The three enterprises, listing plants location by location, compiling a checklist and mapping distributions are three inter-related facets of getting to know and enjoy our flora to the full.

Bryony Macmillan
President

BURNING MINE STOCKTON

an Extract by Peter Hooper

No moonscape
holds more loneliness

the manuka
spreads a white mat of flowers, the stunted flax

mutters by seepage holes and in the breeze
the long leaved orchid trembles purple bells.

THE LAND OF THE EPACRIDS

by L.B. Moore

The high misty plateau country northeast of Westport holds a special place in New Zealand botany. Denniston I heard of first because it was there that Dr. H.H. Allan went, about 1900, directly from his sixth form year at Nelson College, to teach at the small school. The miners' children and the peculiarities of the isolated community fascinated him but he took little note of the strange vegetation, as he regretted when, in later years, he turned from teaching to professional botany. His path probably sometimes crossed (unknown to both) that of Mr. W. Townson who had a pharmacy business in Westport about the same time, and was diligently collecting specimens for T.F. Cheeseman in Auckland. Townson published in 1906 a 53-page account of the vegetation of the Westport district, based on field work up the Buller to Mt. Owen, Mt. Murchison and Mt. Mantell, the Brunner and Lyell Ranges and the coast ranges from behind Karamea south to Mt. Bovis in the Paparoa Range. Mt. Rochfort (3417 ft) was one of his favourite hunting-grounds, and he knew Denniston on its slopes and the neighbouring peaks of Mt. Frederic (3630 ft) and Mt. William (3490 ft). Without making a careful check it is easy to find at least a dozen species described as new from his material.

North of the Waimangaroa River and approached from Granity by the Burma Road are the mines of Millerton and Stockton and the peak of Mt. Augustus (3316 ft). In early 1953 Ruth Mason and Neville Moar spent two days here at about 2500 ft near the site of open-cast mines. Their account of the vegetation and flora (1955) lists the species they

collected and is illustrated by a useful map and photographs that suggest the strangeness of the landscape.

One of the Society's two camps in January 1975 took members to Denniston and Stockton, as reported briefly in the Newsletter of the following month. From the first camp of 1976 some of us were lucky to get well up on the slopes of Mt. Rochfort and to the top of Mt. Augustus. What follows is one person's impressions and notes on some of the plants collected-- it is not at all a complete catalogue.

The roads that zigzag up the steep slopes from the coast flatten out at about 1500 feet and then meander upwards over a rolling topography reminiscent of the broad tops of the Central Otago mountains. Peaty hollows alternate with bare flattish rock cut by crevices where dwarf plants grow. This strange landscape stretches for miles and comparison can be made, not unfairly, with the ice-planed granite of Scandinavia or the high Sierra Nevada of California. Streams cut in rather deeply and along their valley sides stands scrub up to a few metres tall with such plants as rata, kamahi and Quintinia. Such woody vegetation must formerly have been much more widespread; wide areas have been burned, and silt and fine granite grit, still being washed into hollows, cover peat-dwelling plants established there. There are plenty of ponds, most left after mining activities, and round some the beach is of finely comminuted coal. The steep rocky peak of Mt. Augustus has a true mountain vegetation and amongst snow tussocks there every step brought species we had not seen lower down.

The flora, as pointed out by Mason and Moar, is not rich in species, but it contains many not familiar to Canterbury folk, and, because of the collecting of Townson and of field geologists of his time, the type localities of several species lie within this area. Mason and Moar commented on the absence of introduced plants except near the road edge and close to buildings or mines. This may still be true, but we were impressed by the thick hedge of gorse that flanks the road in places and by the quantity of Juncus squarrosus, an apple-green rush with leaves radiating half horizontally from centres 15-30 cm apart and making artistic patterns on peaty flats. At least one plant of Hypochaeris radicata grew right at the top of Mt. Augustus.

EPACRIDS

All five New Zealand genera of epacrids were represented, most of the fifteen species counted were quite important constituents of the vegetation, most were in flower, and at least four of the species of Dracophyllum had been described from plants collected in this very area, that is, we were very near to their type localities.

Pentachondra pumila and Cyathodes pumila were both quite abundant amongst the summit rocks of Mt. Augustus, the latter not seen elsewhere. C. fasciculata, surprisingly, was found, very small-leaved, to the top of the same mountain. C. empetrifolia, also on Mt. Augustus, was seen elsewhere too, with erect branches to 30 cm or more tall, and C. juniperina occurred as tall fruiting shrubs and as short, long-leaved young plants.

Archeria traversii, a shrub with leaves deceptively like those of manuka, was in full flower, the little bell-shaped corollas a rich red. Both species of Epacris were in flower too, but the larger-leaved, taller-growing E. pauciflora had still many buds to open.

