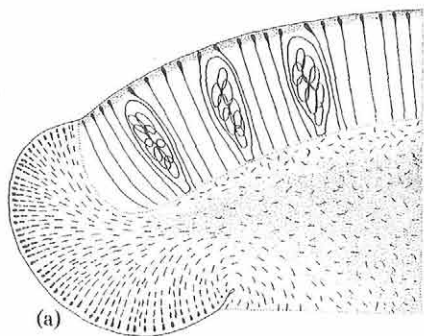


# Botanical Society of Otago Newsletter

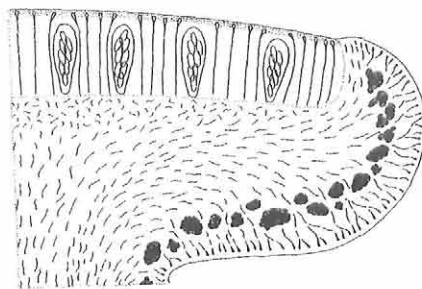
Number 39

September – November  
2003

BSO Meetings  
and Field Trips



(a)



(b)

**24 September, Wed. 5.20 pm. "An introduction to New Zealand gecko and plant associations"** Guest speaker **Mandy Tocher**. New Zealand geckos are stunningly beautiful and have very interesting life history characteristics making them highly sought after as pets; they are regularly stolen from New Zealand by poachers. New Zealand geckos consume significant amounts of fruit as part of their diet e.g. fruit from *Coprosma* spp. Geckos therefore play an important role in dispersing the seed from the fruiting plant species they consume. The continued persistence of New Zealand geckos is critical to the persistence and regeneration of various endemic fruiting plant species. Bring interesting botanical items for the buy, sell & share table (see p 22) and gold coin donations for the drinks & nibbles. At the Benham Seminar Room, Rm 215, **NEW Benham Building**, 346 Gt King St, behind the Zoology car park by the Captain Cook. Please be prompt, door will be locked at 5.30 pm. NOTE EARLIER TIME.

**27 September, Sat. 10 am. Field trip to Warrington and Sealiff.** Carol and Chuck Landis live at the old James Powell Convalescent Home in Warrington. Trip departs from the Botany Dept car park at 10:00 am on Saturday Sept 27. Car-pool rates 10c/km/passenger, to be paid to the driver. (Alternatively meet at Chuck and Carol's at 10:30 am.) Return mid- afternoon. Bring lunch; hot water will be supplied. In case of inclement weather we'll try Sunday 28 Sept., same times. Contacts: Chuck and Carol at 482-2846. More details inside and in last issue.

**11 October, Sat. 1.30 pm. Donaldsons' Garden & Moores Bush** Over the last 40 years Cliff and Linda Donaldson have created a treasure trove of unusual plants. They have nurtured natives from all over New Zealand, including a multi-trunked Kauri that the pigeons fight over, *Dysoxylum spectabile* (Kohekohe) and several

rare species, such as the Marlborough weeping broom, *Carmichaelia stevensonii*, and *Elingamita johnsonii* that was discovered by Geoff Baylis on the Three Kings Islands. There's also quite a fern collection, including some which Cliff is keen to have identified. So **please bring your hand lens and fern guides**. Colourful exotics include collections of *Camellia*, *Rhododendron*, *Prunus*, *Magnolia* and *Fuchsia* species, so spring blooms will abound. Weather and time permitting, we will then travel up Leith Valley to **Moore's Bush**, site of a local Forest & Bird project. There is a bit of restoration going on there but the existing forest is quite lovely - streamside *Fuchsia* etc plus emergent podocarps, and lots of ferns to complement Donaldsons' garden! **Meet** at the Donaldsons' place, 21 Glenmore St, Glenleith at 1.30 pm, or at 1.15 pm in the Botany Department car park, 464 Great King St, to car pool, which is a good idea, as parking will be limited. Co-ordinator Allison Knight, 487 8265

**29 October**, Wed. 5.20 pm **2nd annual Geoff Baylis Lecture**, jointly sponsored by the Botanical Society of Otago and the Department of Botany, University of Otago. Distinguished guest speaker **Dr Peter Wardle** "*New Zealand's forest limits and the vegetation above them, compared with South America and other regions*". Seminar room 2.25 Commerce Building, cnr Union St East and Clyde St. Meet in the atrium for nibbles and drinks (gold coin donation). You are invited to join Peter for dinner after. Abstract p 21, dinner booking details p 25.

**5 November**, Wed 5.20 pm **Monica Peters** "*Living off the land (sort of) in Mongolia 2001-2002*" Images of Mongolia – a land in transition. In the Benham seminar room, as above. Don't forget the Botanical buy, sell and share table (see p 22).

