

South Island trip to Borland Lodge, Monowai, Fiordland, 6–13 January 2020

Maureen Young (editor)

Introduction

Participants (Fig. 1): *Karen & Paul Asquith, Jan Butcher, Ewen Cameron (assistant leader), Lisa Clapperton, Linda Conning, Bev & Geoff Davidson, Gael Donaghy, Mark Fort, Anne Fraser, Leslie Haines, Graeme Jane, Allison & John Knight (part time), David Lyttle, (part time), Thiagaraj (Tiago) Mahalingam, John Millett, Helen Preston Jones (booking officer), Dhahara Ranatunga, Brian & Chris Rance (part time), Juliet Richmond, Jenni Shanks, Claire Stevens, Sam Sutherland, Cheryl Taylor, Rob Vennell, Alison Wesley, Anthony Wright (leader), Maureen Young.*

All non-lichen photographs were taken during the field trip by: Ewen Cameron (EC), Bev Davidson (BD), Geoff Davidson (GD), Leslie Haines (LH), Dhahara Ranatunga (DR), Cheryl Taylor (CT), Rob Vennell (RV) and Anthony Wright (AW). Photographers are acknowledged by their initials at the end of each caption. The photos of lichens (Figs. 47–64) were taken by Allison Knight.

This was the tenth of our two-yearly trips to the South Island since 2002, with 31 participants, although five South Island invitees only attended for part of the time. Our accommodation, Borland Lodge, lies between Lakes Manapouri and Monowai (Fig. 2) on the eastern margin of Fiordland National Park. The Lodge consisted of several small chalets (Fig. 3) and a spacious central kitchen (Fig. 4), dining and ablutions block, and was very well set up for our requirements. There were a few showers of rain on the first and last days of the week, but on the whole the weather treated us well.¹

¹ A week later we were counting our lucky stars, as a terrible downpour struck the south of the South Island, with a metre of rain falling in 10 days, and floods, slips and washouts devastating the roads. Many tracks were closed, including the Milford, Routeburn and Hollyford.



Fig. 1. The core group just before departing from the Borland Lodge, L to R, standing: Bev, Karen, Jenni, Anne, Cheryl, Geoff, Paul, Maureen, Ewen, Lisa, Sam, Leslie, Dhahara, Juliet (hiding), Alison, Claire, Mark, Rob, Linda, Tiago Jan; sitting: Helen and John; and absent: Gael & Graeme, Allison & John, David, Brian & Chris and Anthony. Photo: AW. All photos taken during the Bot Soc field trip, 6-13 Jan 2020.

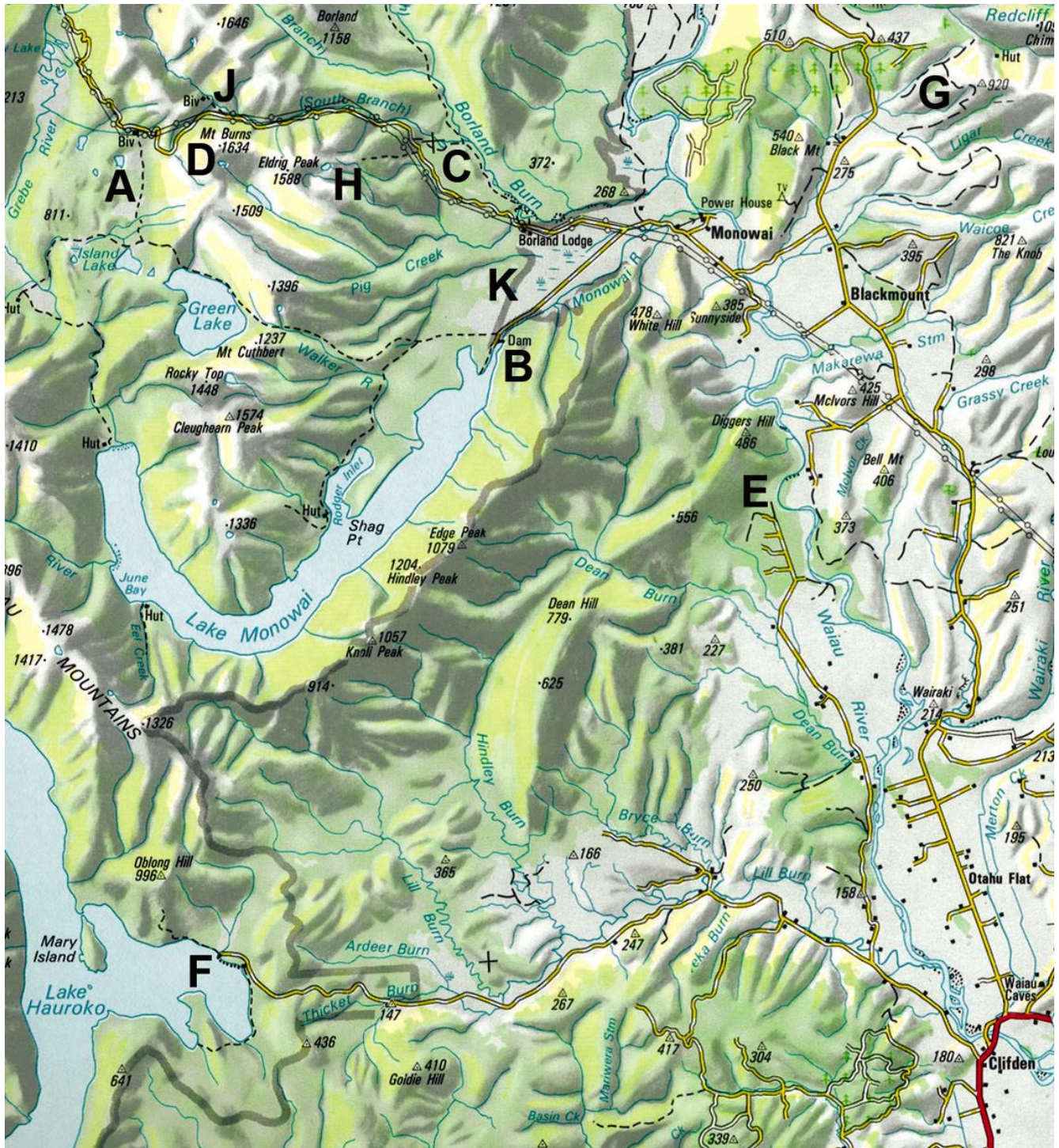


Fig. 2. Location of the Borland Lodge and areas of Fiordland visited by Bot Soc in Jan 2020. **A:** Green Lake Track. **B:** Monowai lake shore. **C:** Limestone bluffs, near south branch of Borland Burn. **D:** Mt Burns. **E:** 'Big totara walk', Dean Forest. **F:** Lake Hauroko. **G:** Blackmount Station. **H:** Mt Eldrig. **J:** Frost flat near south branch of Borland Burn. **K:** Burnt Ridge Track. Map from 'New Zealand Atlas' (1987), publ. Heinemann, modified by Joshua Salter.

People travelled down by various means, but most arrived at Queenstown Airport in the morning of 6 January and were taken by the two hired vans to the lodge, a two and a half hour

drive. One van-load had a brief detour to the Wilderness Scientific Reserve on the Te Anau road. Once settled in our huts some explored the edge of the neighbouring beech forest and



Fig. 3. The row of chalets where most of us stayed, Borland Lodge. Photo: EC.

became acquainted with mountain beech (*Fuscospora cliffortioides*) and silver beech (*Lophozonia menziesii*) and some of the ferns and herbs associated with them. Screeching long-tailed cuckoos seemed to be objecting to the intruders.



Fig. 5. The open mixed mountain and silver beech forest near the start of the Green Lake Track. Photo: EC.



Fig. 6. A shallow frost inversion basin surrounded by beech forest – formed by a combination of impeded drainage and freezing. *Hebe odora* dominating the foreground. Green Lake Track (N end, looking south). Photo: EC.



Fig. 4. Father and daughter (Paul and Karen) on dinner duties, Borland Lodge. Photo: AW.

Tuesday 7th January – Green Lake Track

Jan Butcher & Lisa Clapperton

Each day started with Graeme obtaining the latest weather forecast which determined the location of the field trip to be undertaken. The weather was inclement but not unpleasant and good views were seen at the start of the day. We viewed the general area for the day's botanising from above at the Borland Saddle, which has an excellent interpretive sign explaining the enormous slump that took place, redesigning the topography of the valley: "Around 12,000 to 13,000 years ago the earth shook as 27 cubic km of mountain fell in front of you. Nine km of the Hunter Mountains, heavily faulted from ancient earth movements, were undermined by a shrinking glacier and shaken by an earthquake. This is the largest documented landslide of its type in the world."

The start of the Green Lake track is situated near the end of the zig-zag road below the Borland Saddle, down an access road to service the power pylons marching across to the South Arm of Lake Manapouri. We made our way up past the gear-cleaning station (for stopping the spread of water-borne pests) into the mountain beech forest with silver beech (Fig. 5), with a typically open understorey signalling the presence of deer. Some time was spent spotting those cryptic little birds, brown creepers, busy in the sub-canopy. Numerous beech strawberries, *Cyttaria gunnii*, were scattered across the track as we climbed gently, and the forest floor was lush with lichens and bryophytes, reflecting the high rainfall.

We took our time wandering through the forest, where *Hymenophyllum villosum* was abundant on a fallen log and *Viola filicaulis*, was daintily in flower along the track. On the forest edge, several plants of New Zealand anemone (*Anemonastrum tenuicaule*) were seen with their delicate orange flowers, and a little off-track a few flowering plants of the orchid, *Waireia stenopetala*, caused

excitement. As the track dropped down to the first frost flat (Figs. 6, 7) it was found to be criss-crossed with water courses and holes amongst red tussock (*Chionochloa rubra*) making moving from hump to hump a challenge so as not to get wet feet or more. Small hillocks separated the tarns and on one of these, the blue flowers of the grass or sky lily, *Herpolirion novae-zelandiae* were spotted along with a nice patch of the yellow flowerheads of *Brachyglottis lagopus*. Elsewhere there were firm mats of *Oreobolus pectinatus*, with *Nertera balfouriana* (Fig. 8) and *Celmisia glandulosa*.

