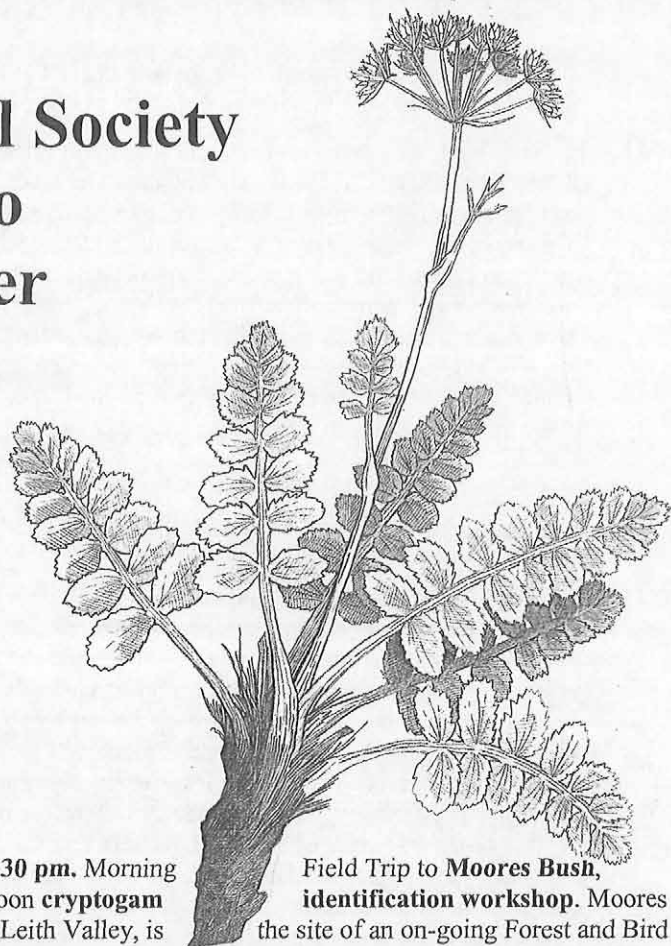


Botanical Society of Otago Newsletter

Number 42
June 2004



BSO Meetings and Field Trips

12 June Sat 9.30 am – 4.30 pm. Morning

followed by afternoon **cryptogam**


Bush, in the upper Leith Valley, is the site of an on-going Forest and Bird restoration project, returning what was once dairy pasture to native forest. Their main emphasis now is in creating a mammal-free 'mini-mainland island' to aid the regeneration of podocarps. Miro, matai, totara, kahikatea and mountain cedar are all present, with some magnificent specimens towering above the vigorously regenerating under-story. Our main aim will be to help update the lichen, bryophyte and fern lists. Cryptogam (non-flowering plants) specimens needing identification will be brought back to the laboratory for the afternoon workshop in the Botany Dept. Lichen leaders Allison Knight and Jennifer Bannister, mosses – Maia Mistral. Bring hand lens and lunch and wet weather gear.

Field Trip to Moores Bush, identification workshop.

Moores Bush, in the upper Leith Valley, is the site of an on-going Forest and Bird

16 June, Wed. 5.20 pm. Oregon, Europe & Dunedin: Plants, Gardens & Seed. A talk by **Tom Myers**, Botanical Services Officer, Dunedin Botanic Garden. Tom recently spent a year in Newport, Oregon where he did some work both gardening and as a marine science contractor, also taking time to visit State Parks and local Botanic Gardens, attending the American Association of Botanic Garden and Arboreta (AABGA) combined mid-west and Pacific region conference. In August-September he travelled to Europe with his partner, visiting Botanic Gardens at the Universities of Coimbra and Porto in Portugal,

Bonn in Germany and additionally visiting the island of Texel in the Netherlands. In January this year Tom returned to his job in Dunedin.

 **21 July, Wed. 5.20 pm. *Pachymenia* - a question of species - Lisa Russell,**

Department of Botany, University of Otago. The taxonomy of the New Zealand members of red algal genus *Pachymenia* J. Agardh (Halymeniaceae, Rhodophyta) has been contentious. Three New Zealand endemic species are currently recognized: one prostrate species, *P. crassa*, and two foliose species, *P. laciniata* and *P. lusoria*. As part of her PhD Lisa has explored relationships between these New Zealand species, in particular between the intertidal species *P. lusoria* and *P. laciniata*, in order to develop a clearer understanding of species boundaries. A multidisciplinary approach was undertaken combining molecular systematics and cell wall chemistry with more traditional approaches based on gross morphological characters. She will discuss here the results of these three approaches, firstly in relation to the New Zealand species of *Pachymenia* and secondly in relation to the generic boundaries between *Pachymenia* and a sister genus *Aeodes*.

25 July, SUNDAY, 9 am. Trip to Tavora Reserve (Bobby's Head), with Pat Mark.

Tavora Reserve is the site of a restoration project undertaken by the Yellow Eyed Penguin Trust, to return former grazing land, pine forest and patches of remnant vegetation back to native bush. This is both to provide nesting habitat for the Yellow Eyed Penguin, and to restore vegetation for its own sake. The Trust is keen that this is a working BSO field trip: they want us to test a trail guide that they have been developing for the Reserve, in addition to the normal compilation of species lists and any advice we can provide on restoration works. The Reserve provides a diverse array of botanical habitats, and can be divided into hillside, dune and wetland/riparian vegetation types. Of special interest are remnant *Poa cita*, *Bulbinella augustifolia* and a local speargrass *Aciphylla glaucescens* in the hillside zone; the cushion plant *Scleranthus biflorus* and sand convolvulus *Calystegia soldanella* associated with sand dunes; and stream edge plants including the salt tolerant *Apium prostratum* - native celery, *Azolla filiculoides* - red water fern, *Cotula coronopifolia* - bachelor's buttons, *Leptinella dioica*, *Mimulus repens* - saltmarsh musk, *Shoenoplectus pungens* - three square sedge, *Sarcocornia quinqueflora* - glasswort, *Samolus repens* - sea primrose, *Selliera radicans* and *Puccinellia sp* - salt grass. The Trust has undertaken extensive plantings to try to reintroduce plants formally endemic to coastal hillsides, sand dunes and wetlands and welcomes feedback from the BSO on the restoration job they have done so far. Leave Botany car park at **9 AM Sunday** and return mid to late afternoon. Pack lunch, water and protection from the sun, wind, rain and cold. **Queries to Pat Mark 476 3229.**

Cover Pictures: Front cover and membership form. *Gingidia montana*, drawn by Monica Peters, winner of BSO's inaugural Audrey Eagle prize for botanical drawing. See more in articles on p 29 - 30.

Contents

Cover pictures	<i>Monica Peters</i>	2
August activities, Meeting & Field Trip details.	<i>Committee</i>	4
President's notes	<i>David Orlovich</i>	5
Good time to renew subscriptions	<i>Lyn Bentley</i>	5
Editor's notes	<i>Allison Knight</i>	5
Editorial Policy and Disclaimer	<i>Committee</i>	6

Articles

On <i>Coprosma parviflora</i> and <i>C. ciliata</i>	<i>Graeme Jane</i>	6
<i>Gastrodia</i> at Warrington	<i>Chuck Landis</i>	13
Southland Community Nursery	<i>Chris & Brian Rance</i>	14
Moths with portable homes	<i>Brian Patrick</i>	15

Meeting and Trip Reports

Gardens Without Weeds? Talk by <i>Helen Leach</i>	Reviewed by <i>Ian Radford</i>	16
Baylis Gathering	<i>Allison Knight</i>	19
Blue Mountains	<i>Norman Mason</i>	19
Rock and Pillar Range	<i>David Lyttle</i>	21
Waipori Forest fungal foray.	<i>Arlene McDowell</i>	23

Plant List

Blue Mountains	updated by <i>John Douglas</i> and <i>Alan Mark</i> ...	24
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Books and Botanical information

<i>The Natural History of Southern New Zealand: 25 % discount!</i>	27
<i>A Field Guide to the mosses & allied plants of Southern Australia.</i>	27
<i>Flora of Australia</i> online	28

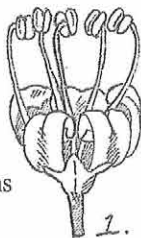
News and Announcements

Audrey Eagle Botanical Drawing Guidelines -	<i>Audrey Eagle</i>	29
Audrey Eagle Botanical Drawing Prize-winner		30
<i>Gingidia montana</i>	<i>Monica Peters</i>	30
Mt Watkin/Hikaroa Reserve announced!	<i>A Knight & Robyn Bridges</i>	31
Orokonui Sanctuary - Te Korowai o Mihiwaka		31
Wilding tree-fellers Award		32

Botanical diary

International and National Events	33
Local Events	33
Contact details of related groups	34
BSO Contact Details and Subscription forms	36

Gingidia Montana flowers; male (1)
and female (2) – *Monica Peters*



18 August, Wed. 5.20 pm. **Growing New Zealand Alpine Plants - Dr David Lyttle**, Otago Alpine Garden Group. The New Zealand alpine flora contains a diverse assemblage of species many of which are desirable and challenging horticultural subjects. Unfortunately New Zealand alpine plants are often appreciated more overseas than in their own country. This talk will provide an introduction to the propagation of New Zealand alpine plants from seeds and cuttings and will discuss problems frequently encountered in their culture.

21 August, Sat, **8 am**. Trip to **Southland Community Nursery**, Otatara, Invercargill. Chris and Brian Rance have established this "community nursery". Their aim is to provide facilities and materials (potting mix, pots etc) to help people to grow local endemic plants and to restore vegetation of the local areas. Brian and Chris have lots of experience in growing native plants from seed and cuttings and are willing to share their knowledge. They are restoring native forest areas on their own property, have created a variety of shelterbelts using native plants and are creating a pond habitat. They have also established a **Threatened Plant Garden** to provide sanctuary to over 70 New Zealand native plants under threat of extinction in the wild. On the trip Chris or Brian will be there to give us a background about the nursery and the associated works, and have offered to show us round the neighbouring **forest/estuary boardwalk** and one of the **local reserves**. Leave Botany car park at 8 AM and return around 6 pm. Pack lunch, drink and protection from the sun, wind, rain and cold. The possibility of extra side trips and an overnight option is still being investigated. For more information about the trip contact Ian Radford on 472 7470 (ah) or 479 9065 (w).

13th October, Wed 5.20 pm. **3rd Annual Geoff Bayliss Lecture** We have decided on this year's Geoff Bayliss lecturer and the speaker is Henry Connor, DSc, FRSNZ, co-author of Flora of New Zealand Volume V, Grasses. More details next newsletter. or watch our website or contact Ian Radford, (03) 479 9065.

Meeting details: Talks are usually on Wednesday evening, starting at 5.20 pm with drinks and nibbles (gold coin donation), unless otherwise advertised. Venue is the NEW Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the Captain Cook Hotel. Use the main entrance of the Benham Building to get in and go to the Benham Seminar Room, Rm. 215, 2nd floor. Please be prompt as we have to hold the door open. *Items of botanical interest for our buy, sell and share table are always appreciated. When enough people are feeling sociable we go out to dinner afterwards - everyone is welcome to join in.*

Field trip details: Field trips leave from Botany car park 464 Great King Street, unless otherwise advertised. Meet there to car pool (10c/km/passenger, to be paid to the driver, please). A hand lens and field guides always add to the interest. It is the responsibility of each person to stay in contact with the group and to bring sufficient food, drink, outdoor gear and personal medication to cope with changeable weather conditions. See trip guidelines on the BSO web site.