**8 November**, Sat **9 am**. Full day field trip to **Nugget Point** and **Cannibal Bay** led by **John Barkla**. A fuller description of the fantastic flora and fauna in this breathtakingly rugged landscape on the windswept south east coast is on p 23.

**6 December**, Saturday, **9 am**. **Mt Watkin podocarp forest**. Trip leader: Ralf Ohlemüller. After recent trips to the area of Mt. Watkin north of Dunedin and the discovery of its significance for a number of rare species (see BSO newsletter 38), we will now have a closer look at the forests near the "bottom" of this remarkable volcano. These sheltered forests in the gullies running off Mt Watkin harbour a wide range of mature specimens of podocarp, such as matai, rimu, totara and kahikatea – rare remnants of the magnificent lowland forest that once clothed much of eastern Otago. Ralf has studied species richness patterns in forest fragments in coastal Otago and also tried to reconstruct the potential natural forest vegetation of the area. He will talk about his work on the day. We will be walking off track, so bring solid shoes, outdoor equipment, rain gear and lunch. A hand lens is recommended. Return to Dunedin, approx. 5-6 pm. Meet 9 am, Botany car park 464 Great King Street to car pool (10c/km/passenger).

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## President's notes

*David Orlovich*

Welcome to spring! Well - apparently ... having just returned to Dunedin from Nelson, I was expecting to see Dunedin greener and warmer than when I left. Not so! Then again, I was only gone for 5 days - but spring *has* apparently sprung and one thing that is bursting from its seams in spring-like fashion is this newsletter and all the trips, talks and articles within. Once again Allison has put together a great read - thanks Allison and all the contributors! The worst thing about proof-reading this newsletter is that when it finally arrives in my pigeon-hole, I've already read it!

Our talks and trips program has heaps of interesting stuff. It is a great pleasure to welcome Ian Radford on to the BSO committee as out trip/talk co-ordinator. We've needed a helping hand this year to manage the list of upcoming events and to do the leg-work to ensure that each event is organised in advance. Ian made the fatal mistake of being in the wrong place at the right time and was quickly coerced into the job. Welcome Ian! Coming up soon we have a talk about geckos and their role in regeneration of native plants by Mandy Tocher; a trip to Warrington and Seacliff to see what was the James Powell Convalescent Home (now BSO members Chuck and Carol Landis' garden!) and the old Seacliff Psychiatric Hospital (now Truby King Reserve); and a trip to the Donaldsons' garden at Glenleith, then on to Moores Bush. If you haven't come along to any of our field trips yet, be brave and make one of these your first. You're guaranteed a fun day out.

The 2nd Annual Geoff Baylis Lecture is on 29th October and we're honoured to have one of New Zealand's best known plant ecologists, Dr Peter Wardle, as the guest speaker. Dr Wardle will speak about New Zealand's sub-alpine vegetation. In South America, deciduous beech forests occupy the sub-alpine habitat, but in New Zealand we have tussocks and shrubs. If sub-alpine NZ is so good for growing pine trees, why were there no native New Zealand trees there in the first place? More details about the lecture are in this newsletter on p 20. It promises to be an interesting evening so be sure not to miss it, and the dinner out at a local restaurant afterwards. Keep an eye on the BSO web page (<http://www.botany.otago.ac.nz/bsol/>) for up-to-date details.

I hope to see you at some of these exciting events. If you've got any suggestions for trips, talks, newsletter articles or any other activities that you'd like to do with the BSO, don't hesitate to let any of the committee members know. Our contact details are in this newsletter or on the web site.  
Happy botanising!

## Treasurer's Notes

*Frances Anderson*

Last year David was successful in attracting many early subscriptions when he alerted members to the date on the corner of the newsletter address label. This date denotes the year to which members have paid their subscriptions. Thank you for the continuing incoming subscriptions. The Botanical Society of Otago runs on a "shoe-string" budget with very low membership subscriptions. I have undertaken a quick audit and can

report the following: BSO has 109 fully paid up members, 8 of whom have paid beyond 2003, 16 subscriptions overdue for this year only, 12 not paid beyond the year 2001, and 7 not paid since year 2000.

Further to this we have 16 newsletters going out to people who have not paid for several years. I will be contacting all receivers who have not paid since 2002 or before to ascertain whether they wish to continue with membership and remind them accordingly. However it would be very helpful if members would check their mail label to confirm whether their membership is current and to contact me to advise of their intentions if subscriptions are overdue. Subscriptions may be sent to **P.O. Box 6214, Dunedin North** and you can contact me on [francesa@es.co.nz](mailto:francesa@es.co.nz).

