SHEEP, SNOWGRASS, and a ROYAL CRASPEDIA .

Description of a visit to Samuel Butler country with Brian Molloy and Tony Druce.

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When Samuel Butler arrived in New Zealand on board the Roman Emperor in 1860 he was a young man of 24 with a small sum of capital (given to him by his father) and two burning ambitions: to multiply his capital by farming virgin land in the colony and to make his name as a man of letters. In due course, he achieved both, returning to England with 'friend' and a fortune to become the author of 'Erewhon' and other books.

But the beginning was not easy. All the foothills and plains land had been taken up and only the backblocks, where it was possible to obtain leases of mountainous land for 1 pound per 1000 acres, were still vacant.

Butler bought a horse, explored the upper Waimakariri and Rakaia Rivers without finding what he wanted, and subsequently turned his attentions to the Rangitata River where, just below the confluence of the three main branches which descend from the Main Divide, he found:

'... A long and open valley, the bottom of which consisted of a large swamp from which rose terrace after terrace up the mountains on either side, the country is as if it were crumpled up in an extraodinary manner, so that it is full of small pounds or lagoons ....'

A little later, he wrote to his parents in England:

'My companion and myself have found a small piece of country, which we have just taken up. We fear it may be snowy in winter, but the expense of taking up the country is very small...We are sanguine that it may be a useful little run.....'

Butler's useful little run amounted to about 15,000 acres and comprised the Valley of Mesopotamia, a large intermontane basin bounded by the Two Thumb and Sinclair Ranges and drained into the Rangitata by Bush Creek, which despite its name is a full-scale river, too deep and swift to be forded comfortably for much of its length.

After a century and a quarter, the Valley still provides summer

grazing for the sheep of Mesopotamia Station, which are driven in after the thaw and mustered out again in April over a high pass known as the Bullock Bow Saddle, but formerly called the Sinclair Saddle. A hut at the foot of the saddle serves as a base for the musterers, a good days ride on horseback from the homestead and half a day's drive by Land-cruiser over a steep and sometimes precipitous track.

From the hut, there is a climb of about 400m to the top of the saddle, following on foot the track up the long Finger Spur which was probably the route also taken by Samuel Butler 126 years ago, when he crossed the Sinclair Range.

From the top of the saddle, at 1570m, a superb view unfolds of undulating tussockland, tarns, amd the peaks of the Two Thumb Range, the highest permanently snow-clad. I was impressed, but Samuel Butler wasn't: 'there is no timber in this valley and accordingly the scenery, though on a large scale, is neither impressive nor pleasing....'

Samuel Butler was no botantist! In the Valley the major feature of interest is the numerous and mostly interconnected tarns, which are (a) beautiful and (b) mostly above 1400m and thus of consider-able botanical interest because the shore-line and cushion-bog vegetation associated with them has a strong alpine component.

A feature of the plant communities, the absence of wood. A century and a quarter ago there may have been subalpine scrub near the tarns, but the country was burnt first by Butler and later by subsequent owners, and today, except on some shady slopes and in the gullies, there is a virtually complete absence of woody vegetation. Most of the surviving scrub consists of species which could have been introduced or reintroduced by birds; Coprosma ciliata, Podocarpus nivalis, and Brachyglottis (Senecio) cassinoides. Hebes and native brooms are conspicuously absent.

Hebe haastii and H. epacridea grew, but not together, on the high screes, the latter in the small-leaved, thin-stemmed form which seems to be characteristic of its northern and southern populations in Canterbury: in between, in the lower Waimakariri basin, the plants are much bigger. High up in the Sinclair Range, on rocky outcrops, we found clumps of a glaucous-leaved hebe in the H. pinguifolia - H. buchananii group, similar plants

occurred also at a lower altitude, on outcrops near the main river. Some of these plants seemed to be intermediate forms but their taxonomic status is in doubt. Possibly they include at least one cryptic species i.e. species which have no apparent morphological differences but have genetic or chemical differences. Sixty years ago Cockayne and Allan (The Present Taxonomic Status of the New Zealand Species of Hebe. T.N.Z.I. 57, 11-47, 1926) noted that further detailed study was required to determine the status of these plants, and that remains the situation today. Recent studies by Brian Molloy have revealed that in mid-Canterbury the H. pinguifolia complex comprises at least two species, 'normal' H. pinguifolia and a similar-looking plant which replaces it on outcrops at high elevations and is chromosomally different. Propagation material of the Rangitata plants has been brought back to be grown on for further studies, but it will be some time, if ever, before the problem of what to call them is resolved.

Apart from these, the only hebe I saw in the Valley was H. lycopodioides, which occurred on one shady face as scattered small plants among snowgrass. These appeared to be the typical form of the species, but seedlings are being grown on by myself and Tony Druce for comparison with specimens from other localities.

On the eastern side of the saddle seedlings of Ranunculus crithmifolius , with their ash-coloured leaves, were hard to spot but once sighted were abundant in fine debris on the track. Only a few carried seed. On the high screes were R. haastii, Lignocarpa carnosula, and Lobelia roughii. L. linnaeoides grew on a shady outcrop a stone's throw fromits cousin - the first time I have seen the two in close proximity. On the western side, descending into the Valley, we passed above hundreds, maybe thousands, of fine plants of the large vegetable sheep(Raoulia eximia) and trod on a probably unnamed cotula (belonging in the G. squalida group) on the track, but the major interest was in the tarns. They were of two types; newish tarns, created probably less than 1000 years ago by slumping from the mountains above, and old, inter connected ones on poorly drained moraines. At the margins of the older,moraine tarns is a rich cushion vegetation mostly saturated with water, and often winded-eroded into

complex interconnected networks of peninsulas and islands, shaped like insane sausages. These were botanical treasure troves, bearing a plethora of species of short grasses, sedges, small herbs, and cushion plants. They included Carex decurtata, Nertera balfouriana, Oreobolus pectinatus, Celmisia glaucescens, C. alpina, Pernettya nana, and an unnamed Drapetes thought to be confined to the area between Mt Peel and Otago. Some of the drapetes plants were growing under water.

The newish tarns, having no outlets, fluctuate with the seasons and above their high water mark is a short, dryish turf, rich in species of tiny grasses, sedges, and herbs. Near one small tarn, Tony found a small colony of a little, green-leaved craspedia which may be a completely new species. It appeared to be confined to the one tarn, though no doubt further field work would reveal other colonies. We gave it the 'stable name' Craspedia 'Rex', in deference to the existence, not far away, of the Royal hut, where Prince Charles, lifted out by chopper from Mt Peel, had a cup of black billy tea.

Craspedias are problem plants, and according to Tony there may be 25 or more species in New Zealand, most of them at present unnamed. Classification of the craspedias presents problems, but Tony is working on a system based on leaf-hair types, which fall in four catagories: (a) cottony, (b) glandular (c) multicellular, erect, (d) with an elongated, cottony tip. These hair types may occur; individually or in various combinations on the upper or lower leaf-blade, or on the margins or midribs. None of the plants, which were abundant within the very small area, was in flower and although some had flowered there was no good seed. A few seedlings were collected and will be grown on for further study.

CRASPEDIA SP.