One Dracophyllum or another was in sight most of the time. The common tall switchy Dracophyllum resembles D. filifolium (Mason and Moar recorded D. uniflorum). D. traversii with big mop heads and terminal inflorescences grows on the slopes where forests are taller. D. townsonii has a woody trunk and wide branches with smaller tufts of leaves and panicles arise below the leaves; this species was based on specimens collected by Townson from near the base of Mt. Rochfort but we did not see it. D. pubescens was likewise described by Cheeseman from specimens from Townson "on mountains near Westport"; its bluish-green colour and the minute downy bloom of its stiff leaves distinguish it. Dr. W.R.B. Oliver gave the name D. densum to a species he found on Mt. Rochfort. This we took to be the common low-growing Dracophyllum both on the Denniston plateau and along the Burma Road to Mt. Augustus. Young plants form a tight sphere the size of a tennis ball, with a long tap root; flowering shoots lie prostrate on the ground or rock surface, and we saw plenty of flowers. Near the track, not far from the top of Mt. Augustus, a most charming Dracophyllum loomed through the soft rain. It grew tall and straight and was almost covered with spikes of biggish flowers of a warm cream colour. This seems to be D. oliveri which was described by the Swedish botanist Du Rietz, from plants collected on Mt. Rochfort by D. Petrie.

OTHER DICOTS

Celmisias were flowering freely. The commonest was the medium-sized C. dubia whose type locality is Mt. Rochfort, again described by Cheeseman from Townson's specimens. With it was the less conspicuous C. gracilenta and the very lowly C. similis which David Given separated in 1969 from the superficially similar C. laricifolia. The long tails of C. lateralis and the big showy clumps of C. dallii were seen only towards the top of Mt. Augustus where also were silvery mats of one of the C. incana complex. Composites listed by earlier writers but not seen by Mason and Moar include a species of Abrotanella (we found a few small plants), Olearia arborescens (not uncommon in scrub) and Raoulia grandiflora (as small plants of a few rosettes in peaty soil).

Three gentians have been described from this area; Kirk named G. spenceri for the man who discovered it on Mt. Rochfort and Cheeseman described G. townsonii from Mt. Rochfort and var. stolonifera of G. montana from there and from Mt. Frederic, both collected by Townson. We saw only a few small plants, not yet in flower. Liparophyllum gunnii, also in the gentian family, was a very common plant, forming broad pure mats of light green fleshy leaves studded with white flowers; the thick white rhizome running just under the surface of the peaty soil is a good distinguishing mark for this species. Forstera mackayi, originally from the Paparoa Range, is stouter than most species of this genus; it grew half under scrub on Mt. Augustus, and further up Euphrasia townsonii (type locality Mt. Rochfort) was in flower. Above Denniston E. disperma was flowering to perfection, crowded flowers, butter yellow and white, standing on their long tubes quite hid the very small, narrowly-lobed leaves; thread-like stems spread out over the ground but the plant roots only at one central point.

Drosera spathulata was common in many peaty places, with the top of its flowering stem tending to curl spirally inwards. Yvonne Elder collected this and D. arcturi, D. stenopetala and D. binata all near the top of Mt. Augustus. Hemiphues suffocata var. novae-zelandiae (Umbelliferae) was one of the very common plants on the high plateaux; in very open places the leaves were small, glabrous and pressed close to the soil with stems partly embedded in the peat, but where most

shaded--though still only by plants short enough to walk over--it made loose mats a few centimetres deep, with stems and leaves very hairy. The stiffly erect little flower stalks were numerous on some plants. Gaultheria depressa var. novae-zelandiae, also low growing, had both red and white "berries". In drier places little bushes of G. rupestris were covered with bunches of creamy flowers.

Leptospermum scoparium, common in scrub, was most striking and very picturesque when filling crevices in broad flat expanses of bare rock, there, as elsewhere, flowering freely. With it in rock crevices were little round bushes of Pimelea gnidia, also smothered in flowers. Pittosporum crassicaule was seen in several shrubby places, and below Mt. Rochfort, in light manuka scrub over Sphagnum moss, there were a number of adult plants and many uniform seedlings 10-15 cm tall; capsules on twigs swathed in fibrous flood debris yielded seeds for germination tests. Pseudopanax lineare was perhaps no more common than P. colensoi but was more noticed because of being less familiar, and much bolder in form. Metrosideros parkinsonii was flowering sparsely on the slope below Denniston. M. umbellata had few flowers but the dull red leaves on quickly growing young shoots were very attractive.