## **Editor's notes**

*Allison Knight*

The plants (and weeds) in my garden are springing into new growth after winter dormancy. I'm pleased to say that local botanists are showing new vigour, too and have sprouted forth with a wonderful range of notes, quotes, articles, reviews and reports for this newsletter, as well as plans for some stimulating spring talks and trips. Thank you, everyone, for contributing- and please keep it up! The newsletter is so much more interesting when there are many points of view. John Steel's article from Botswana adds a welcome perspective from afar, while closer by you are invited to join us in unravelling the intricacies of all the lichen communities at our doorstep.

Word has it that the official party working on the proposed Mt Watkin Reserve is also revitalised and making good progress. We are keeping our fingers crossed that next BSO field trip there will be a celebratory one for two reasons, the other being that leader Ralf Ohlemüller aims to have finished writing up his PhD by then. With so much going on, I'm hoping for plenty of feedback for the next newsletter, so don't be shy about offering to contribute a trip or meeting report, a book review or an article.

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

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

## Notes and Quotes

### Linnean nettles!

David Galloway

In his bicentenary history of the Linnean Society of London (Gage & Stearn 1988: 111), William Stearn makes an intriguing comment on nettles while discussing the fate of the Linnaean Library and the Linnaean Herbarium during the Second World War, and worth recounting here: "...Although the Linnean collections were away at Woburn, it by no means followed that they were safe even there from German bombing. The Council, largely at the instigation of Ramsbottom [John Ramsbottom, Keeper of Botany at the British Museum], sought ways of having a photographic record made for distribution to various centres of learning abroad. An appeal to the Carnegie Corporation of New York, supported by E.D. Merrill, received a typically generous American response: the Corporation made a grant of 2000 pounds sterling for the undertaking. Before the specimens of the Linnaean Herbarium were photographed by Messrs Wallace Heaton at Tring (to which they were transferred), Spencer Savage added numbers to the sheets for reference purposes. If the Herbarium had thereafter been destroyed, the microfilm would have been an invaluable record, even though it was inferior to the one made in 1959 for the International Documentation Centre with much better equipment. While handling the specimens, the photographer, Gladys Brown, was stung on the arm by a specimen of stinging-nettle (*Urtica*) which had been dried and mounted some 200 years earlier: the arm showed a definite blister, apparently similar to one produced by a fresh specimen..."

#### Reference:

Gage, A.T. & Stearn, W.T. 1988: A Bicentenary History of the Linnean Society of London. Academic Press: London.

*Urtica urens*, small annual nettle. WH Fitch, *Illustrations of the British Flora*, 1949

### Nettles with watercress and horopito!

Chuck Landis

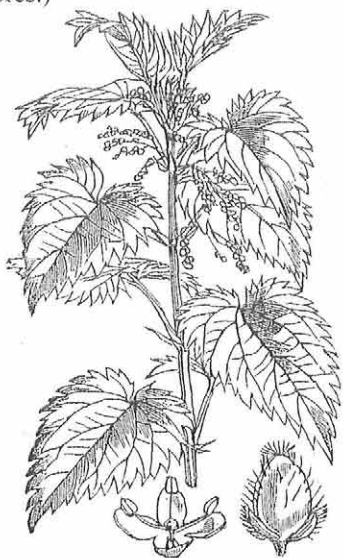
*July*: I really enjoyed Bill Sykes' article. Went right out and gathered some new growth (*Urtica urens*, I believe) and some watercress from the creek. Stir-fried and found it very flavourful as well as attractive in appearance. Carol agreed that it was yummy, though she could feel the back of her throat prickling as I cut up the green plants. Soup next?

*August*: Further to stir-fried nettles and watercress.....since both *Urtica urens* and *Nasturtium microphyllum* (= *Rorippa microphylla*) are Northern Hemisphere



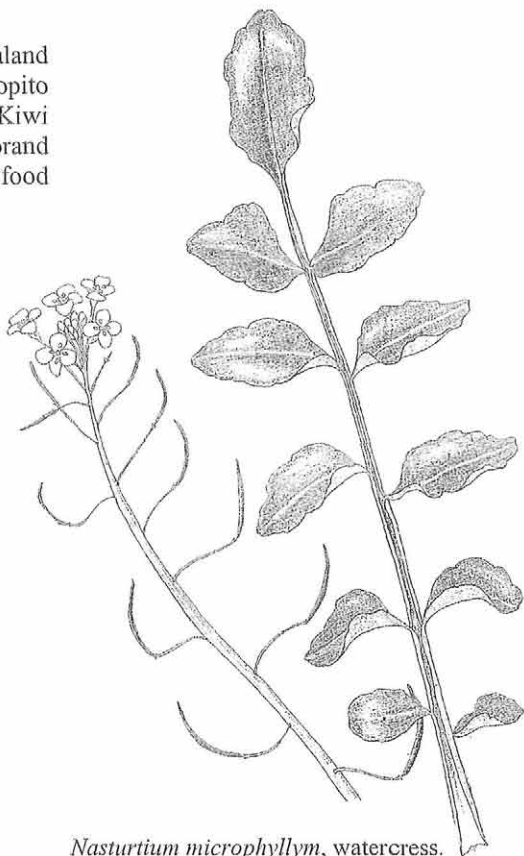
*Urtica urens* L.

