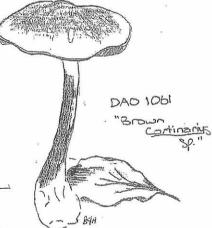
Botanical Society of Otago Newsletter. Number 19, June 2000.



Botanical Society of Otago Meetings

- Thursday June 15th Fantastic fungi: slide show and short talks. Zoology Annexe Seminar room 7.00pm. With David Orlovich, and students. Brilliant slides and a series of interesting short talks. Tea, coffee and mushroom soup (especially for those who have paid their subs!).
- Sunday June 18th Ferns of Dunedin: fern workshop. With John Steel and Bastow Wilson. Meet: Botany Department 12 noon. The Basics of Pteridophtye classification and identification. Feel free to bring along specimens of your own. May be in the field depending on weather. Should be about four hours.
- Sunday July 16th Peggys Hill field trip. With Helen Clarke (regional representative of Q E II National Trust). It's an afternoon session to be a bit warmer as it's an exposed spot. Access to the area is on foot, not far, but reasonably steep, (about 10-15 minutes) over paddocks. Bring: stout walking shoes and be prepared for all types of weather. Meet: Botany Dept. car park, 464 Great King Street, 1.00pm, share transport at 5 cents/km (work it out!). Further details contact Barbara (see back page).
- Sunday August 27th Algae Workshop. With Catriona Hurd and students, a short collection foray (St Kilda, Lawyer's Head) followed by morning tea. Then Catriona and students will show us how to identify and preserve algae specimens for the herbarium. Meet: Botany Department carpark, 464 Great King, 7.00am. Further information contact Barbara.
- Sunday September 17th Garden visit. With Professor Geoff Baylis. Prof. Baylis' garden provides a wonderful opportunity to see specimens of many species most of us would otherwise never have the chance to see other than in slides and books. His great love of the Three Kings Islands, a focus of his early Botanical work, is obvious in the many rare and wonderful specimens from these islands.

Cancellations will be broadcast on Radio 4ZB and 4XO cancellation service.

Note from Head Office

Big things are happening on the fungi front! There's no stopping David and his frolicking band of fungi hunters – good on them, lots of enthusiasm. You'll notice that it is not long since the last newsletter but we had to take the opportunity to let everyone know about the **slide show and talks**!! Not to mention the mushroom soup! (and if you can't trust a mycologist to make good mushroom soup, who can you trust?). I've also taken the opportunity to remind all those with red stickers that subs would be appreciated.

Keep sending in those short notes, pictures, articles, and ideas. We welcome new members so don't be afraid to bring friends and family along to activities. You may have noticed the BSO webpage finally has something on it - more to come! So if anyone has photos or drawings (with labelled subjects if possible) from trips or workshops, please let us know so we can include them in the page.

Apologies to Inge Andrew and John Steel. To Inge who drew the fungi drawings in our last issue at the first fungi workshop, sorry for the missing acknowledgment. To John Steel for the missing acknowledgment for last issue's book review. We look forward to more of Inge's botanical drawings and John's book reviews in the future.

Barbara and Bastow

Cover picture: Cortinarius sp.

Drawn by Barbara Anderson and identified by David Orlovich as one of the many species of *Cortinarius*. This *Cortinarius* sp. was collected on the May Fungi Foray to Silver Stream on soil under a large and exposed *Astelia fragrans* plant growing just beside the track. Spotted by Paul Dean, this cover picture must be a true group effort.

Old Man Range Trip report: By Allison Knight.

There was a good turnout on this trip, despite the threatening weather and the early Sunday morning start. Three 4WD vehicles left from Dunedin promptly at 8am. Alan Mark took Geoff Baylis and a student and picked up David Galloway on the way past Millers Flat. Susan and her husband took Rory and Paul Guy and there were 7 brave souls in my van - Bastow, Rex, Nola, Audrey, Fredrika and Cheong. The convoy was doubled at Mitchell's Cottage, where we met up with another three 4WDs: Brian Patrick and his son Hamish in one. John Douglas and 3 other Upper Clutha Forest and Birders in another, and Gaynor and partner in a Landrover. Prof.Alan Mark handed out a detailed paper from the 1980's on the vegetation of the area and challenged us to update it. He stopped to show us representative vegetation zones, from Montane and Subalpine through to Low and High Alpine, giving us a very informative and entertaining botanical and conservation history of the area. Dr David Galloway pointed out some of the more interesting lichens. David has taken up the challenge to update by producing a preliminary list of lichens from the area, bringing the published number up from 5 to over 200! Lunch was eaten in the shelter of some of the striking, lichen covered tors near the Obelisk, and then we explored along the summit ridge as far as Hyde Rock, where the bluffs were so full of unusual plants and lichens it would have been good to have had a whole day to explore there. People did seem to enjoy the outing despite the bitterly cold wind. The road was pretty rugged after heavy washouts and we were very grateful for a hot drink at Gaynor's place at the bottom of the hill on the way home through the glorious autumn colours.