President's notes

David Orlovich

It's hard to believe we're almost half way through the year! I do hope that you have been able to come to at least some of the events we've had so far this year. Fascinating talks ranging from fossil leaves to mycorrhizas to grazing management (and many other topics) have been complemented by great trips to coastal, sub-alpine and forest sites around Otago. It's been a great year so far, and we're not letting up just because it's winter! You'll see details in this newsletter of a workshop on cryptogams (lichens, mosses etc) coming up very soon, and trips to Tavora Reserve (being restored by the Yellow-eyed Penguin Trust) and Southland Community Nursery in Invercargill. We've got talks coming up by Tom Myers on his overseas botanising, Lisa Russell on native seaweeds, David Lyttle on alpine plants, and Henry Connor (this year's Geoff Baylis Lecturer) on NZ grass taxonomy and systematics. I'm continually excited to see that so many people are attending our events - with many new faces every month. I really hope you enjoy them as much as I do. Welcome to any new members! At the AGM in April I took the opportunity to thank the committee for the hard work that they do to keep the Society running. We are all particularly grateful to Allison Knight for her untiring work in producing this excellent Newsletter - it gets bigger and better with every issue! We welcome three new committee members: Moira Parker joins us to help Arlene and Robyn with the food and drink for our talks, and Abe Gray and Kate Ladley join us as student committee members. You can find out how to contact us (to suggest new trip or talk ideas) at the end of this newsletter, or on the BSO web site (<http://www.botany.otago.ac.nz/bso/>).

Great Time To Renew 2004 Subscriptions.

Lyn Bentley, Treasurer

Please check the address label on your Newsletter to see if you are a current member - it should show 2004 if you are and this will ensure you will receive the next issue. If your label shows 2004 (or a later year) then your membership is current and this excellent publication that we all look forward to receiving, will be sent to you. If your label shows an earlier year or 'unpaid', then now is a good time to renew your subscription using the form at the back of this newsletter.

You may be interested to know that the Department of Botany helps us to send complimentary copies of the Newsletter to secondary schools in Otago, other Botanical societies in NZ, libraries, tramping clubs and other organisations. If you are the recipient of a complimentary copy and your organisation would like to become a full member, don't hesitate to send us a cheque!

If any errors have crept into the integrated mailing and subscription lists, please contact me at: Phone (03)4679616, e-mail<steve1f@ihug.co.nz>, or send a note to The Treasurer, P.O. Box 6214, Dunedin North. Don't forget to let me know of any changes of address.

Editor's notes

Allison Knight

This is a bumper issue bursting with good news and a record number of activities, articles and reports. Thank you to everyone who contributed so enthusiastically. There's a detective story, chasing the elusive *Coprosma* species (t), a ghost in the garden at Warrington, and a tale of ancient moths that decorate their homes with lichen. Chris & Brian Rance describe how they produce "native plants for free" in their Southland Community nursery, and offer to show us around in August. Robyn Bridges has negotiated a generous bulk deal with the University Book Shop to get us 25% off the long-awaited Biology of Southern New Zealand. We have an updated plant list for the Blue Mountains, and the Australians are offering us online access to their Flora. There are several awards to announce plus the good news of Mt Watkin being made a reserve. There's more, too, but space is becoming so limiting that it's time to suggest a few gentle guidelines. Please try and aim for a 0.5 – 1 page of 14 pt Times New Roman for trip and meeting reports and book reviews, and 1 – 2 pages, (4 or 5 at the most) including illustrations for articles.

Please submit copy for next newsletter by 10 August 2004

Editorial Policy The Botanical Society of Otago Newsletter aims to publish a broad range of items that will be of interest to the wider botanical community and accessible to both amateur and professional botanists. Contributions of letters, comments, trip and meeting reports, articles, plant lists, book and website reviews, news items, photographs, artwork and other images and items of botanical interest are always welcome and will be published at the editor's discretion. Articles of a scientific nature may be referred, at the editor's discretion, to a scientific editor appointed by the committee. The scientific editor may refer the material to anonymous referees. Refereed papers will be identified as such in the newsletter. *BSO will not accept papers proposing nomenclatural novelties or new combinations.*

Disclaimer *The views published in this newsletter reflect the views of the individual authors, and are not necessarily the views of the Botanical Society of Otago. Nor do they necessarily reflect the views of the Department of Botany, University of Otago, which is supportive of, but separate from, our society.*

Articles

On Coprosma parviflora and C. ciliata –

Going round in circles with awkward questions!

Graeme Jane, Tauranga

The plot

Every now and then a problem continues to bug you until you just have to do something about it. It all began about 1988, not long after I moved to Nelson. Hugh Wilson, who at the time was writing up his shrub field guide, rang Shannel Courtney but ended up talking to me. He asked me what I thought of the two forms of *Coprosma ciliata*. My response, based on ignorance, was that there appeared to be a more ciliate form in forest

to that in the alpine shrubland! Still, there was no difference between the alpine form I had seen in Canterbury and that found in Nelson. Ignorance prevailed. Hit 1!

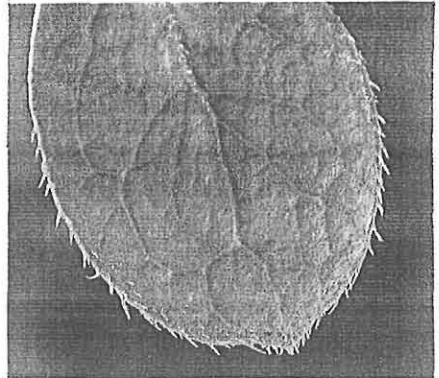
The next wake up came in 1998 while plodding through the swamps at Harihari on a Canterbury Bot Soc summer camp. David Norton of the Canterbury Forestry School brought me up with a sudden jolt by pointing out that a plant I had assumed to be *Coprosma* species (t) was *C. ciliata*. (*C. sp. (t)* was one of Tony Druce's tag names and was illustrated by Audrey Eagle in *Eagle's Trees and Shrubs of NZ*, 306, fig. 180, 1982). My response was that it seemed more like *C. propinqua* than *C. ciliata* but the hand lens soon proved a lie to that one! Hit 2!

Just a few years later, on a Wellington Bot. Soc. camp at Mt Lyford, Shannel pointed to what was to me "an obvious *C. propinqua*" at the base of the skifield, identifying it as *C. ciliata* "eastern South Is". This time I did the careful search for sheltered leaves and behold there they were - cilia. Hit 3!

Finally, in 2002 it all came to a head at Twizel, on another Wellington Bot. Soc. camp. This time it was Neill Simpson who pulled me up for identifying a shrub as *C. sp. (t)* by acquainting me with the *C. ciliata* he knew from Central Otago. Hit 4!

Audrey Eagle, Neill Simpson and I then discussed ways of distinguishing *C. ciliata* from *C. sp. (t)*. Neill suggested the stipules could be used but I was not convinced. Some forms of *C. ciliata* were strongly ciliate and others, it seemed, could be quite glabrous. Some *C. sp. (t)* could also have completely ciliate shade leaves. The overlaps sparked an interest in trying to sort out what I understood by *C. ciliata* and *C. sp. (t)*. The first step was to read carefully what the flora and other sources had to say.

Ciliate seedling leaf of *Coprosma* sp. (t)
from Huiarau Range, Urewera NP
- Graeme Jane.



The books

It all began with Hooker who visited New Zealand in 1839, collected and subsequently described three relevant taxa: *C. myrtilifolia* and *C. ciliata* from the Auckland Is and *C. parviflora* from the main islands. The first two were described in 1844, and the last in 1853 when he re-described *C. myrtilifolia*, from the main NZ islands. In 1867 he further compounded the mess by merging his 1844 *C. myrtilifolia* with *C. parviflora* because it was he said, described without fruit or flowers and he was not sure it was all that different. Hooker, in describing *C. ciliata* stressed it had "midrib pilose above and below", a character I had never seen. Getting confused?

Next in 1886 Cheeseman, in a treatise on *Coprosma*, noted three forms under *C. parviflora*, one as described by Hooker, one of which he distinguished as var *pilosa* and

one recognisable as *C. decurva*. In 1906 Cheeseman formally described *C. parviflora* var *dumosa*. In 1909 he equated *C. parviflora* var *pilosa* with *C. ciliata* and suggested the name *C. myrtillifolia* (Hooker 1853) may be appropriate for his *C. parviflora* var *dumosa*.

In 1935 Oliver, in a treatise on *Coprosma*, recognised only *C. ciliata* and *C. parviflora* although he designated the types for the varieties in *C. parviflora*. In 1961 Allan added his own twist by assigning the name *C. parviflora* var *dumosa* to a plant with small red fruit, a character of the recently described *C. decurva*. The type cited by Allan for var *dumosa*, designated by Oliver at Auckland however, was clearly not *C. decurva* and did not look like *C. sp. (t)* either. So where did this leave me? The descriptions of *C. parviflora* and its various varieties seemed confused. Perhaps the best thing to do was to just get out there and see what forms exist, and later try and fit them into existing "boxes".

The Journeys

During my usual February field trip in 2002 I kept an eye out for *C. ciliata* and *C. sp. (t)* around the northern South Island. A brief trip in to the Allan Herbarium to see the range of forms in the species also answered another of Audrey's questions - the northern limit for *C. ciliata* (Mt Holdsworth and nearby Jumbo).

Next, how to distinguish *C. sp. (t)* from *C. parviflora*? I had not seen the former in the North Is. and only once or twice seen the latter. First stop - the Forest Research Rotorua herbarium. Chris Ecroyd soon informed me that the northern limit of *C. sp. (t)* was at Mamaku so I headed off home via Galaxy Rd and found a good population. Chris had few specimens of *C. parviflora*, so a trip to Auckland Museum to get a list of places to visit followed.

An opportunity arose to visit Lincoln and Otago when a family reunion in Invercargill was planned for June. At the Allan Herbarium at Lincoln (CHR) I was faced with a huge collection of the three recognised taxa - over 800 specimens and at Dunedin over 250 rather uniform specimens under *C. parviflora* var *dumosa*. I appeared to be following the tracks of Tony Druce who determined many of the plants in 1978. *C. ciliata* was a different story. Most of the specimens at CHR caused no concern although about 30 from south Westland and Fiordland had rather large leaves and some appeared rather like small *C. rotundifolia*. At Otago most appeared to fit the eastern form of *C. ciliata* but the local collections from Flagstaff, Cargill, Maungatua exhibited a huge diversity of forms adding more confusion. Again leaves of a few plants from Fiordland were very large and some rather like *C. rotundifolia*. Being winter, with ice in the streets, field trips to even some of these sites had to be deferred.

A request to give a talk for Wellington Bot. Soc. in Wellington in July gave an opportunity to examine the specimens in Te Papa and to see plants in a few places on the way. First stop at Wharite Peak - revealed a whole lot of forms I have still to sort out. Hybridism seemed rife. Holdsworth also had an array of forms of *C. sp. (t)* or was it *C. ciliata* hybrids? It was only on the descent that I certainly found a small patch of *C. ciliata* near treeline.

In August I set out to see more of *C. parviflora* and some orchids. First intended stop Rubbish Dump Hill for orchids and nearby Tawapoutu Bay, which I thought would be an easy spot to find it. I was belting along near Towai, just north of Whangarei and suddenly I thought I saw *C. sp. (t)* - no can't be! A few km later the same again. Must stop! Sure enough it was *C. parviflora* with its leaves ciliate beneath. Most of my scheduled stops were equally rewarding. At one remote roadside, a request for directions from a group of local kaumatua and kuia (trustees on a site visit perhaps), resulted in a half hour of awkward discussion about the importance of plants as cultural heritage to iwi. I then turned round and within 200 m had found the target on the roadside.

