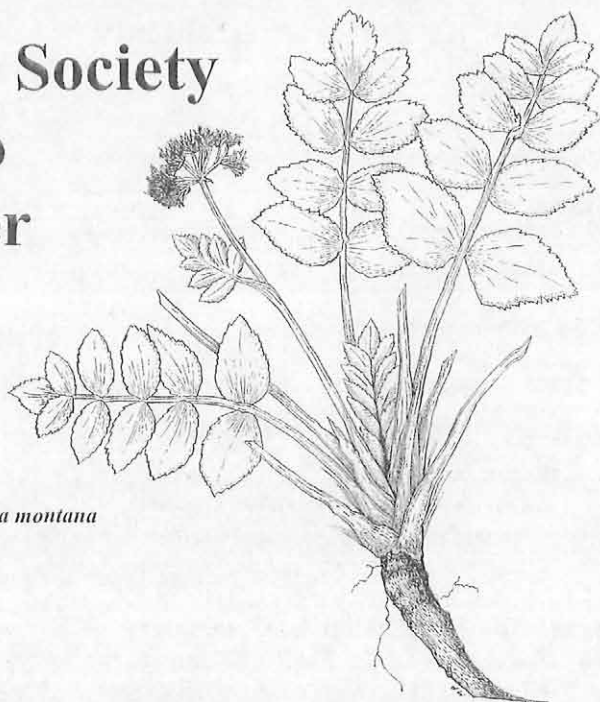


Botanical Society of Otago Newsletter

Number 37
Apr – June
2003



Gingidia montana

BSO Meetings and Field Trips

28 May, Wed. 5.30 pm. Talk and superb slides by **Dr Steve L Stephenson**, Fairmont State College, USA, on "*Special microhabitats for myxomycetes in terrestrial ecosystems*" a slide show on the special places slime moulds occur from arctic tundra to tropical forests. Drinks & nibbles before & after, for a gold coin donation. **Meet in the Zoology Annexe Seminar Room**, Gt King St, back behind the car park between Dental School and Zoology Dept. Dinner in town afterwards, venue to be decided on the night.

4 June, Wed 12 noon, in conjunction with Dept of Botany. Talk "*Israel – Land of Extremes*" by **Barbara Wheeler**, Collections Supervisor, Dunedin Botanic Garden. Upstairs in the Union St Lecture Theatre (formerly Botany School Annexe), in the red-brown bldg, Cnr Union St West & Great King St.

8 June, Sunday, 10 am-5pm. **Botanical Illustration Workshop**. Led by **Monica Peters**, in conjunction with the Cleveland Living Arts Centre at the Dunedin Railway Station. *This workshop is aimed at people who are curious about plants and want to learn a variety of ways to create good quality representations. Basic drawing materials supplied.* Bring a plant to draw, lunch, hand lens and any specialist drawing material (pens, papers etc) if you have them. Course fee \$55. More details inside and on the BSO web page.

26 July, Sat 10 am- 4pm. **Lichens on twigs workshop**. Details inside.

Contents

Cover pictures	<i>Monica Peters</i>	3
President's notes	<i>David Orlovich</i>	3
Treasurer's notes	<i>Frances Anderson</i>	4
Editorial Policy and Disclaimer	<i>Allison Knight</i>	4

Articles

' <i>Hypochoeris</i> ' / ' <i>Hypochaeris</i> ': New Zealand usage is wrong and the rest of the world is right*	<i>John B. Steel and J. Bastow Wilson</i>	5
Lichen rarities in the Routeburn	<i>David Galloway</i>	8
The diversity and importance of wetlands	<i>Amelia McQueen</i>	11

Reports

Botanizing up and over Mt Watkin/ Hikaroroa	<i>Monica Peters</i>	13
Kelvin Lloyd's "The Botanical Trampler"	<i>Allison Knight</i>	15
Adrienne Markey's "Walking with Western Australian Wildflowers"	<i>Ian Radford</i>	15

Books and discounts for BSO members

		16
<i>Meanings and origins of Botanical Names of New Zealand Plants</i> , Marie Taylor		
<i>Wild Dunedin</i>	<i>Neville Peat & Brian Patrick</i>	

Web Sites etc.

	<i>Allison Knight</i>	17
http://linnaeus.nrm.se/botany/fbo/		
http://www.nhm.ac.uk/botany/lichen/twig/		
http://www.botany.otago.ac.nz/bso		
Brief Botanical Definitions		

BSO News

	<i>Allison Knight</i>	
BSO Submission on proposed Mt Watkin Reserve	<i>& Robyn Bridges</i>	18
Plant names prize to Graeme Jane		20
Audrey Eagle Prize for Botanical Drawing		20
Exodus to Africa		21
New Zealand Plant Conservation Network Established		21

Botanical diary

Conserving Native Plants for the 22 nd Century: Symposium Programme		21
Botanical Illustration Workshop		23
Lichens on twigs Workshop		24
Other Events		25
Contact details of related groups		26
BSO Contact Details and Subscription forms		27

*Refereed paper

Cover pictures

Front cover. Pen & ink composite sketch of *Gingida montana*, drawn by *Monica Peters* from two Herbarium specimens from the Otago area.

Back cover. Larger scale drawing of *Gingida montana*, as above.

President's notes – *David Orlovich*

Welcome to another issue of the Newsletter and another programme of talks and workshops. For the second half of May, we're being visited by Prof. Steve Stephenson from Fairmont State College in the US. You might remember Steve gave a great talk to the BSO last year on Wildflowers of Western United States. Steve is a world expert on slime moulds (myxomycetes) and, despite their rather unbecoming name, they are a beautiful and fascinating group of organisms. Steve has just written a book on the slime moulds of New Zealand, which is soon to be published by Landcare Research. In his talk on May 28 he will tell us all about the strange places you can find slime moulds all over the world. If you came to Steve's talk last year, you'll know he's an entertaining and enthusiastic speaker, so don't miss this one! Anyone keen to go out for dinner afterwards is most welcome. We'll decide where we go on the night.

Other events coming up are a joint seminar with the Department of Botany by Barbara Wheeler, a botanical illustration workshop (sure to be popular - but numbers are very limited so get in quick!), and a lichen workshop. New members are very welcome to come to these events - we'll be glad to see you there! We signed up quite a few new members at the BBQ we had earlier in the year and we hope to hold another one of these at the beginning of second semester to welcome new Botany students to the BSO. If you're a new member and you've got ideas about activities that the BSO could be involved in, let one of the committee members know.

Allison Knight and Robyn Bridges have made a submission on behalf of the BSO to the Dunedin City Council requesting that funds be set aside to create a reserve at Mt Watkin. You can read about that later in this newsletter. A big thanks go to Alli and Robyn for such a great job. **I urge members to get behind us and support further action on the formation of this worthwhile reserve.** Also, welcome to our two new committee members: Frances Anderson and Arlene McDowell. Frances is the new Treasurer and Arlene is the new Events Manager. Their contact details, and those of the rest of committee, are at the end of this newsletter and on the web site.

Publication of the new genus *Hebejeebie* created a flurry of correspondence after the last newsletter. The name even had quite a long life on the international email list "Taxacom". There was a mixture of positive and negative responses to the article, and long debates and discussions followed about whether it was appropriate for the *Botanical Society of Otago Newsletter* to publish such articles. At the AGM, a motion was proposed that the Editorial Policy be amended to exclude publications where new

names or combinations are proposed, and this motion was carried. We still welcome articles of a scientific nature, and these can be refereed by anonymous referees independent of the BSO if requested by the author(s).

Finally, we have a **new address: P.O. Box 6214, Dunedin North**. Please direct any correspondence to this address from now on.

Treasurer's Notes — *Frances Anderson*, new Treasurer.

Financial changes made at the AGM:-

- *The annual subscription was raised to help cover the cost of an annual Geoff Baylis Lecture.*

Confirmed subscription rates as from March 2003:

Ordinary member; \$15 for 1 year, \$60 for 5 years

Student/unwaged; \$5 for 1 year, \$20 for 5 years.