A steady drizzle sent us back to the shelter of the forest, and the return journey was made in a surprisingly short time, as we had only ventured c. 0.75 km of the track to Green Lake. Back on the main road one group spotted a "green-flowered" *celmisia* on the roadside bank (Fig. 9).

Wednesday 8th January – Monowai Lake shores & Limestone Bluff area, Borland Road Gael Donaghy & Anne Fraser

With the lake high, the ephemeral turf plants were well under water, so we couldn't see many of them. We botanised the wet area below the weir (Hincheys Outlet), the open area on it, and the bush for a short distance on the far side to the start of the loop track.

The weir had recently been "maintained" and recolonised by weeds, some that had arrived in the nearly 100 years since it was constructed to raise the lake. Present in high numbers were common weeds like tar weed (*Parentucellia viscosa*), the tiny *Viola arvensis* (a garden escape), red and white clovers (*Trifolium pratense* and *T. repens*), *Prunella vulgaris*, *Aphanes arvensis*, and *Sagina procumbens*. In the wet areas below the weir, kahikatea (*Dacrycarpus dacrydioides*) rose from a tangle of *Carex secta*, *C. virgata*, *C. maorica*, *Eleocharis acuta* and *Juncus articulatus*. Also in the water were *Potamogeton cheesemanii* and stonewort (an alga – *Nitella leptostachys*), and in the wet mud, *Glossostigma elatinoides* and *Epilobium nerteroides*.

In the beech forest across the weir, the plant association was more natural. Mature mountain beech provided shelter for other trees and shrubs – silver beech, pokaka (*Elaeocarpus hookerianus*), *Myrsine divaricata*, *Neomyrtus pedunculata* and a range of coprosmas, including *Coprosma colensoi*, *C. dumosa*, *C. foetidissima* and *C. linariifolia*. Some of the group were lucky enough to find the yellow mistletoe *Alepis flavida*, in full flower (Fig. 10) on mountain beech.

Quite a few orchids were in flower here too, including several clumps of a dark wine-red-leaved *thelymitra* with pinkish flowers which is associated with beech forest, recently attributed to Colenso's



Fig. 7. Auntie Anne, matriarch of the group, enjoying the South Island botanical delights during our first outing. Frost inversion basin, Green Lake Track. Photo: DR.



Fig. 8. *Nertera balfouriana* with erect female flowers and a single orange fruit, in a mat of *Oreobolus pectinatus*. Frost inversion basin, track to Green Lake. Photo: EC.



Fig. 9. Geoff's "green flowered daisy" (*Celmisia holosericea*, with toothed leaves) on roadside bank, zig-zag road on the north side of the Borland Saddle. Photo: EC.



Fig. 10. The yellow mistletoe (*Alepis flavida*), on mountain beech, by Lake Monowai outlet. Photo: BD.



Fig. 11. *Pterostylis auriculata*, roadside, by start of track to limestone bluffs. Photo: EC.

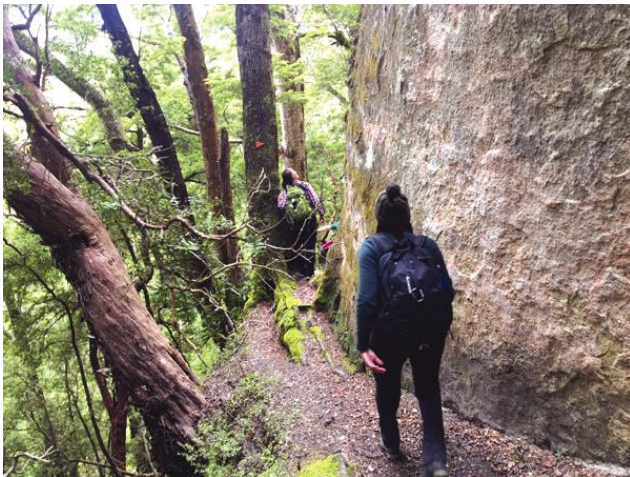


Fig. 12. Limestone bluffs, South Borland Track. Photo: RV.



Fig. 13. The limestone fern, *Asplenium lyallii*, by the limestone bluffs. Photo: DR.

Thelymitra fusco-purpurea. Other thelymitras were too far over to be sure, though probably *T. longifolia*. A small caladenia in flower looked to be *Caladenia chlorostyla*, with its green stem and white flower with wine stripes on the labellum side lobes. One pterostylis was seen, thought to be part of the *Pterostylis montana* group, because of its twisted labellum. Near the weir a rock was hosting a species of earina, which because it bore shorter, brighter green leaves than usual and lacked the speckling seen on the stem of *Earina mucronata*, was presumed to be *E. aestivalis*.

After lunch we moved up the Borland Road and walked down a rough track towards the Borland Burn (the river). Here, mostly in mountain beech, there were many mistletoes of two species (*Alepis flavida* and *Peraxilla colensoi*). There were the usual species in the sub-canopy here in the south – *Phyllocladus alpinus*, *Raukawa simplex*, *Neomyrtus pedunculata* and *Coprosma linariifolia*. The podocarp *Halocarpus biformis* sparked discussion on how difficult it is to identify the species in this genus. Orchids were abundant here, with a good number of *Aporostylis bifolia* in full flower, and enough *Adenochilus gracilis* still in flower to satisfy the photographers. The pterostylis were mainly over, but one plant was good enough to identify as *Pterostylis auriculata* (Fig. 11), a taxon that used to be included in the broadly defined *P. montana*, but with longer lateral sepals and taller stance. Also here was a thelymitra that had finished flowering – probably *Thelymitra longifolia*.

At our destination the track followed along under some limestone bluffs (Fig. 12), and here lovely plants of *Gingidia decipiens* were in full flower, easily photographable on the beech litter. These are usually found out in the tussock above the bushline, where they are tangled with other plants, and difficult to photograph. Other plants of the limestone bluffs were a couple of native grasses, looking very graceful in full flower – *Poa imbecillus* and *P. breviglumis* and, close by, the limestone fern, *Asplenium lyallii* (Fig. 13).

The group split here at the bluffs, with one group retracing their steps back up to the vehicles on the Borland Road, and the other continuing down to the Borland Burn, to return to the Lodge along the 6 km river track. This latter group found a large saprophytic orchid, *Gastrodia cunninghamii*, in flower, and some lovely specimens of the beautiful filmy fern *Hymenophyllum pulcherrimum*.

Thursday 9th January – Mt Burns

Sam Sutherland & Dhahara Ranatunga

We woke to a fine day with some low cloud. The forecast looked good so we decided to head to Mt Burns. We parked at the Borland Road Saddle

carpark which was at 990 m asl. It wasn't until later that we realised that Jenni had accidentally been left behind at the lodge. Fortunately a few members of the group had headed into town (Tuatapere) for antibiotics for an infected finger and so were able to pick her up on the way back.

Some of the more adventurous of the group were keen to get to the top of Mount Burns (1645 m asl) so set off at a fast pace restricting botanising in case the weather changed.

The track started through an area of silver beech forest. Lichens hung from the beech trees including *Ramalina* and *Usnea* species. Other plants seen within the forest included mountain toatoa (*Phyllocladus alpinus*), *Coprosma serrulata*, *Dracophyllum rosmarinifolium* and *D. longifolium*. *Hymenophyllum multifidum* blanketed the ground amongst plants such as mountain astelia (*Astelia nervosa*) and creeping mapou (*Myrsine nummularia*). Last year was a mast fruiting year for beech and there were a large number of beech seedlings.

The treeline was reached around 1000 m asl. We emerged into an area of low growing vegetation of dracophyllum, *Chionochloa* tussocks (Fig. 14), *Gaultheria crassa*, astelia species, mountain flax (*Phormium cookianum*), Hell's bells (*Anaphalioides bellidioides*) and Haast's carrot (*Anisotome haastii*). A diversity of celmisia species were present including Fiordland mountain daisy (*Celmisia coriacea*), *C. verbascifolia* (Fig. 15) and narrower-leaved Petrie's mountain daisy (*C. petriei*).

There were several tarns nestled on the tops including a series of tarns that looked like terraced infinity pools (Fig. 16). The majority of the group spent the day botanising the tarn area. Plants near the tarns included snow tussocks (*Chionochloa* spp.), *Phyllachne colensoi*, *Centrolepis ciliata* and *Drosera arcturi*. Three species of comb sedge were found



Fig. 14. The attractive curly snow tussock (*Chionochloa crassiuscula*) was frequent above the tree line, Mt Burns. Photo: EC.



Fig. 15. *Celmisia verbascifolia* in flower, and the coppery-coloured leaves of *C. coriacea*, both common above the tree line, Mt Burns. Photo: EC.



Fig. 16. The main area of tarns on Mt Burns, looking west. Photo: DR.

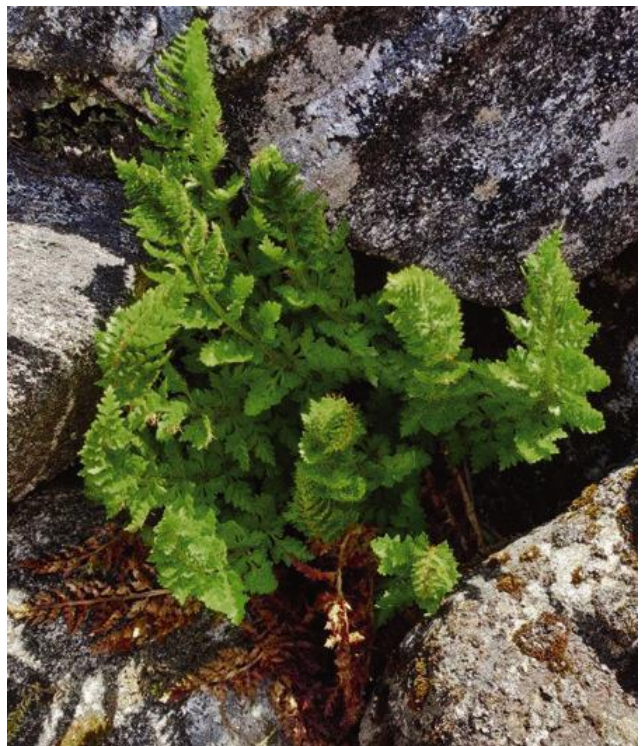


Fig. 17. Soft-leaved mountain shield fern (*Polystichum cystostegia*) on the upper slopes of Mt Burns. Photo: AW.