John Douglas has left us a folder about his ecotours for those who would rather be driven than drive up those rugged roads. It is pinned to the noticeboard in the University Botany Dept tearoom, along with a copy of Alan Mark's paper and the newsletters from other Botanical Societies. Well worth a look. The big disappointment was not managing to coincide with the Wakatipu Botanical Group. Hopefully, with improved communication, we can look forward to joining them on future trips to some of the many fascinating places in that area.

Many thanks to Alan Mark for leading the trip so well at such short notice, and to David Galloway for expanding our knowledge of the lichens so dramatically.

Book review: McPhee, J. 2000. Oranges. 149 pp. p/back. Penguin Books. \$22.95.

I first met this book many years ago, in fact, so long ago I had almost forgotten it. It was by chance I came upon this re-release which immediately brought back the delightful memories of the pleasure the first edition had given me. Time has not in any way diminished this pleasure on re-reading it.

Nothing comes close to matching the flavour or texture of a juicy orange - except, possibly, this book. The text is packed with all kinds of information on the not-so-humble orange, exploring its history, from its origins in Malaysia to the development of the vast and multi-faceted orange industry of today. Did you know that in the fourteen hundreds in Breslau there was an annual orange shoot whereby the Breslovians passed their time shooting oranges from one another's heads - possibly the origin of the William Tell folk tale? Maybe that's why we don't hear of too many Breslovians today! Its place in religion and art is covered as are the modern day horticultural and marketing practices required to put it on your shelves.

McPhee's enthusiasm for his subject is obvious on every page. This is a delicious read with a wealth of delightfully presented information to suit anyone's tastes.

By John Steel

Preliminary list of lichens from the Old Man Range, Central Otago, New Zealand: by David Galloway

Documentation of lichens on the Old Man Range, Central Otago dates from some 40 years ago when Prof. Alan Mark began his studies on the ecology and vegetation of the area, and it is thanks to Alan that the lichen mycobiota of the area is among the best known of any high-alpine site in the Southern Hemisphere. Alan's paper with his Duke University supervisor, Prof. Dwight Billings (Billings & Mark 1961) was the first to mention lichens (Cetraria islandica ssp. antarctica and Thamnolia vermicularis) in an ecological discussion of high-alpine vegetation, although the year previously James Murray recorded Solorina crocea from the Old Man Range from a Dwight Billings specimen (Murray 1960). Alan Mark and Larry Bliss published a very preliminary list of lichens from the Old Man Range (prepared by me, and containing a fair number of errors!) as part of their documentation of the high-alpine vegetation of the Central Otago mountains (Mark & Bliss 1971). This then is the modest beginning of Old Man Range lichenology, and from that time Alan has guided a succession of overseas and local lichenologists to the slopes and broad-backed summit of the range. In more or less chronological order these were: Peter James (London), David Galloway, Larry Bliss (Canada), John Child, Peter Child, Colin Meurk, Hannes Hertel (Munich), Helmut Mayrhofer (Graz), Volkmar Wirth (Stuttgart), Hannes Hertel published on saxicolous lecideoid lichens collected from the Range (Hertel 1985, 1987, 1989), and more recently Peter Johnson has collected aquatic lichens from the Range for Patrick McCarthy (Johnson & McCarthy 1997). Last summer I accompanied Ingvar Kärnefelt and Patrik Frödén (Lund) in their search for alpine Teloschistaceae. From the collections and observations of all of these (many of their collections are housed in OTA) the following lichen list is offered as a working baseline to ongoing high-alpine lichen studies in Cental Otago.