natives, try serving with New Zealand avocado oil flavoured with horopito extract to add a distinctive and zany Kiwi flavour! (Sold under "The Grove" brand name and available at specialty food stores.)



*Urtica dioica* L.

*Urtica dioica*, common perennal nettle.  
Naturalised in New Zealand.  
WH Fitch et al., *Illustrations of  
The British Flora*, Kent, 1949



*Nasturtium microphyllum*, watercress.  
Naturalised in New Zealand.  
Hugh D Wilson, *Field Guide: Stewart Island  
Plants*, Christchurch, 1982

## Nettles, prostates and penguins

Allison Knight

Two recent articles mentioning nettles in the Otago Daily Times caught my eye. Here are some excerpts I thought you might enjoy.

On **prostates**, Dr John Briffa in London writes in the Guardian "...After about the age of 50, the prostate gland can enlarge, usually as a result of benign prostatic hypertrophy, or BPH. While BPH is the most common cause of prostatic enlargement, prostate cancer is a possibility, too. For this reason, men with an enlarged prostate should always seek medical advice.

BPH often responds to entirely natural treatment. Certain healthy fats – essential fatty acids found in foods such as nuts and seeds – seem to contribute to prostate health. Zinc is also believed to help. Pumpkin seeds contain useful quantities of both essential fatty acids and zinc. Studies on the effect of pumpkin-seed extract therapy on BPH

symptoms have produced promising results. Eating a handful or two of pumpkin seeds a day might keep symptoms at bay.

Another popular natural remedy is Saw palmetto (*Serenoa repens*). Some of this herb's action on the body seems to be mediated through testosterone, a hormone some scientists believe is a vital factor in BPH development. It helps to slow the conversion of testosterone into the more potent dihydro-testosterone, and has been found to block the action of dihydro-testosterone on the prostate. More than one study has found that it can control symptoms of BPH in the long term. In fact, the evidence suggests that it is as effective a treatment as the most commonly described drug for BPH (finasteride, or Proscar).

For men with BPH, I tend to recommend the supplement Prostate Support, which contains Saw palmetto, zinc, pumpkin seed oil, stinging nettle and African pygeum. Natural remedies have much to offer men suffering from BPH, especially those attempting to rediscover their inner child and his pee-up-the-wall potential."

On **penguins**, nettles and names, Shirley Stuart, the native plant curator at the Dunedin Botanic Garden, has written a very informative article on the distribution, habitat and stinging potential of five native nettles (*Urtica aspersa*, *U. australis*, *U. ferox*, *U. incisa*, *U. lineaerifolia*) and two naturalised species (*U. dioica* and *U. urens*)

On penguins she writes "...Although regarded as a fearsome plant, the tree nettle, or ongaonga, *Urtica ferox*, plays an important part in its environment. It is an important food plant for butterflies and also helps to protect penguin habitats; apparently, it doesn't affect these little birds and they will quite happily waddle through bushes in places like Otago Peninsula's Victory Beach to get to their nests."

On **names**, Shirley says "*Urtica* is an ideal generic name for nettles. It is related to the Latin verbs *urere*, which means to burn, and *urticare*, to sting. The word nettle is derived from the Anglo-Saxon *noedl*, meaning needle. While this seems to point, excuse the pun, to its fierce sting, it could also refer to the use of nettle fibre in making thread."

## Philosophical Quote

Monica Peters

### Letter to a Lady on Frutification and Liliaceous plants

Dated the 22<sup>nd</sup> of August 1771

'I ... (am) convinced that, at all times of life, the study of nature abates the taste for frivolous amusements, prevents the tumult of the passions, and provides the mind with a nourishment which is salutary, by filling it with an object most worthy of its contemplations...'

**Jean-Jaques Rousseau.** *Letters on the Elements of Botany: Addressed to a Lady.* 1785; tr. Thomas Martyn, 1785.



# Requests

## Volunteers needed

*Friends of the Dunedin Botanic Garden*

We would like to take this opportunity to ask for your assistance in our quest for valued volunteers for the Friends of the Botanic Garden shop, located in the Lower Botanic Garden. The shop was established in 1996 and is a hub of information for local, national and international visitors to the Botanic Garden.