Fig. 18. Mt Cook buttercup (*Ranunculus lyallii*), upper slope of Mt Burns. Photo: AW.



Fig. 19. The summit party reaching the snowline. Photo: DR.



Fig. 20. Geoff and Tiago, Mt Burns summit, 1645 m asl. Photo: DR.

within a metre of each other (*Oreobolus pectinatus*, *O. strictus* and *O. impar*). For those who didn't make it to the tops, highlights in this area included finding New Zealand anemone in flower, South Island edelweiss (*Leucogenes grandiceps*) with its distinctive 'fluffy-petalled' flowers, and flowering Mt Cook buttercup (*Ranunculus lyallii*).

Those headed towards the tops crossed into an alpine basin and followed a stream along before climbing the ridge toward the summit. There was a large patch of the glossy-leaved white snow marguerite (*Dolichoglottis scorzoneroideis*) on the edge of the stream, growing with *Aciphylla pinnatifida*. White caltha (*Caltha obtusa*), which has distinctive folded leaves and small white flowers, was seen in this area and also by the lower tarns. By the stream Tiago had his first experience with snow.

Some additional celmisia species were observed as we headed towards the ridge including *Celmisia alpina*, Walker's mountain daisy (*C. walkeri*), common mountain daisy (*C. gracilentia*) and Lindsay's daisy (*C. lindsayi*). Soft leaved mountain shield fern (*Polystichum cystostegia*) (Fig. 17) was growing amongst the boulders on the slopes with *Brachyglottis revoluta* and *Kelleria dieffenbachia*. We were delighted to find more Mt Cook buttercup (Fig. 18.) in flower, which, like a number of other plants, seemed to be flowering quite late. There were patches of the silvery *Astelia nivicola* var. *nivicola* on the slopes. As we climbed higher (Fig. 19) more snow was to be found including a large snowy slope. The inevitable snow balls were thrown and a couple of small snowmen constructed. Snow was also collected for the traditional Bot Soc G&T toast.

As we headed along the rocky ridge, layers were put back on as the wind picked up. We made a rush to the top, spotting alpine avens (*Geum uniflorum*), *Anisotome capillifolia* and lots of *Aciphylla congesta* and *A. crosby-smithii* along the way. Near the



Fig. 21. *Myosotis retrorsa* in a clump of *Celmisia sessiliflora* (with linear, stiff leaves); near the summit of Mt Burns. Photo: DR.



Fig. 22. *Haastia sinclairii* flowering, in stable scree; near summit of Mt Burns. Photo: DR.

summit we stopped for a short lunch break then proceeded to climb a rocky bluff for a couple of quick photos (Fig. 20) and selfies. We were worried that the weather was moving in so we dashed back down the ridge where we spotted cushion forget-me-not (*Myosotis retrorsa* – only described in 2018) (Fig. 21) and Sinclair's haastia (*Haastia sinclairii* var. *sinclairii*) (Fig. 22) in flower growing amongst the scree. We did take the time for a quick break when a cheeky kea flew over us and decided to hang out for photographs (Fig. 23). On the way down we found that the quickest way to descend the steeper tussocked slopes was to slide down on our bums taking care to avoid the spiky shrubs.

Graeme and Bev didn't quite make it to the ridge so botanised a higher tarn. On their return Graeme showed Bev an area with *Ranunculus buechananii* (Fig. 24) and *R. buechananii* × *R. lyallii* (Fig. 25), a hybrid that he had seen on a previous visit. Mt Burns is one of the best populations I know of this hybrid - the hybrids also back-cross to each parent so there is a range of leaf forms present. Both parents are highly palatable and so have decreased in abundance with *R. buechananii* now listed as At Risk – Declining (Brian Rance pers. comm.).

When we returned to the carpark we could hear a long tailed cuckoo but were unable to spot the bird. The last ones arrived back at the Saddle at 5.20 pm. Pre-dinner drinks included a round of Anthony's traditional G&Ts chilled by ice from Mt Burns, carefully brought down by Tiago.

Friday 10th January – Dean Forest & Lake Hauroko

Helen Preston Jones

This was an easier day on the lowland flats, taking in Dean Forest in the morning and Lake Hauroko in the afternoon. Weather was again pleasant with Fiordland treating us well. We drove south from the Lodge through rolling lowland farmland, mainly

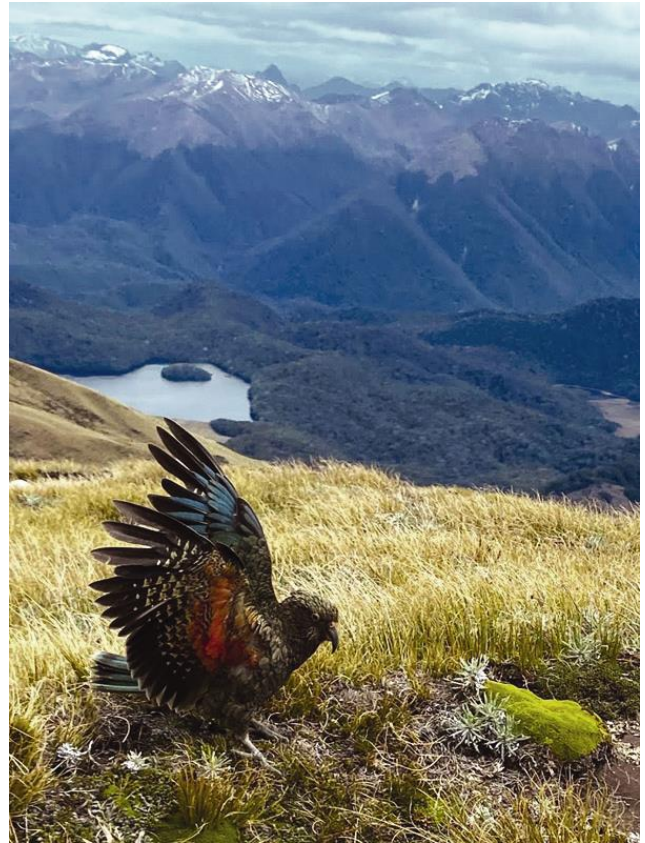


Fig. 23. The money shot: kea with Island Lake below, near summit of Mt Burns looking SW. Photo: DR.



Fig. 24. Cut-leaved mountain buttercup (*Ranunculus buechananii*), Mt Burns. Photo: BD.



Fig. 25. Buttercup hybrid, *Ranunculus buechananii* × *R. lyallii*, Mt Burns. Photo: BD.

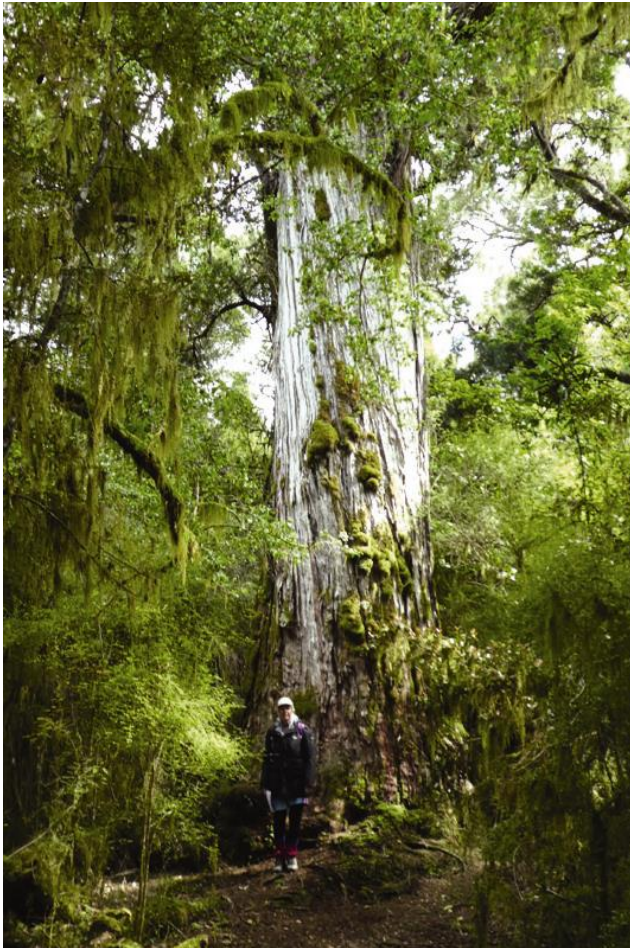


Fig. 26. Juliet with giant lowland totara, in an unmilled part of Dean Forest. The undated sign said "girth at chest height 8.31 m" = 2.64 m dbh. Photo: EC.

pasture for stock grazing with evidence of some farm forestry and occasional small patches of native bush. There were several good stands of *Eucalyptus nitens*, also as shelter belts, which provided an attractive contrast in form and colour to the ubiquitous radiata pines (*Pinus radiata*). This was the valley of the Waiau River, draining Lake Manapouri into Te Waiwai Bay.

In pre-European times the Southland lowland plains were been covered in mainly podocarp forest of matai (*Prumnopitys taxifolia*), kahikatea (*Dacrycarpus dacrydioides*), rimu, and totara (both *Podocarpus laetus* and *P. totara*), with some miro (*Pectinopitys ferruginea*), pokaka and other species. Beech was only localised on the plains, having spread down the major valleys (Waiau, Oriti and Mataura). The major non-forested areas consisted of peat bogs and swamps or fen wetlands.

The area we visited had never been logged, and comprises a small pocket of Southland's largest and tallest lowland totara (*Podocarpus totara* (Fig. 26) – although the sign wrongly claimed that it was a Hall's totara, *P. laetus*), some thought to be over 1000 years old. It is part of the extensive DOC Dean Forest Conservation Area (23,607 ha) proposed for



Fig. 27. Anthony looking for interesting lichens (?), Dean Forest. Photo: GD.

addition to the adjacent Fiordland National Park. The Dean Forest, together with the Longwood, Woodlaw and Rowallan Forests, was part of the previous New Zealand Forest Service (NZFS) Southland Beech Management Scheme in the 1980s when the sustainable logging of native species was promoted. The environmental value of this forest was fortunately recognised at this time and it was due to the scheme that the giant totara in the area were not logged, and significantly large beech in the vicinity of the totara were also spared, so retaining an interesting complex of lowland forest centred around them at c.120 m asl.