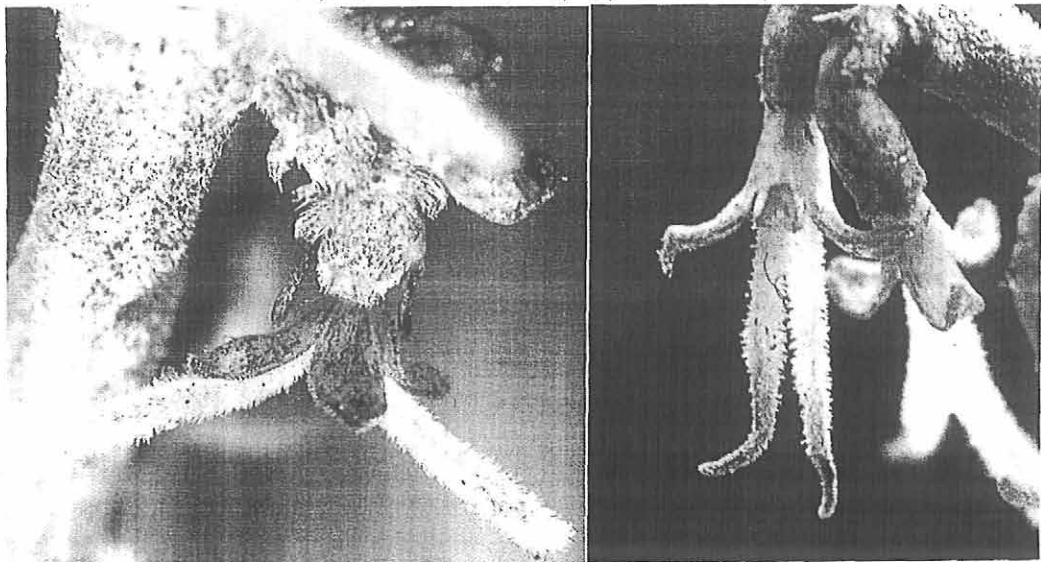
In search of flowers

Audrey Eagle's paintings of the three species show very different flowers and I thought they could be used to identify hybrids. Trips to Mamaku in September found flowers of *C. sp. (t)*. In October, armed with a brand new digital camera, I travelled north to find *C. parviflora* flowers. At the first stop flowers were abundant, but they didn't look exactly like the paintings. Further stops revealed similar flowers. All were rather similar to those of *C. sp. (t)*.

Next trip in November was south to catch *Caladenia* and *C. ciliata* in flower with the working hypothesis that the northern form was the true *C. ciliata*, the West Coast form was a *C. rotundifolia* hybrid and the eastern form perhaps just a variety of *C. sp. (t)*

After a few days chasing orchids around Nelson a fine day prompted a trip to seek *Coprosma* on Mt Campbell. I was in luck, both *C. ciliata* and *C. sp. (t)* in flower, and at one spot growing together. Then it was on to Big Bush and Mt Haast to reaffirm these two finds and lanthe forest for the second form of *C. ciliata*. Here leaves were intensely ciliate, even on the midrib when in the shade, less so in the open when it was somewhat like *C. sp. (t)*. Plenty of flowers to photograph too, and these were different from both the northern *C. ciliata* and *C. sp. (t)*.

Female flowers of *Coprosma ciliata* and *C. sp. (t)* from Mt Campbell – Graeme Jane



Next day it was down to Lake Matheson, one of those sites for the *C. ciliata* x *C. rotundifolia* noted at CHR. Again it was the densely ciliate form of *C. ciliata* yet no sign of hybrids with the *C. rotundifolia* also abundant in the area - one theory squashed! Next was it back to Arthurs Pass or onwards to the Haast? A decision to revisit Neill Simpson's *C. ciliata* at Lake Ohau called the tune. Once more in luck- the Otago *C. ciliata* was in flower but again it took some careful examination to convince me it was not *C. sp. (t)*. The flowers were a help but the bark too, was distinctively red. It was then on to Tony Aldridge in Christchurch. He had several spots to take me.

First it was Sign of the Bellbird where many years ago Ross Elder claimed *C. ciliata* could be found and so did Tony. I headed for the shelter and the place where I had previously seen *C. sp. (t)* but Tony drew me to a roadside tree, which he claimed was *C. ciliata*. The leaves certainly were ciliate but they were dark green and the plant was a small tree - puzzling. As a last resort a scrape of the bark revealed an almost blood red under bark - *C. wallii*! I didn't know it could be ciliate and the books didn't mention it. Was it a hybrid? Another mystery to resolve and more photos of flowers. Then it was on to View Hill to acquaint with *C. pedicellata* a close relation of *C. parviflora*. Sure enough it was soon found with its brilliant violet fruit left over from last season, and more flowers to add to the growing photo collection.

Next it was on to Porters Pass, Arthurs Pass, and Craigieburn skiffeld plotting the range of the eastern *C. ciliata*. By now I was heading towards the Ferry and homewards with Mt Lyford (Shannel's site) on my list. But first just a check at Lake Tennyson - it should be the northern form. But no! It's the eastern form and hybridising with *C. cheesemanii* (well reported at CHR). So what is it at the Lewis Pass? Only 40 mins from the road and there they both were - northern and eastern *C. ciliata* distinguished by leaf colour and growth form. From there it was an easy trip to Parachute Rock at St Arnaud (sorry Shannel). Here, as expected, it was the northern form but on a previous Bot.Soc. trip, I had seen the eastern form just across the valley on the Raglan Range.

The last Round up

My February trip in 2003 was devoted to the southern areas and briefly, Stewart Is. A quick dash down the West Coast with a scramble up Alex Knob at Franz Joseph for the northern form of *C. ciliata* and side trips to the Cascade and Smoothwater, finding both *C. ciliata* and *C. sp. (t)*, often together, had me at the Makaroa in 3 days (a spot with a puzzling array of forms, possibly hybrids) and Bluff in 4 days. With time to spare it was off to Bluff Hill to find one of those large-leaved forms of *C. ciliata* reported in the herbaria. Once more it wasn't far from the summit carpark before they appeared - with *C. sp. (t)* and hinting at hybrids with *C. propinqua* var *latiuscula*.

On Stewart Is, in search of *C. sp. (t)*, I booked a passage to the Freshwater and went out to find Back Rd, a possible site identified from *C. ciliata* specimens at CHR. At the Hicks Rd junction, Back Rd turned out to be a track to Horseshoe Bay with some puzzling forms of *C. ciliata* and possibly *C. sp. (t)*, along with *C. rigida* and *C. propinqua*. Further along there were very ciliate-leaved *C. rhamnoides* and finally some typical, very divaricate northern *C. ciliata*. At the Freshwater hut I was confronted with an array of forms between *C. propinqua* and *C. ciliata*. Next day it was an aimless

wander in search of the Freshwater "gorge" only to find more probable hybrids but no *C. sp. (t)*. On return to Oban *C. sp. (t)* still had to be confirmed. This time the Back Rd sector to Main Rd was traversed and it wasn't long before plenty of *C. sp. (t)* were seen - one mystery cleared up.

On return from Port Craig, a track detour caused by the tide led to another nest of hybrids this time between *C. propinqua* and the western form of *C. ciliata*. At Milford and Deep Cove *C. ciliata* was common and hybrids with *C. rhamnoides* were again evident but other stops around Fiordland merely marked out the bounds of the *C. ciliata* forms and *C. sp. (t)*. En route to Maungatua, the Catlins saw some lovely lemon yellow fruited *C. sp. (t)*, pink fruited *C. propinqua* and *C. rubra* to add to the confusion. Then, those puzzling forms on Flagstaff, Swampy and Mt Cargill noted in the Otago herbarium - more hybrids! Back through sleet at Lawrence for a brief stop over in Queenstown with Neill Simpson to locate more spots to find the eastern *C. ciliata* and *C. sp. (t)*. In the sunny mountains of the Rees, Routeburn and Wye, the confusion between eastern *C. ciliata*, *C. sp. (t)* (largely absent) and other forms of *C. ciliata* deepened. Red, orange and white fruits were abundant on what appeared to be *C. ciliata*. Again, forest disturbed by mining at Mt Chrichton was one of those puzzling spots with what appeared to be hybrids of eastern *C. ciliata* with *C. rhamnoides*, *C. rigida* and *C. propinqua*. By the time I reached the Matukituki the distinction between the eastern form of *C. ciliata* and *C. sp. (t)* was becoming so blurred in my mind a quick trip over the Haast was in order to see the "real" thing again. An impromptu stop at the Blue Pools revealed a stand of *C. wallii* and once more the leaves were ciliate. That meant one more stop was needed at the Howard Valley (Nelson) to affirm that ciliate leaves were the norm in *C. wallii*. Homewards, it was via Mt Cook and Arthurs Pass to revisit a few more spots to check records of *C. sp. (t)* and *C. ciliata*. Thankfully no new problems.

One last day at the Rahu Saddle found hybrids of *C. ciliata* with *C. depressa*. At the Howard valley and at last confirmation of ciliate leaves in *C. wallii* (not observed on earlier trips there with Nelson Bot. Soc.!). A final stop to check out plants seen on the Spring trip at Lake Rotoiti landed me in the middle of the yachting regatta. A carpark found with difficulty but up the track searching for a bronze leafed plant from the spring trip revealed *C. colensoi* in flower and more hybrids. By this time hybridisation was becoming a monotonous theme and time was needed to carefully sort, reconsider and absorb the summer's data.

Summary

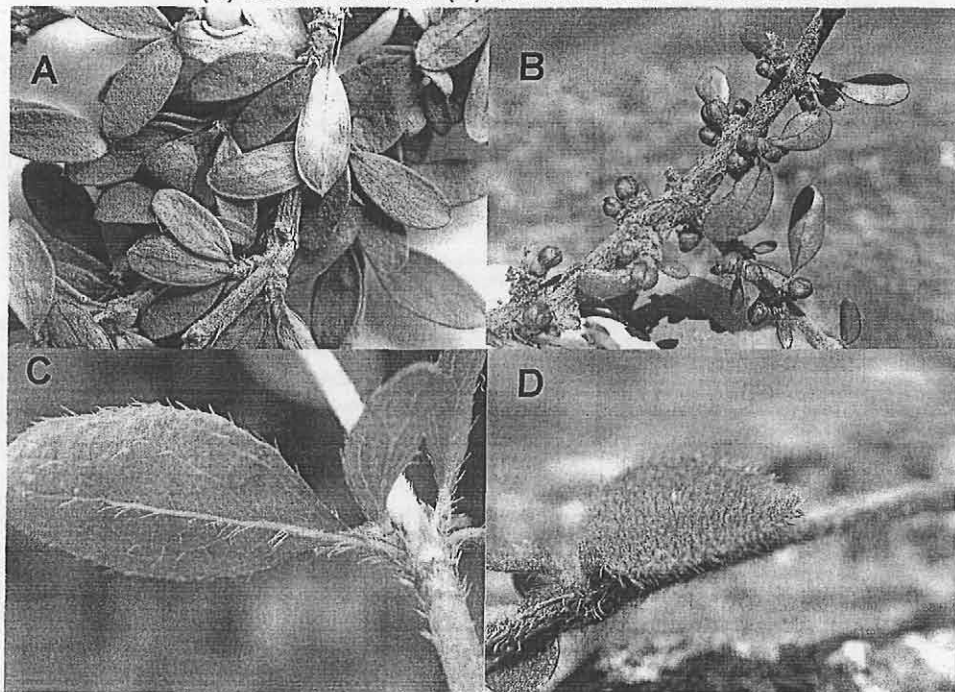
Three clear forms of *C. ciliata* have quite distinct, largely non-overlapping distributions: a high altitude one common in the north but extending to Stewart Is, a southern intensely ciliate, lowland one in the west, and an eastern, largely glabrous one, quite like *C. sp. (t)*. But what names have they? Hybrids of all with three main parents: *C. propinqua*, *C. colensoi* and *C. rhamnoides* also appear to be locally common. More homework required!