Family; \$20 for 1 year, \$80 for 5 years.

- *The passenger rate on trips was raised from 7 to 10 cents/km/passenger, to be paid to the driver.*

Editorial Policy - *Allison Knight*, editor

After considerable discussion at the AGM the following *amended* editorial policy was moved and accepted.

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

'Hypochoeris' / 'Hypochoeris': New Zealand usage is wrong and the rest of the world is right¹

John B. Steel and J. Bastow Wilson *

Botany Department, University of Otago, P.O. Box 56, Dunedin, New Zealand.
e-post: Bastow@otago.ac.nz

Abstract

The valid name of the genus *Hypochoeris*/*Hypochoeris* is *Hypochoeris*. The latter was published in Linnaeus' *Species plantarum* and the different spelling in *Genera plantarum* does not over-ride this. The *Code* does not allow changes in transliteration of names already published. Although this has generally been realised internationally, most usage in New Zealand has been of the incorrect *Hypochoeris*.

Keywords: catsear – cat's ear – Linnaeus – nomenclature – priority

Short communication

Two spellings of the genus *Hypochoeris* have been used: *Hypochoeris* and *Hypochoeris*. The name was published by Linnaeus in *Species plantarum* (Linnaeus² 1753), as *Hypochoeris*³, and used with that spelling in his *Flora Anglica* of April 1754 (Linnaeus 1754). Later that year, Linnaeus used *Hypochoeris* in *Genera plantarum* ed. 5 (Linnaeus 1754). However, he reverted to *Hypochoeris* in later works, such as later editions of *Species plantarum* (e.g. Linnaeus 1763), and later editions of *Flora Anglica* (Linnaeus 1759). Since *Hypochoeris* was Linnaeus' first and final choice, it seems clear that this was his intention.

Moreover, the correct name is that which conforms to the *International Code of Botanical Nomenclature* (Greuter et al. 2000), determined primarily by priority and starting with the 1753 *Species plantarum* (Articles 11.3 & 13). The name was published in the 1753 *Species plantarum* as *Hypochoeris*. Article 13.4 of the *Code* (Greuter et al. 2000) explicitly states that "The spelling of the generic names included in *Species plantarum*, ed. 1 [1753], is not to be altered because a different spelling has

¹ This article has been accepted by the Scientific Editor, upon the advice of two overseas referees.

² The modern spelling of Linnaeus' name is used.

³ Diphthongs such as 'æ' have been converted to single letters, as in modern usage.

been used in *Genera plantarum*, ed. 5 [1754]”. Linnaeus’ name is clearly based on a transliteration from the Greek name for the plant, ὑποχαρίς, which would normally be transliterated into the Latin alphabet as *Hypochoeris*, and for a new name such classical transliteration is recommended (Recommendation 60A). However, for earlier names (and one cannot get earlier than Linnaeus), the transliterations of the original authors must be retained (Article 60.7). It therefore seems quite clear that *Hypochoeris* is the correct name under the *Code*.

A genus can have only one correct name (Greuter et al. 2000, Article 11.1). In earlier taxonomic works, *Hypochoeris* was common, e.g. Bentham (1866), Hooker⁴ (1884), Bentham & Hooker (1937). That spelling is still almost always used in New Zealand (Allan 1940; Wilson 1978; Taylor 1981; Wilson 1982; Webb et al. 1988; Nicol 1997). It is used in *Current Names for Wild Plants in New Zealand* (Parsons et al. 1998). [The very concept of ‘current names’ is contrary to the *Code*, which gives rules for correct nomenclature, but does not dictate taxonomic judgement, which is always up to the individual.] In any case, for *Hypochoeris*, *Current Names* is wrong.

The most recent British flora uses *Hypochoeris* (Stace 1997). Recent indices of plant names also use *Hypochoeris* as their primary entry (Chapman 1991; Quattrocchi 2000). The disagreement has been resolved overseas, sometimes with the issue being addressed explicitly (Harriman 1980; Chambers 1991). The issue gives the impression of having been resolved in New Zealand, but the resolution is different from that in the rest of the world⁵, and incorrect. The correct name in New Zealand is the same as the correct name elsewhere: *Hypochoeris*.

Acknowledgements

We thank Drs M.W. Palmer, M.T. Sykes and P.S. White for helpful information.

References

- Allan, H.H. (1940) *A handbook of the naturalized flora of New Zealand*. Government Printer, Wellington, N.Z..
- Bentham, G. (1866) *Handbook of the British flora*. Lovell Reeve, London, U.K..
- Bentham, G. & Hooker, J.D. (1937) *Handbook of the British flora*, edn 7. Reeve, Ashford, UK.
- Chambers, K. (1991) A pesty weed and a botanical joke. *Bulletin of the Native Plant Society of Oregon*, 24: 60-61.
- Chapman, A.D. (1991) *Australian plant name index*. AGPS Press, Canberra, Australia.
- Gilfedder, L. & Kirkpatrick, J.B. (1993) Germinable soil seed and competitive relationships between a rare native species and exotics in a seminatural pasture in the Midlands, Tasmania. *Biological Conservation*, 64, 113-119.

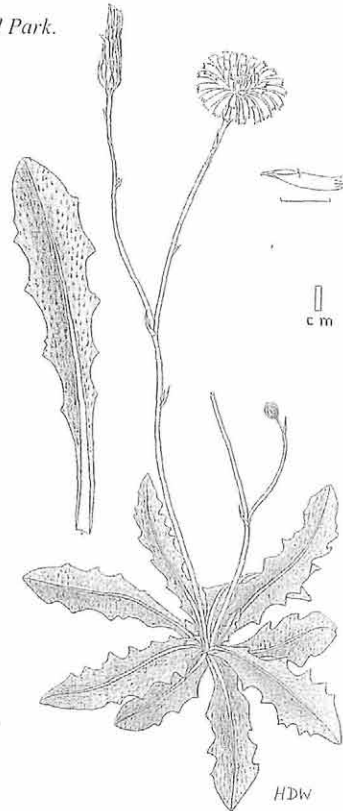
⁴ But as *Hypochoeris* in the index.

⁵ Though old habits die hard in Australia too, e.g. Gilfedder, L. & Kirkpatrick, J.B. (1993), Somerville & Nicol (2002)

- Greuter, W., McNeill, J., Barrie, F.R., Burdet, H.M., Demoulin, V., Filgueiras, T.S., Nicolson, D.H., Silva, P.C., Skog, J.E., Trehane, P., Turland N.J. & Hawksworth, D. L. (2000) *International Code of Botanical Nomenclature*. Koeltz Scientific Books, Königstein, Germany.
- Harriman, N.A. (1980) *Leontodon* and *Hypochaeris* (Compositae) in Wisconsin. *Michigan Botanist*, 19, 93-95.
- Hooker, J.D. (1884) *The student's flora of the British Isles*. MacMillan, London, UK.
- Linnaeus, C. (1753) *Species plantarum*. Laurentii Salvii, Stockholm, Sweden⁶
- Linnaeus, C. (1754a) *Flora Anglica*. Laur. Magnus Höjer, Uppsala, Sweden.
- Linnaeus, C. (1754b) *Genera plantarum*. Laurentii Salvii, Stockholm, Sweden.
- Linnaeus, C. (1759) *Flora Anglica*, edn 2 [in *Amoenitates Academicae*]. Laurentii Salvii, Stockholm, Sweden.
- Linnaeus, C. (1763) *Species plantarum* [vol. 2]. Laurentii Salvii, Stockholm, Sweden.
- Nicol, E.R. (1997) Common names of plants in New Zealand. Manaaki Whenua Press, Lincoln, NZ.
- Parsons, M.J. (1998) Current names for wild plants in New Zealand. Manaaki Whenua Press, Lincoln, NZ.
- Quattrocchi, U. (2000) *CRC dictionary of plant names*. CRC Press, Boca Raton, Florida, USA.
- Stace, C.A. (1997) *New flora of the British Isles*, edn 2. Cambridge University Press, Cambridge, UK.
- Somerville D.C. & Nicol, H.I. (2002) Mineral content of honeybee-collected pollen from southern New South Wales. *Australian Journal of Experimental Agriculture*, 42, 1131-1136.
- Taylor, R.L. (1981) *Weeds of lawns, pasture and lucerne*. The author, Upper Moutere, NZ.
- Webb, C.J., Sykes, W.R. & Garnock-Jones, P.J. (1988) *Flora of New Zealand*. Vol. IV, *Naturalised pteridophytes, gymnosperms, dicotyledons*. Botany Division, D.S.I.R., Christchurch, NZ.
- Wilson, H.D. (1978) *Wild plants of Mount Cook National Park*. Field Guide Publications, Christchurch, NZ.
- Wilson, H.D. (1982) *Stewart Island plants*. Field Guide Publications, Christchurch, NZ.