So if you see yourself as a budding ambassador in a friendly, relaxed work environment with flexible hours, good coffee, ducky pals and no age limit, then phone the shop co-ordinator, 471- 9275 10 am – 4 pm daily to become a much-valued Friends of the Botanic Garden Shop Volunteer, earning unlimited self-reward points.

## Location of Banana Passionfruit plants urgently needed *Alison Gionotti*

We are currently gathering seed and cutting material of *Passiflora* species to be used in tests against a potential biological control agent for NZ weedy *Passiflora* species.

### We are looking for the following exotic species;

*Passiflora tarminiana*, *P. mixta*, *P. antioquiensis*, *P. caerulea*

*P. tripartita* var. *mollissima*, *P. tripartita* var. *azuayensis* and *P. pinnatistipula*

**[As far as I know *P. tripartita* var. *mollissima* will be the most common species in the Sth Island. This is good because we are in need of material, especially ripe fruit, of this species.] We also need the native species, *P. tetrandra***

### We urgently require location details for these species.

I would be very grateful if you could please send me the details of the location of any banana passionfruit (or *P. tetrandra*) plants that you know about. My contact details are at the bottom of this notice. If fruit is present please include details of whether it is green or yellow (i.e. ripe). Please also specify if the plant is naturalised or cultivated and include your contact details.

### We are particularly interested in plants that have fruit on them NOW.

If ripe fruit is present and accessible I would be very grateful if you could send it to me along with flower and leaf material (if also accessible), as this is needed for herbarium specimens.

Many thanks for your help.

*Alison Gianotti*

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email. gianottia@landcareresearch.co.nz

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## Articles

### Some first impressions from Botswana

John Steel

It's been three weeks now since we set foot on our new home and I'm surprised at how quickly we've all settled in. Johannesburg was covered in a thick, yellow smog as we flew out but soon the clear blue sky, that has been with us ever since, surrounded us. Half an hour passed and we were looking down on the dry savannah of Botswana, a sort of rusty yellow dotted with trees, just like on the telly. The airport reminded me of Dunedin before the present terminal was built.

My first impression was that this place is dry; no, not dry, but Dry. Everywhere is covered with a thin coat of coarse, reddish sand and fine dust over what appears to be clay. There are plenty of trees, most of them evergreen, and many of them have very long taproots that go down a long way to reach water. There is, apparently, quite a good source of water deep underground and there is an increasing programme of well-sinking to tap into this. I have a sneaking suspicion that the long-term effects of drawing off this water may not be being fully considered. It is mid-winter here, something I have to keep reminding myself of, and so the vegetation has a feeling of drabness about it although here and there one comes across some spectacular floral displays. Most of them I have no idea what they are! I do recognise many families, however, well....., maybe some, or more likely a few....., actually just one, Poaceae; actually a few more than that – honest! On the way into Gaborone, the capital and our new home, I started to recognise some of the trees, especially; *Eucalyptus* spp.; *Araucaria heterophylla*; the beautiful *Tecoma stans*; *Carica papaya*; *Allocasuarina equisetifolia* and *A. decaisneana*; and huge cactus plants eight and more metres high. You've probably guessed by now that these are not African at all and Gaborone follows the rest of the world in preferring exotic plants over its own.

My section (I couldn't call it a garden) is a two metre dust moat around the house where half a dozen or so weedy things struggle to survive. I am slowly working them out and the most common is the native grass, *Cenchrus ciliaris*, not unlike marram grass but with a purple spike which opens out more than marram and is commonly used here effectively as an ornamental. Next most common is the Mexican firebush, *Euphorbia heterophylla*, a straggly, metre-high *Poinsettia*-like thing begging to be pulled out. It was introduced accidentally by the British in the nineteenth century in horse feed imported from South America and is now widespread. Most noticeable at the moment are the seed pods of all shapes and sizes that almost cover many of the trees. Today Samantha brought in a four winged samara which I tracked down to the genus, *Combretum*, in the Combretaceae, neither of which I'd come across before, which produces a very hard and durable timber. The seeds resemble those elm seeds so abundant in Anzac Avenue in Dunedin every year. Instead of papery, however, these are pergamentous (my new word for the week meaning stiff and parchment-like) and instead of two wings, have another pair at right angles to the other. Depending on the species, they range from one to six centimetres in diameter. At the rear of the section

was a large shrub that I seemed to know. Sure enough, when I keyed it out it turned out to be *Dodonea viscosa*, the akeake, and common throughout South Africa crossing over into Botswana near Gaborone where it is commonly planted as a hedge or garden ornamental.