Meanwhile, for Audrey:

Key to *C. ciliata* forms, *Coprosma* sp. (t)

1	Leaves more or less evenly shaped	2
	Leaves of mixed shapes, especially obovate and elliptic or linear	(hybrids)
2	Leaves obovate to oblanceolate; midrib stout at the base, tapering rapidly and usually petering out by mid leaf beneath	3
	Leaves elliptic to oval; midrib fine, usually extending almost to leaf tip beneath	4
3	Leaves with recurved margins; veins evident above	(<i>C. sp. (t)</i> hybrids)
	Leaf margins flat; veins not evident above or if so not raised or impressed	<i>C. sp. (t)</i>
4	Leaf veins not raised below	<i>C. "ciliata ESI"</i>
	Leaf veins raised below	5
5	Leaf margins recurved, thickened, or scalloped	(hybrids)
	Leaf margins not prominently thickened, flat	6
6	Branches shaggy hairy, midrib long hairy above and sometimes also below	<i>C. "ciliata western"</i>
	Branches finely hairy, midrib glabrous	<i>C. "ciliata northern"</i>

Leaves of *Coprosma ciliata* and *C. sp. (t)*: (A) eastern *C. ciliata*. (B) *C. sp. (t)*. (C) western *C. ciliata*. (D) northern *C. ciliata* - Graeme Jane



While cutting a track through an area of native bush interplanted with rhododendrons, I located two specimens of *Gastrodia* (*perei*). Stems were 33 and 35 cm long, terminated by 24 and 35 flowers respectively. The flowers are 15 mm long, olive brown in colour, stripy, and with paler stipples and raised knobs. Lacking both leaves and chlorophyll, the overall appearance is rather ghostly. The external surface of the flowers is reminiscent of the skin of a gecko. The interior of the flower is velvety white and the labellum is tipped by a vivid yellow. They are sweetly fragrant.

Longitudinal sections through the flowers reveal that both the column and labellum are elongate and of comparable length. Thus they resemble an undescribed species referred to as *Gastrodia* 'long column' by Wilson (1982, p. 294) in *Stewart Island Plants*, a name also used by St George in *New Zealand Native Orchids* (1999, p. 95).

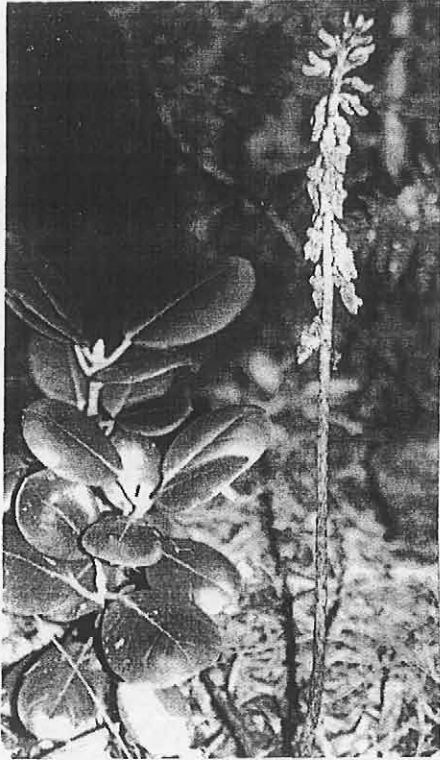
In detail, the Warrington plants differ from those described by Wilson and St George in having shorter stems, blooming later in the summer, and by possible differences in flower structure. Additionally, St George does not record *Gastrodia* 'long column' in the Dunedin region. Dr St George kindly offered to examine these orchids. He confirmed the "long column" identification and that it is a new record for the region, and adds "There do seem to be several taxa in that aggregate, and I am no expert on their differences, suffice it to say all are undescribed."

Blooms were first seen on 29 January. They extended progressively up the raceme with the terminal buds opening on March 3.

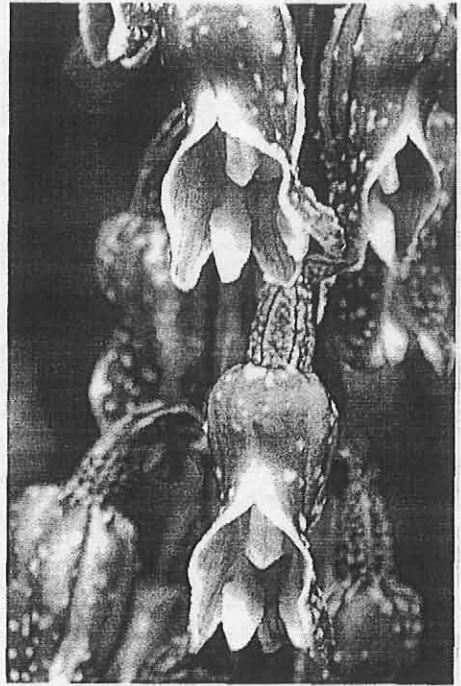
Additional notes:

1. *Gastrodia* are parasitic on mycorrhizal fungi associated with tree and shrub roots. St George (p.93) reports that the more common and widespread species *G. cunninghamii* is associated with *Pinus nigra* and rhododendrons, as well as native *Nothofagus*. Although I did not dig out any tubers from the Warrington plants, they are closely associated with roots of *Rhododendron thomsonii*.
2. St George notes (personal communication) that some *G.* 'long column' appear to be self-pollinating while others (with fragrance) are probably insect pollinated. On two occasions I observed a translucent colourless insect (aphid-like but larger) with conspicuous black eyes inside these orchid flowers. In appearance, they seemed well suited to the ghostly *Gastrodia*.
3. Several authors (e.g. Webb et al. *Flowering Plants of New Zealand*) refer to *Gastrodia* as Potato orchids. This is reference to their starchy tubers (*huperei*), which were collected as winter food by the early Maori, particularly the Tuhoe (Crowe, 1981: *A Field Guide to Native Edible Plants of N.Z.*)
4. Hugh Wilson (1982) refers to the Stewart Island *Gastrodia* as "black orchids". This certainly adds an additional mystique to these unusual flowers. Remarkably, the current issue of the Royal Horticultural Society's journal *The Garden* (Vol. 129, Pt 3, 2004) includes a beautifully illustrated article on Black Orchids by Isobyl La Croix. She describes the black orchid as "a holy grail for plant hunters" but points out that although some orchids have flower parts that could be described as black, all so-called black

orchids are mainly brown or deep purple. The Warrington *Gastrodia*, while dark in colour, are certainly not black. Thanks to Ian St George, Brent Murdoch and Carol Landis for comments and suggestions. Photos: L *Gastrodia* by *Rhododendron thomsonii* at Warrington. – Carol Landis.



R Black Orchid, Stewart Island, - Rosemarie Smith



Southland Community Nursery. Native Plants for Free!

Chris & Brian Rance, Invercargill

Southland Community Nursery is a nursery, but unlike many others - we don't sell plants and we grow only native plants! At the Community Nursery we help people to grow native plants for their own projects - for farms, schools, conservation group projects or for people's gardens.

All work in the nursery is done on a voluntary basis (including the running of the nursery), but it is funded from Environmental grants which are spent mainly on potting mix and pots. The nursery has been operating since 1996 and in that time thousands of native plants grown in the nursery are now flourishing all over Southland.

Because people do the work themselves, they can take away the plants they pot up for free, but we do ask for a little help to weed and water those plants during summer. We run the nursery from our own home property in Grant Road, Otatara and the nursery is set up like any other nursery with shade houses, plant standing areas and covered areas for seeds and cuttings. We supply seedlings from locally collected seed

but we also encourage people to collect their own seed from their own area. We specialise in growing plants for forest restoration projects, pond, wetland or riparian projects, native shelterbelts and plants to attract native birds to the garden.

In autumn we have seed collecting days and in winter days for learning how to grow native plants from cuttings. The nursery is generally open each Friday between October and June.

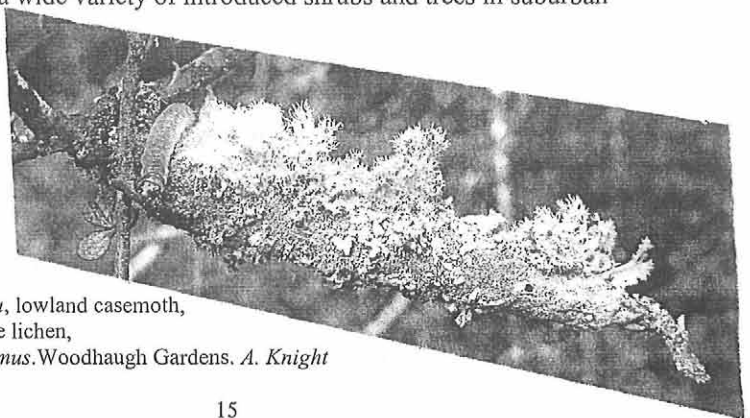
As well as running the nursery we also have on our property a stand of native kahikatea forest (protected by QEII Covenant), a pond and examples of plantings using native plants - shelterbelts, streamside plantings etc. We are happy to show people around - groups or individuals and often host school visits – where students can learn about Southland’s special native plants. As we are located next to Bushy Point Educational Boardwalk, owned by Ian and Jenny Gamble, we often run trips which take in both properties. At Gambles, a boardwalk takes you through tall forest and out to the Estuary where you can see the rare fernbird as well as views across to Bluff Hill and Stewart Island. Visits to both properties are by prior arrangement. If you would like more information or would like to visit, please phone 2131161 (evenings) or email rances@es.co.nz. The Southland Community Nursery web site address is <http://homepages.ihug.co.nz/~rances/> (Interested? The Rances will show BSO around on our 21 August field trip–ed.)

Moths With Portable Homes

Brian Patrick, Otago Museum

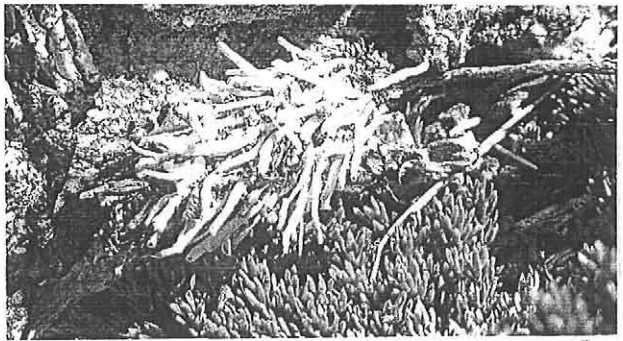
Casemoths belong to the worldwide moth family Psychidae, an ancient family which evolved before many higher plants. The adults are non-feeding and sometimes mouthless and the larvae drag around a silken case decorated with plant material, often lichens. The case is enlarged as the larva grows. Eventually it becomes the protective case around the pupa and for some species it is also the coffin for the wingless female that mates in it, lays eggs there and dies within!

In New Zealand we have about 50 species, many of which are undescribed. Characteristically the wandering larvae are specialist feeders on lower plants such as algae and lichens but several feed on leaf litter. One group, the familiar large casemoth of the New Zealand forest, *Liothula omnivora* is omnivorous as the name implies and has adapted to feeding on a wide variety of introduced shrubs and trees in suburban gardens.



Case of *Liothula omnivora*, lowland casemoth, camouflaged by the orange lichen, *Teloschistes chrysophthalmus*. Woodhaugh Gardens. A. Knight

Case of alpine casemoth, *Orophora unicolor*, covered in cut strands of the white lichen, *Thamnolia vermicularis*. Old Man Range. A. Knight



There are two other large species in New Zealand; one an undescribed *Liothula* that is found in forests and gardens from about Greymouth north, and the alpine casemoth *Orophora unicolor*. The later is distributed throughout the South Island down to 600m in places in Central Otago and also on Mt Anglem on Stewart Island. Its cases are ornately decorated with various lichen or grass species making a spectacular sight as it hauls its cases across high-alpine tundra.