⁶ Place names have been modernized

Catsear, *Hypochoeris/Hypochaeris radicata*
from *Stewart Island plants*, by Hugh D Wilson.
Field Guide Publications, Christchurch, NZ, 1982



Lichen rarities in the Routeburn

David Galloway

Landcare Research, Private Bag 1930, Dunedin, New Zealand

From 21-23 February, while staying at the motel at Routeburn Station, I took the chance to acquaint myself with the forest lichens of the lower Routeburn along the track to Sylvan Lake and around Weka Flat. This brought back memories of a trip into the Olivines with Peter Smith, John Holloway and David Mitchell in November 1965 that had started from the same Sylvan Lake track. Between 1965 and 1972 I visited the lower Routeburn many times, generally on the way to or from somewhere else and consequently I have never dallied there for long, or looked carefully for lichens in the lower reaches of this lovely valley.

By great coincidence it was 76 years to the day, 21 February 1927, that the first lichenologists to collect from the Routeburn, the Swedes Prof. G. Einar Du Rietz and his wife Greta Sernander Du Rietz, gathered samples from the southern slopes of Mt Momus. These two intrepid Uppsala botanists, in company with Leonard Cockayne, Jack Scott Thomson and George Simpson spent 10 days in the Routeburn area based at the old Routeburn Huts and Kinloch, from where they visited the Harris Saddle (12.2.1927), the environs of the Routeburn Hut (11-16.2.1927), forest, subalpine scrub and grassland to 1650 m on Bold Peak above Kinloch (18,19.2.1927), and the Routeburn again and Mt Momus (20-22.2.1927). From their stay in the Routeburn, Einar and Greta Du Rietz made about 200 collections. Most of these collections have printed labels (Fig. 1), and are now held in the herbarium of the Museum of Evolution in Uppsala (UPS).

In the intervening period, only occasional lichens were gathered in the Routeburn. I collected from the North Branch, from North Col and from Sugarloaf Saddle, and the OUSSA Science Survey of May 18-25, 1968 (Westerskov 1968) included lichens in an investigation of ground and epiphytic vegetation (Irwin 1968). It was therefore high time that lichens from the lower reaches of the valley were looked at a bit more closely.

I had two things in mind: the first was to search for *Erioderma*, as its present known southern limit is east of the Routeburn, close to Chinaman Flat in the Dart. The second was to check out the local populations of *Placopsis* on rocks in the Routeburn and in grassland and forest outcrops. The *Placopsis* story will not be very easily told just yet, but I found *Erioderma* and, along with it, several cyanobacterial species of *Pseudocyphellaria* representing major southern extensions of their ranges. The range of cyanobacterial species in the area is remarkable, making this humid forest a prime site of cyanolichen diversity, comparable to the famed Valdivian rainforest at Choshuenco (Galloway 1992), and well worthy of future detailed study.

However, in the 30 years since I was last in the lower Routeburn, I noticed that introduced weeds were much more obvious than formerly, and I was astounded at the level of traffic that the road receives in a late summer weekend. Before the Dart Bridge made access so easy, the only regular motor vehicles on the road were Harry Bryant's fleet of ancient tourist buses (McKenzie 1973), and as well the farming of the riverflats was not nearly so conspicuous as it is now. Both dramatically increased road traffic

(and its associated dust) and agricultural practices will have had some effect on lichen communities in the developed areas of the lower valley.

Erioderma soledatum I found fairly quickly on the smooth bark of young mountain beech, but it was very rare and scattered on this substratum. It turned up a bit more frequently on the basal parts of young groves of *Phyllocladus* growing in small clearings carpeted with *Cladia retipora* and *Cladonia confusa*, although even here it is often rather sparse. It should be looked for further up the valley and across the Divide in the Eglinton Valley and in Fiordland. I didn't find its fertile counterpart, *E. leylandii*. Other cyanobacterial rarities turned up most surprisingly on mountain beech bark in humid sites (close to small streams) and included the following:

- (1) a sward of *Pseudocyphellaria mallota*, (Fig 2) a tomentose, solediate species formerly known only from southern Chile, Argentinian Tierra del Fuego and Juan Fernandez (Galloway 1986, 1992; Galloway et al. 1995). This species I know well from southern Chile, so it was most exciting to see it so happily developed on a tree 5 m from the Routeburn Road! This is a major extension of its range and joins other austral members of this genus including *P. faveolata*, *P. glabra*, *P. granulata* and *P. physciospora*.
- (2) *Pseudocyphellaria nermula* (formerly known only from its type locality at the Boyle River south of Lewis Pass); *P. pubescens* in both its green algal, and cyanobacterial states, and combined as a photosymbiodeme; and *P. sericeofulva* a rare northern species (known also from New South Wales) that occurs sporadically from Radar Bush in Northland to Mercer in the Waikato (Galloway 1988).
- (3) *Sticta limbata* parasitized by *Abrothallus parmeliarum*. This lichenicolous fungus is known from New Zealand on species of *Parmelia*, and is recognized by its scattered, black, convex ascomata that are commonly iridescent, green-pruinose at first, and by its characteristic brown, 1-septate, warted ascospores. *Sticta limbata* is a well-known host for this lichenicolous fungus in the Northern Hemisphere.
- (4) Associated cyanobacterial taxa with the above-mentioned lichens included: *Coccocarpia palmicola* and *C. pellita*; "*Dendriscoocaulon dendriothamnodes*"; *Degelia duplomarginata*; *Fuscoderma amphibolum*, *F. applanatum* and *F. limbatum* (Jørgensen & Galloway 1989) many green algal species of *Pannaria* (most still maintained in *Psoroma* but soon to be transferred); *Nephroma cellulosum*; *Pseudocyphellaria ardesiaca* and *P. intricata*; and *Sticta fuliginosa*.

What this shows, I think, is that even very accessible habitats in New Zealand have considerable lichen rarities waiting to be discovered. The Routeburn does have some sort of tradition of lichen collecting, and the well-developed lichen communities to be found there would make an ideal thesis project utilising both ecology and systematics. We know these days a considerable amount about what lichens are, the next step is to find out just what they do in the landscapes they have evolved in. I have started a Routeburn lichen list and will deposit the lichens collected there in CHR and OTA.

Perhaps we should emulate the Du Rietzs and think about a lichen foray to the Routeburn.

