

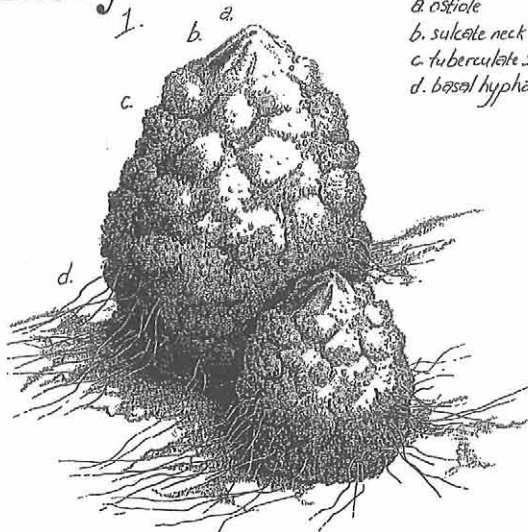
Botanical Society of Otago Newsletter

Number 47
February 2006

BSO Meetings and Field Trips

Cercophora ambigua

1. Perithecia
& ostiole
b. sulcate neck
c. tuberculate surface
d. basal hyphae



12 February, Wed 5.20 pm Mike Thorsen DOC: *Flora of Macraes and potential skink/plant interactions in a changing environment.* Flora surveys of the Macraes area has shown a surprising diversity of plant species and a high number of threatened plant species. This talk introduces some of the unusual species found at Macraes and discusses how the vegetation in this area has changed in the past, how it continues to change, and how this change could impact on the population of grand and Otago skink found there. At the 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, and seats fill fast.

6 February, SUNDAY, 9.30 am. John Barkla will lead a field trip to **Guilds Hill** near **Seacliff, Warrington**. Seacliff Scenic Reserve comprises three discrete indigenous forest remnants near the Truby King Reserve. One of these, Guilds Hill, has a distinctive coastal forest element that includes the uncommon fragrant tree daisy, fierce lancewood and at least two species of mistletoe, one of which is hemi-parasitic on the other! The hilltop provides a great view to the south and a lunch spot. Prior to its reservation the forest had a checkered history and suffered a partial forest collapse. A number of serious weedy lianes and shrubs have subsequently established and some grazing still occurs. Come along and give your views on management options. Leave Botany carpark at 9.30 am Sunday and return early to mid afternoon. Bring lunch and be prepared for untracked walking and muddy conditions.
Contact: John Barkla, phone: (03) 476 3686.

March, Friday 12 – 2 pm Start of semester FREE BBQ Yes, there is such a thing as a free lunch! A BBQ to welcome new botany/ecology students and new BSO members. At the front lawn, Botany House Annex, Great King Street (across the road from the

main Botany building). Sausage sandwiches and drinks provided free by the Botanical Society of Otago. All BSO members and intending members welcome! Contact David Orlovich, phone: (03) 479 9060.

15 March, Wed 5.20 pm Fish, frustules, fungi, flowers and foliage: an investigation into the biota of an Early Miocene maar lake and its surrounding forest.

A talk by **Jennifer Bannister**. About 20 million years ago a volcanic eruption near Middlemarch, formed a crater in the schist that filled with water. This type of lake is known as a maar. Sediment gradually built up on the lake floor, mainly the valves (frustules) of diatoms, where over time a finely varved diatomite formed. A forest grew up around the lake and leaves, flowers and fruits fell or were blown into the lake, sank on to the sediment and were preserved. We are trying to identify the leaves from their cuticles to build up a picture of the type of vegetation that grew there. We already have a pollen list although this is incomplete. Venue details above and below.

18 March, Saturday, 9 am – 3pm. Akatore is a remnant of diverse coastal shrubland at the mouth of Akatore Creek 45 minutes south of Dunedin. Some special features of this site include the diversity of shrub species and threatened species such as *Coprosma obconica*, *Olearia fragrantissima*, and *Carex littorosa* with the possibility of our discovering other threatened species. We'll also visit the adjacent coast where the threatened cress *Lepidium tenuicaule* is present as well as *Myosotis pygmaea*. Leader; **Mike Thorsen**. Meet Botany Car Park.

5 April, Wed 5.20 pm AGM, talk and DVD. A short AGM will be followed by an introductory talk by Emeritus Professor **Peter Bannister** on *Mistletoes*. Then we'll see a special screening of a DVD entitled *Exhuming Adams; a forensic investigation into the mysterious disappearance of a native mistletoe*, by Brant Backlund and Thassilo Franke from last year's Natural History Film Making Course. Venue details above and below.

29 April, Saturday 8.30 am. Field trip to **Nenthorn**, inland from Palmerston, with John Barkla The DOC reserve at Nenthorn/Macraes is best known as a site for rare skink conservation but there is also great botanical diversity, including over 25 threatened plants. It's a landscape of rolling tussockland dotted with lichen encrusted schist rock outcrops, shallow ephemeral wetlands, and the odd deep gully with shrubby remnants. We'll seek out some of the less familiar species and should encounter coral broom, wetland herbs such as *Gratiola nana* and *Tetrachondra hamiltonii*, and the rare grass *Simplicia laxa*. Leave Botany carpark at 8.30 am Saturday and return late afternoon. Bring lunch and be prepared for cool changeable weather conditions. Queries to John Barkla ph. 476 3686.

24 May, Wednesday 5.20 pm. A magnificent obsession: the botanical life and legacy of Tony Druce A talk by **Geoff Rogers**. An account of the wit, wisdom, mentoring role, and scientific achievements of a great New Zealand botanist. Venue as before.

27 May, Saturday 9 am. **Fungal Foray to Orokonui** A fungal foray led by **David Orlovich** to Orokonui Reserve. Note this trip will run subject to DoC approval. Bring hand lens, a basket or bag for collecting fungi, greaseproof paper (for wrapping specimens in the field) and a camera if you have one. Leave 9 AM from the Botany Dept carpark or 9:15 AM at the Orokonui carpark. We will aim to collect in the morning, and then return to the Department of Botany to record and dry the collections we make for the herbarium, finishing by 4 pm. In case of really bad weather, we will go on Sunday 28th May instead. Contact David Orlovich, phone: (03) 479 9060 (daytime).

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. Talks usually finish around 6.30 pm, keen discussion might continue till 7 pm.*

NEW 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). 50% student discount now available on trips over 100 km. (see Treasurer's report). **Please contact the trip leader before Friday for trips with special transport, and by Wednesday for weekend trips.** 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: <http://www.botany.otago.ac.nz/bsol/>

Cover Pictures

Front cover.

Cercophora ambigua, a common wood-rotting fungus.

Drawn by Toni Atkinson, first prize winner in the 2005 BSO Audrey Eagle Botanical Drawing competition. More details in the Original Art feature.

Back cover

Pollen grains of pepper tree, *Pseudowintera colorata*, awaiting release from the anther. Scanning Electron Micrograph. – *Mary Anne Miller*

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President's notes

David Orlovich

Hello BSO members. Happy New Year! I hope you had a great Christmas and New Year break. Our calendar of trips, talks and social events is getting off to a busy start with several events coming up very soon. Check out the first few pages of this newsletter, or the web site, for details of Mike Thorsen's talk on Macraes on Feb 22, John Barkla's trip to Guilds Hill on Feb 26, and our annual free BBQ on March 3. You'll see that the committee have managed to get together a great program of events right up till May, so there is plenty to do, and I hope you'll be able to attend as many of these events as possible. With the AGM coming up on April 5, now is a good time to start thinking about whether you would like to contribute to the running of the BSO by joining the committee. If you are interested in being involved, let any of the committee members know (their contact details are at the end of the newsletter, and on the web site). Finally, welcome to all new members! At the start of the year, we often see new University students joining, and I hope you find the events we have planned are thoroughly enjoyable. If you have any suggestions for events that you would like to do, then don't hesitate to suggest them to any of the committee members.