I couldn't find a bryophyte anywhere until I spotted what looked like a lichen on the ground behind the house. Closer inspection of the circular white patches made me suspicious so I soaked it in water and within minutes I had a bright green thallose liverwort similar to those found in the Australian deserts. In amongst them were some moss strands and nearby I found a small brown patch of what turned out to be very pretty little moss, deep green with a strong, golden costa. My books haven't arrived yet so it will be a wee while until I can come up with names for them.

As for lichens, I have found a few, which I have collected and will try to name once I find a source for lichen identification. Sadly, none of the libraries has anything on southern African cryptogams. Those lichens I have found are very small, one *Physcia*-like, the others all crustose, corticolous things that don't do me any favours. To date, no *Ramalinas* for Jennifer but it's early days.

## Lichens on twigs in the Dunedin area

*A Knight & J Bannister*

Several trends emerged from the lichens brought in from around Dunedin for the recent BSO workshop. Firstly, nearly all the specimens collected were on deciduous, exotic trees and shrubs, such as red currant, apple, pear, silver birch, magnolia, dogwood and maple. The most commonly collected lichens from urban sites (Kew, Highgate, Maori Hill and Macandrew Bay) were *Lecanora carpinea*, a spreading flat white crust, *Physcia adscendens*, grey-white with cilia, the eye-catching bright orange *Xanthoria parietina*, and orange *Teloschistes chrysophthalmus*, also with cilia.

Next most common were the grey-green, shrubby, (**fruticose**) lichens *Usnea oncodes* (*U. arida* in the *Flora of NZ Lichens*) and *Ramalina celastri*, which has strap-like lobes. These last three species tended to be small and tatty in the city and to grow more luxuriantly in the semi-rural areas of Sawyers Bay and Seacliff. The first 4 are widespread, cosmopolitan lichens, and it is interesting to speculate whether they arrived in New Zealand before or with the introduced trees on which they perch so readily. All flourish in a high light environment, so did they just take advantage of the increased light available in a new, deciduous habitat or did they arrive on exotic trees? They can sometimes be found on indigenous garden specimens, or on exposed twigs on the outer edges of our evergreen native forest, but are seldom found within it.

First, we divided the lichens into 3 main types, **foliose**, **fruticose** and **crustose**, as grouping morphological types is the first step towards using identification keys.

**Foliose** lichens have lobes with a distinct upper and lower surface, which can be lifted up from the substrate, to which they are attached over a wide area, often by rhizines. It's easy to tell the ones with wide, raised, leafy lobes, like *Parmotrema chinense*, or *Parmelina labrosa*, but we found other foliose lichens which were quite flat against the

bark, like *Parmelia borreri*, *Xanthoria parietina*, *Physcia jackii* and the small, green, very flat-lobed *Hyperphyscia adglutinata*. Their lobe edges had to be prised up quite carefully to examine the lower surface and so determine that they were not crustose. Still other foliose lichens have quite narrow, raised lobes, like *Physcia adscondens* and *Hypogymnia physodes*, which could at first glance be mistaken for shrubby fruticose lichens, if it were not for their broad attachment to the **substrate**. *Hypogymnia* was not brought in from any urban areas, but is common on twigs and posts in reserves around the city, such as Ross Creek, Flagstaff, Swampy Summit and Mt Cargill.

**Fruticose** lichens grow out from a holdfast on the substrate. They can be upright and 'shrubby' as orange *Teloschistes chrysophthalmus* is, or dangle down, like some of the larger, grey, strap-like *Ramalina celsastri* specimens seen. A cross-section of their 'branches' can be round (**terete**), as in *Usnea* spp, or flattened, as in *Ramalina* spp.

**Crustose** lichens are often so closely adpressed that they are liable to be mistaken for the bark itself and so tiny that they are missed altogether, despite their bright colours and unusual shapes. They cannot be removed without removing some of the bark, so must be collected with care. The white crust lichen, *Lecanora carpinea*, is so widespread on deciduous trees around Dunedin it could easily be mistaken for white bark. Closer inspection with hand lens or microscope reveals numerous, round, crowded fruiting bodies (**apothecia**). These apothecia are covered with a fine white crystalline powder (**pruina**), which turns yellow on addition of a small drop of household bleach (hypochlorite, '**C**' reagent). The crystalline pruina is possibly a defence against grazing by invertebrates, such as mites and snails. Some very cute hairy mites did crawl out of our lichens! Other crustose lichens seen on our Dunedin twigs, but not all fully keyed out, included *Haematomma babingtonii*, with blood-red apothecia, fertile *Caloplaca*, *Arthonia*, *Buellia* and *Rinodina* and members of the family Graphidaceae, which have squiggly, elongated apothecia that look a little like hieroglyphics.