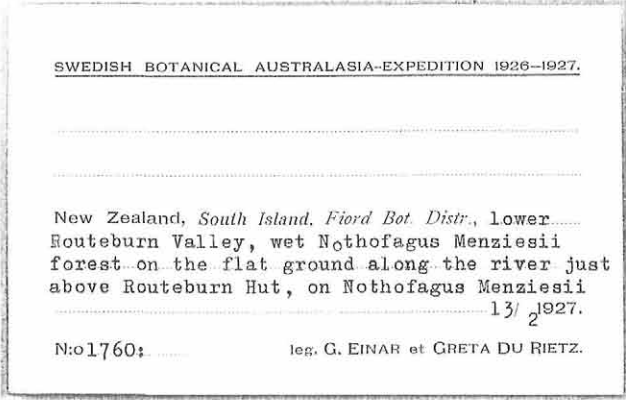
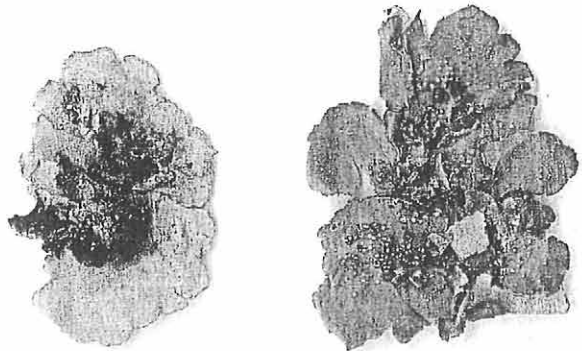


Fig 1. Printed label from the Du Rietz's 1927 Routeburn expedition, x 0.71

Fig 2. Photocopy of dried *Pseudocyphellaria mallota* from the February 2003 Routeburn collection., x 0.71



References

- Galloway, D.J. 1986: Non-glabrous species of *Pseudocyphellaria* from southern South America. *Lichenologist* 18 (2): 105-168.
- Galloway, D.J. 1988: Studies in *Pseudocyphellaria* (lichens) I. The New Zealand species. *Bulletin of the British Museum (Natural History)*, Botany 17: 1-267.
- Galloway, D.J. 1992: Studies in *Pseudocyphellaria* (lichens) III. The South American species. *Bibliotheca Lichenologica* 46: 1-275.
- Galloway, D.J., Stenroos, S. and Ferraro, L.I. 1995: Lichenes Peltigerales: Lobariaceae y Stictaceae. *Flora Criptogámica de Tierra del Fuego* 13 (6): 1-78.
- Irwin, J.E. 1968: Ground and epiphytic vegetation. *Science Record* 18: 52-55.
- Jørgensen, P.M. and Galloway, D.J. 1989: Studies in the lichen family Pannariaceae III. The genus *Fuscoderma*, with additional notes and a revised key to *Leioderma*. *Lichenologist* 21 (4): 295-301.
- McKenzie, D. 1973: *Road to Routeburn. The story of Kinloch, Lake Wakatipu*. John McIndoe, Dunedin.
- Westerskov, K. 1968: Science Survey. Routeburn Valley, May 18-25, 1968. *Science Record* 18: 45-46.

The diversity and importance of wetlands

Amelia McQueen, email amelia@zoomail.com

Wetlands conjure up thoughts of wet, dark, dank places with creepy insects, even snakes and crocodiles – let your imagination run wild! However if you look closely at the wetlands in your district, they are diverse places full of colour and texture, with beautiful, small intricate animals and plants. The 2nd of February was set aside to celebrate the importance and uniqueness of wetlands around the world, including New Zealand. How many of you took time on that day to explore bogs on Swampy or wander around the numerous estuaries on the Dunedin coastline? Here are some interesting facts about wetlands which you may not have known – read on!

What is a wetland?

Wetland or Mire is a broad term that covers many types of wetlands from bogs through to mangrove swamps. Differences between classification of wetland types is based on water level, acidity (pH), levels of nutrients and the quantity of accumulated peat. Bogs, such as the Borland Bog, are at one extreme end of the wetland spectrum. They are highly acidic with a pH range of 3-4 (vinegar has a pH close to 3), have very few nutrients (they receive all their nutrients from rain water) and accumulate enormous amounts of peat (a depth of 6-14 m of peat in some bogs). Swamps, such as the Sinclair Wetlands, are at the other extreme of the wetland spectrum. They generally have high water and nutrient levels (i.e. more productive systems than bogs), have a relatively high pH of 6-7 and don't accumulate peat.

Why are wetlands important?

Wetlands are important ecosystems that house a weird and wonderful array of plants and animals, some of which are only found in wetlands! Wetlands, particularly bogs, are the 'book keepers' of social and biological history and they are important components of water catchments, regulating water clarity and rate of water drainage.

Plants and animals of wetlands

Most of you will have come across pitcher plants and venus fly-traps - those neat plants which catch all those unwanted flies inside your house and can be entertainment for hours! Pitcher plants (*Sarracenia* spp. and *Darlingtonia californica*) come from North and South American bogs and Venus fly-traps (*Dionaea* sp.) are found only in bogs between North and South Carolina. These pitcher plants should not be mistaken with pitcher plant *vines* (*Nepenthes* spp.) that come from places such as South-east Asia, Madagascar and Australia. As you will recall bogs have very few nutrients so these plants have evolved a way of catching extra nutrients in the form of insects and even frogs! In New Zealand bogs there are similar 'insect catching' plants called sundews (*Drosera* spp.). These plants are usually identified as small red or green rosette plants with numerous sticky hairs. At the tip of each hair there is sticky droplet of digestive juice that helps to entrap and slowly digest small insects. Next time you happen to be wandering in a mossy damp area up on Swampy, have a closer look at the ground, as

you may see these small red glistening plants in amongst the mosses. Other wetlands, such as carrs and marshes⁶ are important habitats for some of New Zealand's endemic fish species and freshwater crayfish. Eels and freshwater crayfish lurk under banks and in pools. Native fishes, such as *Galaxias* (most commonly known by the juvenile form, white bait) swim in small creeks and mountain pools where the introduced trout and salmon are unable to reach. Some rare mudfish (*Neochanna* species) are only found in wetlands. A diverse range of moths, spiders, lizards and birds also inhabit or visit wetlands.

The 'book keepers' of history

Bogs accumulate peat over ten of thousands of years, at a rate of about 1-2 cm of peat per year. Radiocarbon dates of peat cores indicate that some bogs in the Waikato and in the South Island are extremely old. Some of these bogs were present at the end of the last glaciation in New Zealand, that is ~ 12000 years ago! As peat accumulates, pollen from plants, or dead animals such as moa are trapped in the layers of peat. The pollen and animal remains are preserved in the peat layers due to high acidity and low oxygen levels. In many cases only skin and hair of animals are preserved as the bones are eaten away by the acid within the peat. Pollen diagrams taken from peat cores can reveal what trees grew in a particular area and can indicate their disappearance due to climate change. Pollen from exotic grasses (e.g. *Agrostis capillaris* and *Anthoxanthum odoratum*) and trees (e.g. *Pinus radiata* and *Cupressus macrocarpa*), and increased levels of charcoal in peat cores also give some indication of when humans arrived in New Zealand. Other disturbances of bogs such as ploughing and drainage have also revealed numerous animal remains. Several species of the extinct moa, all with their skin and feathers intact, have been found trapped in peatlands in Canterbury. These peatlands have been re-flooded to help preserve the some of the moa remains. Many overseas examples of peat preservation have revealed some gruesome facts of European history. Tollund man and other 'bog' people that have been excavated from bogs are thought, in many cases, to have been subjects of hangings and executions, as some of the people had rope nooses around their necks or had bound hands.

The 'water filter' ecosystems

Wetlands are vital parts of water catchments, helping maintain water clarity and possibly reducing the potential of flood damage. Water run-off from surrounding land is filtered by wetland plants such as rushes, reeds and mosses which take out particles of soil and other debris that flow through them. Wetland sediments bind metals and some organic toxins, and thus remove them, or slow their circulation in the waterways. Wetlands can be a useful, natural solution to sewage waste systems, if created properly. Wetland plants also minimise soil erosion around creeks and small streams by forming thick vegetation cover and may help to slow the process of flooding, by slowing the velocity of water and soaking up water like a sponge.

⁶ Carrs and Marshes are wetlands that generally have creeks of slow flowing water and pools within them, are relatively nutrient rich in comparison to bogs, and often have plants such as flax (*Phormium tenax*), manuka (*Leptospermum scoparium*), Raupo (*Typha orientalis*), *Juncus* and *Carex* spp.

Respecting and appreciating your wetlands

Very few wetlands are left in New Zealand, less than 10% of the original area of wetlands that existed in New Zealand before people arrived. They are fragile ecosystems that have complex foodwebs and hydrology. We should respect and enjoy the wetlands we have left and stop further loss or damage. Take the time to celebrate the diversity of wetlands and their wildlife by taking a walk around some of the wetlands in your district.

