TAUHERENIKAU FLATS.

The weekend of 7-8th February was fine and sunny, and the ten members who made the trip to Tauherenikau Valley had ideal conditions for botanizing on both days. The Tramping Club's hut beside the river stands on an old shingle terrace that forms a rocky, well-drained flat broken at intervals by shallow damper depressions that run roughly parallel with the river and mark the positions of former subsidiary channels that have been cut off by the building-up of the terrace. While the higher parts of the flat become excessively dry in summer, the deepest depressions are permanent swamps. The vegetation of the drier parts is remarkably uniform, changing rapidly wherever soil moisture increases and giving place to rain-forest on the longer-established terraces and lower hillsides. By careful and prolonged study it might be possible to reconstruct the history of this terrace and its vegetation; all that was attempted on this brief visit was to list the principal species and outstanding characteristics of the present plant-covering.

The manuka forest. The most remarkable and charming feature of the manuka forest is the general absence of any continuous shrub layer between the golden carpet of moss that covers all but the biggest boulders, and the light and open canopy that is composed almost entirely of the tops of tall, well-spaced trees of L.ericoides. Kowhai, which is far from common, was the only other tall tree noted. Between the grey manuka boles totara, Nothopanax arboreum, Melicytus simplex, and Leucopogon fasciculatus, are widely scattered, and ball-shaped shrubs of Cyathodes acerosa are fairly common, while, where disturbance has been greatest, near the hut and track, there is a switchy growth, waist-high, of quickly growing young manuka.

Thuidium furfurosum and Hypnum cupressiforme are the dominant ground mosses, amongst which an occasional shiny cushion of Dicranoloma billardieri or a grey wolly patch of Rhacomitrium hypnoides var. pruinosum lends variety. Lagenophora petiolata was in February quite the most conspicuous accompanying species with its white miniature daisy flowers held 3" high on slender stems. Abundant in the turf also were the lichens Cladonia aggregata, C.furcata, and C.retipora; and Haloragis depressa, Pratia angulata, Gnaphalium collinum, Cotula minor, Luzula compestris, Wahlenbergia gracilis, Acaena sanguisorbae, Thelymitra sp., Prasophyllum colensoi, Hydrocotyle moschata, and Helichrysum filicaule. Only a sprinkling of exotics was noted. Holcus lanatus, Poa annua, Cnicus lanceolatus, and Cerastium sp. Added to these on and about emerging boulders were Nertera sp., Hymenophyllum sanguinolentum, Cyclophorus serpens, Polypodium grammitidis, the lichens Cladonia pycnoclada, Stereocaulon ramulosum, Sticta psilophylla, the mosses Rhacomitrium crispulum, Campylopus sp., Macromitrium sp., and liverworts of the genus Lepidolaena. Seedlings of woody species except of manuka were not common but Hebe salicifolia and Nothofagus fusca juveniles were seen.

Manuka trunks carried plenty of foliose lichens e.g. Sticta latifrons and its broader variety menziesii, S.coronata, and S.episticta; and mosses of the species Papillaria flavo-limbata, Cladomnion ericoides, and Dicnemon calycinum.

The lawn. Absence of canopy combined with greater dampness and apparently persistent grazing by deer and rabbits probably affect the composition of a remarkably lawn-like sward that has developed where a much-used track passes through an opening in the manuka forest. Of the species observed on the forest floor we found only those marked above. Additional to these were Centaurium umbellatum, Dichondra repens, Epilobium nerteroides, E.pedunculare, Geranium molle, Juncus bufonius, J.novae-zealandiae, J.planifolius, Juncus sp.(tall, eaten short), Leontodon hispidum, Microtis unifolia, Myosotis caespitosa, Ophioglossum coriaceum (fertile, very abundant), Polygonum hydropiper, Prunella vulgaris, Ranunculus sp., Sagina sp, Trifolium repens, T.dubium, Vulpia sp. Marchantia was locally abundant and mosses H.cupressiforme, and Polytrichum juniperum were scattered throughout.

The swamp. A swamp between the river flat and the hillside near Canyon Creek was examined.

From the fringe of toetoe it appears at first that a number of species of shrubs and young trees are growing on the floor of the swamp; a closer look shows that they are all rooted in the clumps of niggerheads that are everywhere abundant. Leptospermum ericoides is the commonest; others noted were Podocarpus dacrydiodes (1), Carpodetus serratus, Pittosporum eugenoides, Aristotelia serrata, Fuchsia excorticata, Coprosma robusta, C.rotundifolia, C. rhamnoides (1), and also the ferns, Asplenium bulbiferum, Blechnum fluviatile, B.procerum, Polystichum vestitum.

Floating on the surface of the water were reddish-green plants of the water-fern Azolla rubra, the bright

duckweed, Lemna minor, and the brownish leaves and fruiting inflorescences of Potamogeton cheesemanii.

In the shallower water Ranunculus rivularis was flowering and fruiting, Callitriche verna was in fruit, and the exotic Nasturtium officinale occured. Eleocharis acuta occupied a damp muddy area where the swamp shallowed out.

In damp grassy places Uncinia uncinata var. ferruginea was again in full fruit, reminding us of our visit in January last year when we released a young blackbird that had got so tangled in the hooked half-ripe fruits on the close-ranked spikes that it was helpless when we found it and would almost certainly have died had we not set it free.

A species which is found only here and there under the manuka between the track and the hillside is Schizeilema trifoliolatum.

L.B.M., R.N., D.K., P.S., G.B.C.

PAKURATAHI LIVERWORT WELCOME IN ENGLAND.

Extract from letter from Dr P.W.Richards, the Botany School, Cambridge University:

"I was delighted with the beautiful material of Monoclea c.fr. which reached me early in February. It was in excellent condition ..... I should think very few people in this country know the sporophytes except from text-book figures. We feel so cut off from the outer world now-a-days that it is a great pleasure to see something new botanically."

HECTOR MEDAL AND PRIZE.

The Hector Memorial Medal and Prize for the encouragement of scientific research in the Dominion have this year been awarded by the Royal Society of New Zealand to Dr H.H.Allan, for his botanical researches. Congratulations to our vice-president.

Annual subscription to the Society:- In Wellington 5/-
beyond Wellington 2/6
Hon.Sec: - D.King, 55 Standen St. Karori, W.3.
Editor:- L.B.Moore.
N.B. Financial year ends 30th June.