Treasurer's Notes

Lyn Bentley

Good News and a Reminder

The good news is that if you pay your subscription now it will cover right through to the AGM in April 2007. The other good news is that 50% travel subsidies on trips over 100 km are available for student members.

Editor's notes

Allison Knight

Here's Newsletter 47, kicking off activities and articles for 2006. Notable are the impressive contributions from the DOC botanists, who take an active role on committee, lead *inspiring trips* and write *informative articles*! Thanks, John and Mike! We are also very fortunate to have input from academic botanists, as well as a broad range of interested members, leading to a very lively group. This issue is notable for two expert plant lists, one for the 'Crater' area, the other of liverworts in Fiordland. It feels extra good to publish these, knowing that moves are afoot, through both the NZ Biodiversity Network, and the NZ Plant Conservation Network, to database such lists and make them widely available on the web, so that any member can refer to them, and even add to them. What a difference that will make to our knowledge of the changing distributions of plants, especially the 'forgotten flora' of liverworts, mosses and lichens, and what added incentive it will give us all to make comprehensive plant lists on field trips, knowing that it is adding to national

information. Also notable in this issue is the high standard of original art and photography. Wonderful to see.

Editor's guidelines Contributions are always welcome, but newsletter space is a little limited. Please note these 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, including illustrations, for botanical notes. Original articles, if they are exceptionally relevant, could stretch to 4 or 5 pages of 14 pt, including illustrations.

Please submit copy for next newsletter by 10 January 2006

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.*

New Zealand falcon perched on lichen-encrusted schist outcrop. Late snow banks, Rock and Pillar Range, in the background. - *Janet Ledingham*



Wedding, Request, Art Prize, and Beans

Invitation to Bastow and Raewyn's Wedding

Bastow Wilson and Raewyn Stedman are to be married on 25 February 2006. This is an open wedding: anyone is welcome.

The details are: Nuptial Mass (Wedding and Eucharist) at St Peter's Anglican Church, cnr Hillside Rd and Baker St, Caversham, Dunedin. 25 February 2006, 11:00 am.

There will be tea and cake afterwards in the church hall (either bring a plate of finger food to share, or don't because there's bound to be too much). There's no need to let us know: just come along if you want. We've bought a big packet of tea, and if there are hordes we'll just cut the cake into smaller bits. No presents please: we already have two households full of cats and stuff.

Any questions to Bastow@bastow.ac.nz, 4 739 300 (Bastow), or 4 728 999 (Raewyn).

Visiting Botanists

Please excuse this intrusion, but I'd like to ask your assistance.

I am an avid amateur botanist who will be traveling in New Zealand during March and April of this year, along with my wife (equally avid, but less technically inclined) and our son (in his late thirties, interested and indulgent of his parents' interest). While there we would be very interested in contacting anyone who shares an interest in native plants and attending any programs or hikes with native plant themes.

I have been active working with governmental organizations in my part of the US, doing inventories and mapping of rare, threatened and endangered species. I became interested in the fynbos flora of South Africa and as a result contacted university botany departments there to ask assistance in finding someone or some organization that could serve as a guide when I visited the region. As a result, my wife and I have become friends with a delightful professional botanist there and have made two extended trips to the area. It is this experience that leads me to hope that I can make similar contacts in New Zealand.

I would appreciate any help you could offer, including people or organizations to contact, field guides, and locations to visit. We now plan to spend most of March on the South Island, primarily in the Catlins and Fiordland, but are open to suggestion. We also plan a fortnight on the North Island.

Thank you for your consideration

Don Galloway

Darnestown, Maryland USA (Don & Judy Galloway, dandjgalloway@earthlink.net)

Margaret Flockton Award for Scientific Botanical Illustration

The Australian Botanic Gardens Trust is calling for entries for the 2006 Margaret Flockton Award for Scientific Botanical Illustration. The Award offers prize money totaling \$7000.

Details at: http://www.rbgsyd.gov.au/whats_new/margaretflocktonaward2006.

Entries for the 2006 Award close on Friday 26 May 2006.

Tony Martin

Resources Manager

Botanic Gardens Trust

National Herbarium of NSW

Mrs Macquaries Road

Sydney, NSW 2000 Australia

Telephone: 61 2 9231 8171

Mobile: 61 409 046 483

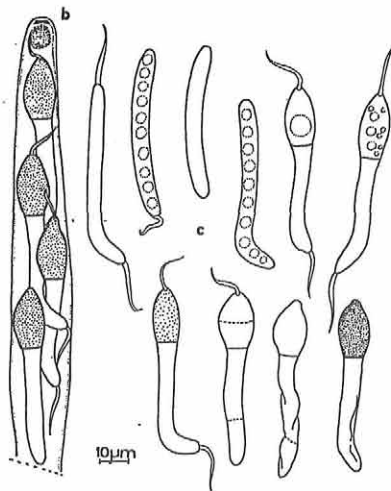
Facsimile: 61 2 9251 4403

email: tony.martin@rbgsyd.nsw.gov.au

Website: www.rbgsyd.nsw.gov.au

More Beans *Allison Knight*

So far this season – to the end of January - in Dunedin the progeny of Audrey Eagle's runner beans have varied somewhat in productivity. Audrey's, in sun and shelter at Macandrew Bay, take the prize with a whole bucket full. Mine, in rather shady shelter at Kew, have yielded enough for a large meal and Robyn's, at Sawyers Bay, enough for a small meal. Kelvin's, on the *Olearia* hedge in Pine Hill, were battered by the wind, while Lyn at Glenleith has flowers but no beans yet in her first year of planting. All the others I have spoken to have flowers with beans yet to come. It would be interesting to know where (and how) the most productive beans (in kg/plant) are grown, so I'd love to hear from all you prolific bean growers for the next newsletter.



Articles

THE *NEW* DEPARTMENT OF BOTANY RESEARCH BUILDING!

Mary Anne Miller

The rain held off but the champagne flowed as we welcomed the Vice-Chancellor, Professor David Skegg, on Friday 25th November 2005 to open the new research building – our first custom-built facility in 81 years. Since 1924, when the Reverend Dr John Holloway took on the role of Lecturer of Botany, there have been requests, some strongly worded, for new department facilities. There was a time in the early 1970s when the Department thought it would be moving from its “temporary” residence to occupy part of the Science III complex, but this was not to be. Recent acquisitions to the department archives include undated plans for a four storied establishment with links to the Landcare building on Cumberland St. Obviously another aborted attempt at re-housing us.