If you want to find out more about wetlands, look up these recommended resources:

New Zealand Wetlands: www.doc.govt.nz/conservation/wetlands/index.asp

RAMSAR convention of wetlands: www.ramsar.org

Bodies of bogs: www.archaeology.org/online/features/bog/index.html

Wetland Plants in New Zealand, Peter N. Johnson and Pat A. Brooke. 1989.

DSIR publishing, Wellington.

Reports

The BSO/Botany BBQ

- Allison Knight

Brainchild of David Orlovich, the BBQ to welcome Botany students and new BSO members went off with a bang. Balloons popping in trees, flowers (optional) in the salad, sausages skilfully sizzled by Paul Guy, new Head of the Botany Department, and generous lashings of sauces and sunshine all combined to make it a serendipitously successful occasion. Wonderful to see botanists young and old chatting together so enthusiastically and harmoniously. Well done, David and Paul!

Field Trip Report

Botanizing up and over Mt Watkin/ Hikaroroa, Mar. 15. - Monica Peters

Mt Watkin/ Hikaroroa (616m) lies inland, marked by an unassuming road sign just before Cherry Farm some 40 km north of the city. It is described by Neville Peat (Wild Dunedin, 1995) as "... an oddity – a volcanic hill standing alone amidst a schist landscape..."

Led by Robyn Bridges and Allison Knight we (Frances Anderson, Mignon Pickwell, Rosalind Andrews, Pascale Michel, Chuck Landis, Scott Dunavan, Ian & Eve Radford, Nola Walker, John McBurney, Judy Russell and Monica Peters) set off at a pace that can only be described as leisurely - as is befitting of a group of people for whom the minute vegetative details of the landscape are of prime importance. Mt. Watkin provides a brief but valuable glimpse into the past, feeling much like a remnant part of a landscape substantially modified through farming.

Several species of *Aciphylla*, *A. subflabellata*, *A. glaucescens* and *A. aurea*, - some with last year's weather-bleached inflorescences, are scattered throughout the reserve. Waist high tussock, *Chionochoa rigida*, and *Poa cita* (previously *P. laevis*) are similarly distributed. In the grazed paddock that surrounds the reserve, a small handful of

Broadleaf seedlings, *Griselinia littoralis*, were discovered beneath a generous clump of gorse, well out of reach to browsing stock. A few others grow in patches amongst the rocks along with Kohulu, *Pittosporum tenuifolium*.

Although the fence that surrounds the reserve is, well, porous the broad swathes of basalt rock, by virtue of their near impassibility to stock at least, serve as protection for some notable species. Beginning a slow ascent, “combing” for details we were able to locate a few healthy plants of *Gingidia montana*, a variety of native aniseed. These unstable screes are coated with ancient communities of lichens, including the brown foliose *Pseudocyphellaria crocata*, the white crustose *Lecanora farinacea* with pinkish fruiting bodies, and, higher up, the related *L. rupicola* with greyish fruit. Both these lichens have a pruinose covering over their fruit – a fine crystalline layer which may offer some protection against browsing by invertebrates.

We found *Fuschia perscandens* scrambling across the loosely piled stones, leathery Hound’s tongue ferns, *Microsorium pustulatum* (*Phymatosorus diversifolius*) and glossy *Huperzia australiana* (*Lycopodium australianum*), ripe with yellow spore cases, as well as parched mosses. Of note were huge prone trunks of ancient Totara. Flax (*Phormium* spp.), is ubiquitous and 2 species of weedy *Hieracium* (*H. pilosella* and *H. lepidulum*) have begun to make in-roads. We paused for a while around a *Coprosma rugosa* with a rich horde of tiny globular fruit sitting just inside a dense network of branches. Through a powerful hand lens, the almost transparent fruit surface is speckled with minute grains of blue. A taste test reached the general consensus that they are really quite palatable. The summit of Mt. Watkin (which we eventually reached) is marked by a diminutive trig point from where the Waikouaiti and Karitane estuaries can be seen. The weather was benign to us – sunny with a light, warm wind. This combined with such a diverse group of (botanically-minded) people, made for a highly enjoyable and informative day.



Lichen covered rocks encircle Scott Dunavan as he examines the *Hieracium* spp gaining hold between the tussock and the *Aciphylla*. – Photo by Robyn Bridges

Meeting Reports

Kelvin Lloyd's "The Botanical Trampler" - Allison Knight

As guest speaker at our AGM in March, Kelvin Lloyd gave us even more than a superbly illustrated talk about the wild and wonderful places he has tramped, more even than the delightful tale of the little dog who wouldn't go home and followed for days over alpine passes. Most importantly, Kelvin showed us how any clued-up botanist who visits out-of-the-way places can, and should, usefully add to the still sketchy knowledge of plant distribution in this country, by keeping detailed records of plants seen, and by collecting herbarium specimens where appropriate. Thanks to Kelvin's efforts, the extended distributions of some of our less common native grasses such as the snow tussocks *Chionocholea acicularis* and *C. teretifolia*, now follow lines on the map suspiciously like the routes of Kelvins wanderings! A thoughtful, good humoured and provocative talk with a serious botanical message that didn't go unchallenged.

Adrienne Markey's "Walking with Western Australian Wildflowers" report by Ian Radford

As an Australian botanist-ecologist (at least in name) it has been my ambition for years to take a trip to see the western Australian wild flowers in spring. In fact the wild flowers are probably the only thing going for Western Australia from an eastern Australian standpoint! Leaving aside state rivalries, Western Australia is world renowned for its diversity of endemic wildflowers and is second only to fynbos heathland communities in South Africa in terms of species richness (in non-tropical rainforest communities). So it was with great anticipation that I approached the last Otago Botanical Society meeting to see Adrienne's talk, "Walking with Western Australian Wildflowers". And my anticipation was richly rewarded. My eyes were dazzled by the brilliant floral displays of *Grevillea* spp. and *Banksia* spp. and an assortment of other Proteaceous and Myrtaceous species and genera found only in this part of the world. It made me a bit home-sick I must admit (and not a little proud) to remember all those rich colours, and the distinct character of the Australian bush (which I hasten to add, before I get lynched, doesn't mean I don't appreciate the unique character of the New Zealand flora any the less). I was impressed with Adrienne's broad knowledge of the Western Australian flora across vast tracts of the state, from the far south right up into the Kimberley – certainly I cannot boast anything like this knowledge of the flora of NSW, my home state. Adrienne's talk so inspired many in the audience that she was asked to lead a Botanical Society tour of south western Western Australia ASAP. Although she didn't seem that keen (she said she had a thesis to write, or something) I'm sure if the price was right she might reconsider the offer! Anyway, all in all a wonderful snapshot of the harsh beauty of the West, and an impressive display from one of our young botanists.

Books

Meanings and origins of Botanical Names of New Zealand Plants

Marie Taylor (2002) \$27 incl post& packaging.

“This eagerly awaited book is now available! A little treasure trove of information, surprises and insights as to why plants carry the names they do. A must have for any keen botanist.”

Available from Auckland Botanical Society, c/- Kerry Bodmin, 24 Laingholm Drive, Laingholm. Ph 09 816 8291

-From the Auckland Botanical Society newsletter

<p>Correction: The above book is still good value at \$27, which is the correct price. Apologies for the typo, which gave the wrong price last issue – ed.</p>

Special Book deals for BSO members!

Wild Dunedin: Enjoying the Natural History of New Zealand's Wildlife Capital. Neville Peat & Brian Patrick. 144pp, RRP \$39.95

This wildly popular book has been reprinted. With a new, redesigned paperback cover and almost 200 colour photographs, *Wild Dunedin* is an example of that rare thing – an authoritative book enjoyed by the general reader. *Wild Dunedin* explores every corner of our gorgeous region, from the ocean to the high alpine zone of the inland ranges. It provides a comprehensive full-colour introduction to the area's geology, flora and fauna. – *From the flyer, and I can thoroughly recommend it, too –Ed.*

PS Otago University Press generously offered a 40% discount to BSO for a bulk purchase 10 or more copies for resale to members. If you ordered one it is available now for \$24 from the BSO secretary, Robyn Bridges, email robyn.bridges@stonebow.otago.ac.nz, ph 479 8244. She has one spare copy. First in, first served.

