

An interesting feature of the summit area was the occurrence of large patches of exposed peat. This seems to have been the result of fire, given the charcoal layer apparent on closer inspection. Grey-bleached branches give evidence that these bare peat areas were once dominated by *Halocarpus* shrubs, whose demise is further proof of fire disturbance. Another curious find on the exposed peat was a pile of putative moa gizzard stones. Though it seemed to me that the smooth, white pebbles were very similar to those forming a pile of roading material near the summit transmission tower, Prof. Mark assured us they were deposited during a Moa's miring and not as a deer-stalker's joke. There are similar piles of stones in areas of exposed peat on Maungatua's summit, which lend support to the authenticity of our find.

Invasion by exotic conifers is a common problem in vegetation above the limit of native forest throughout the rain-shadow areas of the South Island. With large coniferous plantations on the lower slopes, the native shrublands and grasslands of the Blue Mountains have suffered heavy infestations of *Pinus contorta*, *P. radiata*, Douglas fir (*Pseudotsuga menziesii*) and European larch (*Larix europaeus*). Over the last five years wilding conifers have been largely eradicated from these areas through weekend trips organised by the Department of Conservation (D.O.C.) and the Royal Forest and Bird Protection Society. It is estimated that "several thousand" trees have been pulled, axed, bow-sawed, and chain-sawed to their deaths during these trips. Some of this work has been carried out on a c.800ha block of private land, with a view to future purchase as an addition to the existing D.O.C. reserve. However, the asking price of the landowner has, to date, proved too steep for conservation groups. Prof. Mark informed us that the owner now intends to plant conifers on the land having found "pastoral" management unprofitable.

The upper slopes of the Blue Mountains offer an accessible example of the Southeast South Islands sub-alpine vegetation. The summit in particular offers many curious juxtapositions of contrasting vegetation types on a peatland complex. This is a fragile landscape, which could easily be damaged if visitor pressure increases. Prof Mark has recommended that D.O.C Southland provide interpretation signs to inform visitors of the special features and their vulnerability, especially the cushion bog areas around the tarns, in the hope that this will help to minimise future damage. While the vegetation above the treeline is now largely free of coniferous invaders, the threat of future invasion remains, with considerable plantations still occupying the lower slopes and new areas on the upper slopes to come under plantation soon. It seems the fate of this special area depends on the tenacity of wilding pine control groups.

Rock and Pillar Range, 3rd April

David Lyttle

About 20 members of the Society met in the Botany Department car park and drove to the DOC car park at the foot of the Rock and Pillar Range. Those who wished to walk the entire altitudinal transect from the car park to the summit proceeded on foot while a number of others who were anxious to spend more time looking at the plants in the alpine zone drove up the hill in two 4WD vehicles. On the upper slopes the day was sunny with high nor-west cloud accompanied by a strong, cold wind. The first stop was at about 1250 metres by a snowbank to look for slime moulds that apparently appear

with the melting snow. *Celmisia viscosa* and *Hebe poppelwellii* were prominent beside the track. After further driving the summit plateau was reached and the lead vehicle continued on to some small tarns and more botanising. David Orlovich was anxious to find the grass *Festuca madida* that had been reported from the Rock and Pillar but it proved elusive. A good number of cushion species including *Raoulia grandiflora*, *Raoulia hectori*, *Phyllachne colensoi* and *Anisotome imbricata* var *imbricata* were observed on the exposed summit plateau. *Anisotome imbricata* var *imbricata* forms large silvery cushions packed with small, compact rosettes. *Dracophyllum muscoides* was very common everywhere. *Celmisia argentea*, which is often confused with smaller forms of *Celmisia sessiliflora*, was present in the damper sites. The small cushion plant *Kelleria childii* was observed in flower.