**Brief Glossary** (see BSO newsletter no. 38 and references for more terms)

**Ascus:** Sac in the fruiting body (apothecium) containing sexual fungal spores. See fig. on front cover.

**C reagent, C test:** Colour, often fleeting, when a drop of hypochlorite (household bleach) reacts with part of a lichen.

**Cephalodia:** Different coloured lumps in or on the thallus, containing cyanobacteria.

**Cortex:** Discrete outer layer of thallus on upper, and sometimes lower, surface.

**Cyphellae:** lined pits on the lower cortex of the thallus of some foliose lichens.

**Hyphae:** Thread-like filaments of the fungus that forms the structure of the lichen.

**Maculae:** Pale blotches on the upper cortex, caused by lack of algal cells below

**Medulla:** A layer of loose hyphae below the algal layer.

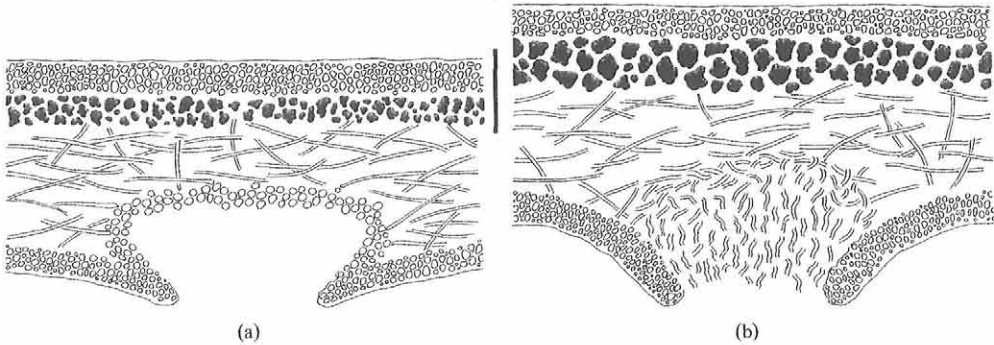
**Podetia:** The fruiting branches or stalks in Cladoniaceae are called podetia.

**Pruina:** Frost-like coating of minute crystals, often of calcium oxalate

**Pseudocyphellae:** Round or slit-like breaks in the upper or lower surface (cortex), exposing the inner hyphae of the medulla. Not smoothly lined.

**Terete:** Cylindrical, round in cross section.

**Thallus:** the lichen body, usually with distinct lobes in foliose lichens, a shrubby appearance in fruticose lichens and a closely attached crust in crustose lichens.



Cross section of (a) *cyphella* (*Sticta*) and (b) *pseudocyphella* (*Pseudocyphellaria*). Note **algal layer** of black dots under upper **cortex** and above the strands of fungal **hyphae** making up the inner **medulla**. *The Lichen Flora of Great Britain and Ireland*, OW Purvis et al, eds., 1992. (UK website <http://www.nhm.ac.uk/botany/lichen/twig> also has lichen terms)

**Table of Lichens on twigs in the Dunedin area, identified at the July workshop.**

Lichen	Notes
<b>Foliose</b>	
<i>Hyperphyscia adglutinata</i>	On red currant. Small, flat and easy to overlook.
<i>Parmelia cunninghamii</i>	Fine white lines ( <b>pseudocyphellae</b> ) breaking the surface.
<i>Parmelina labrosa</i>	Powdery granules ( <b>soredia</b> ) on 'lips' of lobes.
<i>Parmotrema chinense</i>	More common in outlying areas. Long, dark, <b>cilia</b> .
<i>Physcia adscendens</i>	Common in urban areas. Cosmopolitan.
<i>Physcia jackii</i>	Less common. Previously called <i>Physcia stellaris</i> in NZ.
<i>Punctelia borreri</i>	Round spots ( <b>pseudocyphellae</b> ) on upper surface.
<i>Punctelia subrudecta</i>	Sorediate centrally. Cryptic marginal pseudocyphellae.
<i>Xanthoria parietina</i>	Common in urban and outlying areas. Flat, fertile, orange.
<b>Fruticose</b>	
<i>Ramalina celsa</i>	Struggling in city, luxuriant at Sawyers Bay and Seacliff
<i>Ramalina inflexa</i>	Only brought in from Seacliff.
<i>Teloschistes chrysophthalmus</i>	Common, 'shrubby', orange. Healthier away from city.
<i>Usnea arida</i>	Miserable in city, bigger and bushier further out.
<b>Crustose</b>	
<i>Arthonia</i> sp	Irregular, flat, black apothecia on thin green crust.
<i>Buellia</i> sp	Tiny round black <b>apothecia</b> (fruiting bodies).
<i>Caloplaca</i> sp	Tiny, round, rusty orange apothecia.
<i>Haematomma babingtonii</i>	Round, red apothecia, with a white rim, on a white crust.
<i>Lecanora carpinea</i>	Widespread white crust covering large areas of bark.
<i>Rinodina</i> sp	Tiny round brown apothecia with a paler rim.