BSO Members Discount: Many botanical books, not just from Landcare, and including those published by CSIRO, Australia, are available from Manaaki Whenua Press, at 20% off, to BSO Members. This includes post and packing. If you are a member of BSO, say so when you order.

Email: MWPress@landcareresearch.co.nz (NOTE CHANGE of email address!!)

Online ordering website: <http://www.mwpress.co.nz>

Post: Manaaki Whenua Press, PO Box 40, Lincoln 8152, NZ.

Telephone: +64 3 325 6700, Fax +64 3 325 2127

Web Sites - Allison Knight

<http://linnaeus.nrm.se/botany/fbo/>__ Monica Peters has passed on this website from the Swedish Museum of Natural History, where the Linnaeus Herbarium has put online photos of 48 type specimens and 3523 sheets from the collections of Carl Linnaeus (1707 – 1778). Linnaeus introduced the current binomial system for naming plants and animals, validly publishing over 9,000 plant names! Other historical botanical collections accessible through this web site include Celsius' Flora Uplandica, Münchenberg's Herbarium Vivum, and the Swartz Herbarium, all in the Department of Phanerogamic* Botany, while the Department of Cryptogamic* Botany has put online Linnaeus' Cryptogams, Erik Acharius' Lichen types and Olof Swartz' Lichen types.

**See Botanical Definitions*

<http://www.nhm.ac.uk/botany/lichen/twig/> Lichens are extremely sensitive to pollution and are natural indicators of the health of our environment. This site, from the Botany Department of the Natural History Museum, London, provides much useful basic information on lichens as well as a user-friendly guide to over 60 lichens which can be found growing on twigs in the UK. Although not all the British species are the same as those here, there is still some overlap. *Lecanora carpinea*, for instance, forms a white crust which is very common on deciduous trees in Otago. The simple UK key is a good guide to common genera of lichens on twigs, and to the features which are most useful in keying them out. Coloured images of the keyed out species, which can be magnified, plus an illustrated glossary add to the usefulness of the site, which has inspired us to run a Lichens on Twigs Workshop in July.

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

Our web site now contains trip details, membership forms, contact details and links to other websites of Botanical interest. Check it out to see the fabulous fertile sphagnum picture and the changes David Orlovich has made.

Botanical definitions. From the *New Shorter Oxford Dictionary*.

Phanerogam: Seed plant. From the archaic division Phanerogamia, which included the true flowering plants (**angiosperms**) and the non-flowering seed plants (**gymnosperms**), such as conifers, cycads and ginkgos.



Cryptogam: Any plant from the old Linnaean division Cryptogamia, which covered all the rest of the non-flowering plants, including, **ferns, mosses, liverworts, lichens, algae and fungi.**



News

BSO submission on proposed Mt Watkin/Hikaroroa Reserve

Robyn Bridges & Allison Knight

Our recent field trip to Mt Watkin (p13) was a delight – seldom-seen upland native plants, spectacular lichen-covered rock glaciers, and fabulous views of rural North Otago. We looked down from the tussock grassland and shrubland into the forested gully of the north branch of the Waikouaiti, which is still home to the stately podocarps such as kahikatea, matai, rimu, and totara that used to clothe this land. A herd of goats came out to browse the shrubs at the foot of the peak and we were very disturbed to realise that these irreplaceable remnants of once-widespread indigenous vegetation had no protection from browsing by wild or domestic animals. No wonder the *Gingidia montana* has retreated to the least accessible rock crevices. Another concern was that we found 2 species of invasive *Hieracium* that were becoming established amongst the native tussock grasses.

So when the Mt Watkin Working Party invited us to their next meeting we went to find out more. The area has an interesting history. The local Maori called the imposing volcanic plug Hikaroroa, and regarded it as their sentinel. In 1894 approximately 2000 acres of land at Mt Watkin was set aside by an Act of Parliament as endowment land for recreational purposes in the then Hawkesbury district. Around 1913 more than half the original endowment was partitioned off for farming, leaving 900 acres, which were subject to a rolling farm lease. Now only 500 acres are left with the original native vegetation.

As far back as 1986 a report from the Botany Division of DSIR recommended protection of the indigenous vegetation. It noted that it included the best and largest of the very few remaining examples of podocarp forest in all of coastal Otago today. Since then numerous groups have supported the call for a Mt Watkin Reserve, including the Department of Conservation, the Otago Tree Society, and the Geological Society of New Zealand. The Mt Watkin Working Party even commissioned a management report, with boundary agreements and estimates of fencing costs, which was prepared by Wildland Consultants at no cost to the Dunedin City Council, who now manage what is left of the Mt Watkin endowment land. This year the council has responded by commissioning another vegetation report.

When we reported back to the last BSO committee meeting we were urged to put in a submission to the LTCCP Annual Plan, and to speak to it, which we did. You may have seen the report by Allison Rudd in the Otago Daily Times, 16 May. She thought it was such an important issue that it should be followed up with a full-page feature in the ODT. We think it is important, too. There are many features at Mt Watkin that are rare, vulnerable and irreplaceable, and if we sit back and do nothing they may continue to be eroded away. So we hope that you, the members, will support us in pressing for the Council to act rapidly towards forming a reserve to protect what is left of the indigenous vegetation at Mt Watkin before it disappears altogether.

Please, write letters, talk to people and groups, and let us know if you have any additional information that could be used in the feature page or by the Mt Watkin Working Party. For instance, are there native invertebrates that are important for pollination, and native birds essential for seed germination or transport? A full copy of our submission is on the BSO noticeboard and our web page. You can get more information from Robyn or Allison, contact details inside back page.



Ian Radford and Allison Knight enjoy helping Eve clamber up a lichen covered rock glacier towards the top of Mt Watkin.



View from the upper slopes of Mt Watkin down a vegetation gradient from upland tussock grassland through native shrubland to lowland forest.

Photos by Robyn Bridges

BSO Prizes

Plant names prize to Graeme Jane

Congratulations to Graeme Jane, of Tauranga, who was the only person who managed to fully update the Botanical names for the *Metrosidreos* paintings by Robert Donn, which were featured in the article by Mary Anne Miller in the last newsletter. It was a tricky challenge, because *Metrosideros scandens* has been used in the past for two different climbing ratas. None of those who came in to the herbarium to consult conventional sources found all the answers.

Graeme, of course, had all the information at his fingertips, and found it amazingly rapidly using his updated electronic botanical names program (or HTML version of the Flora). What a shame we can no longer use it in the Herbarium. However the New Zealand Plant Names Database <http://nzflora.LandcareResearch.co.nz/>, is providing an increasingly useful service as a single, quotable reference source for New Zealand plant names. Graeme wins a year's subscription to our newsletter.

Donn's 1921 names

Pohutukawa

Metrosideros tomentosa

Three species of Rata

Metrosideros hypericifolia

Cunningham 1839

M lucida

(Forst.) A. Rich 1832

M scandens

(JR & G Forster) Druce 1917

M scandens

Solander ex Gaertn. 1788

Current names

Metrosideros excelsa Sol. ex Gaertn,
New Zealand Christmas tree.

Metrosideros diffusa (G. Forst.) Smith 1797
white rata

M. umbellata Cav,
Southern rata

M. fulgens Sol. ex Gaertn.
vine rata, scarlet rata

M perforata (J.R. Forst. & G. Forst.) A. Rich. 1832
clinging rata, small white rata

Audrey Eagle Prize for Botanical Drawing

The Botanical Society of Otago is pleased to announce that Audrey Eagle has agreed in principle to our institution of a prize for the best botanical drawing submitted for publication in the BSO Newsletter. As most of you will know, Audrey is illustrator and author of the two much prized volumes of *Eagle's Trees and Shrubs of New Zealand*.