By far the majority of our casemoth fauna consists of much smaller species in the genera *Reductodermes*, *Scoriodyta*, *Mallobathra* and *Grypotheca*. The cases are diagnostic for each genus as are the larval feeding habits. Typically the female casemoth is flightless, either apterous or short-winged and either remaining inside the cases after emergence from the pupa or clinging to the outside of the case awaiting a male. Some *Mallobathra* females are fully winged and fly by day. These genera are found in specialised places from the sub-antarctic islands, through coastal cliffs up to the high-alpine zone, with each species living in a particular habitat and with larvae depending on a certain food source.

Good places to see aggregations of the larval cases of these smaller casemoths are rock faces, tree trunks and clay banks where a covering of algae provides sustenance for the larvae.

Another peculiarity of casemoths is that the fragile males often fly at dawn to seek a female, as this is the time when air is stillest and safest for them. Fewer species are day-flying, delighting to sunbathe and mate on the sunniest days of spring or summer. Because for the majority of species the females are flightless, dispersal is effected by the emerging larvae ballooning to new habitats or hosts with the use of silk in much the same way spiderlings do it.

Meeting reports

Gardens Without Weeds? Annual General Meeting 21 April 2004

Helen Leach, Dept. of Anthropology, Otago University.

Reviewed by Ian Radford

A couple of months ago, at a conference in South Africa, saw a talk by Dave Richardson, a prominent plant invasion ecologist, suggesting that Australian *Eucalyptus* species were mere whimps when it came to invasiveness. Despite the fact that I obviously don't like weeds, my national pride was stung by the inference that Australia's best, the eucalypts, were somehow inferior in invasive ability compared to

say *Pinus*. But following the talk by **Helen Leach** at the AGM this year (21st April), I don't feel nearly so slighted. Clearly New Zealand indigenous plants are even more whimsy than the Australian eucalypts when it comes to invasiveness!

Helen set the scene of her talk soon after the arrival of Europeans into New Zealand with an account by Dr Monkhouse of Maori gardens at Anaura Bay. Apparently in a walk through these gardens Dr Monkhouse noticed very few weeds – something he found quite impressive, apparently, compared to equivalent European gardens.

Based on this, and other similar observations Helen posed the question:- Did the Maori actually have any weeds in their gardens? In other words, was the weed free nature of the gardens because there were no weeds, or because the Maori were meticulous gardeners? Following from this question Helen also asked, did Maori have a concept of weeds? If the Maori didn't have weeds, perhaps they didn't need a concept/word to describe them. These were the basic questions addressed in the rest of the talk.

Helen described the Maori gardening/cropping practices in order to set the context in which weeds may or may not have been present. Apparently Maori had a style of agriculture known as swiddening, where native bush is slashed and burnt, to remove most of the forest cover, the land was cropped for about 2 years, then the site is left fallow for 14 – 25 years. She suggested that such a system did not allow for the conditions in which weeds and other problems such as pathogens might develop. Maori apparently avoided problems with having to clear species like bracken in their gardens, by having that long fallow period. Long fallow periods perhaps allowed secondary woody regrowth to shade out problem species. Is this an example of an indigenous people being in tune with their environment?

Helen spent a large part of the talk tracing the origins of plants that may or may not have been present in Maori gardens. These included apparently indigenous New Zealand plants that could have come up in gardens. Plants like woody seedlings of *Solanum aviculare*, tree fuchsia, *Cassinia* spp., wineberry (*Aristotelia serrata*), manuka, kanuka and *Coriaria* spp. In addition herbaceous species including *Erechtites minima* and *Chenopodium pusillum* were observed, or could have occurred in Maori gardens. These species do not become serious weeds in gardens, compared to European weeds such as the *Brassica* spp., docks (*Rumex* spp.), parsnip, celery, carrot and spinach, which arrived soon after the first Europeans. The lack of invasiveness in native species, Helen thought, was and is due to their relatively slow growth, and the ease with which they can be pulled out/removed by hand.

The other group of plants discussed were exotic species present at the time of European arrival – the plants that arrived in association with Polynesian people. Helen traced the historical passage of some of these species through Polynesia. Species including *Oxalis corniculata*, swamp shield fern, glossy nightshade, *Sigesbeckia orientalis*, *Bidens pilosa* and *Sonchus oleraceus* were shown to have been present at various Polynesian islands when the European explorers first arrived. These species, like the native New Zealand species, appear to be fairly minor in terms of their impacts in gardens compared to the problems reported once the European weeds started to appear in gardens in New Zealand. Although some Polynesian associated plants did become weeds on other

Pacific islands, a temperate climate seems to have prevented the spread of most of these to New Zealand.

So, in answer to the first of Helen's questions, it appears that Maori really didn't have invasive species in their gardens; certainly not compared to those which came later. Did the Maori therefore have a weed concept? Helen fairly convincingly showed that traditional Maori/Polynesian words for bush only later, once Europeans and their plants had arrived, came to have the negative connotation of weediness.

New Zealand/Polynesian garden plants were therefore fairly non-invasive (whimps) compared to their European counterparts. Not so the woody plants and bracken found across many of the lower rainfall areas of New Zealand – these plants were and are seen as vigorous invaders. Why does there seem to be this contrast in weediness of indigenous garden and rangeland weeds?

What I found particularly interesting in Helen's talk was the apparent contrast between Helen's portrayal of the almost benign cropping practices of the Maori, on the one hand, and the increasingly accepted view of the wholesale decimation of woody vegetation in much of eastern New Zealand through Maori burning. How could one people have had such contrasting management of garden and rangeland environments?

Perhaps, as Helen suggested, Maori were careless with fire and often accidentally burnt large areas. Or perhaps, as others have suggested, Maori deliberately burnt these areas. It is interesting to speculate that the large scale burning by Maori may have been related to hunting of moa and also many of the smaller birds necessary for them to obtain their protein – perhaps a more limited resource than carbohydrates in New Zealand. There is a long global human history of the use of fire for hunting – perhaps the Maori were no different. And perhaps the comparative invasiveness/resilience of many native woody species in the rangelands of New Zealand, compared to their whimpy garden counterparts, is directly related to the much greater exploitative pressure Maori put on this environment. While relatively little effort and land allowed Maori to grow enough vegetables (e.g. kumara) to keep them going, perhaps Maori needed to maintain large areas of open grassy vegetation, to provide habitat for the game they needed to live on. Perhaps the problem of bracken and woody regeneration faced by pastoralists of today are the same as those faced by Maori for hundreds of years prior to European arrival! Deliberate and continual burning over hundreds of years in these areas would certainly be a better explanation for the almost treeless nature of central Otago than Maori carelessness, or lack of understanding of fire.

It would be good to see Helen's work on weediness/invasiveness of garden plants published in a place more accessible to invasive biologists. I think it is very biologically interesting that few invasive plants have evolved in cropping systems in New Zealand – contrary to Europe, the Middle East, India and China, where cropping systems and associated weeds have co-occurred for much longer. It would also be good to see if anthropology could shed more light on the management/hunting/burning practices of the Maori in New Zealand – particularly in the areas of open rangelands which apparently have such a long history of burning since the Maori arrived.

Thank you Helen for a very interesting and stimulating talk.

A large gathering of c 120 people from around the country filled the Hutton Theatre to celebrate the life and achievements of Geoff Baylis FRSNZ. The talks started with Geoff's family life in Auckland, and covered many facets of his life, from his distinguished Navy service to his contributions to the University of Otago, the Royal Society of New Zealand, the Otago Museum, the Hellaby Indigenous Grasslands Research Trust and even to the Botanical Society of Otago. Apparently Geoff enjoyed watching the tape of our BSO inaugural Geoff Baylis Lecture several times. Geoff's long association with the Department of Botany as Head and Professor was described in detail by colleagues and former students, who between them produced a vivid picture of changing times. A fascinating display of photographs further illustrated Geoff's life and times. Graeme Parmenter recorded all the talks on video, and Anthony Wright is summarising the scripts for publication in the New Zealand Botanical Society Newsletter. The day finished with a dedication ceremony in the University Courtyard, where some of Geoff's ashes were placed and a plaque laid under the magnificent *Magnolia campbellii*. A fitting place, as Geoff planted this magnificent tree in 1965. It has twice featured on the cover of the University Calendar and also graces the cover of the official University commemorative register. Thanks to the vision and tireless work of Alan and Pat Mark the whole day was a very special, historic and moving occasion.

Trip reports

Blue Mountains, 13 March –

Norman Mason

Trip Leader: Professor Emeritus Allan F. Mark

It was a brilliantly sunny autumn's day as an unprecedented number of botany buffs embarked for a trip to the top of the Blue Mountains. It seemed that the combination of the trip leader's eminence and the prospect of visiting a little-known corner of Otago was too much to resist. As well as BSO members from Dunedin, the party's numbers were swelled at the Beaumont rendezvous by guests from Invercargill and Alexandra. From there the convoy climbed the immaculately maintained forestry road that wound through pine and Douglas fir plantations on the lower slopes. Having the right key (a privilege not known to all visiting parties of naturalists) we were able to follow the road past the locked gate right to the highest point on the range (c. 1000 m).

Between the conifer plantations and the tree line, is silver beech forest, interspersed with pockets of the more pale-leaved *Hoheria*. In places the tree line is ragged, with younger trees establishing above the main massing of mature beech. This suggests that the treeline has been temporarily lowered by past disturbance (human or otherwise), since New Zealand beech forest typically forms very distinct boundaries at its upper limit. Prof. Mark also pointed out areas of stag-headed beech trees as evidence of damage due to heavy snowfalls.

The trip focussed on the complex of peatlands near the summit, which includes shrubland, tussock grassland and various bog communities. In the shrubland *Dracophyllum longifolium* dominates, with *Chionocloa rigida* (narrow-leaved snow tussock) an important component in places. As well as the dominant *C. rigida* the

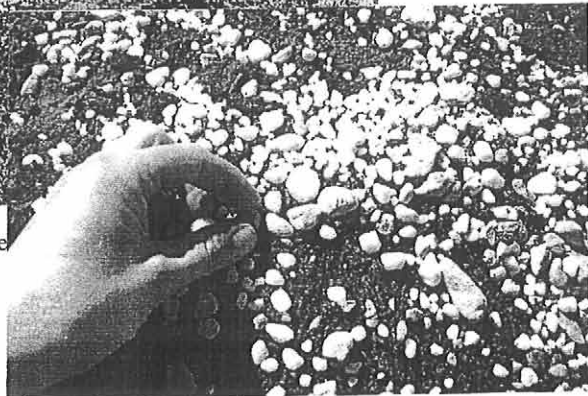
tussock grassland contains abundant *Gaultheria* spp., *Astelia linearis*, *Aciphylla aurea*, and several *Celmisia* spp. (or hybrids thereof). The bog communities included areas of *Donatia* cushion, with the cushion-forming species *Celmisia argentea* and *Phyllachne colensoi* also occurring. Cushions were often interspersed with grey-white strips of the lichen *Thamnomia vermicularis* (bringing to mind the image of an elderly man whose failing eyesight makes an all-over clean shave difficult to achieve). Also present are patches of *Sphagnum* spp. at tarn edges or in wet depressions.