While the land ownership and logging rights had been restored to the local Waitutu iwi early in the last century,² discussions under the Beech Management Scheme transferred these logging rights to a different area of beech forest where logging was already taking place, allowing the Dean area to remain uncut, with the potential to become part of the national park.³

Now the "Big Totara Walk" provides easy access to see the massive lowland totara and silver beech, almost of similar size. (*Nothofagus* was such a lovely name, but I think I shall get attached to *Lophozonia* in time, better than *Fuscospora*). Anthony was quickly at work looking for interesting species (Fig. 27).

The scale of the totara and beech trees was immense; the surrounding vegetation a matrix of sub-canopy species. The totara bark was very

² <https://www.odt.co.nz/business/sustainably-supplying-native-beech>

³ <https://teara.govt.nz/mi/southern-beech-forest/page-5>

furrowed. Attractive but uniform areas of crown fern (*Blechnum discolor*) indicated presence of deer browse at some stage, removing the smaller seedlings which should have been coming through. Tree ferns were evident and *Dicksonia fibrosa* and *Cyathea smithii* (Fig. 28) were added to the species list. There was little rimu regeneration evident; miro and matai were present, the latter a large specimen with strongly hammered bark. Dampness of the area was evident with kahikatea covered in hanging moss (*Weymouthia mollis*), and epiphytes on the beech trees. We searched for mistletoe, but only found a few red flowers of *Peraxilla colensoi* on the ground. There were few species in flower, possibly due to the earlier cold spell; other species flowering were small – *Pterostylis patens*, *Lagenophora petiolata*, *Viola cunninghamii*, *Ranunculus glabrifolius* and *Parsonsia heterophylla*. Brian pointed out some shallow shaded pools with *Galium trilobum* (no flowers).

The forest matrix included pokaka, *Raukaua simplex*, *R. anomalus*, *Melicope simplex*, *Lophomyrtus obcordata*, *Pennantia corymbosa*, *Pseudopanax colensoi* var. *ternatus*, *Neomyrtus pedunculata*, *Carpodetus serrata*, *Fuchsia excorticata*, *Myrsine australis* and *Pittosporum eugenoides*. Of the coprosmas, *Coprosma rotundifolia*, *C. rhamnoides*, *C. dumosa*, a hybrid *C. propinqua*, and *C. linearis* with sheathing stipules, provoked discussion, as did the divaricating form of a small seedling of *Sophora microphylla*. We saw robins (Fig. 29), bellbirds, tomtits and pigeons but overall there was little bird song or sightings.

The second stop of the day was a cold and overcast one at Lake Hauroko, where we had lunch (Fig. 30) and explored along the lake shore edge. Across the lake to the south the Hump (Fig. 30), of the famous Hump Ridge Track, stood out, and to the northwest the higher peaks of the Princess and Kaherekoau Mountains were snow-capped. Lake Hauroko is the deepest lake in New Zealand at 462 m. The lake drains south via the Wairaurahiri River into Foveaux Strait. The translation of the name Hauroko is "the souging of the wind", for the winds which sweep across and along the lake, funnelled by the surrounding steep forested hills. We certainly experienced this but a chilly breeze didn't seem to deter the black-flies. The lake margin had a narrow, almost pumice-like beach with swampy ground extended into the bush, with matai, Hall's totara and rimu present in wetter areas and some mountain beech (tawhai rauriki), scattered on the drier, higher ground. Notable plants to challenge our ID skills included *Myrsine divaricata* and *Neomyrtus pedunculata*; on the margins were *Coprosma dumosa*, *Raukaua anomalus*, *R. simplex* and a hybrid between the two; larger trees included kamahi (*Weinmannia racemosa*) and pokaka, often transitioning into adult foliage. *Rubus australis* and



Fig. 28. *Cyathea smithii* with a dense ground cover of crown fern – a reflection of the deer browsing. Dean Forest. Photo: EC.



Fig. 29. South Island robins were common in all forest areas visited, so tame they would even land on your boot. Dean Forest. Photo: EC.



Fig. 30. Lunchtime on the jetty at Lake Hauroko, with Hump Ridge standing out to the south. Photo: BD.



Fig. 31. *Mazus radicans* with its marked leaves in a bed of bryophytes with *Blechnum procerum* by Lake Hauroko. Photo: BD.



Fig. 32. A young southern rata tree flowering on the shore of Lake Hauroko. Photo: CT.



Fig. 33. A sizeable *Olearia fragrantissima* being admired by the group, Blackmount Station, toe slope of the Takitimu Range. Photo: AW.

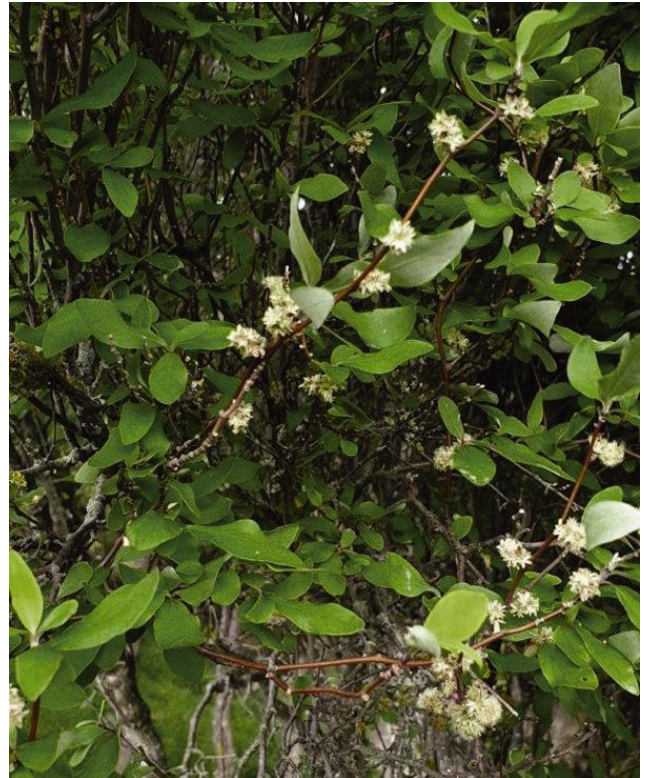


Fig. 34. *Olearia fragrantissima* flowering, Blackmount Station. Photo: AW.

Muehlenbeckia axillaris scrambled, and *Earina autumnalis* (unfortunately not in flower) hung. *Mazus radicans* (Fig. 31) and *Parahebe catarractae* were in flower, but not prolifically; *Hymenophyllum pulcherrimum*, *Gastrodia cunninghamii* and *Pterostylis banksii* were found discretely tucked away by the fern and orchid hunters. Sharp eyes spotted a single plant of *Korthalsella lindsayi* on a *Coprosma rotundifolia*, although the identification was debated between *K. lindsayi* and *K. clavata* (see Tiago's image in iNaturalist). A single young southern rata (*Metrosideros umbellata*) on the beach was admired flowering at eye-level (Fig. 32).

Saturday 11th January – Blackmount Station

Rob Vennell

Grey, windy conditions meant that we were forced to stay low today, so Brian Rance suggested we explore Blackmount Station, in the McKerchar Stream catchment on the lower slopes of the Takitimu Range. The station is part of the Robertson Conservation Area, approximately 545 ha of a DOC land purchase funded by the Nature Heritage Fund in the late 1990s. The purchase was made to prevent the area being converted to a pine plantation, which was being considered by the owner, and also to protect the unusual regenerating forest stand, shrublands and associated rare plants. The block extends from 300–920 m asl. The area adjoins the large Takitimu Conservation Area (45,510 ha) and so extends the



Fig. 35. *Melicytus flexuosus* and Brain Rance, Blackmount Station. Photo: AW.

protected lands on the western slopes of the Takitimu Mountains from the snowline 'retirement fence'⁴ boundary down to the lower slopes.

Fighting strong winds, we crossed through the private farmland (access arranged by Brian) and encountered an exposed grassy hillside of scattered divaricating plants – mainly *Coprosma propinqua*, but including many others such as *Olearia bullata*, *O. fragrantissima* (Figs. 33, 34), *Myrsine divaricata*, *Discaria toumatou*, *Melicytus flexuosus* (Fig. 35) and *Coprosma dumosa*. These were swamped in climbers – *Muehlenbeckia australis*, *Parsonsia heterophylla*, *Rubus* spp., and *Clematis* spp. Also present was a robust population of the mistletoe *Illeostylis micranthus*. We had a brief respite underneath the canopy of a small forest fragment which included lowland ribbonwood (*Plagianthus regius*). Highlights in this area included a flowering *Carmichaelia petrei* and several specimens of the mistletoe, *Tupeia antarctica*, although these appeared to have been munched by wandering stock.

As we carried on out into the open, we battled strong gusty winds (Fig. 36) that threatened to throw us off our feet, and waded through an ocean of waving red tussock, but the rewards were worth the

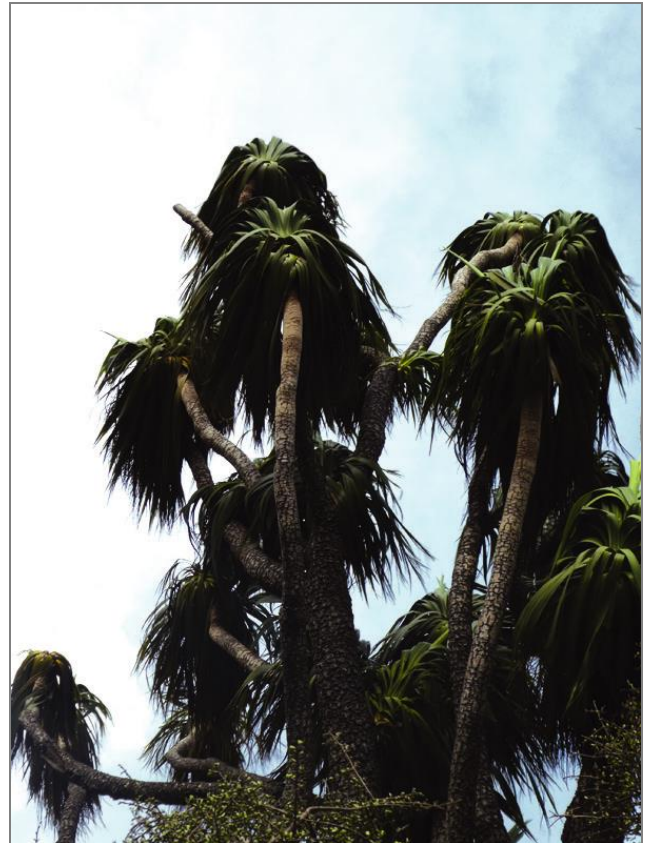


Fig. 36. Cabbage tree during one of the frequent wind gusts on our visit to Blackmount Station. Photo: EC.