At present she is revising her first two books. These will then be incorporated with her recent work of 190 new illustrations into two new volumes, organised by genus. We are delighted to be able to acknowledge Audrey's contribution to botany in a way that will encourage others to share their talent in botanical drawing. At the moment this is just a broad concept. Audrey suggests that the prize be awarded annually at our AGM. We would welcome feedback and suggestions as to the form the award should take, and of course we would welcome lots of entries. To help you on your way, Monica Peters, in

conjunction with the Cleveland Living Arts Centre, is organising a Workshop on Botanical Illustration on June 8. Don't miss this opportunity to improve your skills.

Exodus to Africa

John Steel, whose articles and book reviews have been a much appreciated feature of this newsletter, is moving to Botswana next month. We wish him well, and look forward to botanical correspondence from abroad.

Good wishes also to **Alan Mark**, as he gets on his feet again after a double hip replacement. Next stop is Durban, South Africa, where Alan and **Kath Dickinson** are presenting a poster at the International Rangeland Congress on *Contemporary issues in New Zealand rangelands* in July. Then he hopes to catch up with John Steel in Botswana, before going back to Durban to present a paper at the World Parks Congress on *The conservation status of New Zealand's indigenous grasslands* in September.

New Zealand Plant Conservation Network Established –

forwarded by *Kath Dickinson*

The New Zealand Plant Conservation Network is now incorporated. The chairman is Mike Oates, Wellington City Council. The vision of the network is

"that no indigenous species of plant will become extinct nor be placed at risk of extinction as a result of human action or indifference, and that the rich, diverse and unique plant life of New Zealand will be recognised, cherished and restored".

An inaugural meeting of the Network will be held at Te Papa Tongarewa in Wellington on Saturday 2nd August 2003. More details on BSO noticeboard or from: Mike Oates (Michael.oates@wcc.govt.nz), John Sawyer (jsawyer@doc.govt.nz), Tim Park (tpark@qc2natrtrust.org.nz) or New Zealand Plant Conservation Network, PO Box 16-102, Wellington South, New Zealand.

Botanical Diary

Conserving Native Plants for the 22nd Century, 7 June 2003 Canterbury Botanical Society 50th Anniversary Programme

The symposium covers native plant species, communities and habitats, with an emphasis on Canterbury and Westland. The papers are forward-looking reviews rather than accounts of research in progress, and are pitched at a level that attracts the interest of Botanical Society members, scientists, conservation managers, and others with a concern for native plants.

8.30: Registration , 9.00-9.10: Introduction by the president Neil O'Brien*

Session 1 9.10-10.00 : **Conservation in the cultural landscape**; chair Colin Burrows*
(University of Canterbury)

Re-establishing native plant communities from scratch; lessons from Matawai Park, Rangiora (Geoff Henderson*, Matawai Park Advisory Group Member, Rangiora)

QE II covenants – protecting open space values on private land (Miles Giller*, QE II Regional Representative, lowland Canterbury)

Session 2 10.30-12.05: Restoring and enhancing native vegetation; chair Brian Molloy* (Landcare Research, QE II Trust)

Nature not Nurture; minimal interference management and forest restoration on Hinewai Reserve, Banks Peninsula. (Hugh Wilson*, Hinewai Reserve, Banks Peninsula)

Canterbury kettles and other ephemeral wetlands: collection centres for native plant diversity (Peter Johnson, Landcare Research, Dunedin)

Restoring indigenous biodiversity in the eastern South Island rainshadow zone. (Susan Walker, Landcare Research, Dunedin)

Long-term changes, including the invasion of introduced plant species, in a Canterbury alpine grassland: 1960-2000 (Claire Newell*, Landcare Research, Christchurch)

Session 3 1.10-2.45: Biology and management; chair David Given* (Lincoln University)

Weeds in Canterbury landscapes (Peter Williams, Landcare Research, Private bag 6, Nelson; Helen Braithwaite, Department of Conservation Private bag 4715, Christchurch)

A taxonomic perspective on what we are trying to preserve (Peter Heenan*, Landcare Research, Lincoln)

Is inter-dependence of native fauna and flora an issue for future survival of native plants; e.g. with regard to pollination and dispersal (Dave Kelly*, University of Canterbury)

Some practical issues for conservation of vegetation and its component species (Colin Meurk*, Landcare Research, Christchurch)

Session 4 3.15-5.10: Pathways and prospects; chair (Margaret Austin*, Chancellor Lincoln University)

Conservation and Maori aspirations (Murray Parsons*, 242a Main Road, Moncks Bay, Christchurch).

Work undertaken by the Christchurch City Council's Port Hills Ranger Service to coordinate quality habitats through promoting community involvement, education and prioritised management. (Di Carter*, Port Hills Ranger Service, Christchurch City Council)

The Department of Conservation; Roles, Responsibilities and Results (Harry Broad, Manager, Strategic Issues, Department of Conservation, Wellington)

Conservation and You – the role of the individual in conservation in the 21st Century (Judith Roper-Lindsay*, Ecologist/Principal, Boffa Miskell Ltd., Christchurch)

Summing up 5.10-5.30. (Bill Lee, Landcare Research, Dunedin)

5. 45 p.m. AGM of Canterbury Botanical society in Room A3

8. 00 p.m. 50th Anniversary Dinner, Hoon Hay 88 (20 Tankerville Rd Hillmorton)

*Member of the Canterbury Botanical Society

For further information email Peter Wardle: wardlep@paradise.net.nz

botanical illustration workshop

Sunday June 8, 10am – 5pm

Cleveland Living Arts Centre

Dunedin Railway Station

22 Anzac Ave

Ph 477 7291



This workshop is aimed at people who are curious about plants and want to learn a variety of ways to create good quality representations.

Technical aspects of the workshop will include pictorial composition, scale, creating 3-dimensionality, texture and form. I will bring a wide range of source books featuring everything from contemporary NZ illustrators to Japanese watercolours to Victorian travellers... to provide both inspiration, as well as create an historical/ cultural context for this very broad subject.

This workshop will structured to suit participants' aims; some may want to produce a series of sketches that experiment with a variety of different techniques and styles while others may want to focus on producing one finished work.

Materials:

Basic materials will be supplied (white cartridge paper, spray fix, rubbers, pencils) so please bring any specialist items you will need e.g. watercolours, brushes and watercolour or other heavier weight papers, technical pens and so forth. A hand lens is useful if you have one.

Please also bring a plant to draw!

Course fee is \$55

For more information contact the Cleveland Centre

Or Monica Peters, email: map_monica@hotmail.com

Lichens on Twigs Workshop, with Jennifer Bannister and Allison Knight.

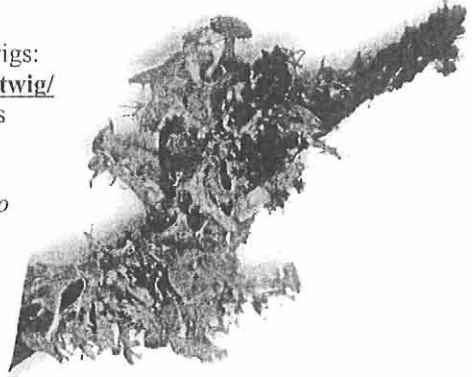
26 July, Saturday 10 am- 4pm. Department of Botany, 464 Great King St

Leaves are falling and wind is blowing, exposing and dropping twigs. Lichens growing on the newly exposed bark of twigs are good environmental monitors. We thought it would be interesting to get an indication of what is growing on twigs in our area, and then talk about the possibility of a distribution map.

Do start collecting interesting twigs you come across now. Please note where you found them and what tree or shrub they are from. Air-dry them and store them in a dry place (or in the freezer if you want to slow the browsing by invertebrates). **Bring:** lichens on twigs, hand lens, and lunch. Microscopes, and laboratory space are generously made available by the Department of Botany, tea and coffee will be supplied by BSO.

