dominant, with cushions of *Phyllachne colensoi* and occasional thelymitras and prasophyllums. In the drier true fellfield amongst the snowgrass there are *Carpha alpina* (commonly infested with the smut *Cintractia waiouru*), *Luzula campestris*, *Danthonia gracilis*, *Poa colensoi*, *Aciphylla colensoi*, *Anisotome aromatica*, two species of *Gentiana*, *Epilobium pernitens* and *E. pedunculare*, *Drapetes dieffenbachii*, *Pentachondra pumila*, and *Celmisia graminifolia*.

On and between the great slabs and blocks of schistose rock which are strewn over a considerable part of the top, are to be found the following: a small, completely prostrate dracophyllum (*D. rosmarinifolium?*), *Gaultheria depressa*, *Viola filicaulis*, an astelia (*A. solandri?*), a tall carex (either *C. cockayneana* or *C. semi-forsteri*), *Euphrasia monroi*, *Coprosma parviflora*, *C. pseudocuneata*, *Pimelea longifolia* (not var. *lanceolata* as recorded by Martin), *Anisotome haastii*, *A. deltoideum*, *Schizeilema roughii*, *Hymenophyllum villosum* (with wiry rhizomes entangled among the roots of the *Schizeilema*), *Senecio lagopus*, and *Celmisia rutlandii*. The two latter are plentiful south of the highest point, in rock clefts and sheltered places. There is also an interesting series of plants referable to *Ranunculus geraniifolius*, but apparently consisting of two distinct forms and intermediates between them.