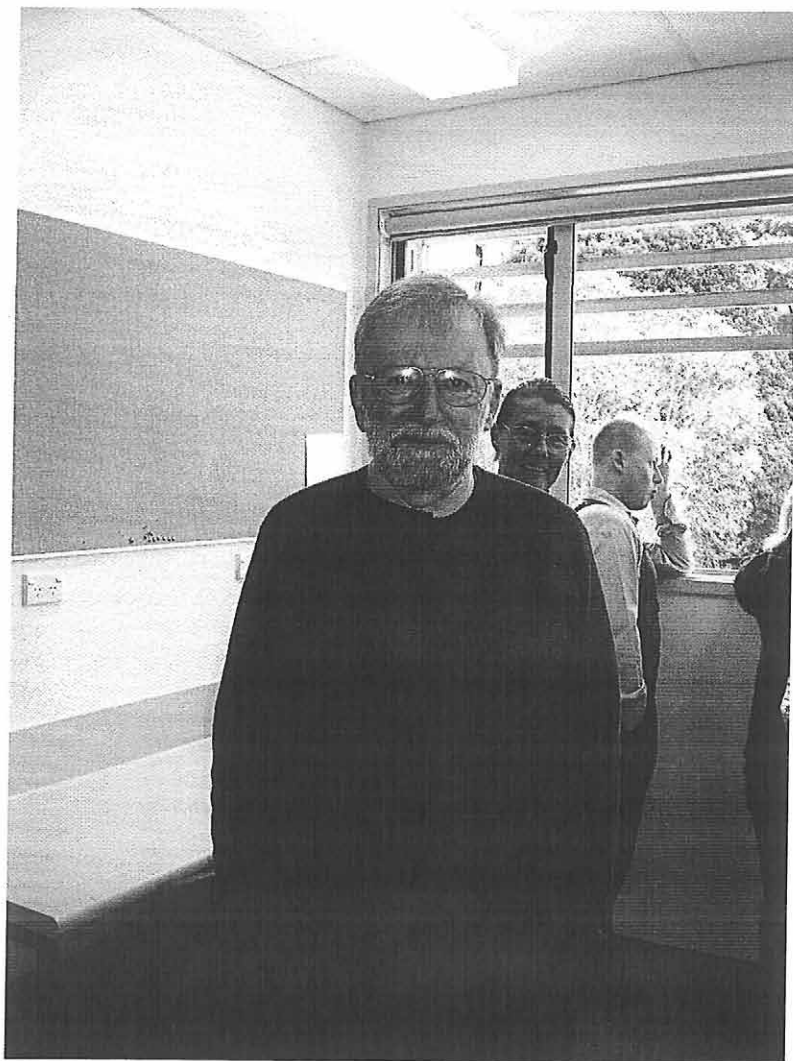
Finally in 2000 permission was granted to proceed with a dedicated research facility. Plans were drawn up and negotiations got underway with Otago Museum over exchange of land to make our building and their proposed Tropical House possible. Early in 2004 the site was cleared, which unfortunately meant the destruction of a garden first created by Holloway then later enhanced with Three Kings rarities by his successor Professor Geoff Baylis. However, the department gardens had expanded to other areas over the years so although plants were lost, space was not significantly reduced. Also demolished were Holloway’s original glasshouse and a World War II prefab hut.

The footprint was in place by October 2004 with Naylor Love responsible for constructing the Neil Ashby design. Foundations for both the Botany Research Building and Tropical House went down simultaneously and fortunately for Botany it was decided to go ahead with its construction first. There were some interesting moments when huge cranes lifted steel girders over the glasshouses onto the site and a few delays, mainly bad weather over last summer, but time was made up later so that the building was ready for occupation at the beginning of August 2005.

We now have an area under cover, the Interim Lab, where samples can be sorted and cleaned from the field. And while the downstairs Holloway Lab and smaller rooms are for ecological/physiological activities, such as current investigations on the function of red pigments in the New Zealand ice-plant *Disphyma australe* and carbon uptake mechanisms in seaweeds, the upstairs Baylis and Bannister Labs are dedicated to molecular biology. Projects underway include applying DNA fingerprinting to look at fungal diversity in *Hieracium* roots, West Coast forests species, wood rotting fungi and the alpine lichen *Thamnolia* as well as a search for gender markers in rimu and genetic delineation in the family Lobeliaceae. The adjacent microscopy room has so far accommodated research on fossil plants, slime moulds, and mites and crystals in plants. The three main labs, as you may have noted above, commemorate the

contribution to science of our first three Heads of Department. They were constructed to ERMA (Environmental Risk Management Authority) standards and HSNO (Hazardous Substances and New Organisms) Act 1996 regulations. We are very pleased with our new building but hope we don't have to wait another 80 years for further upgrades.

Emeritus Prof Peter Bannister in the new Bannister Laboratory - Mary Anne Miller



A Checklist of Liverworts and Hornworts, Fiordland National Park

Rodney Lewington

4 Highbury Crescent, Wellington 5, New Zealand. rodnevil@xtra.co.nz

The following pages give a checklist of liverworts and hornworts recorded for the geographic area now forming the Fiordland National Park, up until April 2005.

The boundary has been taken as it stood at the end of 2004. Most records can be unambiguously allocated to the Park. Where there was any doubt about the location they have been excluded.

This checklist has taken records from the main New Zealand herbaria and from a search of relevant literature. Data base searches were made of herbaria AK and WELT. Manual searches were made of the collections in OTA and CHR. No attempt was made to verify the identification of species.

The literature search was necessary as a number of species collected from the Park are deposited in overseas collections. The literature yielded records from collections by Archibald Menzies in 1791 through to those in publications available in February 2005.

Species names have been brought up to date following Hamlin 1972 and 1973, Glenny 1998 and subsequent literature.

A list of species that are likely to be in the Fiordland National Park but for which no record has been found is included.

With 4 new records from a field trip in April 2005 the list records 365 species in 120 genera. These represent approximately 60 and 77 percent respectively of the New Zealand flora.

The author would appreciate information on any other species recorded for this area. An Excel workbook showing the source/s of each record is available from the author.

Liverworts and hornworts recorded from the Fiordland National Park

*An asterisk indicates additions to the record collected from Breaksea Island in April 2005.

Acrobolbus cinerascens	Anastrophyllum schismoides
Acrobolbus lophocoleoides	<i>var.</i> crassulum
Acrochila biserialis	Anastrophyllum schismoides
Acromastigum anisostomum	<i>var.</i> schismoides
Acromastigum cavifolium	Andrewsianthus cuspidatus
Acromastigum colensoanum	Aneura <i>aff.</i> novoguineensis
Acromastigum cunninghamii	Aneura <i>aff.</i> pinguis
Acromastigum marginatum	Anthelia juratzkana
Acromastigum mooreanum	Anthoceros laminiferus
Allisonia cockaynei	Archilejeunea olivacea
Anastrophyllum novazelandiae	Asterella tenera

Austrolejeunea hispida
 Austrolejeunea olgae
 Austrometzgeria saccata
 Balantiopsis convexiuscula
 Balantiopsis diplophylla *var.* diplophylla
 Balantiopsis diplophylla *var.* hockenii
 Balantiopsis lingulata
 Balantiopsis montana
 Balantiopsis rosea
 Balantiopsis tumida
 Balantiopsis verrucosa
 Bazzania adnexa *var.* adnexa
 Bazzania hochstetteri
 Bazzania involuta *var.* involuta
 Bazzania involuta *var.* submutica
 Bazzania monilineris
 Bazzania nitida
 Bazzania novae-zelandiae
 Bazzania tayloriana
 Blepharidophyllum vertebrale
 Calypogeia sphagnicola
 Calypetrocolea falcata
 Calypetrocolea occlusa
 Cephalolobus hodgsonae
 Cephalolobus squarrosus
 Cephalomitron aterritum *var.* aterritum
 Cephalozia austrigena
 Cephalozia pachygyna
 Cephaloziella crassigyna
 Cephaloziella exigua
 Cephaloziella exiliflora
 Cephaloziella grandiretis
 Cephaloziella pseudocrassigyna
 Cephaloziella pulcherrima *subsp.*
 pulcherrima
 Cephaloziella rufobrunnea
 Chandonanthus squarrosus
 Cheilolejeunea albobirens
 Cheilolejeunea celata
 Cheilolejeunea mimosa*
 Chiloscypus austrigenus
 subsp. okaritanus
 Chiloscypus bispinosus
 Chiloscypus calcareus
 Chiloscypus chlorophyllus
 Chiloscypus echinellus
 Chiloscypus hattorii
 Chiloscypus helmsianus
 Chiloscypus herzogii
 Chiloscypus lentus
 Chiloscypus leucophyllus
 Chiloscypus mittenianus
 Chiloscypus multipennus
 Chiloscypus muricatus
 Chiloscypus novae-zeelandiae
 Chiloscypus pallidus
 Chiloscypus planiusculus
 Chiloscypus semiteres
 Chiloscypus spiniferus
 Chiloscypus subporosus
 var. inflexifolius
 Chiloscypus subporosus
 var. subporosus*
 Chiloscypus tuberculatus
 Chiloscypus variabilis
 Chiloscypus villosus
 Clandarium xiphophyllum
 Clasmatocolea crassiretis
 Clasmatocolea humilis *var.* humilis
 Clasmatocolea inflexispina
 Clasmatocolea notophylla
 Clasmatocolea strongylophylla
 Cololejeunea cucullifolia
 Cololejeunea laevigata
 Colura pulcherrima *var.* bartlettii
 Colura saccophylla
 Cryptochila acinacifolia
 Cryptochila grandiflora
 Cryptochila nigrescens
 Cryptochila pseudocclusa
 Cryptostipula inundata
 Dendromastigophora flagellifera
 Diplasiolejeunea plicatiloba
 Diplophyllum dioicum
 Diplophyllum domesticum
 var. domesticum
 Diplophyllum novum
 Diplophyllum verrucosum
 Drepanolejeunea aucklandica
 Echinolejeunea papillata
 Eoisotachis stephanii
 Eotrichocolea polyacantha
 Fossombronina *sp.*
 Frullania aterrita *var.* aterrita
 Frullania deplanata
 Frullania falciloba
 Frullania fugax
 Frullania incumbens