The Blue Mountains represent somewhat of a boundary between coastal and central Otago, with several species (e.g. *Astelia linearis* and *Celmisia glandulosa*) reaching their eastern limit here. Other interesting occurrences are New Zealand edelweiss (*Leucogenes grandiceps*), golden *Celmisia* (*Celmisia semicordata* sub sp. *aurigans*) and an abundance of *Aciphylla scott-thomsonii*. During the day's botanizing there were several notable additions to the summit area species list compiled by the Otago Entomological Society. These included the discovery, by David Lyttle, of pygmy pine (*Dacrydium laxifolium*, now *Lepidothamnus laxifolius*), in the summit area. It was only later that the irony of this nomenclatural coincidence dawned upon me.

Prof Mark pointing out Moa gizzard stones on the peat to Dave Lyttle, Ian, Eve & Jimmy Radford, and Alli Knight amid the *Halocarpus* skeletons. - John Knight



Inset: Closer view of the putative gastroliths.- Monica Peters



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

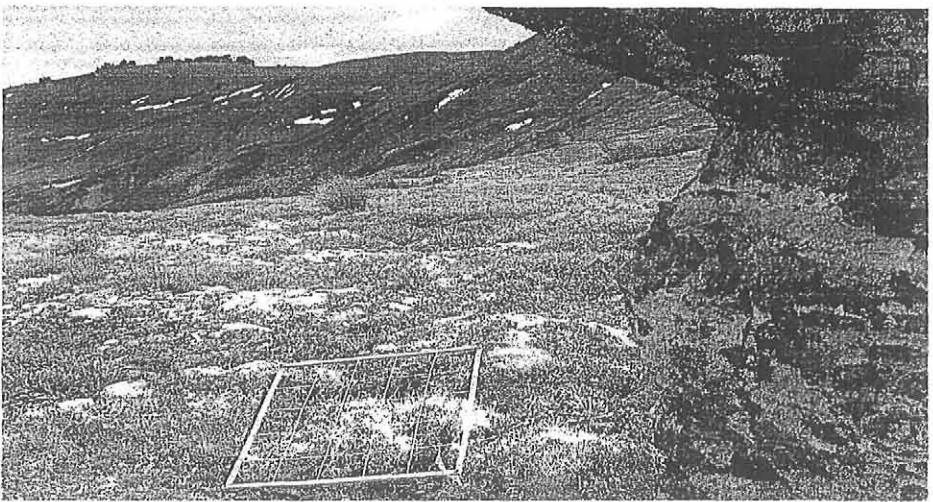
with the melting snow. *Celmisia viscosa* and *Hebe poppelwellii* were prominent beside the track. After further driving the summit plateau was reached and the lead vehicle continued on to some small tarns and more botanising. David Orlovich was anxious to find the grass *Festuca madida* that had been 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

fungi ranged from red, orange, green and purple to the expected brown tones. The proud fungi collectors worked through the afternoon with David to identify their specimens. Representatives from a range of genera were found including *Cortinarius*, *Mycena*, *Russula* and *Lactarius*.

In addition to the successful BSO trip, the following day David returned to Waipori Forest and was able to make a further collection of an undescribed specimen that may be a new species of *Lepista*.

15/03/2004 **PLANT SPECIES LIST – BLUE MOUNTAINS (998m).**

Plants that are found from about 100m below the natural treeline elevation (c. 900m), to up along the open summit ridge of the Blue Mountains, Otago.

*Introduced species.

Acaena caesiiglauca - glaucous bidibid
 ? *A. novae-zelandiae* - red bidibid
Aciphylla aurea - golden speargrass
A. "lomondii" (= *A. ?horrida* of Heads)
A. scott-thomsonii - giant speargrass
Actinotus novae-zelandiae - (south end only)
Agrostis muscosa - pincushion grass
A. muelleriana (= *A. subulata*)
Anemone tenuicaulis
Anisotome aromatica
A. flexuosa
Aporostylis bifloia - odd leaved orchid
Astelia fragrans - (bush flax)
A. linearis

* **Betula pubescens** - downy birch
Brachyglottis bellidioides
B. haastii
B. revolutus - (N and S ends)
B. rotundifolia (= *B. bennettii*)
B. southlandicus
B. wairauensis
Bulbinella angustifolia - (Maori onion)

Caladenia lyallii - orchid
Cardamine corymbosa
C. debilis - NZ cress
Carex coriacea - cutty grass
C. echinata - star sedge
C. gaudichaudiana
C. wakatipu
Carpha alpina

Celmisia alpina
C. argentea - silver cushion
C. densiflora
C. glandulosa - bog mountain daisy
C. graminifolia
C. lyallii - false speargrass
C. prorepens
C. semicordata ssp. *aurigans*
C. sessiliflora - cushion daisy
Centrolepis ciliata - a moss like cushion
C. pallida - small pale-green cushion
Chionochoa conspicua
C. rigida - narrow-leaved snow grass
Coprosma cheesemanii - sprawling *Coprosma*; dr
 normally orange but here multi-coloured
C. cuneata - clear red drupes
C. ciliata - black, pink or cream drupes
C. parviflora - leafy *Coprosma*; drupes blue
 to black, crimson or white
C. perpusilla - very small (= *C. pumila*);
 drupes orange
C. propinqua - mingimingi; drupes pale
 blue to indigo
C. pseudocuneata - resembling *C. cuneata*
 but drupes orange
Craspedia uniflora - soldier's button
Cyathodes empetrifolia - bog mingimingi;
 prostrate shrub
C. pumila - often confused with
Pentachondra pumila but leaves
 whitish underneath

***Digitalis purpurea** – foxglove

- Donatia novae-zelandiae* - dark green hard cushion
Dracophyllum longifolium - inaka
D. politum - leaves thick; cushion-forming shrub
D. prostratum - leaves spreading, creeping subshrub
D. uniflorum - turpentine scrub
Drosera arcturi - alpine sundew
Deyeuxia avenoides - oat-like grass
- Empodisma minus** - wire rush (southern end only)
Epilobium alsinoides ssp. *atriplicifolium* - willowherb, resembling *Alsine* – a chickweed
E. brunnescens - creeping willowherb, leaves often bronze-coloured
E. pernitens - creeping willowherb, leaves glossy green
Euphrasia dyeri – small bog eyebright; purple eye
E. zelandica - small eyebright; on drier sites
- Forstera sedifolia** – sedum-leaved
F. tenella – slender forstera, delicate
- Gaimardia setacea** - much like *Centrolepis ciliata*
Gaultheria antipoda - bush snowberry; fool's beech
G. crassa - scarlet snowberry; lily of the valley shrub
G. depressa - mountain snowberry
G. macrostigma - snowberry (= *Pernettya macrostigma*)
Gentiana grisebachii – marsh gentian; annual
G. lineta – linear leaves, small & narrow; rare
G. patula – like *G. bellidifolia* but with longer stems
Geranium microphyllum – small-leaved cranesbill
G. sessiflorum - short-flowered cranesbill, green leaf
G. sessiflorum var. *glabrum* - short-flowered cranesbill, bronze leaf
Geum leiospermum
Gnaphalium mackayi - mat cudweed
- G.* (or *Pseudognaphalium*) *luteoalbum*
Griselinia littoralis - broadleaf (northern end)
Gunnera monoica
- Halocarpus bidwillii** - bog pine (= *Dacrydium bidwillii*)
Hebe odora - fragrant smelling
Helichrysum bellidioides - everlasting daisy (= *Anaphalloides bellidioides*)
H. filicaule - slender everlasting daisy
 **Hieracium lepidulum* - tussock hawkweed
 **H. pilosella* - mouse-ear hawkweed
Heterochloa equisetia - Holy grass
H. redolens
Hoheria glabrata - mountain ribbonwood
Hydrocotyle moschata - pennywort
 * *Hypochoeris radicata* - catsear
- Juncus antarcticus** - dwarf rush
J. novae-zelandiae - small rush
- Kelleria dieffenbachii** (= *Drapetes dieffenbachii*)
K. laxa - loose leaved (= *D. laxus*)
- Lagenifera petiolata**
Lepidothamus laxifolius - pygmy pine (= *Dacrydium laxifolium*)
Leucogenes grandiceps - South Island edelweiss; rare
Leucopogon fraseri - dwarf shrub; orange berries (= *Cyathodes fraseri*)
Luzula crinita var. *petriana* - alpine woodrush
L. rufa - red woodrush
Lyperanthus antarcticus - green hooded orchid
- Melicytus alpinus** (= *Hymenanthera alpina*) - porcupine shrub
Microtis unifolia - grass orchid
Montia fontana
Myrsine nummularia - creeping mapou
Muehlenbeckia complexa - small-leaved pohuehue
- Nertera depressa*
Nothofagus menziesii - silver beech

Olearia arborescens - glossy small tree
daisy
O. nummularifolia - thick rounded leaves
(north end)
Oreobolus pectinatus - comb sedge
O. strictus - forms loose cushions
Oreomyrrhis ramosa
Oreostylidium subulatum - star-like rosette
herb; needle leaved
Ozothamnus leptophyllus - mountain
cottonwood (= *Cassinia vauvilliersii*)

Pentachondra pumila - dwarf heath; leaves
purplish
Phormium cookianum - mountain flax
Phyllachne colensoi - flat cushion; leaves
smaller than *Donatia*
Phyllocladus alpinus - mountain toatoa
/celery pine
Pimelea oreophila - dwarf mountain daphne
P. sp.
* *Pinus contorta* - lodgepole pine
Plantago novae-zelandiae - NZ plantain
* *Poa annua* - annual poa
P. breviglumis
Prasophyllum colensoi - onion orchid
Pratia angulata creeping herb, pink berries
Pseudopanax colensoi - threefinger
(northern end)

Ranunculus gracilipes - slender feathery-
leaved buttercup; bogs
R. multiscapus (= *R. lappaceus*) grassland
buttercup
Raoulia glabra - mat daisy; bright-green;
glabrous leaves
R. subsericea - mat daisy; pale-green leaves
* *Rumex acetosella* - sheep's sorrel
Rytidosperma australe
R. sp.

Schoenus pauciflorus - sedge tussock;
purple sheaths

Synonyms (=): Sometimes the old name is given first, sometimes the new. You can sort out which on the New Zealand Plant Name Index: <http://nzflora.LandcareResearch.co.nz/>

The original plant list was prepared by Michael Heads for a report to the NZ Forest Service on "Entomological Survey of the Blue Mountains" by BH Patrick BIP Barrett and M Heads in 1985 and has been amended/updated by John Douglas and Alan Mark. March 2004.

Scirpus aucklandicus - rush-like
Scleranthus uniflorus - brown moss-like
cushion
Stellaria parviflora - small-flowered
chickweed

Thelymitra ?sp.

Uncinia fusco-vaginata - hooked sedge;
brown sheath
U. rubra - reddish hooked sedge
Utricularia monanthos - bladderwort
(southern end)

Viola cunninghamii - white mountain
violet

Wahlenbergia albomarginata - New
Zealand harebell

Ferns and Fern Allies

Blechnum penna-marina - little hardfern
Hymenophyllum multifidum - filmy fern
Hypolepis millefolium - thousand-leaved
fern
Lycopodium australianum - fir clubmoss
L. fastigiatum - mountain clubmoss
L. scariosum - creeping clubmoss
Polystichum vestitum - prickly shield fern

Mosses

Racomitrium crispulum - woolly brown
moss
R. pruinosum - woolly white moss
R. ptycophyllum - woolly green moss

Lichens

Cladia retipora - coral lichen; cushion bogs
C. sullivani - brown lichen; cushion bogs
Thamnosia vermicularis - white worm
lichen

Books and Websites

Special discount for BSO, limited offer ends June 30!

The Natural History of Southern New Zealand.