The Old Man Range is the type locality for two species: *Menegazzia castanea* (Galloway 1983) and *Verrucaria*

austroschisticola (McCarthy & Johnson 1995). Of note is the pronounced bipolar aspect of the lichen mycobiota from the exposed summit (Galloway & Aptroot 1995; Galloway et al. 1998). It was fitting that our visit on 16 April 2000 was again guided by Alan. He can be justly proud that his devotion and enthusiasm over the years have led to the lichen mycobiota of the Old Man Range being so well known today.

In the list [*] refers to lichenicolous fungi, and [?] indicates a taxon known from other Central Otago mountains and likely to occur on the Old Man Range. 220 taxa from 87 genera are here recorded. It is hoped that this list will stimulate further lichen work on the Range and we will update the list from time to time as additional novelties are reported. Further information on many of the lichens mentioned in the list may be found in Galloway (1985). A supplement to this work (describing all taxa not mentioned in the 1985 lichen flora) is in preparation and is to be published in 2002.

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The List

Acarospora schleicheri Alectoria nigricans Arthrorhaphis alpina A. citrinella Aspicilia cinerea Bartlettiella fragilis Bellemerea alpina Brigantiaea fuscolutea Brvoria austromontana ? Buellia dunedina ? B. griseovirens B. insignis Bunodophoron ramuliferum Caloplaca amvlacea ? C. biatorina C. cerina C cinnamomea C. lutea C. murravi ined. C.olivaceobrunnea C. tornoensis Candelaria concolor Candelariella coralliza C. vitellina ? Carbonea vitellinaria C. vorticosa Cataypyrenium cinereum *Cercidospora trypetheliza Cetraria aculeata C. islandica ssp. antarctica Cetrariella delisei Cladia aggregata Cladina confusa C. mitis Cladonia aueri C. bimberiensis C. capitellata C. cervicornis ? C. ecmocyna C. fimbriata C. gracilis ssp. tenerreima C. scabriuscula C. southlandica

C ustulata Coccocarpia palmicola Collema durietzii Cystocoleus ebeneus Degelia neozelandica Dermatocarpon luridum Dibaeis arcuata Diploschistes muscorum ssp. hartlettii D. ocellatus Flavoparmelia haysomii Haematomma alpinum Hypogymnia lugubris H. kosckiuskoensis H. lugubris var. compactior H. lugubris var. sublugubris H. subphysodes Hypotrachyna sinuosa Immersaria athroocarpa ? Ionaspis lacustris Labyrintha implexa ? Lecanora bicincta L. cavicola L. dispersa L. epibryon ssp. broccha L. epibryon ssp. xanthophora L. farinacea L. galactiniza L. parmelinoides L. polytropa L. rupicola L. swartzii Lecidea atromorio L. endochlora L. fuscoatrula L. lapicida var. lapicida L. lapicida var. pantherina L. lygomma Lecidella cf. euphorea L. schistiseda L. sublapicida ? L. wulfenii ? Lecidoma demissum

Lepraria neglecta ? Leproloma membranaceum 2 L. vouqurii Leptogium laceroides L. menziesii L. propaguliferum I. victorianum Megaspora verrucosa Menegazzia aeneofusi M. castanea M. globulifera M. inflata M. testacea M. ultralucens Micarea austroternaria M. isabellina ? Miriauidica nigroleprosa ? Neofuscelia adpicta 2 N. hrattii ? N. depsidella ? N. glabrans ? N. imitatrix ? N. martinii ? N. peloloba ? N. pictada ? N. squamans ? N. squamariatella ? N. stgyiodes N. subhosseana N. petriseda ? N. verrucella Neuropogon acromelanus N. antarcticus N. ciliatus N. subcapillaris Omphalina ericetorui Ochrolechia parella O. xanthostoma Pannaria hookeri

Paraporpidia leptocarpa Parmelia saxatilis P. signifera P. sulcata Peltigera didactyla P. dolichorhiza ? P. lepidophora ? P. malacea P. neopolydactyla P. rufescens ? P. ulcerata Pertusaria dactylina P. gymnospora ? P. leucodes ? P. lophocarpa P. otagoana P. subverrucosa Physcia adscendens P. caesia ? P. dubia P. tribacia Placopsis clavifera P. lateritioides P. perrugosa P. trachyderma ? Poeltiara corralensis ? Poeltidea perusta Porpidia crustulata P. macrocarpa Protoparmelia badia Pseudephebe minuscula P. pubescens