Frullania nicholsonii
 Frullania pycnantha
 Frullania rostrata
 Frullania scandens
 Gackstroemia *aff.* weindorferi
 Geocalyx caledonicus
 Goebeliella cornigera
 Goebelobryum unguiculatum
 Haplomitrium gibbsiae
 Haplomitrium ovalifolium
 Harpalejeunea latitans
 Hepatostolonophora paucistipula
 Hepatostolonophora rotata *var.* perssonii
 Hepatostolonophora rotata *var.* rotata
 Herbertus alpinus
 Herzogobryum teres
 Heteroscyphus allodontus
 Heteroscyphus ammophilus
 Heteroscyphus biciliatus
 Heteroscyphus billardierei
 Heteroscyphus circumdentatus
 Heteroscyphus coalitis
 Heteroscyphus compactus
 Heteroscyphus cuneistipulus
 Heteroscyphus cymbaliferus
 Heteroscyphus decipiens
 Heteroscyphus fissistipus
 Heteroscyphus lyallii
 Heteroscyphus menziesii
 Heteroscyphus mononucleus
 Heteroscyphus multispinus
 Heteroscyphus normalis
 Heteroscyphus physanthus
 Heteroscyphus polycladus
 Heteroscyphus sinuosus
 Heteroscyphus splendidus
 Heteroscyphus triacanthus
 Hyalolepidozia microphylla
 Hygrolembidium acrocladum
 Hygrolembidium australe
 Hygrolembidium rigidum
 Hymenophyton flabellatum
 Hymenophyton leptopodium
 Isophyllaria attenuata
 Isotachis intortifolia
 Isotachis lyallii
 Isotachis minima
 Isotachis montana
 Isotachis plicata
 Jamesoniella colorata
 Jamesoniella kirkii
 Jamesoniella monodon
 Jamesoniella tasmanica
 Jensenia connivens
 Jubulopsis novae-zelandiae
 Kurzia allisonii
 Kurzia calcarata
 Kurzia compacta
 Kurzia helophila *var.* flaccida
 Kurzia hippuroides *var.* hippuroides
 Kurzia tenax
 Kymatolejeunea bartlettii
 Lamellocolea granditexta
 Leiomitra lanata
 Lejeunea cyanophora
 Lejeunea flava
 Lembidium nutans
 Lepicolea attenuata
 Lepicolea scolopendra
 Lepidogyna hodgsoniae
 Lepidolaena clavigera
 Lepidolaena palpebrifolia
 Lepidolaena reticulata
 Lepidoleana taylorii
 Lepidozia bisbifida
 Lepidozia concinna
 Lepidozia glaucophylla
 Lepidozia kirkii
 Lepidozia laevifolia
 Lepidozia microphylla
 Lepidozia novae-zelandiae
 Lepidozia obtusiloba
 Lepidozia ornata
 Lepidozia pendulina
 Lepidozia procera
 Lepidozia pumila
 Lepidozia setigera
 Lepidozia spinosissima
 Lepidozia ulothrix
 Leptophyllopsis laxus
 Lethocolea pansa
 Lopholejeunea colensoi
 Marchantia berteroa
 Marchantia foliacea
 Marchantia pileata
 Marsupella sparsifolia *subsp.* childii
 Marsupella sprucei
 Marsupidium epiphytum

Marsupidium knightii
 Marsupidium perpusillum
 Marsupidium setulosum
 Marsupidium surculosum
 Megaceros denticulatus
 Megaceros giganeus
 Megaceros pellucidus
 Megalembidium insulanum
 Metahygrobiella drucei
 Metalejeunea cucullata
 Metzgeria alpina
 Metzgeria flavovirens*
 Metzgeria furcata
 Metzgeria leptoneura
 Metzgeria rigida
 Mnioloma fuscum
 Monoclea forsteri
 Neohodgsonia mirabilis
 Nephelolejeunea papillosa
 Nothogymnomitrium erosum
 Pachylossa tenacifolia
 Pachyschistochila altissima *subsp.*
 altissima
 Pachyschistochila berggrenii
 Pachyschistochila colensoana
 Pachyschistochila nivicola
 Pachyschistochila parvistipula
 Pachyschistochila subhyalina *var.*
 subhyalina
 Pachyschistochila succulenta
 Pachyschistochila virescens
 Pallavicinia lyellii
 Pallavicinia tenuinervis
 Pallavicinia xiphoides
 Paracromastigum fiordlandiae
 Paraschistochila conchophylla
 Paraschistochila pinnatifolia
 Paraschistochila tuloides
 Pedinophyllum monoicum
 Phaeoceros carolinianus
 Phyllohallia nivicola
 Plagiochasma rupestre
 Plagiochila annotina
 Plagiochila baileyana
 Plagiochila banksiana *var.* *banksiana*
 Plagiochila baylisii
 Plagiochila caducifolia
 Plagiochila circinalis
 Plagiochila circumdentata
 Plagiochila deltoidea
 Plagiochila fasciculata
 Plagiochila fragmentissima
 Plagiochila fruticella
 Plagiochila fuscella
 Plagiochila gigantea
 Plagiochila gregaria
 Plagiochila incurvicolla
 Plagiochila lyallii
 Plagiochila obscura
 Plagiochila pleurata *var.* *pleurata*
 Plagiochila radiculosa
 Plagiochila ramosissima
 Plagiochila retrospectans
 Plagiochila rutlandii
 Plagiochila sinclairii
 Plagiochila stephensoniana
 Plagiochila strombifolia
 Plagiochilium conjugatus
 Plagiochilium prolifer
 Podomitrium phyllanthus
 Porella elegantula
 Porella pulcherrima
 Pseudocephalozia lepidozoides
 Psiloclada clandestine (*incl.* *P. major*)
 Ptilidium ciliare
 Radula buccinifera
 Radula dentifolia
 Radula physoloba
 Radula plicata
 Radula ratkowskiana
 Radula sainsburiana
 Radula scariosa
 Radula tabularis
 Radula uvifera
 Riccardia aequitexta
 Riccardia alcicornis
 Riccardia asperulata
 Riccardia australis
 Riccardia bipinnatifida
 Riccardia breviala
 Riccardia cochleata
 Riccardia colensoi
 Riccardia crassa
 Riccardia eriocaula
 Riccardia exilis
 Riccardia lobulata
 Riccardia marginata
 Riccardia nitida

Riccardia papulosa
 Riccardia perspicua*
 Riccardia pusilla
 Saccogynidium australe
 Saccogynidium decurvum
 Schistochila appendiculata
 Schistochila balfouriana
 Schistochila chlorophylla
 Schistochila ciliata
 Schistochila glaucescens
 Schistochila kirkiana
 Schistochila lehmanniana
 Schistochila monticola
 Schistochila muricata
 Schistochila nobilis
 Schistochila pluriciliata
 Schistochila pseudociliata
 Schistochila repleta
 Siphonolejeunea nudipes
 Solenostoma inundatum
 Solenostoma orbiculatum
 Solenostoma totopapillosum
 Stolonivector fiordlandiae
 Symphyogyna hymenophyllum
 Symphyogyna subsimplex
 Symphyogyna tenuinervis
 Telaranea herzogii
 Telaranea inaequalis
 Telaranea lindenberghii var. lindenberghii
 Telaranea martinii
 Telaranea meridiana
 Telaranea pallescens
 Telaranea paludicola
 Telaranea patentissima var. patentissima