After a time the effects of wind were being felt and everyone went back to the vehicle and returned back to the crest of the ridge to where the second vehicle had stopped. From here it was a short walk to a cluster of tors on the crest of the range. Various members of the second party were found huddled behind a small tor sheltering from the wind. Out in the open the wind was strong enough to make walking upright difficult. Finally everyone was re-united in the shelter of a massive blocky tor on the ridge crest. Growing in the crevices in the rock was a small crucifer *Pachycladon novae-zealandiae* and, surprisingly, a small filmy fern that was not identified. A little bit of fossicking under rocks revealed the large weta *Hemideina maori*. Beside the weta was a little pile of its droppings that were scooped into an envelope by a delighted mycologist to be taken back to the lab and cultured for exotic fungi.

The view from the summit was quite magnificent with clusters of squat schist tors that give the range its name rising above the slab-strewn ground. Growing in and around this chaotic jumble of rock in the landscape were the cushion plants adapted for life in this exposed environment. Down below to the east was the Strath Taieri with Taieri Ridge on the opposite side of the valley. At this altitude it was possible to look down into the Crater on Taieri Ridge, a curious volcanic feature in this predominantly schist landscape. Once again the wind did not encourage people to linger and the comparative comfort of the vehicles was most welcome.

The entire party returned to the little gully outside Leaning Lodge Hut for lunch. Here Katrina Spencer talked about her Masters project which involved looking at the effects of environmental factors on the growth and flowering of the three *Celmisia* sps, *Celmisia viscosa*, *Celmisia hectori* and *Celmisia prorepens*. Allison Knight outlined the history of the Botany Departments research efforts on the Rock and Pillar Range over several decades. The most recent phase of this work is focused on the effects of global warming on the alpine plant communities. Allison herself was studying the growth of *Thamnolia vermicularis* - a distinctive lichen that is prominent in the cushion field.

After lunch the party continued up the slopes for more botanising. The steeper eastern slopes are a mosaic of herbfield, late snowbank and early snowbank communities. Directly above the hut there was an area of subalpine scrub dominated by *Hebe odora*. Growing between the bushes were vigorous mats of *Celmisia viscosa*. A few small patches of snow were still present. The pattern of the early snowbank species *Celmisia prorepens* and the late snowbank species *Celmisia haastii* var *tomentosa* was evident. There were also many plants of *Gentiana bellidifolia* flowering.



Lichen-covered tor by quadrat over clumps of white *Thamnolia vermicularis*. A Knight

Other plants found in this area were *Anisotome flexuosa*, *Coprosma perpusilla*, and *Gaultheria nubigena*.

Eventually it was time to leave. The original plan was for a group to stay overnight in the hut but as the forecast for the following day predicted snow, it was decided that it was too risky to leave vehicles up on the mountain. However two adventurous souls remained at the hut and walked down the next day in the snow that arrived during the night. The remainder of the original overnight party were kindly offered the use of a cottage by the McConnell family for the potluck meal. An enjoyable meal and good company rounded off a very satisfactory trip.

Waipori Forest fungal foray. Saturday 1st May, 2004

Arlene McDowell

A very enjoyable wonder was had by those who attended the BSO trip to Waipori Forest collecting fungi with David Orlovich. Waipori Forest is located near the Maungatua Range approximately 80 km south west of Dunedin. Our foray started in the car park for the Berwick Track where David gave us an introduction to collecting fungi with a few important tips including; to note what substrate the fungus was growing on, ensure the base of the mushroom is included when taking a specimen and that a collection should comprise three specimens so that sample identification is possible. The first part of the tract was through broadleaf forest where it looked like there had been a snowfall as the ground was covered in tiny white mushrooms. A slight increase in elevation brought us into manuka (*Leptospermum*) forest where it was a little drier, but there were still fungi to be collected. The last part of the collecting trip was along the Waitahuna River with an overstorey of beach (*Nothofagus menziesii*).

Upon returning to the Department of Botany, all of the collections were displayed on the lab benches. The number of different fungi collected in just a few hours was impressive and the diversity of forms amazing. The common names of 'bird's nest fungus', 'earth star' and 'coral fungus' aptly described their appearance. Colours of the