Pseudocyphellartia corbettii P. degelii P. glabra P. maculata P. pickeringii Psoroma buchanani P. fruticulosum P. hirsutulum P. hypnorum P. hypnorum var. paleaceum P. rubromarginatum Punctelia subrudecta Pyrrhospora laeta Ramalina fimbriata R. glaucescens Ramboldia petraeoides Rhizocarpon geographicum R. grande R. superficiale * Rimularia insularis R. psephota Rinodina cf archaea R. conradii R. olivaceobrunnea R. thiomela ? Siphula complanata S. decumbens S. dissoluta ? S. elixii ? S. fastigiata S. foliacea S. fragilis Solorina crocea Sporastatia testudinea

Staurothele fissa Steinera sorediata Stereocaulon caespitosum S. gregarium S. ramulosum Sticta martinii Teloschistes fasciculatus T. velifer Tephromela atra Thamnolia vermicularis Toninia bullata Trapelia coarctata Umbilicaria cylindrica ? U. cinereorufescens U.decussata U. hyperborea U. nylanderiana U. polyphylla U. subglabra U. umbilicarioides U. vellea U. zahlbruckneri Usnea contexta U. torulosa Verrucaria amnica V. austroschisticola V. margacea V. rheitrophila Xanthoparmelia mexicana X. mougeotina X. scabrosa X. subnuda X. tasmanica Xanthoria elegans X. novozelandica

Contact for David Galloway: Landcare Research New Zealand Ltd, Private Bag 1930, Dunedin

Plant of the month: Capsicum annuum L.

Class: Dicotyledonae Order: Solanales Subclass: Asteridae Family: Solanaceae Common Name: chilli pepper, chillies, capsicum, pepper Flowering time (N.Z.): spring – summer Fruiting time (N.Z.): summer – autumn Flowers: inconspicuous and white Fruit: a many-seeded berry, green, yellow, orange, purple or red NZ status: introduced and cultivated Origin: Tropical America

There are 10 species in the *Capsicum* genus. Four are widely cultivated in Tropical America and two, *Capsicum annuum* L. and *C. frutescens* L., are cultivated throughout the world. The capsicum (*Capsicum annuum*) has been cultivated in Central and South America since at least 7000 BC. It was introduced to Europe by Columbus who brought it back from his first voyage in 1492 AD. It then spread through Africa and Asia.

Paprika is a finely-ground powder made from the dried fruits of *Capsicum annuum. Capsicum frutescens* is known to many cooks as both cayenne pepper (the whole fruit including seeds and placenta finely ground to a hot powder) and Tabasco sauce (the fruit pulp pickled in brine or vinegar). Chillies are rich in Vitamin C, stimulate the appetite and cool people down, by making them sweat.

Many of our most common vegetables and fruits come from the Solanaceae family including Lycopersicon esculentum (tomato), Solanum tuberosum (potato), S. melongena (egg plant or aubergine), S. muricatum (pepino), Cyphomandra betacea (tamarillo or tree tomato) and Physalis peruviana (Cape gooseberry). Many species of the Solanaceae family yield medicinal or hallucinogenic alkaloids including Nicotina tabacum (tobacco), Atropa belladonna (belladonna) Datura stramonium (thorn-apple) and Hyoscyamus niger (henbane).

Notes from the Otago Herbarium (OTA), May 2000

Herbarium Activities:

A second successful herbarium workshop was held in late February. More than 20 participants, mainly post-graduate students, were instructed on collecting and mounting techniques for both vascular and non vascular plants. It was noted at the workshop that adventive species are underrepresented in the collection. Herbaria can contribute much to the study of invasions by systematically collecting adventives and recording their habitat and abundance. We would like to build up OTA's regional adventive collection to provide a better resource for identifying new adventives and documenting their spread, so bring in those weeds!

The fungal collection is receiving much-needed attention and additions owing to the enthusiasm of David Orlovich and his postgraduate students. We are very fortunate to have such an active mycologist on the staff.

