

the growing of exotic forests in New Zealand, formerly viewed with suspicion, is now being justified by demands for war-time projects. *Pinus radiata*, which twenty years ago was little used now ranks third of all commercial timbers. It supplies all fruit casings and much temporary building material, and in addition large quantities are required for munition containers, and for concrete piling.

Utilization of Waste. Restriction of paper imports has necessitated the use of suitable thinnings for rough types of paper and cardboard-making, and dangerous waste material is now consumed in the production of formerly imported fibre-boards and mill-board. Such utilization increases the management efficiency and hygiene of these forests.

A major problem for long has been the utilization of thinnings, which in larch plantations formerly gave a return too small to render the operation economically; however, war-time use in tunnelling, trenching, and shelter building, and in power and communication lines now enables this process to be carried out on a financially sound basis.

Charcoal as a war-time commodity is being produced from waste material of beech milling and from sawn sawn timber.

The trend of demand, therefore, is having a significant influence upon the use and treatment of our forest areas.

#### IMPRESSIONS OF BUTTERFLY CREEK.

On November 29th three fortunate Bot. Sociers, under-led by heavy rain at getting-up-time, visited Butterfly Creek. The day was ideal. A fresh wind was a welcome spur up the shrubby hillsides. Within the beech-forest, filmy ferns and bryophytes, refreshed by the rain, looked very different from the parched, curled and faded shadows of themselves which alone might have been seen in drier weather.

The trip was particularly satisfying for the orchid-lover. Ground orchids were first met with in the stunted wind-swept scrub -- two species of *Thelymitra*, one in flower, and a fruiting specimen of the dainty fairy *Caladenia minor*. In the beech-forest patches of

*Corysanthes triloba*, some fruiting, were common. There was one small clump of *Chilodactylis cornuta*, with broad membranous leaves, characteristically two to a plant, and rather large green flowers. The leafless mottled flower-stalks of *Gastrodia cunninghamii* were found to be plentiful when once the eye had become used to discerning them in the shadows. A few of the large brownish-white flowers were fully open. This leafless orchid is a saprophyte, obtaining its organic nourishment from humus, with the aid of the fungus which inhabits its underground tubers, instead of elaborating it from carbon dioxide and water as do plants possessing green leaves.

In the swamp-forest on the level area between Butterfly Creek and Gillian's Stream, the broad-leaved epiphytic orchid, *Sarcochilus adpressus* was seen in flower. Here also the ground was strewed with shed corollas of putaputa (*Carpodetus serratus*). A strange and unknown shrub later proved to be *Bignonia melia*, that myrtaceous tree confined to swampy ground, from which it raises untidy masses of aërating roots.

On the way to the fire-place (where later bilbies, milk and sugar were found to be superabundant, and tea by no means forgotten), the ground was strewn with pollen-gone clusters of metal, now brown and rain-sodden. Growth-stages of another podocarp were also of much interest -- rankkaka seedlings a few months old, plentiful on several small patches of wet ground, suggesting that 1942 had been a good seed-year for this species, and that germination conditions had been favourable.

Beyond the fire-place, the undergrowth is a paradise of diverse eating shrubs.

The homeward trip was made via the MacKenzie Track, where wood-rotting fungi of the shelf type abounded: tobacco-brown *Olyporus tabacinus* on a fallen log; *Peziza hemisphaerica*; stout young specimens, still creamy-white over their whole surface, made a striking sight on the trunk of a dead standing tree, while an older specimen, on the under-surface of a log, was brown on top.

*Lymanthe tetrapetala*, a parasitic shrub closely allied to the English mistletoe, had dropped its slender scarlet petals on the track, and the plant, a mass of blossom, was soon found high up the trunk of a beech tree. B.B. Ashcroft.

#### THE MOSSES OF WATERFALL GULLY IN THE TARARUA FOOTHILLS, NEAR CARTERTON.

(This article relates to a field of New Zealand botany in which few records are available. A similar but more general paper "Mosses and their Habitats in the Atiamuri District, New Zealand" by Mr K.W. Allison, was published in 1931 in the Victorian Naturalist, presumably for want of a suitable journal in this country.)