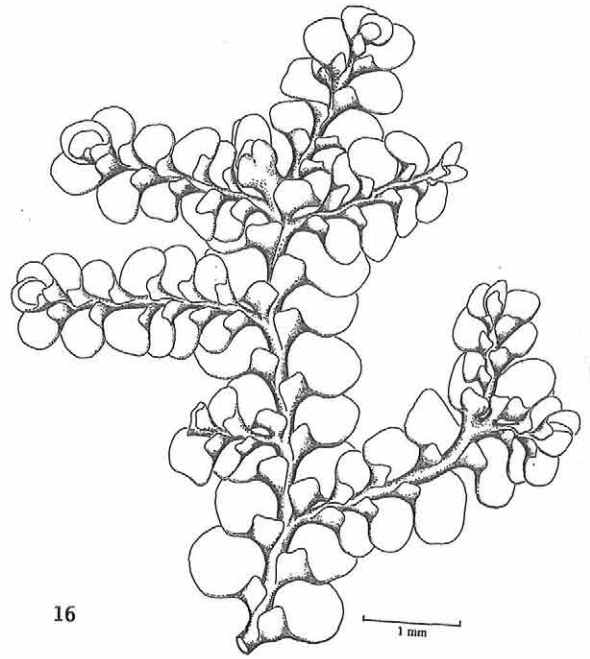
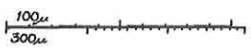
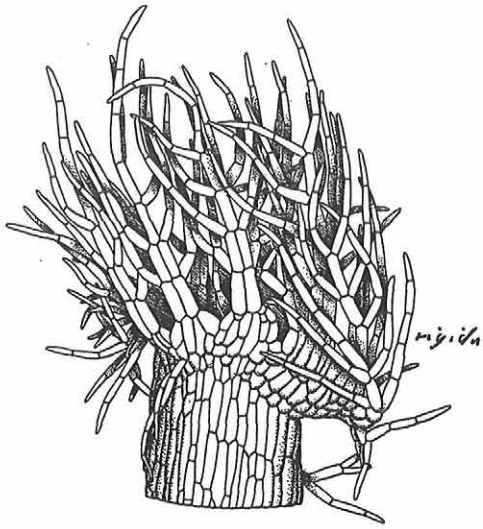
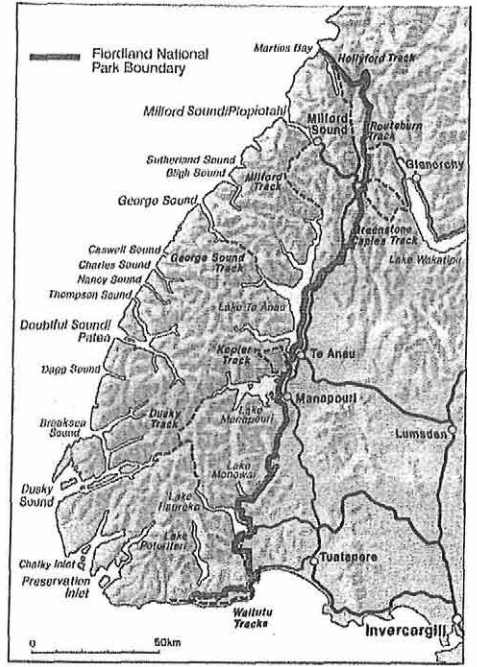
Telaranea patentissima var. zebrina
 Telaranea praenitens var. dentifolia
 Telaranea praenitens var. praenitens
 Telaranea pulcherrima var. pulcherrima
 Telaranea remotifolia
 Telaranea tetradactyla
 Telaranea tetrapila var. roseana
 Telaranea tetrapila var. tetrapila
 Telaranea tridactylis
 Telaranea trilobata
 Telaranea tuberifera
 Temnoma palmatum var. cuneatum
 Temnoma palmatum var. pseudospiniferum
 Temnoma paucisetigerum
 Temnoma pulchellum
 Temnoma quadrifidum
 Temnoma quadripartitum
 var. quadripartitum
 Treubia lacunosa
 Triandrophyllum subtrifidum
 Trichocolea mollissima
 Trichocolea rigida
 Trichotemnoma corrugatum
 Tylimanthus diversifolius
 Tylimanthus saccatus
 Tylimanthus tenellus
 Verdoornia succulenta
 Wettsteinia schusterana
 Xenothallus vulcanicolus
 Zoopsisidella caledonica
 Zoopsis argentea
 Zoopsis ceratophylla
 Zoopsis leitgebiana
 Zoopsis setulosa

No record was found for the following species although they have been reported from Southland and in many cases from Westland and/or Otago.

Dendroceros validus
 Fossombronia reticulata
 Frullania ptychantha
 Frullania setchellii
 Heteroscyphus knightii
 Lejeunea epiphylla
 Lejeunea primordialis
 Lembidium longifolium
 Marchantia polymorpha var. aquatica
 Riccardia alba
 Seppeltia succuba

Symphyogyna undulata
 Temnoma palmatum var. laxifolium

Figs. Clockwise from top right:
 A. Fiordland National Park Boundary, 2004.
 B. *Radula buccinifera*-
Southern Australian Liverworts, GAM Scott, 1985
 C. *Trichocolea rigida*
 Section of stem with leaf pair.
 Nova Hedwigia 118, Austral Hepaticae Part 1,
 RM Schuster, 2000



Noted during the searches but excluded from the checklist are the following:

Chiloscyphus austrigenus subsp. *austrigenus*.

Packets labelled as this subsp. are held in CHR and OTA. Engel(1992) believes this subspecies is only in South America. It seems probable that the material in these packets was identified before the literature separating the two subsp. of *C. austrigenus* was available.

Chiloscyphus integrifolius

This name is on many packets in OTA under George Scott's hand in 1968. Google search has this as a European species that is probably not in NZ.

Drepanolejeunea colensoi

Packets in OTA under George Scott's hand. I can find no reference to this name in the literature.

Metzgeria decrescens

A single record from Lake Manapouri in OTA under George Scott's hand with a question mark.

This is considered by ML So to be a species limited to southern South America.

Riccardia oppositifolia

Three packets in OTA labelled as this by George Scott and one amended by A Hodgson in 1969 with a question mark following. The later originally named *R. aff. palmata*. One is from 1966. The others are from 1969.

Telasraneae centipes

Several packets labelled as this are in OTA. Recent literature on *Telaranea* refers NZ species to *T. tuberosa* and has *T. centipes* is a Tasmania species.

My sincere thanks to the following people who provided assistance in compiling this list: David Glenny for his checklist for the Southland Province and assistance with up-dating species names. Leon Perrie at Te Papa and Mei Nee Lee at the Auckland Museum. They carried out the data base searches of WELT and AK collections respectively. Aaron Wilton and Jennifer Bannister who facilitated the manual searches in CHR and OTA. My wife, Darea Sherratt, who spent many hours searching through herbarium packets in CHR and OTA.

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Original Art Feature

Cercophora ambigua (Sacc.) R. Hilber (Ascomycetes, Sordariales, Lasiosphaeriaceae)

Toni Atkinson, winner, 2005 BSO Audrey Eagle Botanical Drawing Competition

Cercophora ambigua is a cosmopolitan woody-decay fungus, found commonly throughout New Zealand on a variety of native substrates including *Nothofagus* species. The fruit bodies (perithecia) are black and less than 1 mm in height and occur in groups covering at least several centimeters of decaying wood. Large fruitings are common; I have seen a large stump of wind-thrown beech near Haast completely covered by the fruit bodies of *Cercophora ambigua*.