Farewell to a past curator:

In February of this year Ray Tangney left New Zealand to take a herbarium curatorship at the National Museum of Wales in Cardiff. We wish him well in his new position. Ray was the curator of OTA for a number of years and during that time he worked on many members of the Lembophyllaceae and Polytrichaceae and their allies. His new address is: Department of Biodiversity and Systematic Biology, National Museum and Gallery Cardiff, Cathays Park, Cardiff CF10 3NP, U.K.

Dr Janice Lord, Botany Dept., University of Otago, <u>http://www.botany.otago.ac.nz/staff/lord/</u>

Fungi Workshop report: 14th New Zealand Fungal Foray and Australasian Mycological Society Conference. By David Orlovich

The foray in Fiordland was one of the most awesome weeks ever! There were about 50 participants based at Te Anau from the $6^{th} - 13^{th}$ May. People came from all over New Zealand, from Australia, the USA and Switzerland. We split into groups and spent most of the week collecting fungi at different sites in Fiordland.

The group I was with spent the first full day collecting at Te Anau Downs on the road to the lake. It was a mixture of Nothofagus forest on one side and Leptospermum on the other. One of the most common and diverse genera we found was Cortinarius. This is the largest genus of mushrooms in the world and people estimate that there are probably 300-odd species in New Zealand most of them undescribed! They ranged from small pure white mushrooms with a slimy cap and stipe to huge purple, yellow, green and brown ones. The thing they have in common is that they're all mycorrhizal, they all produce a rusty brown spore print and the spores have a rough ornamentation. It seemed for a time that every mushroom collected was going to be a Cortinarius but there were plenty of others to find. We found a relatively rare relation of *Cortinarius* that has a rooting stipe – it went down about 10 cm below the ground – called *Phaeocollybia*. Each day we came back with far more collections than we intended. People were collecting everything from lichens to caterpillar fungi (Cordyceps sp.) to leaf endophytes and everything in between. Collection sites also included Milford Sound, Lake Gunn, the Kepler Track, Borland nature trail, Borland Saddle and the Grebe Valley Lookout.

Each night we had dinner (catered for by Laure Taylor) and then relaxed with a beer for a slide show or talk put on by some of the

participants. Don Horne has just produced a new book called Mushrooms and Other Fungi of New Zealand (Reed New Zealand Nature Series) and this was launched on one evening. Don gave an inspiring practical talk on how to photograph fungi in the field and showed us how he does it with a minimum of equipment. On another night the Australian botanical artist Katie Syme gave a talk on painting and dyeing. After the talks the keenest people then retired to the "lab" we set up in a disused restaurant. Many people were up till well after midnight each night trying to identify as many of the day's collections as possible. The organisers ran a competition for the biggest, the smallest, the smelliest and the 'most anatomically-correct' mushrooms. Alison Stringer from the University of Otago and Wang Yun from Invermay won a prize for the most anatomically-correct fungus with their collection of a Cordyceps species with a big caterpillar attached.

Some of us were lucky enough to be able to participate in a workshop with Dr Egon Horak who was visiting from Switzerland. We spent the best part of a day learning how to collect and describe fungi for taxonomic study. Some important points we learnt included: making collections of no less than three fruit bodies at different stages of development; being very careful not to touch the upper part of the stipe (there might be little 'hairs' (caulocystidia) there that can be damaged easily); cleaning off any dirt from the specimen in the field; and recording the colour and shape of the mushroom as soon as possible after collection.

The Australasian Mycological Society conference was held for the first time in New Zealand on Monday 8th May and this was a very interesting day too. Topics of talks included edible mushrooms (by Wang Yun from Crop & Food at Invermay), pathogenic polypores (by Peter Buchanan from Landcare in Auckland), mycological history (by retired veterinary mycologist Peter Austwick), lichen phylogenetics by Otago student Nina Hesom-Williams, biosecurity by Geoff Ridley from FRI at Rotorua and insects that eat slime moulds by Rich Leschen from Landcare Auckland. Otago University honours student Anne-Maree Oliver won the prize for best student presentation for her talk on *Gymnopilus* in New Zealand.

All in all it was a fantastic week. I for one am inspired to be a fungal taxonomist! The organisers (Peter Buchanan and Peter Johnston at Landcare Auckland and Geoff Ridley at FRI Rotorua) should be congratulated for organising such a great week. I can't wait for the next one!