Related reading

Try the British website on lichens on twigs:
<http://www.nhm.ac.uk/botany/lichen/twig/>
(see website review) for interactive keys and some useful basic information.
For common New Zealand species, see:
Lichens on Trees; Identification guide to common lichens and plants on urban and rural trees in New Zealand,
by PN Johnson and DJ Galloway,
Landcare Research, Dunedin, 1999.



Australasian Events

Melbourne, 29 Sept - 3 October 2003. A joint conference of the **Australian Systematic Botany Society** and the **Australasian Mycological Society** with the **7th Australasian Bryophyte Workshop** and the **Orchid Conservation Forum II**. Email: bhewitt@unimelb.edu.au. Register online at: www.conferences.unimelb.edu.au/150years. Flyer on BSO noticeboard.

19th John Child Bryophyte Workshop, 11-16 Sept, 2003. Hunua Ranges, Auckland

The Hunua Ranges, 50 km SE of Auckland, rise to 688 m and are a water catchment area. Major vegetation types are podocarp/broadleaf forest, with some kauri (*Agathis australis*), and small areas dominated by hard beech (*Nothofagus truncata*). There are also some areas of second growth forest dominated by kanuka (*Kunzea ericoides*). In addition an excursion is planned to swamp land to the south. **All levels of expertise welcome, including beginners**, who might like to know that bryophyte is a general term which includes mosses, liverworts and hornworts. The workshop will run from evening of Thursday 11th September to morning of Tuesday 16th September. It will be held at Kokako Lodge at Hunua Falls in the Hunua-Ranges, less than an hour's drive south east of Auckland City. Transport will be arranged from Auckland airport. Accommodation is in bunkrooms. A great chance for southern botanists to enjoy 4 days in the beautiful northern NZ forests and swamps, and learn more about the smaller plants. For further information, or to be placed on the list to receive the first circular, contact Mei Nee Lee:

Botany Dept. Auckland Museum, Private Bag 92018, Auckland, New Zealand.

Email: Meineel@akmuseum.org.nz

Local events: BSO events in boxes, extra details on front cover & inside

14 May, Dept of Botany seminar. Do stable isotopes tell us anything about species distribution in relation to climate? A test using two species widespread in New Zealand: *Leptospermum scoparium* (manuka) and *Ramalina celastri*, a fruticose lichen

Professor Peter Bannister, Botany Department, University of Otago

21 May, Wed 12 noon. Dept of Botany seminar Does size matter? Vegetation and plant diversity in fragments of indigenous forests in eastern Otago

Ralf Ohlemueller, Botany Department, University of Otago

28 May, Wed 5.30 pm, Dr Steve L Stephenson, Fairmont State College, USA, on “Special microhabitats for myxomycetes in terrestrial ecosystems” a slide show on the special places slime moulds occur from arctic tundra to tropical forests. Zoology Annexe Seminar Room. Drinks & nibbles. Gold coin donation towards costs. Dinner afterwards, at a venue to be decided on the night.

28 May, Wed 12 noon. Dept of Botany seminar. Brownfields to green forests: phytoremediation of soil contaminants using short rotation forestry in the United Kingdom

Chris French, Biological and Earth Sciences, Liverpool John Moores University and The University of Liverpool, Liverpool, United Kingdom

4 June, Wed. 12 noon. Combined BSO/Department of Botany Seminar. Israel – Land of Extremes

Barbara Wheeler, Collections Supervisor, Dunedin Botanic Garden

8 June, Sunday, 10 am-5pm. Botanical Illustration Workshop. Led by Monica Peters, in conjunction with the Cleveland Living Arts Centre at the Dunedin Railway Station.

26 July, Sat 10 am- 4pm. Lichens on twigs workshop, Dept of Botany, 464 Great King St.

University of Otago Mid Year break 9 June – 11 July

Ramalina celastri, a common twig lichen, which grows in cleaner air around Dunedin. -from *Lichens on Trees; Identification guide to common lichens and plants on urban and rural trees in New Zealand*, by PN Johnson and DJ Galloway, Landcare Research, Dunedin, 1999.

1 mm



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, in the Zoology Dept Seminar Room, (NOTE CHANGED VENUE) Great King St. Their field trips leave from the Citibus Depot, Princes St. Visitors are welcome. **Contact: Beth Bain, President, 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, 9am, Saturday. **Secretary: Paul Star 478 0315**

Friends of the Botanic Garden meet on the third Wednesday of the month at 7.30 pm in the Education Centre, Lovelock Ave. **Secretary: Mrs Betty Wolf, 488 1550**

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 Caren Shrubshall, DOC: Ph 474 6932, or Steve Broni, email: sbroni@doc.govt.nz**

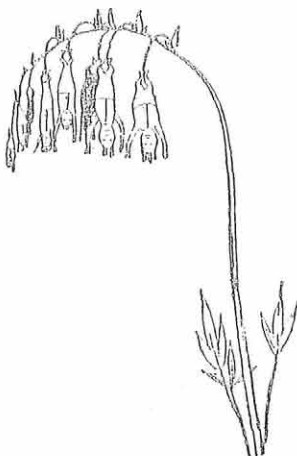
Otago Institute (OI) contact: **Michelle McConnell, secretary, phone 479 5729, email: michelle.mcconnell@stonebow.otago.ac.nz . Web site: <http://otagoinsitute.otago.ac.nz/>**

Southland Natural History Field Club. Meetings 7.30pm on the second Thursday of the month, currently at the Otatarā 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**

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

Manypeepia upsilonina
from Edward Lear's
Nonsense Botany



Botanical Society of Otago: whom to contact

Our new mailing address is:

Botanical Society of Otago, PO Box 6214, Dunedin North, New Zealand

For membership enquiries, email the **chairman, David Orlovich**,
david.orlovich@botany.otago.ac.nz, ph 479 9060, or **treasurer** or **secretary**, below:

For media, publicity or event enquiries, email the **secretary**:

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

To suggest or send newsletter items, email the newsletter editor:

Allison Knight, *bso@botany.otago.ac.nz*, ph 487 8265

To suggest or offer trip ideas or speakers for our monthly activities, email any of the above, or one of the other **committee members**:

Treasurer, **Frances Anderson**, *francesa@es.co.nz*,

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

Kelvin Lloyd, *lloydk@landcareResearch.co.nz*;

John Barkla, *jbarkla@doc.govt.nz* or **Bastow Wilson**, *bastow@otago.ac.nz*

For information on activities contact the trip leader or see our notice board.

This Newsletter was published on 20 May 2003. ISSN 0113-0854

Please submit copy for next newsletter by end of June 2003

Membership form: Botanical Society of Otago, 2003

Title: _____

Name: _____

Mailing Address
(work or home) _____

E-mail address:

Phone: work () _____ home () _____

Annual Subscriptions are due by the beginning of each calendar year.

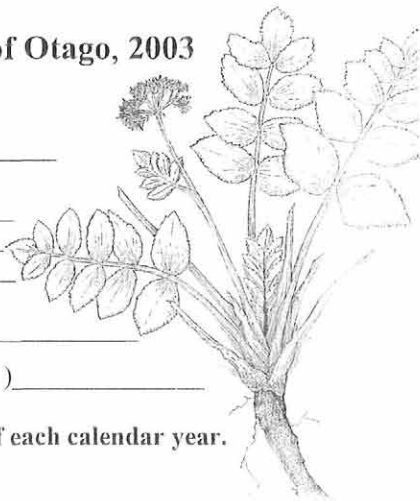
Only \$5 Student (unwaged), [\$ 20 for 5 years]

\$15 Waged (salary) [\$60 for 5 years], _____


\$20 Family (2 adults + children) [\$80 for 5 years]

Donations are welcomed

Cheques to: "Botanical Society of Otago". **Post** to: Treasurer, BSO,
P.O. Box 6214, Dunedin North, New Zealand



BOTANY DEPARTMENT
UNIVERSITY OF OTAGO

Permit Post 
NEW ZEALAND
PERMIT No. 1007

John Barkla
26 Larkins Street
Dunedin
New Zealand

[2001 : Family]