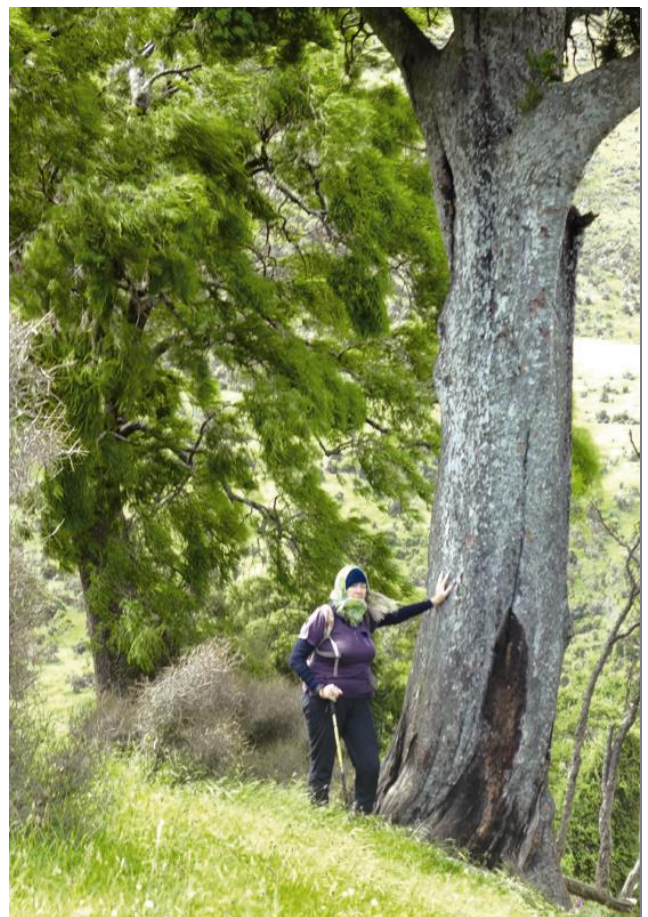


Fig. 37. Cheryl with matai tree and divaricating shrubs, and a large kowhai (behind). Photo: EC.

⁴ Retiring the area from stock grazing – Editors' note



Fig. 38. *Scleranthus biflorus* with paired sessile fruit on a single elongated peduncle approx. 10 mm long (the peduncle elongates as the fruit ripens – note the shorter ones below); taken on a cell phone. Photo: AW.



Fig. 39. Large manuka, in stunted forest with kamahi, southern rata and mountain beech; admired during the ascent of Mt Eldrig. Photo: LH.

struggle, discovering *Korthalsella clavata* near our lunch spot at the edge of the forest. After lunch we had the chance to explore a unique example of a regenerating kowhai (*Sophora microphylla*) forest with scattered large matai trees (Fig. 37). Although the understorey had been impacted by stock it was regenerating strongly, and a thick wall of *C. rotundifolia* made navigating a path through the forest challenging. The ground cover included *Asplenium hookerianum*, *A. flabellifolium*, *Australina pusilla*, *Viola filicaulis*, *Scleranthus biflorus* (Fig. 38) and *Arthropodium candidum*. A feature of the forest was the abundance of the fragrant tree daisy, *Olearia fragrantissima*. Other notable species were *Coprosma wallii*, *C. obconica* and fierce lancewood (*Pseudopanax ferox*). *Coprosma* was a common theme of the day with examples of *C. propinqua*, *C. dumosa*, *C. rugosa*, *C. rotundifolia*, along with the more unusual species, *C. obconica*, *C. rubra*, *C. virescens* and *C. wallii*.

As we left the shelter of the forest for the last time, rain clouds began to threaten with menace and we picked up pace along the farm track, stopping to view a clump of *Fuchsia perscandens* along the way, before speeding back to the shelter of the vans.

Sunday 12th January – Option 1 – Mt Eldrig **Leslie Haines & Thiagaraj Mahalingum**

While one group visited the adjacent frost flats, twelve of us took the 4WD up to the pylons on Mt Eldrig. We walked immediately into forest, with some large southern rata in flower. The track here was fairly dry and we stopped often to botanise, especially looking for the orchid *Townsonia deflexa* in flower. As we climbed, some flowers were found to be almost open.

A patch of stunted forest allowed a canopy of large ancient manuka (*Leptospermum scoparium*) (Fig. 39) to survive amongst kamahi, southern rata, and mountain beech. Here we saw two leaf forms of *Coprosma colensoi* agg. Further on, the taller forest had a canopy of mountain beech with *Halocarpus biformis*, and *Alepis flavida* was seen often with flower buds. Our morning tea stop was a rocky knoll with views back to the valley and Borland Lodge.

As the forest track became wetter *Drosera stenopetala* was in flower and at the higher altitude we saw *D. spatulata* and *D. arcturi*. In the more open boggy areas *Lycopodiella diffusa*, multi-branched bog pine (*Halocarpus bidwillii*), *Empodisma minus* and a thelymitra in bud. At the forest edge were good examples of the large *Celmisia coriacea*, *Coprosma pseudocuneata*, and *Dracophyllum menziesii* (pineapple shrub). We also walked through meadows dominated by *Gleichenia*, blanketed with furry brown frond-buds.

At higher altitudes amongst the tussock (*Chionochloa teretifolia*) was *Caladenia lyallii*, *Ourisia macrocarpa*, *Bulbinella angustifolia*, *Hebe odora*, *Montitega dealbata* (syn. *Cyathodes pumila*), and *Bulbinella gibbsii* var. *balanifera*. In the higher forest was *Schizaea australis* and *Astelia nervosa* with *A. nivicola* on the highest areas above the tree-line, along with *Hebe pauciramosa*.

In the open we walked over a lot of *Astelia linearis* with large red fruit, and *Forstera tenella* and *Pimelea pentacondra*. *Myrsine nummularifolia* was in open areas while *M. divaricata* occurred in the forest. Orchids that we saw in flower included *Corybas trilobus*, *Caladenia lyallii*, *Prasophyllum colensoi* in the boggy area and *Chiloglottis cornuta* in the forest.

We had been in and out of cloud/mist much of the day and most of us returned with our leader for the day, Brian Rance (Fig. 40), who had a deadline to meet, but four of the party decided to continue to the tops. There they encountered a bitterly cold wind which hastened their return soon after the main group, after minimal botanising amongst edelweiss (Fig. 41), sedges, and *Celmisia* species. One of the interesting aspects of the day was the clear zonation pattern as we ascended: stunted forest, taller forest, gleichenia meadow, open boggy areas, more forest, tussock zone, then more forest to the tree-line (Fig. 42), with alpine plants at the summit.

Sunday 12th January – Option 2 – A Day Of Two Halves – South Borland and Burnt Ridge Track

Bev & Geoff Davidson

Our last opportunity to return to the alpine zone started with a dismal outlook. The option of climbing Mt Eldrig (1595 m) was not met with enthusiasm by all the group. The diehards (Fig. 42) declared they would climb the mountain despite the bad weather, others preferring the alternative of a frost flat at a lower altitude, complete with a wide suite of alpine plants.

The staunch group experienced the same weather as the more cautious trampers, only more so. The low-level trampers arrived at the south branch of the Borland Burn and quickly donned full wet-weather gear and additional warm clothing. Ambling down the short access drive from the Borland Road we arrived at a relatively flat valley floor (780 m). The first *Hebe subalpina* we encountered growing in shade had no flowers, and below it sprawled the blue-grey foliage of *Acaena caesiiglauca*, endemic to the South Island, as were so many of the plants we were to find.

Snow tussock and more *Hebe subalpina*, mostly with flowers, dominated the frost-flat, and our group dispersed in all directions with the distant bobbing of



Fig. 40. Brain and Graeme discuss the options at the morning tea stop, ascending Mt Eldrig. Photo: LH.



Fig. 41. South Island edelweiss (*Leucogenes grandicepes*) on Mt Eldrig. Photo: AW.



Fig. 42. The Mt Eldrig group at the tree-line. L to R: Tiago, Brian, Sam, Leslie, Karen, Rob, Dhahara, Helen, Lisa. Photo: AW.



Fig. 43. Hunting for the diminutive *Ophioglossum coriaceum*, in a cold and wet frost flat, Photo: EC.



Fig. 44. The native monocot, *Herpolirion novae-zelandiae* (Asparagaceae), with flowers to 30 mm across, were frequently around the drip-line of the bog pines in the open amongst mosses and the lichen, *Cladonia confusa*. Burnt Ridge Track. Photo: BD.



Fig. 45. A patch of the blue-flowered *Thelymitra cyanea* in a damp area kept the photographers busy. Burnt Ridge Track. Photo: BD.

red/blue/green raincoat hoods. Frozen fingers pulled on gloves and fumbled with cameras. Those with cell phones were reminded that gloves on wet screens don't transmit the correct message, if they can even turn the phone on.

There were good examples of *Coriaria angustissima* with their fine feathery foliage mixing with a carpet of *Muehlenbeckia axillaris*. *Ozothamnus vauvillersii* was in bud, most showing a green/white form, with an occasional pinker type, looking most attractive, but it was out-dazzled by the vibrant *Celmisia verbascifolia* in full flower. Not in flower but very attractive was the 'false Spaniard', *Celmisia lyallii*. It certainly looked and felt like an aciphylla. Maureen rejoiced when Gael discovered the diminutive *Ophioglossum coriaceum*, and many of us were down on our knees (Fig. 43) looking at it and *Raoulia glabra* when word came that due to the inclement weather we would retreat to the lodge at 11.30 am for hot drinks and lunch. No one argued!