Through a dissecting microscope one can see the pore (ostiole) in the apex of the fruit body, through which the ascospores are released, and the characteristic more-or-less ribbed (sulcate) apex. The surface of the fruit body is exceedingly warty (tuberculate), and hyphae can be seen extending from the base onto the substrate.

When a squash mount is made of a fruit body, one can see that inside are many hyaline (colourless), transparent sac-like structures (asci), each containing 8 ascospores. In the apex of the asci is a light-refractive apical ring, and, directly beneath this, a plasma globule; these features are characteristic of family Lasiosphaeriaceae. The ascus surrounding the spores can be extremely difficult to see, hence my use of a dotted line in the illustration. Between the asci are sterile filaments (periphyses), which are hyaline and septate.

Cercophora ambigua was first described as *Lasio-sphaeria ambigua* in 1877 by Italian mycologist Pier Andrea Saccardo (1855-1921) in Volume II of his remarkable 38 volume *Fungi Italica* (1877-1886). It was transferred to the genus *Cercophora* in 1979 by German mycologist Ruzenia Hilber, working with her husband Oswald Hilber, and illustrated.

The Landcare herbarium in Auckland has several collections of *Cercophora ambigua* made over the years by New Zealand mycologists, but little work has been done on the family in general, and, as far as I know, my drawing is the first illustration of *Cercophora ambigua*. On morphological grounds New Zealand collections are probably indistinguishable from overseas; this was confirmed last year by two visiting mycologists who described *Cercophora ambigua* as a world-wide temperate 'weed'.

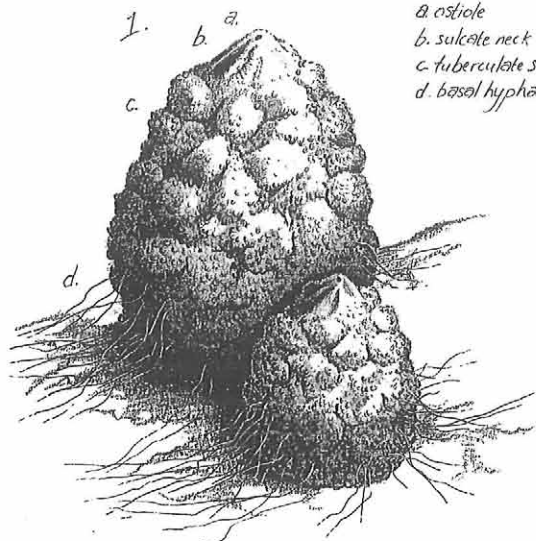
However, genetics tell a different story. I have internal transcribed spacer (ITS) DNA sequences from two of my New Zealand collections, and recently compared these (which are a couple of base pairs different from each other) with the ITS sequence of *Cercophora ambigua* available on Genbank. They are over 55 base pairs different. This suggests that our taxa has had a long separate history, and could certainly be considered a unique endemic species on genetic grounds.

The illustration was drawn from collections made at Pleasant Flat, Haast, and Lake Wilkie, in the Catlins.

For other entries in the first and second Audrey Eagle Botanical Drawing competitions, 2004-5, see: <http://www.botany.otago.ac.nz/bsc>

Cercophora ambigua

(Sacc.) R Hilber



0.25 nm

1. Perithecia

- a. ostiole
- b. sulcate neck
- c. tuberculate surface
- d. basal hyphae

2. Periphyses

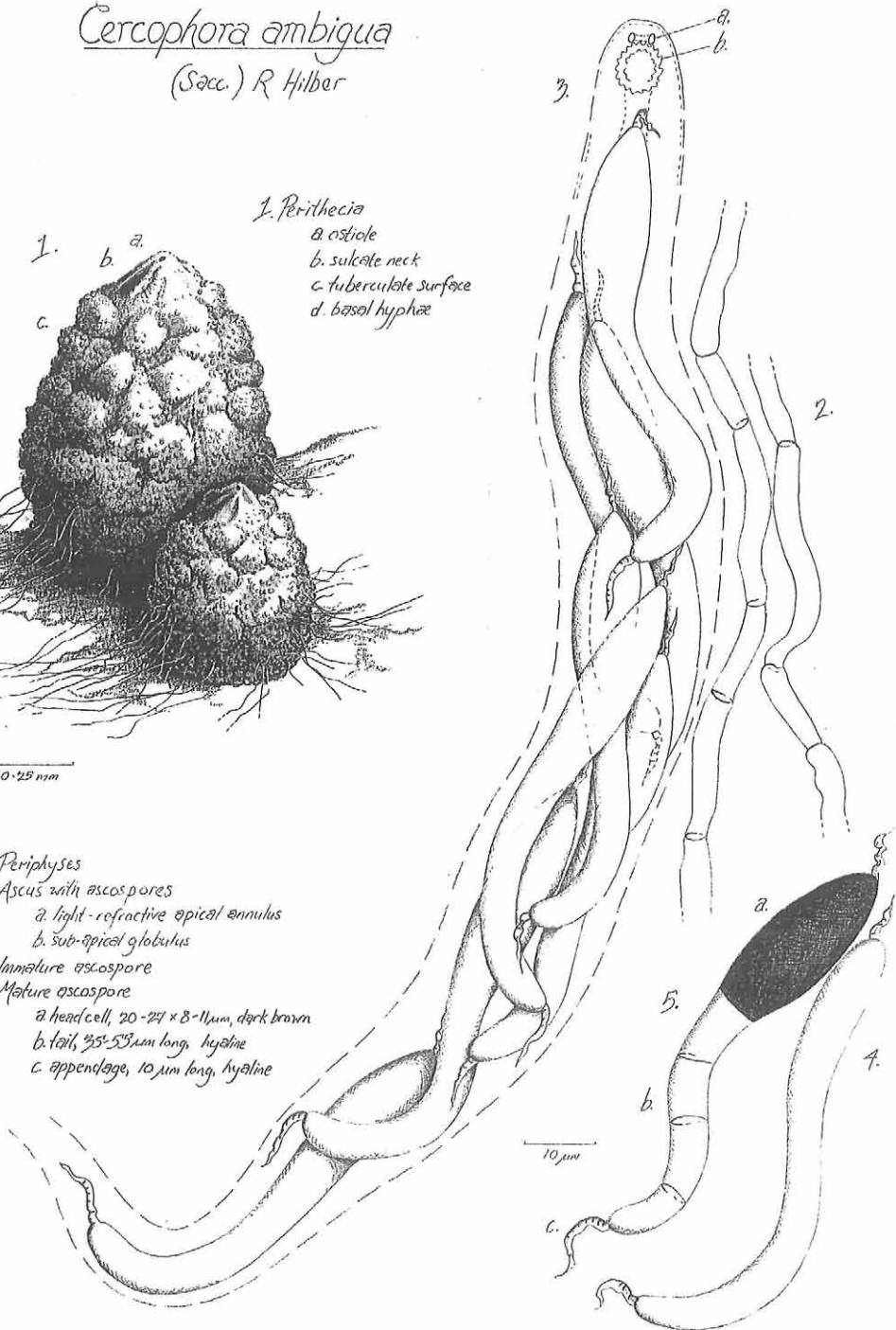
3. Ascus with ascospores

- a. light-refractive apical annulus
- b. sub-apical globulus

4. Immature ascospore

5. Mature ascospore

- a. head cell, 20-24 x 8-11 μm, dark brown
- b. tail, 35-53 μm long, hyaline
- c. appendage, 10 μm long, hyaline



10 μm

Meeting & Trip Reports; Vascular plant list

10 September 2005, 'The Crater' – Taieri Ridge *John Barkla*

A procession of cars regrouped at Middlemarch before winding their way through the back roads to the foot of Taieri Ridge. Our objective, The Crater, stood out as a curious lip of volcanic rock amongst the ubiquitous schist, high on the ridge. It looked quite a walk, and turned out to be so.