Edited by John Darby, R. Ewan Fordyce, Alan Mark, Keith Probert and Colin Townsend.
University of Otago Press. Email university.press@otago.ac.nz

Robyn Bridges has negotiated an amazing one-off 25% discount on this magnificent book from The University Bookshop That's \$89.63 instead of the in store price of around \$120. To get this generous discount the society needs to buy a bulk lot of at least 25 copies. Please **register your intention to buy** with Robyn Bridges **asap** - the offer ends 30 June.

Email: robyn.bridges@stonebow.otago.ac.nz,

Phone: 64-3-4798244

Fax: 64-3-4799148

Post: Robyn Bridges, Careers Advisory Service
University of Otago, PO Box 56, Dunedin

The Natural History of New Zealand is a major work combining hundreds of years of collective research and expertise. Leading scientists from the University of Otago guide the reader through the south in a profusely illustrated book that will be the ultimate work on the region's unique physical environment for some time to come.

The book considers geology, landforms, fossils, climate, biogeography, environmental change and the impact of human beings, before taking the reader through a series of habitat-based chapters. Forests and shrublands, tussock grasslands and associated mountainlands, inland waters and wetlands, the coast and the open sea are explored, and there is a closing chapter on conservation issues.

Superb illustrations include photographs, satellite images, paintings and drawings as well as diagrams. *The Natural History of Southern New Zealand* is published in association with the Otago Museum. (February 2004).

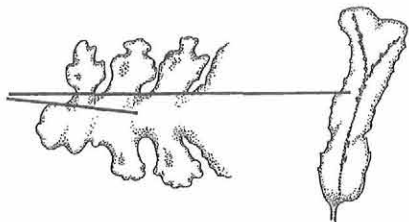
Excerpt from University of Otago Magazine, issue 7, Feb 2004.

A Field Guide to the mosses & allied plants of Southern Australia. Flora of Australia supplementary series number 20. David Meagher & Bruce Fuhrer
Soft cover, A5, 280 pages. A\$48 includes surface mail worldwide.

A comprehensive, plain English, richly illustrated guide to 500 mosses, liverworts and hornworts in southern Australia. The book includes an introduction to the bryophytes, information and hints on the collection, storage and identification of specimens, identification keys, descriptions, thumb-nail anatomical sketches and more than 250 superb colour photos. A co-publication of ABRS and the Field Naturalists Club of Victoria, with enough cross-over to be useful here.

The copy in the Otago Herbarium is getting a lot of use. E.g.:-

- 1 If the gametophyte is not differentiated into stems and leaves (i.e. it is a thallus), it is a liverwort or hornwort (see 11).



More Special Book deals and details



Manaaki
Whenua
P R E S S

Manaaki Whenua Press offers a wide range of quality New Zealand natural history and science titles. Some, like the *Flora of New Zealand* series, are published by Manaaki Whenua Press, while many others are sourced from other publishers in order to expand and enhance our range. Manaaki Whenua Press also acts as exclusive distributor for CSIRO publishing, the New Zealand Plant Protection Society, and the Entomological Society of New Zealand. For more information, visit the website at www.mwpress.co.nz Botanical Society of Otago members enjoy a 20% discount off the RRP of all titles (excluding already reduced special offers) - please advise us of your membership status when placing your order.

www.mwpress.co.nz

Websites

2 March 2004

The Australian Biological Resources Study is pleased to announce the *Flora of Australia* is now online

Flora of Australia online delivers the landmark publication series *Flora of Australia* to a potentially vast audience. This comprehensive, scientific resource demonstrates the Australian Government's commitment to ensuring Australia remains a world leader in taxonomy and managing, presenting and using biodiversity knowledge. This online resource is a result of collaboration between the Australian Biological Resources Study and national and international botanical communities and institutions.

This is a world first for delivery online of an interactive, flora resource at a national level with a flexible, user-defined search interface. Clients can customise data delivery to suit their own needs. Information is available for a wide range of uses, such as school projects, habitat information for land managers, identification keys for naturalists, or species lists for environmental impact statements and land surveys. The information links to electronic distribution maps and much of the line art from the books.

Around 8,500 taxa have been published so far in the *Flora of Australia* book series, and to date 4,500 of these are available in *Flora of Australia online*.

There are three web sites for the information and their addresses follow:

<http://www.deh.gov.au/biodiversity/abrs/online-resources/abif/flora/49/>
(*Flora of Australia* volume 49: Norfolk, Lord Howe and surrounding Islands);

<http://www.deh.gov.au/biodiversity/abrs/online-resources/abif/flora/50/>
(*Flora of Australia* volume 50: the remaining Oceanic Islands);

<http://www.deh.gov.au/biodiversity/abrs/online-resources/abif/flora/main/>

(Information for over 50 families extracted from the following nine volumes of the *Flora of Australia* book series: 3, 11A, 11B, 12, 16, 17A, 17B, 35 and 48).

We hope you share our excitement about this new development and that you find the *Flora of Australia online* to be a useful resource. We would be pleased if you would bring this news to the attention of your friends and colleagues.

Yours sincerely



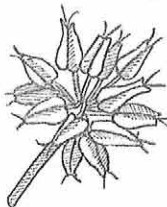
Mary Colreavy
Director, ABRIS

Botanical Society of Otago: <http://www.botany.otago.ac.nz/bs/>

Our web site contains trip details, membership forms, contact details and links to other websites of Botanical interest. Check it out to see updates on trips and activities.

News

BSO Botanical Art Competition



Audrey Eagle

Presenting a prize for botanical illustration was a new idea for our society and it certainly was a learning experience for Allison and myself.

Contrary to my expectation choosing the place-getters was not an intuitive process. We soon found that judging required a scientific approach, so we decided on the criteria and then designated points accordingly.

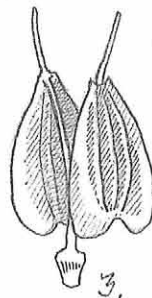
As the prime aim of the competition is to create more illustrations for the newsletter we now know that the criteria need to be described in more detail in future advertisements for the competition.

As a consequence of not giving more detail we received a large oil painting. From this entry arose a new suggestion by David, our Chairman, that such works of art could go on our web site.

We hope that in future with an earlier notification of the competition it will encourage more entries.

Let me give you some of the points that Alison and I were looking for, so that you can make your own judgments when you look at the illustrations.

- Botanical accuracy.
- Detailed drawings of identification features.
- Clarity of lines.
- Good proportional representation and scale.



- Layout
- Suitability for publication.
- Preference given to plants that are rarely, or have not been, illustrated in a readily available form. For example an illustration of an uncommon wetland plant would be of more scientific value than a picture of a lancewood.
- Caption to go with illustration e.g. name of plant, where it came from and the date it was collected and/or drawn.
- Botanical notes, or comments of interest about the plant or both.
- Artistic merit.

Prizewinners – Audrey Eagle competition for Botanical Drawing.

Congratulations to Monica Peters, who won first prize of \$100, with her black and white drawings of *Gingidia montana*, (front & back cover) and to Toni Atkinson, who came second, with a colourful oil painting of *Datura*.

Audrey was impressed by the high standard of all 5 entries, which covered a wide range of styles and subjects. She hopes that there will be more entries next year, now that there are clearer guidelines and the entry date has been extended to September 2005. I'm thrilled to be able to feature all these exciting works of art, along with the interesting botanical notes that came with them. Look out for them over the next 5 issues. Monica's drawings are featured on the cover and the membership form, with details of flowers and seeds in the above article and contents page. Her notes follow.

Gingidia montana (JR & G Forst) JW Dawson

Monica Peters

Genus: *Gingidia*

Family: Umbelliferae

Cheeseman (1914) recorded this species as having been discovered during Cook's first voyage to New Zealand. Described as a "lush, tufted herb" reaching up 0.5 m in height (Moore & Irwin, 1978), the whole plant is highly aromatic with an odour resembling aniseed. Compound flower heads are up to 10 cm across (Mark & Adams, 1973).

Gingidia montana is widely distributed, from the middle of the North Island southwards, though not on Stewart Island. Habitat is moist open sites in forest, scrub and snow tussock-herbfield, though now largely restricted to inaccessible rocky bluffs due to browsing (Mark & Adams, 1973). Cheeseman (1914) describes *G. montana* as "greedily sought after by cattle and sheep" observing – nearly a century ago from today, its comparative scarcity where it once was abundant.

In the Bot. Soc. Otago Newsletter (No. 38, 7.8.2003) Heenan and Patrick agree on there being an ‘..unnamed species of *Gingidia* in NE Otago..’. Heenan suggests that Mt Watkin forms the southern limit to its distribution. He highlights the importance of this site, with the *Gingidia*’s demise in previously recorded locations in Trotters Gorge.

The illustrations are composites derived from sources including Cheeseman (1914), Webb & Simpson (2001) as well as several herbarium specimens from the Otago region.

Mt Watkin - Hikaroa Reserve announced! *A. Knight & R. Bridges*

Mt Watkin – Hikaroa has been the focus of two BSO trips and several articles in the newsletter over the last 3 years. The first explored the summit area, where rare and threatened subalpine herbs, lichens and mosses are sheltered by the tumble of extruded basalt, which forms extensive rock glaciers. The second trip explored the remnant podocarp forest down in the valley, where steep cliffs form refugia for the rarer and more palatable species. With the encouragement of members of the Mt Watkin Working Party, Robyn and Allison made a submission on behalf of BSO, urging that these areas be protected. So we were thrilled when the Dunedin City Council announced recently that it will create a 480 ha conservation reserve on DCC endowment land. We were a little embarrassed that the *Otago Daily Times* (13.4.04) singled out BSO in their feature article on the proposed reserve. The importance of the native forest at Mt Watkin was first recognised in a DSIR report in 1986. This was followed by a long campaign involving local groups such as Forest & Bird, the Dunedin Environment Centre and the Otago Tree Society, supported by the Otago Conservation Board. Our involvement only came after the DCC had established the Mt Watkin Working Party in 1999, so we would like to give credit to all the hard work that went before. We are delighted at the outcome, and pleased to have been able to contribute.

At its final meeting on 15 April this year, the Mt Watkin working party voted to support the incorporation of the remaining 380 ha of the endowment land into the reserve. By doing this the whole reserve would be already fenced. The extra land contains significant areas of regenerating native vegetation as well as farmland. A charitable trust is being set up to undertake fundraising to buy this last piece of endowment land from the council. They would welcome support from individuals and organizations. Please contact Rob Mitchell, 453 0876 or Ralph Allen 453 0876, email harptree@xtra.co.nz for further information

Orokonui Sanctuary – Te Korowai o Mihiwaka

You may have heard of the exciting proposal to develop the **Orokonui Sanctuary – Te Korowai o Mihiwaka**, to enclose a large area of regenerating forest in a mammal/predator-proof fence (like Karori in Wellington) and to restore (in time) a number of precious indigenous species to this area once pests have been removed. The

vision is that this area will in time become an ecological, educational and cultural treasure for Dunedin, and a major feature of our city's special wildlife focus for visitors. A feasibility study for the project is currently underway. Those who would like to help this vision become a reality are invited to join the Otago Natural History Trust, PO Box 6425. A copy of the membership form is on the BSO noticeboard. For further information contact David McFarlane, phone 473 7259, email miniwaka@xtra.co.nz.