Diary of upcoming events:

- 10th June, Saturday: Wakatipu Botanical Group, June activity: Workparty along the Kelvin Peninsula walkway, 10 am till 3 pm followed by a mid winter social evening at Simpsons. We could make it a pot luck dinner so either stay on after the workparty or come along any time after 6 pm and sit around the fire and enjoy catching up.
- 13th June, Tuesday: Forest and Bird Talk. Hutton Theatre 7:45pm. Bill Gillbertson: *The West Coast forests*, and A. G. M., Hutton Theatre 7:45pm
- 15th June, Thursday: Fantastic fungi: slide show and short talks. Zoology Annexe Seminar room 7.00pm. With David Orlovich, and students. Brilliant slides and a series of interesting short talks. Tea, coffee and mushroom soup.
- 18th June, Sunday Ferns of Dunedin: fern workshop. With John Steel and Bastow Wilson. Meet: Botany Department 12 noon. The Basics of Pteridophtye classification and identification. Feel free to bring along specimens of your own. May be in the field depending on weather.
- 21st June, Wednesday: Friends of the Botanic Gardens A.G.M. 84 Albany Street 6.30pm. Potluck plus auction of special plants,
- 22nd June, Thursday: Entomological Society of NZ Otago Branch talk. Hutton Theatre, 7.30pm. Dr Gerry Closs (Dept. of Zoology, UoO): *Fish*, *bugs and muddy billabongs*.
- 2nd July, Sunday: Entomological Society of NZ Otago Branch. Otago Museum (details To be announced). Creepy creature ID parade - part of the International Science Festival.

15th July, Saturday: Wakatipu Botanical Group July activity: Workparty along the Kelvin Peninsula walkway, 10 am till 3 pm.

16th July, Sunday: BSO Peggy's Hill field trip. With Helen Clarke, regional representative of Q E II National Trust. (see front cover for details).

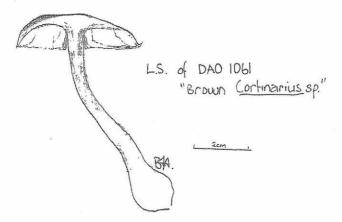
18th July, Tuesday: Forest and Bird Talk. Hutton Theatre 7:45pm

24th August, Thursday: Entomological Society of NZ Otago Branch talk. Hutton Theatre, 7.30pm Dr Frank Wilhelm (Dept. of Zoology, UoO): Life on top of the peaks - a look at amphipod adaptations along an elevation gradient in the Canadian Rocky Mountains.

27th August, Sunday: BSO Algae Workshop. With Catriona Hurd and students, (see front cover for details).

28th September, Thursday Entomological Society of NZ Otago Branch talk. Hutton Theatre, 7.30pm. Dr Ian Jamieson (Dept. of Zoology, UoO); Rock 'n rolling with the alpine tree weta: does size really matter?

Entomological Society of NZ Otago Branch contact: Brent Sinclair email: <u>brent.sinclair@stonebow.otago.ac.nz</u> ph. 479 5618 or Brian Patrick email brian.patrick@otagomuseum.govt.nz QEII National Trust contact: Helen Clarke email: <u>ge2@genattrust.org.nz</u> ph.454 3320 Friends of the Botanic Gardens contact: Jane Wright email: <u>iane.wright@DCC.govt.nz</u> ph. 474 1505 Diary contributions contact: Barbara Anderson email: barbiade@es.co.nz ph 479 5981



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Donations are welcome (donations equivalent to the subscription rate will be treated as such after the General Meeting in February). Subscriptions are:

Cheques to "Botanical Society of Otago".

Botanical Society of Otago: whom to contact

Information for the Newsletter to:

Barbara Anderson, ^c/_o Botany Dept., University of Otago, P. O. Box. 56. Dunedin Phone (03) 479 5981 e-mail <u>barbjade@es.co.nz</u>

New members, Subscriptions or Donations to: Paul Dean, 22 Nicholson Street, Forbury Corner, Dunedin. e-mail: pauld@hotpop.com

Ideas for activities to:

Bastow Wilson,

°/_o Botany Dept., University of Otago, P. O. Box. 56. Dunedin e-mail <u>bastow@otago.ac.nz</u>

For information on activities:

The trip leader or Barbara Anderson (contact above), or see our webpage: http://www.botany.otago.ac.nz/bso

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