As we sat outside the lodge in the brilliant sunshine drinking our coffees, we marvelled at the rapid change in weather and decided the afternoon was good for the Burnt Ridge Track tramp to Lake Monowai. Paul offered to drive us to the Lake-end giving us all afternoon to walk the sign-posted 1.5 hours back to the lodge. This was sensible in that we did not then need to arrange a time to be picked up. It was foolish to set a group of botanists free to roam a jewel-laden wonderland without time constraints. Starting at 1.30 pm the first hour saw progress of about 20 m along the track and the shedding of many warm layers of clothes.

We were lured by an unnameable pimelea (*Pimelea prostrata* agg.), *Herpolirion novae-zelandiae* (Fig. 44 & cover illustration) with big white and blue flowers, and again *Raoulia glabra*, closely followed by *Celmisia glandulosa* and *Prasophyllum colensoi*. The latter provided ample opportunity for those with their cameras in their cell phones to focus on one subject indistinguishable from its background. The ingenious solution was to use two cell phones. Turn one off and use its blackened screen as the backdrop and the other can take the perfect shot, with perhaps the reflection of the orchid and photographer behind it. This technique proved essential for the many delights yet to be discovered. Aunty Anne was in raptures over a colony of *Thelymitra cyanea* with some fully open intense blue flowers (Fig. 45) amid a crowd of buds.

Gael was off-track searching for sign of deer browse and additions to the sightings. The lack of divaricating coprosma amidst the duopoly of manuka and bog-pine (*Halocarpus bidwillii*) (Fig. 46) suggested heavy browsing. Diligent searching found a couple of *Coprosma tayloriae* and *C. propinqua*

together with a lone *Phyllocladus alpinus*. The latter looked more like a frilly lettuce, having been chomped so often and resprouting into a multi-branched tuffet. All were growing within the protective cover of a bog-pine. Gael theorised that the deer are vain and protective of their beautiful eyes, and therefore would not risk the danger of upward-pointing twigs to secure a mouthful of the indigestible.

Maureen and Ewen, recording every species, brought up the rear, speculating on the species of *gleichenia* and the cause of the deformation of about 40 % of the fern colony. What started as a browning and curling of the pinnule tips, grew into crisp grey balls 3 mm in diameter, looking very like small manuka seed capsules. The distortions were quite disfiguring.

John, Cheryl, Claire and Jenni picked up their pace and headed back to the lodge, leaving the rear-guard to debate the species of *chionochloa* that had descended from higher altitudes to settle on this frosty, open landscape between the widely spaced manuka and bog-pine. We settled amicably on *Chionochloa crassiuscula* and continued the search for yet more species.

Stylidium subulatum (*Oreostylidium* to us oldies) popped up with many large buds just bursting into flower, together with *Oreobolus pectinatus*, a green dinner-plate-sized mat of densely packed tufts, 5–10cm tall. No flowers or fruit were seen, but perhaps we did not look deep into the foliage, because the books tell us the “floral bits” remain well hidden.

Bev & Geoff, being on tonight’s cooking roster, thought perhaps it was time to move faster as we had been on this track for twice the time given, and may not yet have been half way. Anticipating a brisk, easy 40 minute walk we left the remnant group and pressed on. The ‘flat’ frost flat soon gave way to a forest of mountain beech trees, and the track started to rise steeply. We had forgotten we had to cross up and over the toe of a moraine. Topographic maps say it is a 50 m rise, but the uneven steps and troublesome roots had us puffing and pausing for breath long before the track levelled as it crossed the moraine through an even-age stand of slender beech saplings. The lower slopes of the moraine had mature old beech trees which had survived the fire that gave Burnt Ridge Track its name.

The curious mind would ask, “Why do some areas of beech have dense undergrowth almost entirely of *Blechnum discolor*, and other areas are almost devoid of higher plants which are replaced by a carpet of moss?” – a myriad mosses in a delightful



Fig. 46. Bog-pine (*Halocarpus bidwillii*) and manuka usually <2 m tall dominated the frosty, open flat, with a ground cover of grasses, bryophytes, lichens and herbs. Burnt Ridge Track. Photo: BD.

mosaic of many verdant hues. Clearly the fern has been induced by red deer’s (*Cervus elaphus*) lack of appetite for it, eating all other more palatable species. But why has it not colonised the mossy areas? Nature still has her secrets and the uneducated eye cannot fathom her design.

Weary legs at last carried us along the bush edge to the back door of the lodge at 6 pm. Fortunately we had been part of the Asquith team of chefs, and they had ably prepared the spaghetti bolognaise in good time for dinner. The bolognaise even included horopito (*Pseudowintera colorata*) in the recipe for that extra zing. The chefs had kindly waited until the last two returned at 7 pm, before serving a delicious meal after a day of delectable botanical delights.

Borland Camp Lichen Report 6–9 January 2020

Allison Knight

What an abundance of lichens there were around the Borland area, and how many extra were revealed with time to look carefully, and to make more detailed investigations afterwards. The lichens in this report and accompanying list are just a small selection of those that were out there. I have listed only those that I had time to photograph and identify properly, with the expert help of Jennifer Bannister, plus a few extra that others, especially Karen Asquith, drew my attention to in the field. For the full list of lichens observed see Appendix 1.

Our fun started the evening of **January 6** when John took a group up to Borland Saddle to enjoy the sunset, fresh snow and the keas. The lichens up there were striking, too, and John brought back a fallen branch festooned in beard lichens (*Usnea* spp.). The most striking lichen on the Saddle was *Usnea capillacea*, a high-altitude endemic species usually growing on Nothofagaceae. It festooned the beech branches, especially the dead ones that had

been cut down, and was a conspicuous feature in all the forests we visited. Jennifer Bannister, who is revising the genus *Usnea* in New Zealand carefully examined all the *Usnea* that I brought back to her from the Borland area, and has identified at least 6 different species. She says that *U. capillacea* (Fig. 47) is incorrectly called *U. articulata* in the 2007 Lichen Flora, as the morphology is quite different, and there is some evidence that the DNA is distinct. Unusually, at Monowai Dam it had tiny apothecia (disc-shaped fruiting bodies). *Usnea ciliifera* (Fig. 48), which is covered in large apothecia with protruding rays, was another spectacular species, growing out from forest branches and falling down to make eye-catching displays on the forest floor. *Usnea inermis* is a small shrubby fruticose lichen found in high light situations such as the forest edge at Borland Saddle. Jennifer's painstaking look at John's fallen branch revealed another three species, *U. oncodes*, *U. xanthopoga* and, most excitingly, *U. nidulifera*, which is not yet reported for New Zealand. Jennifer also identified two species of the white, crustose, *Pertusaria* on the Borland Saddle branch, *P. truncata* and *P. psoromica*. Even more exciting was her discovery of a new *Pertusaria* species that is not in the world key.

January 7 was almost as exciting. We saw at least six species of *Placopsis* this day. This genus has nodules of N-fixing cyanobacteria (cephalodia) on a thallus containing green algae, which enhances survival in wet conditions. A rock at the start of the track to Green Lake (Fig. 49) sported brown 'snakeskin' *P. perrugosa*, *P. illita* with black apothecia and a black prothallus (margin of fungal hyphae), *P. polycarpa* with masses of tiny apothecia and 'bull's eye' *P. subgelida* with a striking large purplish central cephalodium. *Placopsis rhodocarpa* and an unidentified species were growing on the trackside further along. In addition, rocks on the water edge at Monowai Dam hosted rusty *P. bicolor* plus sorediate *P. microphylla* and *P. gelida*, both with patches of fluffy vegetative propagules. Lichens with mazedia (fruiting bodies with loose fluffy black spores), were common in the Borland area. They included the ubiquitous scrambling, finely branched greenish-white *Leifidium tenerum* (Fig. 50), whose fertile thalli sport black mazedia at the tips of straight stalks. Windfalls of *Sphaerophorus stereocauloides* (Fig. 51) caught the eye. Their fertile lobes had globose mazedia at the tips, veiled when young. *Bunodophoron* species have black mazedia on the lower surface of their fertile lobe tips, sometimes veiled, as in *B. insigne* (Fig. 52). On the sheltered underside of old, leaning trunks we saw the occasional patch of grey, filamentous *Lecanactis mollis* (formerly *Sagenidium molle*). Large-lobed, short-stalked *Sticta latifrons* protruded from trunks, while *Pseudocyphellaria homoeophylla*, grey when dry, green when wet, was common festooning trunks

and stumps. *Yarrumia* (formerly *Pseudocyphellaria*) *colensoi* and the occasional *Y. coronata* were also eye-catching, especially when molluscs grazing the algal layer exposed the yellow medulla below (Fig. 53). Looking oddly brown and sunburnt in the opened-up branches of the shrubs overlooking the first wetland was *Leioderma pycnophorum*. The shrub community was so interesting that this was as far as we got. I was so pleased to see fertile *Podostictina* (formerly *Pseudocyphellaria*) *degelii* that I nearly overlooked the adjacent very uncommon and much less conspicuous grey cyanobacterial *Podostictina* (formerly *Pseudocyphellaria*) *jamesii* (Fig. 54). The brownish cyanobacterial *Pseudocyphellaria neglecta* (formerly *P. crocata*) was also part of the Lobariaceae mix. Recent research indicates that the true *P. crocata* does not occur in New Zealand. On the way back we noticed narrow-lobed *Pannoparmelia angustata* adhering close to branches, and the slightly wider-lobed *Notoparmelia* (formerly *Parmelia*) *norcambidiocarpa* with spectacularly large brown apothecia (Fig. 55).