Wilding tree-fellers award

Congratulations to the wilding tree eradication group from Dunedin's Forest and Bird Protection Society. Their co-ordinator, David McFarlane was recently presented with an Environment Award by the Otago Regional Council. The award was for the team's outstanding work in the containment and eradication of wilding trees throughout Otago in areas of high conservation value. Over the past 6 years the group has removed close to 80,000 wilding or uncultivated trees, predominantly *Pinus contorta*, *Pinus nigra* and Douglas fir. If you would like to assist this dedicated team please contact David McFarlane, phone 473 7259, email miniwaka@xtra.co.nz

Botanical Society of Otago's letter of support for this award follows:

Duncan Butcher
Chairperson
Otago Regional Council
Private Bag 1954
Dunedin

Dear Mr Butcher

Otago Regional Council Environmental Award nomination – Forest & Bird, Dunedin branch, Wilding Tree Team

The Botanical Society of Otago supports the nomination by Pieter Raal, Department of Conservation, Otago Conservancy, of the Forest & Bird's, Dunedin branch, Wilding Tree Team for an Otago Regional Council Environmental award.

In supporting this nomination, the Society acknowledges the positive results the actions of this largely volunteer group has achieved. Through eradication and the raising of public awareness of the threat posed by wilding pines, we feel, together with the Department of Conservation and many private landowners, that the Wilding Pine Group has made a significant contribution to the protection and enhancement of Otago's environment.

The Society's support is further strengthened by the belief the Wilding Pine Group is deserving of recognition for this initiative aimed at helping to enhance the values of the Otago landscape.

Yours sincerely

Robyn Bridges
Secretary,
Botanical Society of Otago

Botanical Diary

National Events



Te Whare Wānanga o Ōtago

DEPARTMENT OF BOTANY 80TH ANNIVERSARY DINNER

The above celebration, for current and former staff and students, will take place on **9th October, 2004**, at the Otago Museum. We are assembling a mailing list now, so if you would like to take part please make sure we have your correct address (street or email) by contacting the Department

Secretary: trish@botany.otago.ac.nz

Trish Fleming
Department of Botany,
University of Otago
PO Box 56, Dunedin

Wellington Botanical Soc. Summer Trip, 28 Dec. – 6 Jan '05. Western Canterbury

The Wellington Botanical Society have kindly invited us to join them on their next legendary summer trip. This will be based not far south of Methven, at Staveley Campsite, which has dormitories and camping areas. Possible field trips located with the help of Bryony McMillan and the Canterbury Botanical Society include: Mt Somers Conservation area, Staveley Hill, Caves Stream, Mt Hutt Conservation Area, Coalgate Walkway, Rakaia Gorge Walkway, Lake Emma & Mt Harper, Mt Thomas, Glentui and Ashley Gorge....Booking form will be posted on the BSO noticeboard and website) when it arrives.

Local Events - see front pages for finalised **BSO** events, and following pages for details of local groups.

11 June, Fri. 12 noon. Botanic Garden. *Ferns on the menu – a history of fern consumption in New Zealand.* Prof. **Helen Leach**, Anthropology Department, University of Otago. HortTalk, Botanic Garden Centre, Upper Lovelock Ave.

13 June, Sun... *Saltmarsh Boardwalk, Aramoana.* DOC/community workday to remove weed species. Meet at DOC office 9 am (please book) or at boardwalk 10 am. Contact **David Mules**: dmules@doc.govt.nz, phone 474 6926

- 9 July**, Fri. 12 noon. Botanic Garden *Lesser Known natural Wonders of Dunedin*
Neville Peat, photographer and co-author of award-winning book *Wild Dunedin*.
 HortTalk, Botanic Garden Centre, Upper Lovelock Ave.
- 9-11 July**, Fri-Sun. **Te Rere Yellow-eyed Penguin Reserve, Catlins**. Forest and Bird
 planting weekend, staying at Tautuku Lodge. Book through DOC Conservation
 Volunteers. **Contact David Mules: dmules@doc.govt.nz, phone 474 6926**
- 13 August**, Fri. 12 noon. Botanic Garden *Sculpture in the Home Garden – an
 armchair tour of Dunedin gardens with an expert*. Artist. **Moira Crossman**.
 HortTalk, Botanic Garden Centre, Upper Lovelock Ave.
- 10 Sept**, Fri. 12 noon. Botanic Garden *MAF's current regulations on seed and plant
 import*. MAF Quarantine Service. Plus – *Dunedin Botanic Garden's
 international seed exchange programme* - **Tom Meyers**, Botanist, Botanic
 Garden. HortTalk, Botanic Garden Centre, Upper Lovelock Ave.

Weekend lichen workshop.

There is still a small group showing interest, including David Galloway. If
 numbers increase we'll reconsider the weekend in Central Otago later the year.
 To express interest, email: bso@botany.otago.ac.nz, or phone Allison Knight,
 487 8265, or Jennifer Bannister 467 2142. Then we'll arrange a suitable date.

Conservation Volunteers Community Noticeboard

These groups would appreciate a hand – please contact them if you are able to help:

- George Sutherland 467 5999. **Track Group**. Silver Peaks area. Every Wednesday
 Rex Malthus 473 7919. **Track Group**. Mainly in Silver Stream/Silver Peaks area. First
 Thursday of every month
- Dave McFarlane 473 7259. **Yellow-eyed Penguin Trust**. Clearing, planting and maintaining
 areas of coastal penguin habitat. Frequent workdays
- Nigel McPherson 476 1109. **Colinswood Bush Committee**. Clearing, planting and maintaining
 covenant of native bush on Otago Peninsula. Interested to know of anyone able to help
 occasionally on week days
- Don McKechnie 482 2021. **Mopani Ecological Environmental Society**. Clearing, planting
 and maintaining areas of coastal shrubs. Meet 10.30am at Long Beach, last Sunday of
 every month.
- Ken Mason 476 7100. **Forest and Bird Protection Society**. Clearing of weed species in
 Otanomomo Scientific Reserve near Balclutha. Frequent workdays.
- Lala Fraser 479 8391. **Save The Otago Peninsula**. Clearing, planting and maintaining natural
 environments on Otago Peninsula. Frequent workdays
- Marilyn Egerton 481 7171. **Taieri Mouth Amenities Society**. Clearing, planting and
 maintaining public areas around Taieri Mouth. Frequent workdays.

Please come prepared for all **weathers**, with sturdy **footwear**, **lunch** and a **drink**.

From the *DOC Conservation Volunteers Newsletter*

Local contacts and meeting places of groups with overlapping interests.

University of Otago Botany Dept Seminars are on Wednesdays during teaching semesters at 12 noon, upstairs in the Union St Lecture Theatre (formerly Botany School Annexe), in the red-brown bldg, Cnr Union St West & Great King St. **Contact: Trish Fleming, Secretary, phone 479 7577, email: trish@planta.otago.ac.nz**

Dunedin Naturalists Field Club (DNFC) Meetings are at 7.30 pm, first Monday of the month, at Room 215, new Zoology Benham Building, 346 Great King St. Their field trips leave from Citibus Depot, Princes St. Visitors are welcome. **Contact: Beth Bain, 455 0189, email: bethbain@ihug.co.nz**

Dunedin Forest and Bird (F&B) meetings are on Tuesday, at 7.45 pm in the Hutton Theatre, Otago Museum. Field trips leave from Otago Museum Gt King St entrance, 9 am, Saturday. **Secretary: Paul Star 478 0315**

Friends of the Botanic Garden meet on the second Tuesday of the month at 4.30 pm in the Lower Garden Information Centre. **Web Page- <http://www.friendsdbg.co.nz/>.** “HortTalk”= monthly talks at the Botanic Garden, at 12 noon on the second Friday of the month, in the Botanic Garden Centre, Upper Lovelock Ave. **HortHelp**=problem or mystery plant can be left at the Botanic Garden’s information centre for staff advice.

DOC Conservation Volunteers: ongoing opportunities for hands on conservation work in coastal Otago. Learn new skills in some neat places, help conservation efforts and have fun all the while! To sign up, and receive newsletters and event programmes, **contact David Mules: dmules@doc.govt.nz, phone 474 6926**

Otago Institute (OI) contact: **Michelle McConnell, secretary, phone 479 5729, email: michelle.mcconnell@stonebow.otago.ac.nz . Web site: <http://otagoinstitute.otago.ac.nz/>**

Southland Natural History Field Club. Meetings 7.30 pm on the second Thursday of the month, currently at the Otatara Hall, just out of Invercargill. Field trips the following Saturday or Sunday to places of botanical, ornithological, ecological or geological interest. **Contact Lloyd Esler 032130404, email esler@southnet.co.nz**

Otago Alpine Garden Group Meets every 3rd Thursday of the month at the Dunedin Botanic Gardens Centre, Lovelock Avenue at 7.30 pm. The Group operates a seed exchange and holds periodic field trips and garden visits. **Contact: Secretary, P.O. Box 1538, Dunedin or Les Gillespie Ph 489-6013**

Entomology Society of NZ, Otago Branch bimonthly meetings are held 7:00 pm, 3rd Thursday of the month in the Hutton Theatre, Otago Museum. Guest speaker programme and natural history sessions on insects. To get newsletter and invitations for meetings and field trips contact **Eric Edwards, 03 213 0533, email: eedwards@doc.govt.nz. Guests welcome**

Southland Forest and Bird Society Winter talks - second Tuesday of each month, 7.30pm, Southland Museum, Invercargill. See Southland F&B web site for speaker details **<http://www.converge.org.nz/fbsth/>.** Working Days (contact Barbara Boyde 03 2160353) Tautuku Lodge 25-26 May 2004. Te Rere yellow-eyed penguin Colony planting days (contact Brian Rance 03 2131161) 10 July 2004, 14 August 2004.

Times and other details may change. Check with the group involved first.

Botanical Society of Otago: Patron: Professor Peter Bannister

Committee 2004 –April 2005

Chairman, **David Orlovich**, *david.orlovich@botany.otago.ac.nz*

Secretary, **Robyn Bridges**, *robyn.bridges@stonebow.otago.ac.nz*, ph 479 8244

Treasurer, **Lyn Bentley**, *stevelf@ihug.co.nz*

Events Managers, **Arlene McDowell**, *arlene.mcdowell@stonebow.otago.ac.nz*

Moira Parker, *moiraparker@clear.net.nz*

Program Manager, **Ian Radford**, *ian.radford@botany.otago.ac.nz*

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John Barkla, *jbarkla@doc.govt.nz*, **Kate Ladley**, *ladka296@student.otago.ac.nz*

Newsletter editor, **Allison Knight**, *bsa@botany.otago.ac.nz*, ph 487 8265

Please submit copy for next newsletter by 10 August 2004

For information on activities contact the trip leader, or see our notice board in the Botany Dept corridor, or website: <http://www.botany.otago.ac.nz/bsa/>

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Membership form:

Botanical Society of Otago, 2004

(This form is also available on our website)

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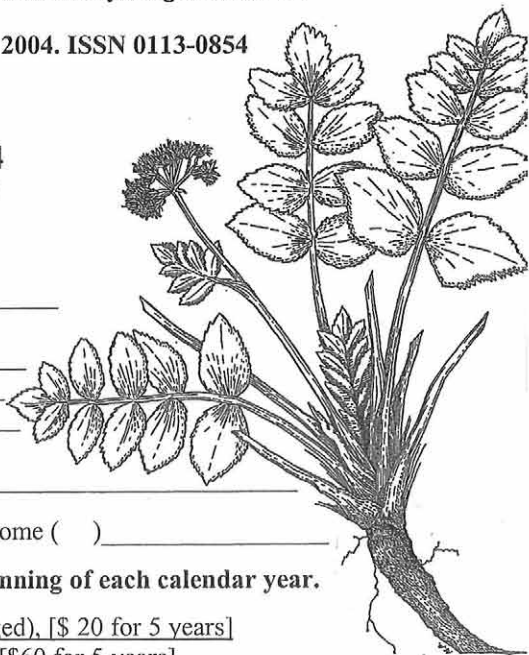
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Cheques to: "Botanical Society of Otago".

Post to: Treasurer, BSO, P.O. Box 6214, Dunedin North, New Zealand