ORCHIDS

Thelymitras were in flower, the common one on the plateaux being T. pulchella which one young visitor christened "split ends" because of the yellow frayed tips of the column-arms. T. venosa, also striped but with bluer flowers (or on the pakihi lower down often flesh-pink) was less commonly seen at higher levels; "curly-ears" seemed a good name for it, referring to the twisted ends of the column-arms. The form of T. pulchella found about Westport was called T. pachyphylla by Cheeseman.

Aporostylis bifolia, Lyperanthus antarcticus, Corybas rivularis and Pterostylis montana were seen in small numbers but the rarest orchid was Pt. venosa, growing a dozen plants together in sheltered pockets near the top of Mt. Augustus.

OTHER MONOCOTS

Amongst sedges the tall dark stiff heads of Gahnia rigida were unmistakeable, and on the smaller G. procera bright shiny fruits were dangling. Two rush-like sedges were the square-stemmed Lepidosperma australe and the thin Baumea teretifolia. We saw all three species of Oreobolus, the familiar C. pectinatus, the comparatively formless O. strictus and the broader-leaved O. impar forming neat cushions on Mt. Augustus. The tiny broad-leaved grass, Microlaena thomsonii is only as big as O. impar, and grows in wet cushions. Carpet grass, Chionochloa australis, filled some rock crevices and the big snow tussock, Ch. flavescens, was flowering on top of Mt. Augustus. Three introduced rushes, Juncus squarrosus (already mentioned), J. bufonius and J. bulbosus accompanied the native J. planifolius and J. antarcticus. Empodisma minus (formerly Calorophus minor and before that Hypolaena lateriflora), is common to dominant in peaty areas, forming a deep brown thatch on very wet, over-burnt slopes.

In very wet open places Centrolepis ciliata formed fine reddish, moss-like knobs. Herpolirion novae-zelandiae was plentiful on drier peat, with flowers both blue and white. Astelia linearis var. linearis rated as a new record for Mason and Moar, this variety having been reported previously only from Stewart Island and the Auckland and Campbell Islands far to the south. It is now well known in west

Nelson and Buller and we saw biggish plants (to 10 cm tall) under scrub and small ones in the open, only one with fruit. We failed to find the still smaller A. subulata. Since Mason and Moar's first South Island collection in 1953 it has been found on the Paparoa Range and on the slopes of Mt. Perry near the Heaphy Track, but it is still a very rare plant except in the southern islands.

NON-FLOWERING PLANTS

We recognised three species of Dacrydium, D. laxifolium on the open plateaux, D. biforme in short forest and D. intermedium in both sites. Noteworthy ferns were Hymenophyllum lyallii clothing a bank by a shaded stream, Schizaea fistulosa fertile when only 2-3 cm tall, and Gleichenia flabellata, a good find of Dr. Ballin's. Tmesipteris tannensis, growing near the H. lyallii, on the ground reached a length of nearly 40 cm. There also were long thin stems of Lycopodium laterale, while on open wet peat up higher the ground-hugging L. ramulosum looked like a contracted version of the same thing. The more commonly seen L. scariosum and L. volubile both flourished on dry banks near Burnett's Face.

STOCKTON HOME REVISITED

by J. McArthur

While at our Summer Camp at Westport we made a trip up to Stockton on the top of the hill 1,100 ft above Granity. It was a bright sunny day with hardly a cloud in the sky and it was difficult to visualise the constant mists and rain which I remember from my childhood days. Perhaps it is these mists which have assisted in the amazing re-growth which has obliterated all signs of the rows of houses in this former coal mining village.

Before we left the hill I insisted that the party make a sentimental journey to the spot where our house once stood. "Here it is", I said, pointing to a patch of bush. They all stood around on the track (once a road) and looked rather blankly at me so I pushed aside some gorse and blackberry and there were some fence posts and further in bricks and concrete from the chimney. Interest revived and we all scrambled about finding further evidence of our little home.

I mentioned my childhood memories of a climbing rose over the out-buildings and there it was doing its best to climb up to the daylight, amid tree ferns, Dicksonia squarrosa, Blechum capense, Paesia scaberula, Phymatodes diversifolium and Pteridium esculentum. We took a cutting of the rose and I'm hopeful of it blooming for me.

The little four roomed cottage in which I was born was sold for £100 some 35 years ago and, like other houses in this ghost town, it was moved down to the beach and the section allowed to return to nature. There is little evidence now of our lawns and gardens. Tall pussy willow and poplars outline the boundaries of the garden, Coprosma australis and Hebe salicifolia jostle with one another for room to breathe and tiny Nertera depressa, white watsonia and monbretia show themselves in small patches of grass where I remember rolling gaily painted hard-boiled eggs down the gentle slope on Easter Day. The coal no longer trundles past our doorway and down the incline. Instead it sails overhead on an aerial ropeway and the incline, like our garden, has been returned to the bush.
