

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/green1.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.

The general appearance of the beech forest was extremely variable; sometimes the floor was thick with *Blechnum* ferns, sometimes it was a vast humpy field of mounding moss, sometimes there was a thick cover of beech saplings and sometimes the floor had a rich variety of other shrub and tree species.

The 3-wire bridge and the rotten-log-bridge were a bit of a challenge, but we reached the Hope Arm Hut in plenty of time for the boat rendezvous at 4:00pm.

While we had been sheltered in the bush, the wind had picked up, making it impossible for the boat to land at the usual place. After much arm-waving and shouting between ship and shore, we sidled around the lake shore to a smaller, more sheltered cove, where the boat was able to pull in safely. The white-capped lake gave us a very bumpy ride back to Manapouri, between steep-sided hills dropping straight into the water, around islands splashed with red rata, and then slowly up the broad dark water of the Waiau River.

For me, the highlights of the day were more touristical than botanical, but others listed these botanical highlights:

Val: Lots more orchid species than expected.

Moir: The tall *Plagianthus*, Kowhai and Kaikomako in the grove.

Ros: The large areas of 'mounding mosses' under the beech trees.

Sever: The 3-wire bridge!

Chris H.: *Aristotelia fruticosa* (shrubby or mountain wineberry); *Melicytus flexuosus* (leafless porcupine plant) - a strange plant, with variable leaves; the variety of bush in the various understories; a 20m+ *Plagianthus regius*; 18m *Cordyline australis*; *Alepis flavida* (yellow mistletoe) in mountain beech, on the way down to the jetty.

Allison: Finding the newly re-named *Coprosma pedicillata* (=C "violacea"), just as Neill Simpson predicted we should.

Clifden Limestone (3 Jan) – Pat Enright

On a lovely hot typical Southland day we botanised two limestone areas near the Clifden Historic Bridge. The day started slowly with a walk across the golf course and then the fun started. Led by a couple of intrepid pathfinders we bashed around at the base of the limestone bluff looking for a way to get up onto the top. There was a diversity of ferns at the base of the limestone scarp, mainly *Blechnum chambersii*, with maidenhair (*Adiantum cunninghamii*), hen & chicken (*Asplenium bulbiferum*) and others. The botany was interesting without being too exciting but once a short break was called near a more open seasonally wet area, species numbers and variability increased with several orchids and a small *Raukaua simplex* being noted.