

Note on Waimahoe Bush and Kapiti Vegetation

THERE are some interesting parallels between Waimahoe Bush and Kapiti vegetation in spite of their very different histories since 1800.

The disappearance of many tall trees is a feature of both areas. According to early reports kahikatea and rimu, along with matai and miro, were a conspicuous feature of the vegetation. Since 1839, however, kahikatea and rimu have disappeared without trace. Fire is a possible cause but alone cannot account for their elimination. Matai and miro persist; there are a few old trees of each and many small plants. A. S. Wilkinson in several of his annual reports mentioned the abundance of young plants of these species but it seems unlikely now that they will become a significant part of the vegetation anywhere on the island.

Totara has not been recorded on the island but it is surprising that more did not occur on the consolidated sand dunes of the Waikanae district. It seems that the shingles on the roof of the Kapiti whare came from Otaki about 1882.

Epiphytic northern rata of the old generation is becoming rare on Kapiti and the adjacent mainland. Old age, opossums and scarcity of "host" trees possibly all played a part in its decline, but charcoal on nearly all dead and dying trees on Kapiti points to a further possible cause.

Kohekohe forest in Waimahoe Bush and on Kapiti does not differ in any major aspect but the Kapiti forests may be younger. Kohekohe now dominates in some places that were almost bare at the beginning of this century. An early caretaker commented that shrubs were appearing where they were being protected from goats within gunshot range of the house (the present whare). Part of this area is now kohekohe forest. The kohekohe forest of the Kaiwharawhara basin too is relatively young. In 1902 it consisted mainly of seral shrubs.

Tawa forest on Kapiti is also young. The dense stands of saplings 8–10 ft. high mentioned by Cockayne in 1907 are now the main canopy at 40–60 ft. Because of the intense competition among the dominants the undergrowth is very sparse, contrasting strongly with that of Waimahoe Bush.

The kohekohe—tawa balance on Kapiti is determined in part by the greater air-borne salt tolerance of kohekohe. The even canopy may also confer greater resistance to wind damage. However in many places the two species are co-dominant, the young plants of each being able to establish and mature in the presence of the other.

Akiraho occurs on the dry, wind-swept sites on Kapiti. Akiraho and mapou together follow manuka or kanuka and are ultimately

replaced by kohekohe. The sequence can be seen on the hillside above Rangatira flat, west of the caretaker's house.

Shining broadleaf (*Griselinia lucida*) is both terrestrial and epiphytic on Kapiti. Young plants are abundant under kanuka and akiraho on very steep slopes. The habitat here probably differs little from that in the canopy of a tree. One very large specimen in Maraetakaroro Valley has two oval trunks each about 18 in. thick in the narrowest dimension but one reaching 27 in., the other 40 in. across the long diameter.

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Field Trip to the Black Birch Range

During Easter 1967 the Society visited the Black Birch Range on the western side of the Awatere River in Marlborough. We stayed in a large, centrally heated house situated on the crest of the range at 4,600 feet. The house had been built by Princeton University as one of two possible sites for an astronomical observatory, the other at Mt. John being finally selected.

The terrain in the vicinity of the house was a more or less level ridge crest with scattered large outcrops of rock. The latter sheltered a number of shrubs, including the Marlborough endemics *Helichrysum selago* and *H. microphyllum* (bright yellow with flowers), and various herbs including the spaniard *Aciphylla aurea* and large specimens of *A. monroi*. The often windswept open areas had a low cover mostly of herbaceous plants with *Celmisia spectabilis* and *C. sessiliflora* prominent. The red berries of *Pentachondra pumila* were particularly attractive.

The ridge led to Altemarloch (5,600 ft.) and on the way there was quite a striking change in the vegetation from about 5,000 ft. with the pale yellow cushions of the Marlborough vegetable sheep (*Haastia pulvinaris*) becoming conspicuous, together with other mat or cushion plants such as *Anisotome imbricata*, *Raoulia bryoides* and *Celmisia sessiliflora*. In places *Gentiana bellidifolia* and *G. corymbifera* were in full flower.

There were quite extensive scree on the west side of the ridge but no scree plants were noted here.

A saddle separated Altemarloch from Mt. Harkness (5,280 ft.) where further screes provided habitats for a few plants of typical scree species. About half a dozen plants of the more northern of the two scree anisotomes (*A. diversifolia*) were discovered, this being a new record for the species. In addition one rather diminutive specimen of the penwiper plant (*Notothlaspi rosulatum*) was noted, and several plants of *Epilobium pycnostachyum*.

Finally, at somewhat lower altitudes, the upper limits of remnant mountain beech forests were visited in two valleys to the west of