January 8. The morning at Monowai Dam brought several more species of *Bunodophoron* into view, including the shrubby, almost fruticose, much branched, yellowish, light-loving *B. ramuliferum*. *Pannaria* species, including *P. farinosa* with sorediate lobe margins and *P. sphinctrina* agg. with masses of brown apothecia, were spread over smooth trunks on the far side of the dam, while the dark cyanobacterial jelly lichen, *Collema laevae*, lurked deeper in the shade. On the track to the lookout, Karen drew my attention to a clump of *Cladia aggregata* sensu lato. This species has been split into multiple species using DNA analysis and even the authors admit that the new species are impossible to distinguish in the field. Karen also pointed out subalpine *Hypogymnia lugubris* with inflated lobes and a smooth black lower surface. After lunch there was so much of interest in the beech forest that John and I only got a few hundred metres along the South Borland Track. *Menegazzia* is another foliose genus with inflated lobes, distinguished from *Hypogymnia* in most cases by the intriguing perforations on the upper surface. *Menegazzia pertransita* was widespread and conspicuous in every forest we visited. Inconspicuous *Menegazzia nothofagi* has very narrow lobes with pustules that burst open and become sorediate (Fig. 56). Next day we found *Menegazzia dielsii* on a fallen branch by the track down from Mt Burns. It has distinctive pruinose apothecia frosted with tiny white crystals (Fig. 57). *Pseudocyphellaria glabra* looks very similar to *P. homoeophylla* apart from the tiny cylindrical vegetative propagules (isidia) protruding from the lobe margins (Fig. 58). The *Podostictina* (formerly *Pseudocyphellaria*) *pickeringii* here had such a mass of branched isidia that it was hard to recognise at first, but the yellow lower surface

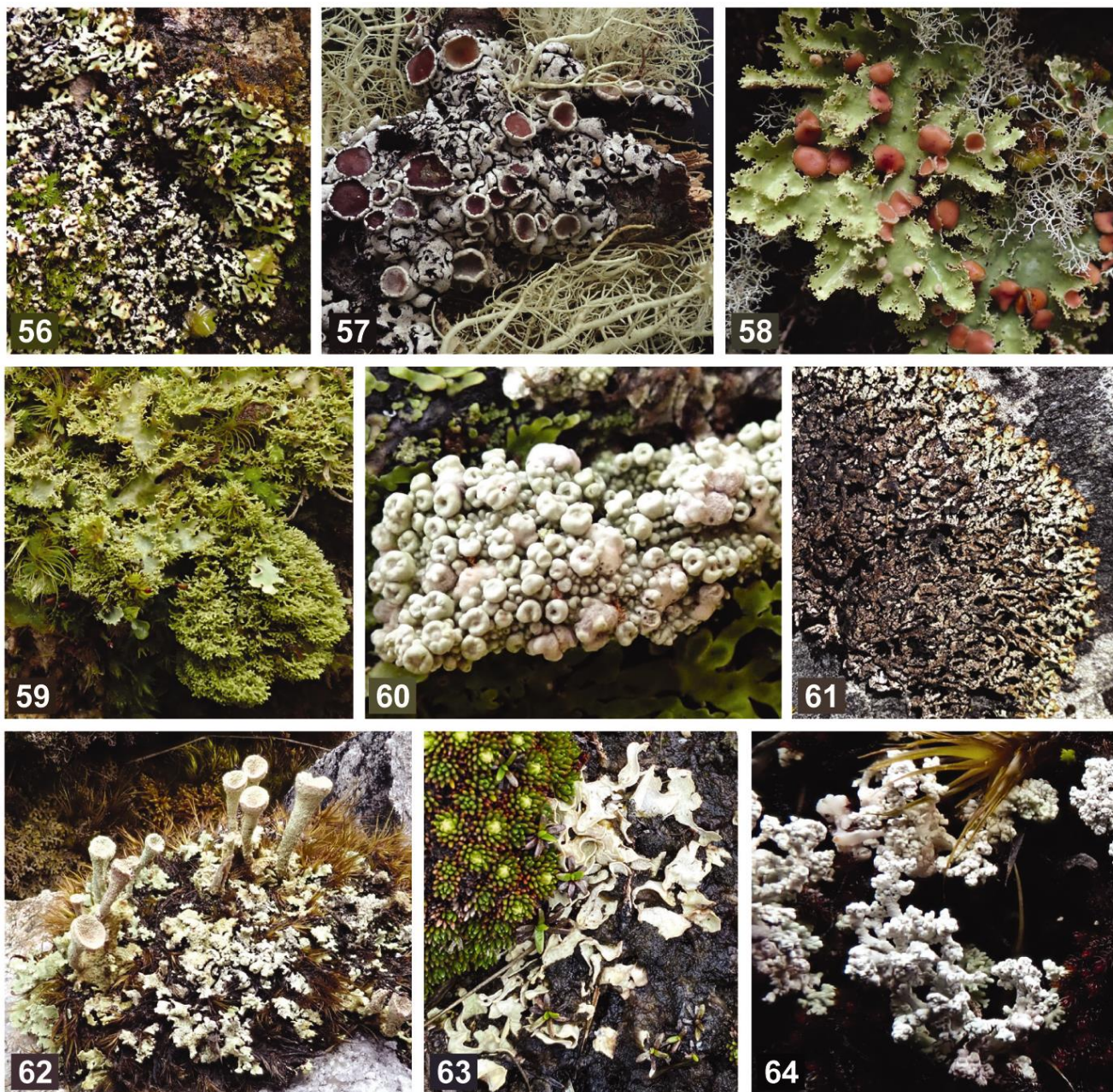


Figs. 47–55: 47. Dangling *Usnea capillacea* in beech forest, start of track down to North Borland. All lichen photos (Figs. 47–64) by Allison Knight, 7–9 Jan 2020. 48. Fallen *Usnea ciliifera* covered in large apothecia, track to Green Lake. 49. Brown *Placopsis perrugosa* (top left), *Placopsis illita* with black apothecia and black border (mid left & top right), *Placopsis polycarpa* (mid bottom) and *Placopsis subgelida* (right), entrance of track to Green Lake. 50. Fertile *Leifidium tenerum* on beech trunk, start of track to Green Lake. 51. Fallen fertile *Sphaerophorus stereocauloides*, track to Green Lake. 52. Underside of *Bunodophoron insigne* showing fertile veiled mazedia. Stalked mazedia of *Leifidium tenerum* in foreground. Lake Monowai near dam. 53. *Yarrumia colensoi* with large orange-brown apothecia growing above and around wide-lobed *Yarrumia coronata* with small brown apothecia. Track to Green Lake. 54. Rare *Podostictina jamesii* (left) growing with fertile *Podostictina degelii* on *Hebe* in first shrubby slope, track to Green Lake. 55. Large apothecium of *Notoparmelia norcrambidiocarpa* on beech branch, track to Green Lake.

was a give-away (Fig. 59). On a rotting log grew a good specimen of crustose *Cocotrema cucurbitula*, with the lumpy, pale pink cephalodia clearly visible (Fig. 60). Lower down the track Karen saw the common *Baeomyces heteromorphus*, a crustose lichen with stalked apothecia. Double birthday celebrations made the evening extra special.

Climbing Mt Burns on **January 9** was such an effort that I didn't have time to look at the forest

lichens on the way up and was too rushed to look on the way back. On the rocks at the base of the ridge up the mountain I was pleased to find brownish *Hypogymnia kosciuskoensis* radiating out and looking very like an alpine *Menegazzia*, but without the perforations (Fig. 61). This was a new record for me and for Mt Burns. Gracing a cleft in the rocks was the yellowish pixie cup *Cladonia carneola* (Fig. 62). This genus is notoriously hard to key out and even David Galloway found it difficult. Higher up the mountain



Figs. 56–64: **56.** Small-lobed *Menegazzia nothofagi* with central erumpent pustules growing on a beech trunk at the start of the track down to North Borland. **57.** Convoluted fertile *Menegazzia dielsii* growing amongst *Usnea ciliifera* on a fallen beech branch on the track down from Mt Burns. **58.** *Pseudocyphellaria glabra* with projecting marginal isidia, start of track down to North Borland. **59.** *Podostictina pickeringii* with masses of projecting isidia (vegetative propagules). Start of track down to North Borland. **60.** *Coccotrema cucurbitula* with perithecioid fruiting bodies and pale pink cephalodia. On a rotten log, start of track down to North Borland. **61.** *Hypogymnia kosciuskoensis*, spread flat over a boulder at the base of the ridge to Mt. Burns. **62.** A clump of *Cladonia carneola*, with stalks covered in soredia (vegetative propagules) and brown fruit on the rim of the mature cup. Growing in moss on a boulder at the base of the ridge to Mt. Burns. **63.** *Parasiphula foliacea* growing in damp peaty soil near the patterned tarns on Mt. Burns. **64.** Uncommon *Stereocaulon loricatum* with pale pinkish-grey cephalodia (nodules of cyanobacteria). On the ground near the patterned tarns on Mt. Burns.

Karen spotted the tightly clumped *Siphula dissoluta*, the fine-haired *Gowardia* (formerly *Alectoria*) *nigricans* and the vibrant yellow-green crusts of *Rhizocarpon geographicum*. In the peat bogs on the way back down I stopped to photograph *Parasiphula* (formerly *Siphula*) *foliacea* (Fig. 63) and *Stereocaulon loricatum* (Fig. 64). Both are new records for Mt Burns. *Cladonia mitis*, the whiter, less symmetrically branched alpine counterpart of *C. confusa*, also grew in this damp, open area. Snow,

rushed down from Mt Burns, enhanced the traditional toast to the Queen.

Jennifer Bannister made a tremendous contribution to identifying lichens from the Borland area. Her painstaking investigations revealed an *Usnea* new to New Zealand and a *Pertusaria* that is probably new to the world. Jennifer is continuing her revision of the genus *Usnea* and has started looking at *Pertusaria* on bark. There are very likely to be

exciting discoveries to be made in the north as well and Jennifer would be thrilled to be sent any interesting specimens of these that you might find. I was thrilled to get photos of several more species for the expanded Lichen Guide that I am working on. There are sure to be northern species that I haven't yet got or haven't got a good photo of. So, if you do take any good photos of northern lichens, with a specimen to confirm the ID, I would be delighted to get them. There could well be treasures right in your back yard, in a patch of trees or on a roadside near you, and now is a good time to take a close look!

Thank you Ewen for inviting us and thank you everyone for supporting our quest to make lichens more accessible and understood! Please send photos and samples to allison.knight.nz@gmail.com, 28 Embo St, Kew, Dunedin 9012.