Rocky outcrops and shallow gullies hid relicts of native shrubland and these became more conspicuous as we climbed to a morning tea stop – a lone, tall, conical pine. A surprising find amongst ablation surfaces was mats of the minute *Crassula mataikona*. After a short steep descent through narrow-leaved tussockland we crossed a small stream and discovered a few tiny flowering plants of NZ mousetail (*Myosurus minimus* subsp. *novae-zelandiae*) on shallow damp soils. There were more of this spring annual in damp gravelly depressions on a higher terrace.

The promise of lunch spurred weary legs up the final climb to the rocky ramparts of the crater rim. This was a great view point out over the Strath Taieri to the bulk of the Rock and Pillar Range with its shrinking snow banks. Most of the group dispersed to explore the nooks and crannies of the crater rim, constructing a plant list along the way. Others, mostly small people, opted for a game of one-two-three-home amongst the short tussock of the crater floor.

Scrambling over the gritty 20 million year old basaltic breccia revealed many treasures including groves of flowering kowhai, *Melicope simplex*, *Coprosma crassifolia*, *C. propinqua* and *Carmichaelia petriei*. Sunny dry ledges had *Vittadinia australis*, *Senecio quadridentatus* and *Einadia allanii* with the odd cushion of *Scleranthus uniflorus* and *Raoulia australis*. Shaded crevices and overhangs sheltered ferns such as *Asplenium hookerianum* and *A. flabellifolium*. In contrast, the crater floor had a paucity of natives despite a promising ephemerally wet central depression.

Some chose an alternative route back to the cars taking in the shrublands of a small incised creek. They discovered a few groves of the tree daisy *Olearia lineata* and the uncommon grass *Elymus tenuis*. A stunning landscape and a magnificent spring day to boot – thanks Robyn for organising.

Vascular plants of The Crater, Taieri Ridge, Otago
Centred on NZMS 260 Sheet I43 GR 943251
John Barkla & Mike Thorsen with assistance from other BSO members
10 September 2005

**adventive species*

Trees and shrubs

Carmichaelia petriei
Coprosmma crassifolia
C. propinqua
*Cytisus scoparius
Discaria toumatou
Leucopogon fraseri
Melicope simplex
Melicytus alpinus
*Rosa rubiginosa
Sophora microphylla

Herbs

Acaena caesiiglauca
A. dumicola
Aciphylla aurea
Anisotome aromatica
Bulbinella angustifolia
Cardamine sp.
*Cerastium fontanum
*Cirsium vulgare
Colobanthus strictus
Crassula colligata subsp. colligata
C. mataikona
Dichondra repens
Einadia allanii
Epilobium nerteroides
Euchiton ruahenicum
Galium perpusillum
Geranium microphyllum
Helichrysum filicaule
*Hieracium pilosella
Leptinella pusilla
L. squalida subsp. mediana
Libertia ixioides
*Marrubium vulgare

Oreomyrrhis ramosa
Oxalis exilis
Raoulia australis

Herbs ctd.

*Rumex acetosella
*Sagina procumbens
Scleranthus uniflorus
*Sedum acre
Senecio quadridentatus
Stellaria gracilentia
*S. media
*Trifolium arvense
*T. repens
*Verbascum thapsus
*Vicia sativa
Vittadinia australis
Wahlenbergia albomarginata

Lianes

Clematis marata
Muehlenbeckia complexa
Rubus schmidelioides

Grasses

*Aira caryophyllea
*Anthoxanthum odoratum
Chionochloa rigida
*Cynosurus cristatus
Festuca novae-zelandiae
*Festuca rubra
Poa cita
P. colensoi
Rytidosperma clavatum

Sedges and rushes

*Juncus amabilis

Ferns

Asplenium appendiculatum subsp.
appendiculatum
A. flabellifolium
A. hookerianum
Polystichum vestitum

What do soldiers, wives, poets, Women's Suffrage, University of Otago deans, professors, lecturers, students, vice-chancellors and secretaries, have in common? Memorial or commemorative trees have been planted for these people or groups, at appropriate sites on the University Campus. In some cases however, a tree has been substituted by a plaque or a seat, such as the Robin Irvine Seat on the lawn in front of the Clocktower Building in memory of Sir Robin Irvine, Vice-Chancellor from 1973-93.

Robert Scott, University of Otago Grounds Officer, guided our group on a two hour 'short version' of many of the 41 existing items on the magnificently bound and presented Commemorative Register, giving insight into why each person, or their contribution, has been commemorated. This was most interesting. Many of us expressed intentions to return independently to spend a longer time not only to look at the remaining trees, shrubs and items of interest, but to see the large number of Northern hemisphere trees at different times of their yearly cycle eg *Fraxinus oxycarpa*, 'Raywood' claret ash. A wonderful sight in Autumn, with its stunning rich purple to claret red leaves. This tree is growing between the Gregory Wing and Archway to commemorate a New Zealand cyclist and student, James Faulding (1979-2001) who was killed while training.

Many will be familiar with a magnificent tree, particularly in early September when it is covered in large, pink flowers, growing in the Courtyard behind the Clocktower. This is *Magnolia campbellii*, Charles Raffill pink tulip tree, planted by Professor Geoff Baylis, Head of Botany 1945-78. Professor Baylis died in 2003, with some of his ashes and a plaque placed close to the tree.

NZ natives also have their place as commemorative trees. Near the Computing Services Building is the 'Charles Brasch Kauri', *Agathis australis*, kauri (Charles Brasch 1909-73 poet, literary figure and University benefactor). Another of the same species is nearby, commemorating Ana Louise North (1981-2001) a student killed in an accident in Baldwin Street, Dunedin. Dr Hamish Godfrey (1958-2002) a Department of Psychology staff member is commemorated by three *Metrosideros umbellata*, Southern Rata found on the South side of Mellor House.

The Commemorative Register, started in 1980, is displayed in the Science Library, Hocken Collections, Information Services Building, Clocktower and Property services Buildings. An excellent pamphlet of this Register showing a location map is available from locations on Campus. It is saddening to realise that this Register and the pamphlet will occasionally become temporarily outdated as further trees are planted to commemorate those who are no longer part of the University and in many cases who are no longer living due to sad or unfortunate circumstances. To end on a brighter note, it was heartening to see the result of successful relocation of some large and established trees to make way for the ever-expanding Campus building programme. Several *Metasequoia glyptostroboides*, dawn redwood growing outside Student Health Services are testimony to this.

Kevin Gould's presentation at the 4th Baylis Lecture on 'The Remarkable Properties of Red-pigmented Plants' was more than a talk, it was a colourful performance, complete with poetry, jaunty red waistcoat and brandished umbrella for dramatic emphasis. (The ghosts of Indian princes turned out to be a quote from a poem on autumn colours, not from Indian folklore as I'd fondly imagined) First he whet our appetites with rainbows and the iridescent blue plants found by a colleague, David Lee, at the bottom of rainforests where less than 1% of available light reaches. These have a bizarre arrangement of plastids and cell walls at just the right distance apart to cause thin film interference as with oil on water – a similar mechanism to iridescent paua, butterflies, beetles and peacocks.

A glorious tour of red plants around the world followed, from tropical understorey to exposed tundra; old-growth autumn colours in the northern hemisphere and young growth in New Zealand in the south. Some of the many examples included the liverwort *Jamesoniella colorata* on Rangitoto Is, *Blechnum* spp. ferns on roadside banks, red flax, (*Phormium* sp.) *Dracophyllum latifolium*, (Neinei), North Island tree daisy, *Olearia rani* v. *rani* with red between the veins and pigeonwood, *Hedycarya arborea* with red veins. No wonder the New Zealand Maori had 75 phrases for red!

Why red? Among other things, most folivores lack red light receptors, so red leaves look dark, dead and unpalatable. Ants that culture fungi on leaves take green, not red leaves. Some frugivores are attracted by the contrast between red fruit and green leaves.

Most of the red pigments in plants are from anthocyanins, which have 4 times the antioxidant activity of vitamin C. Experiments on rats indicate useful activity in an extraordinary range of conditions. Kevin's enthusiasm is certainly contagious. Maybe that's why I've been eating more red fruit and vegetables, and can't wait to turn those rapidly ripening elderberries into jelly and syrup to see me through the winter.

