

REPORTS FROM THE OTAGO AND WELLINGTON BOTANICAL SOCIETIES' SUMMER FIELD TRIP.

This 10 day field trip was based at Borland Lodge, on the eastern boundary of Fiordland National Park, between Lakes Manapouri and Monowai. It ran from 29 Dec – 7 Jan, and the weather was a diverse as the botany and the botanists, ranging from skiffs of snow up on the tops of Mt Burns on the first outing to a warmly welcoming 30° C in sunny Invercargill. Reports of botanical interest follow, with more to come next issue.

Pukerau Red Tussock Reserve, “Burwood” Tussock Reserve and Redcliff Wetland Reserve. (29 Dec & 7 Jan) - Allison Knight

Those who joined the convoy from and to Dunedin were treated to some interesting stops long the way. At first sight the remnant lowland plant community in Pukerau Reserve looked to be mainly red tussock (*Chionochloa rubra* ssp *cuprea*) and wire-rush (*Empodisma minus*). Closer inspection soon had Gael and Val exclaiming over the number of different orchids in flower. Bastow's revelation that the peat was over 6.5m deep here, the deepest measured in Otago, and his question as to whether the *Sphagnum* or the *Empodisma* was the main peat-forming organism in New Zealand bogs provided something to ponder over for the rest of the trip. A highlight for me was finding several lichenised *Omphalina* in fruit. They are among the few lichens from the class Basidiomycetes, or toadstool fungi.

The second reserve was just west of Mossburn, beside the road to Te Anau. This montane hillside tussock community also contained a variety of orchids. There were many clumps of *Aciphylla glaucescens*, with their striking blue-green foliage and tall yellow flower spikes.

On the return journey we made a brief stop to look down at the Redcliff Wetland Reserve, where ponding has been re-introduced as a sanctuary for wildlife. Then next stop was at Arne Cleveland's Pukerau nursery, where there were a great many native plants to admire and covet.

Green Lake Landslide, Fiordland.

By Audrey Eagle

This landslide is believed to be the largest of its type on earth. Because of the lush growth of forests in Fiordland the landslide was disguised and it was not until 1976 that a geologist, Roger McPherson, recognised it as such. In 1994 it was fully documented by G. T. Hancox and N. D. Perrin.

The immense size of this 9 kilometre long landslide was appreciated by our members when viewed from a high vantage point on Mt. Burns, a part of the Hunter Mountains. The valley floor was seen to be covered in a series of rounded and pyramid shaped bush clad hills of fallen rock, between which were large boggy areas and tussock grassland. It spreads over an area of 45 square kilometres, filling the valley to a depth of 800 metres with some 27 cubic kilometres of rock debris, comprising semi-intact blocks.

The original large lake was filled and new lakes formed, the largest being Green Lake in the South. In the North is Pyramid Lake and Island Lake is in the centre of the valley. Water from the original lake flowed southwards into Lake Monowai, this exit was blocked and the flow reversed, and now the catchment flows northwards into Lake Manapouri.

This catastrophic collapse of a substantial part of a high mountain range occurred when the glaciers were retreating between 12,000 and 13,000 years ago. Geologists have found that the land broke away along a fault zone because it had been undercut by a glacier and was no longer supported by it. The final trigger was probably a large earthquake on the Alpine Fault off the coast of Fiordland.

This dramatically changed landscape is truly inspiring. And one doesn't have to climb a mountain to see it, as the 12 kilometre road from the Lodge goes right up to the Borland Saddle from whence a good view of part of the valley can be obtained.

Reference

Hancox, GT , Perrin, ND. (1994) Green Lake Landslide: A very large ancient rock slide in Fiordland, New Zealand. 7th International IAEG Congress, Balkema, Rotterdam. pp 1677-89.
For more information email: g.hancox@gns.cri.nz, and for stunning aerial colour photos of the landslide see: http://www.gns.cri.nz/earthact/land_stab/greenl.html

Manapouri, Hope Arm and Back Valley (1 Jan) – Jill Goodwin

The organising committee had arranged a wonderful highlight for our first day of the new year - various combinations of boating across and walking beside beautiful Lake Manapouri.

We all drove to Manapouri, and from 9:00am some went by launch to Hope Arm to walk back, others got one of several sailings of the ferry across the Waiau. Some walked in to Hope Arm and boated back; some walked the long loop: Manapouri - Back Valley - Hope Arm - Manapouri; and some did various walk-in-and-back options.

The group I was with walked in to Hope Arm, taking the Lake track, not the longer Back Valley track. We enjoyed the very pleasant walking conditions alongside the river, beside the lake, and over an extensive boardwalk system. We walked through beech forest, mixed with a great variety of other vegetation.