The Monstrous Mouse Massacre

Maureen Young

This spring was a mast year for beech flowering, and the usual explosion in mouse numbers was plain for all to see. In the forest, mice were scattering in all directions, usually with a bolt-hole to disappear down. At the lodge a couple of mouse traps were supplied, but John Knight had four more in his vehicle, so they were put to good use. It took 48 hours to trap the first hundred mice, then things slowed down a little with a final tally of 204. In one instance two little pests were caught in the one trap; two mice were seen cannibalising one of their brethren; one couple (of people) caught four mice before sleep finally won the day, with the following pattern – set the trap, nod off, trap snaps, argument over who would get out of bed to deal with it, set the trap, nod off, etc.

Requiem for a Puir Wee Moose (Apologies (sort of) to Rabbie Burns)

Wee sleekit, cowrin', timorous beastie,
Oh, what a panic's in thy breastie.
My scroggin thou hast chewed,
In my lunch box thou hast poo'd.
No longer dost thou need to wait
Thy true and well-deservéd fate.
The cruel jaws of death came doon,
Upon thy thievin' little croon !

Birds observed in and around the Borland Valley during the ABS trip – January 2020

Paul Asquith

Arriving at the Borland Lodge in the late afternoon, most of the party was greeted by a cacophony

of raucous calls from the tall beech forest edge just behind the cabins, long tailed cuckoos, of course, being the source of the noise. There seemed to be quite a number of them in the trees but as is often the case they are easy to hear but far more difficult to see or photograph. Fortunately they quietened down on dusk so that we weren't too disturbed at night.

Most of the Auckland-based Bot Soc members admitted to some interest in the Southland birds and most were not disappointed to at least hear most of the expected species. Seeing them was another matter altogether! The total species list for the visit came to 50, which was quite a good number (see Appendix 2). Of particular interest or pleasure were the large numbers of brown creepers and riflemen tumbling through the trees in family groups. Bellbirds and yellow heads were seen occasionally, and robins and tomtits were almost everywhere on every day, either around, on or under our feet (Fig. 29). They seemed much tamer than their North Island cousins. Black-morph fantails appeared occasionally and yellow crowned parakeets were heard and seen on at least two different occasions, which was quite special. Disappointingly, falcons only put in one appearance, but what appeared to be genuine grey ducks rather than the more common grey/mallard hybrids were seen on several of the alpine tarns. Also at the alpine level, redpolls, New Zealand pipit and kea (Fig. 23) appeared in many locations whilst at lower altitude many fat New Zealand pigeons swooped above us, and at least one kaka was briefly spotted.

Acknowledgements

To the main organizers of this trip: Anthony Wright for arranging bookings, organising menus, providing a botanical library and purchasing the food; Ewen Cameron for coordinating many aspects; Helen Preston Jones taking bookings being the first point of contact for participants; Graeme Jane for suggesting areas to visit and organising all the invaluable field species lists; our invited South Island guests along with their local knowledge, especially Brain Rance, David Lyttle and Allison Knight; the rostered chefs who set such a high standard of cuisine; John Knight for his ability to trap mice; Allison and Juliet for sharing their birthdays with us; drivers of all the vehicles; Joshua Salter for providing the map (Fig. 4); Ewen Cameron for selecting and writing captions for all the images; Brian Rance for expert comments; and finally, to everyone for making sure the trip ran smoothly.

Reference

Scofield, P., Stephenson, B. 2013: *Birds of New Zealand – a photographic guide*. Auckland University Press, Auckland.

Appendix 1. Borland Trip Lichen List. Lichens observed during the Auckland Botanical Society visit to the Borland Lodge area in 6-10 January 2020, compiled by Alison Knight.

Key

B: Borland Saddle area;
BL: Borland Lodge;
GL: Track to Green Lake;

LM: Lake Monowai;
MB: Mt Burns;
SB: Track to S Borland.

* = spotted by Karen Asquith,
= identified by Jennifer Bannister

Species (old name in brackets)	Fig. No.	Location	Species (old name in brackets)	Fig. No.	Location
<i>Bacidia</i> sp.		LM	<i>Placopsis illita</i>	Fig. 49	GL, LM
<i>Baeomyces heteromorphus</i>		SB*	<i>Placopsis microphylla</i>		LM
<i>Bunodophoron agnetae</i>		SB	<i>Placopsis perrugosa</i>	Fig. 49	GL, LM
<i>Bunodophoron insigne</i>	Fig. 52	GL, LM*, SB	<i>Placopsis polyspora</i>	Fig. 49	GL
<i>Bunodophoron notatum</i>		GL	<i>Placopsis rhodocarpa</i>		GL
<i>Bunodophoron ramuliferum</i>		LM	<i>Placopsis</i> sp.1		GL
<i>Cladia aggregata</i>		LM*	<i>Placopsis</i> sp.2		MB
<i>Cladonia carneola</i>	Fig. 62	MB	<i>Placopsis subgelida</i>	Fig. 49	GL
<i>Cladonia mitis</i>		MB	<i>Podostictina (Pseudocyphellaria) pickeringii</i>	Fig. 59	SB
<i>Coccotrema cucurbitula</i>	Fig. 60	SB	<i>Podostictina (Pseudocyphellaria) degelii</i>	Fig. 54	GL
<i>Collema laeve</i>		LM	<i>Podostictina (Pseudocyphellaria) jamesii</i>	Fig. 54	GL
<i>Diplotomma</i> sp.		MB	<i>Pseudocyphellaria ('crocata') neglecta</i>		GL
<i>Gowardia (Alectoria) nigricans</i>		MB*	<i>Pseudocyphellaria billardiarei</i>		LM
<i>Hypogymnia kosciuskoensis</i>	Fig. 61	MB	<i>Pseudocyphellaria faveolata</i>		GL, SB
<i>Hypogymnia lugubris</i>		LM*	<i>Pseudocyphellaria glabra</i>	Fig. 58	SB
<i>Lecanactis mollis (Sagenidium molle)</i>		GL, SB	<i>Pseudocyphellaria homoeophylla</i>		GL
<i>Lecanora aff. caesiurubella</i>		MB	<i>Pseudocyphellaria multifida</i>		GL
<i>Lecanora lugubris</i>		MB	<i>Psoroma implexum</i>		SB
<i>Lecanora</i> sp.		GL	<i>Rhizocarpon aff. reductum</i>		LM
<i>Lecidea fuscoatrula</i>		MB	<i>Rhizocarpon distinctum</i>		LM
<i>Leifidium tenerum</i>	Fig. 50	all	<i>Rhizocarpon geographicum</i>		MB*
<i>Leioderma pycnophorum</i>		GL	<i>Siphula dissoluta</i>		MB*
<i>Lepraria neglecta</i>		MB	<i>Sphaerophorus stereocauloides</i>	Fig. 51	GL
<i>Menegazzia dielsii</i>	Fig. 57	GL	<i>Stereocaulon loricatum</i>	Fig. 64	MB
<i>Menegazzia nothofagi</i>	Fig. 56	SB	<i>Stereocaulon ramulosum</i>		LM
<i>Menegazzia pertransita</i>		B, GL, LM	<i>Sticta latifrons</i>		GL
<i>Notoparmelia (Parmelia) norcrambidiocarpa</i>	Fig. 55	SB	<i>Tephromela atra</i>		GL
<i>Pannaria allorhiza</i>		LM	<i>Thelotrema lepadinum</i>		GL
<i>Pannaria athroophylla</i>		LM	<i>Usnea (articulata) capillacea</i>	Fig. 47	all
<i>Pannaria farinosa</i>		LM	<i>Usnea ciliifera</i>	Fig. 48	B, GL #
<i>Pannaria sphinctrina</i> agg.		LM, SB	<i>Usnea inermis</i>		B #
<i>Pannoparmelia angustata</i>		B, GL	<i>Usnea nidulifera</i>		B #
<i>Parasiphula (Siphula) foliacea</i>	Fig. 63	MB	<i>Usnea oncodes</i>		B #
<i>Parmeliella thysanota</i>		MB	<i>Usnea xanthopoga</i>		B #
<i>Peltigera</i> sp.		LM*	<i>Xanthoparmelia amplexula</i>		LM
<i>Pertusaria psoromica</i>		B #	<i>Xanthoparmelia scabrosa</i>		BL
<i>Pertusaria</i> sp.		B #	<i>Yarrumia (Pseudocyphellaria) coronata</i>	Fig. 53	GL
<i>Pertusaria truncata</i>		B #	<i>Yarrumia (Pseudocyphellaria) colensoi</i>	Fig. 53	GL
<i>Placopsis bicolor</i>		LM			
<i>Placopsis gelida</i>		LM			

Appendix 2. Species List – Birds. Birds observed or heard during the Auckland Botanical Society visit to the Borland Lodge area in 6-13 January 2020, compiled by Paul Asquith.
Birds listed in the order shown in the Birds of New Zealand Guide (Scofield & Stephenson 2013).

Key: *= introduced species

feral goose *	greylag	little owl *	
Canada goose *	kuiki	rifleman	titipounamu
paradise shelduck	putangitangi	grey warbler	riroriro
mallard *	rakiraki	bell bird	korimako
grey duck	parera	tui	tui
NZ scaup	papango	yellowhead	mohua
NZ dabchick	wewera	brown creeper	pipipi
pied shag	karuhiruhi	Australian magpie *	makipai
white-faced heron		NZ fantail	piwakawaka
swamp harrier	kahu	NZ tomtit	ngirungiru
NZ falcon	karearea	South Island robin	kakariwai (Fig. 29)
SI pied oystercatcher	torea tuawhenua	Eurasian skylark *	
pied stilt	poaka	silveryeye	tauhou
spur-winged plover		welcome swallow	warou
southern black-backed gull	karoro	Eurasian blackbird *	manu pango
red-billed gull	tarapunga	song thrush *	
black-fronted tern	tarapirohe	common starling *	
rock pigeon *	feral pigeon	house sparrow *	
NZ pigeon	kereru or kukupa	NZ pipit	pihoihoi
NZ kaka	kaka (Fig. 23)	dunnock *	hedge sparrow
kea	kea	common chaffinch *	
yellow-crowned parakeet	kakariki	European goldfinch *	
shining cuckoo	pipiwharauoa	European greenfinch *	
long- tailed cuckoo	koekoea	common redpoll *	
morepork	ruru	yellowhammer *	