2nd Annual BSO Audrey Eagle Art Awards

Allison Knight

There were three judges for the Second Annual Botanical Society of Otago Audrey Eagle Botanical Drawing Competition; Audrey Eagle, emeritus Prof. Peter Bannister and Allison Knight. All the judges commented on the extremely high standard of all the entries – so high that the BSO committee agreed to double the total prize money, and extend it to \$50 each for the second prize-winners. Entries were displayed at the Baylis Lecture and prizes presented by Audrey Eagle and Peter Bannister. First prize of \$100 went to Toni Atkinson, for her extremely detailed and well-described drawing of *Cercophora ambigua*, a common wood-rotting fungus (see Original Art feature, this issue). Second equal were Kathleen Graham, with a very clear rendition of *Coprosma lucida*, and Jinty Mactavish, with her carefully observed dung fungus, *Coprinus stercoreus*. Kathleen also submitted drawings of the shrub, *Corokia cotoneaster* and hound's tongue fern, *Microsorium pustulatum*, while Mara Nydegger drew the colourful

red-capped mushroom, *Weraroa erythrocephala*. Look for them, with their descriptions, in future newsletters.

5 Nov 2005, Catlins field trip

Purakaunui Bay

Fergus Sutherland

Beach walking, boulder hopping and cliff scrambling are a challenge on any day, but throw in a strong spring wind and the botanising becomes more of a challenge. However, by virtue of good luck and a fair bit of dexterity, the botanists and assorted hangers on, such as myself, managed to wade through sheets of drifting sand, pirouette about on big boulders and basically hang on, to get to the Purakaunui cliff plants. My modest list of plants on the higher slopes included the cliff daisy *Celmisia lindsayi* (of course), *Anisotome lyalli*, *Urtica ferox* (ouch!), *Anaphalioides bellidioides*, *Hebe elliptica*, *Melicytus ramiflorus*, *Schefflera digitata*, *Myrsine australis*, *Coprosma lucida*, *Asplenium obtusatum*. Lower down near the sea, smaller and mat plants were identified as *Gentianella saxosa*, *Libertia ixioides*, *Apium prostratum*, *Gnaphalium* sp, *Crassula moschata*, *Leptinella dioica*, *Colobanthus apetalus* and *Epilobium komarovianum*. The *Myosotis pygmaea* caught our particular attention, as it is the world's smallest forget-me-not. Wind and plants were not all that Purakaunui Bay offered however, our experience was also enriched by the discovery of a newly exposed Maori midden, a lichen-rich old stone wall, and an unconcerned yellow-eyed penguin.

Myosotis pygmaea, below, and
Celmisia lindsayi, left.
Purakaunui Bay, Catlins
- Fergus Sutherland



Purakauiti Stream

Allison Knight

Without John Barkla's inside knowledge we would have been hard-pressed to explore the rare alluvial forests of Purakauiti Stream, marvel at the giant *Pittosporum obcordatum* and *Olearia lineata* and the weird leafless *Melicytus flexuosus*. The continuing wind and a wayward key prompted a difficult decision to cut the trip short, leaving plenty of interest to explore another time. Thanks, John, for sharing so much.

December 2005 Adrienne Markey: A journey southwards to the subantarctic islands.

Arlene McDowell

I always look forward to Adrienne's talks as her passion for botany is evident and her breadth of knowledge about natural history is extensive. Adrienne treated us to a talk about her 7 day voyage in early 2005 with Heritage Expeditions from Invercargill to the subantarctic islands.

The subantarctic islands are located between latitude 40° and 60° south including the area known as the *Roaring 40s*. Contrary to the weather that makes this stretch of ocean infamous, the expedition that Adrienne was on had glorious sunny weather and calm seas! The voyage included visits to Aucklands, Campbell and the Snares Islands.

Campbell Island was formed by volcanic activity and the main harbour, Perseverance Harbour, was formed by glaciers. The flora of Campbell Islands includes tussock grassland (*Chionochloa* spp.) and Adrienne's slides of the megaherbs were truly spectacular. The flowers ranged from pink and purple hues including *Pleurophyllum* spp. with their broad, distinctively corrugated leaves and purple daisy-like flowers to the green umbels of *Stilbocarpa polaris* (known as Maori or Macquarie cabbage). Adrienne was also able to acquaint herself with other members of her PhD study subjects – the subantarctic species of *Coprosma*.

The Snares Islands lie 200 km south of Bluff on New Zealand's South Island. No landings are permitted on the Snares without a Department of Conservation permit and they are the only subantarctic island group that is free from any introduced terrestrial mammals. Adrienne concluded her talk by showing a DVD with some action footage taken during her trip. Whilst not terribly botanical in nature, the Snares crested penguins (*Eudyptes* sp.) were very cute! (Our Chairman was very impressed with this DVD technology and I think he will have added another item to his Santa wish list).

Web Site

“Fungal Network of New Zealand” (FUNNZ).

This new society was incorporated following the 19th NZ Fungal Foray at Ohakune. For details of the Society, check out the new website www.funnz.org.nz. At this site you can find photos of all past fungal forays, details of those elected to positions on the Society, copies of the Constitution and membership form, details of activities, and links to other mycology sites.

Correction

Audrey Eagle advises that there will be illustrations of 806 plants in her new, 2 volume publication, *Eagle's Complete Trees and Shrubs of New Zealand*, which is due out in November 2006.

Botanical Diary

National: 20th NEW ZEALAND FUNGAL FORAY, WESTPORT,
West Coast, South Island, NZ 7th – 13th May 2006
for more information see: www.funnz.org.nz

Cheeseman Botanical Symposium, Auckland 20-22 Nov 2006

Call for papers now out. See BSO noticeboard or email Mei Nei Lee, mnlee@aucklandmuseum.com for more details.

Local:

8 March, Wednesday 7 pm. Dunedin Botanic Garden invites you to a lecture by staff from **Royal Botanic Gardens, Kew**, about the NZ plant collection at Kew Gardens and Kew's current NZ seed and herbarium specimen collecting trip.

“New Zealand Natives at Kew”

St David St Lecture Theatre, Otago University.

Contact Details for groups with overlapping interests:

DOC Conservation Volunteers,
Dunedin Forest and Bird,
Dunedin Naturalists Field Club,
Entomology Society of New Zealand, Otago Branch
Friends of the Botanic Garden,
Otago Alpine Garden Group, Otago Institute,
Southland Forest and Bird and
Southland Natural History Field Club
are in issue 44.

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

PO Box 6214, North Dunedin, NZ
Patron: *Professor Peter Bannister*

Committee 2005 –April 2006

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Events Manager, **Moirra Parker**, moiraparker@clear.net.nz

Program Manager, welcome **Mike Thorsen**, mthorsen@doc.govt.nz

Committee; **Bastow Wilson**, bastow@otago.ac.nz, **Abe Gray**, graab419@student.otago.ac.nz, **John Barkla**, jbarkla@DOC.govt.nz, There's still a spare space on our convivial committee – please contact a committee member if you'd like to be co-opted!

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

Please submit copy for next newsletter by 10 May 2006

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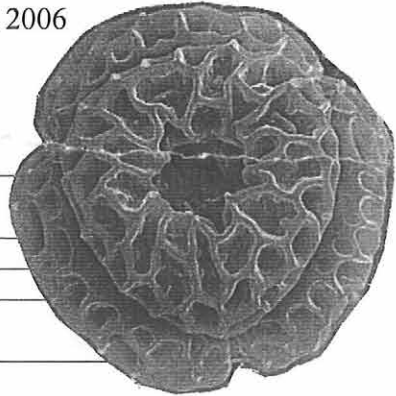
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EHT= 10.0 KV WD= 5 mm
50.0µm

PHOTO= 9

Canelloles
Family: Winteraceae
Genus: Pseudowintera