**Useful References:**

- WM Malcolm & DJ Galloway *New Zealand Lichens, Checklist, Key and Glossary*, Museum of New Zealand, Te Papa, 1997  
 DJ Galloway *Flora of New Zealand Lichens*, Government Printer, Wellington, New Zealand, 1985

# Key to 15 genera of common foliose lichens in the Dunedin urban area

*Jennifer Bannister and Allison Knight, OTA*

1. More or less regular pale pits (**cyphellae** or **pseudocyphellae**) on lower surface.....2  
     No pits on lower surface (exclude rips, tears, insect and other damage).....3
2. Pits on lower surface indented, smoothly lined with raised margins (cyphellae).....*Sticta*  
     Pits roughly lined, less indented, less regular (pseudocyphellae).....*Pseudocyphellaria*
3. Spots or lines (pseudocyphellae) breaking the upper surface or margins (look carefully at the ends of young lobes).....4  
     No spots or lines breaking upper or lower surface or on lobe margins.....5
4. Pseudocyphellae on upper surface small, round (punctiform), **medulla** C+ pink...*Punctelia*  
     Pseudocyphellae breaking upper surface in irregular lines or network. There may also be pale unbroken patches or blotches (**maculae**).....*Parmelia*
5. Lower surface a felted mat of **hyphae**, with darker veins and thick **rhizines**, usually growing on soil (terricolous) or moss (muscolous) in damp places.....*Peltigera*  
     Lower surface not felted or veined.....6
6. Lobes of the **thallus** (the main body of the lichen) hollow.....7  
     Thallus lobes solid (slice open near the tips and examine with lens or microscope).....8
7. Hollow lobes perforated by holes on upper surface, usually numerous.....*Menegazzia*  
     Hollow lobes with no perforations .....*Hypogymnia*
8. Thallus and fruiting bodies (**apothecia**) orange or tinged with orange.....*Xanthoria*  
     Thallus green-yellow, green, grey, brown.....9
9. Thallus yellow-green or yellow brown, especially at tip of lobes.....10  
     Thallus green, grey-green, grey, brown-green or brown.....11
10. Thallus yellow-green, soresiate, tips of lobes rounded, growing on bark (corticolous) or rock, (saxicolous). .....*Flavoparmelia soresidians*  
     Thallus yellow-green, lobe tips irregularly incised, growing on rock, road, footpath, tile or other hard surface.....*Xanthoparmelia*
11. Thallus entirely brown, or greenish brown if damp, growing closely on rock, road or other hard surface.....*Neofuscelia*  
     Thallus green or grey, growing on a variety of substrates (bark, rocks etc).....12

12. Thallus largely white or whiteish grey, even when damp (soredia may be greenish)...*Physcia*  
Thallus grey-green or green when damp.....13
13. Lobes broad (4-20 mm), rounded, with long, conspicuous cilia.....*Parmotrema*  
Lobes narrower, green or grey-green, cilia short, if present.....14
14. Lobes narrow, mainly < 4 mm wide, short cilia may be present, medulla C+ red...*Parmelina*  
Thallus very small and closely attached to bark (corticolous). Lobes thin, green flat, with  
paler, round soralia. No cilia present.....*Hyperphyscia adglutinata*.

## Trip and Meeting Reports

### Solander meeting

*Allison Knight*

Dr Ted Nye spoke to a full house of 30-odd people in the new Benham seminar room on July 23. He began his talk with an upright cardboard file box, with an open front and sloping sides, correctly called a Solander box, after the Swedish botanist who invented it while he was working at the British Museum over 200 years ago. Then he regaled us with all manner of interesting details of Solander's life, going right back to his great-great grandfather who lived at a time before surnames were common and took a local feature, Solberg (sun mountain), as the family name. Great-grandfather, who was a Lutheran priest, latinised the name to Solimontanus, and grandfather contracted it to Solander. Father was a priest and a schoolteacher, so young Solander would have grown up with a good background in Latin, which he put to good use as a pupil of Linnaeus at Uppsala University. Coincidentally, there is a town called Nye not far from Linnaeus' birthplace. Linnaeus' house, glasshouses and garden, arranged according to Linnaean systematics, are all still there in Uppsala.

From Uppsala Ted led us to Britain, where Solander spread Linnaeus' hierarchical system of binomial classification, possibly indulged in a little industrial espionage for Sweden, and was in demand for classifying private collections, such as that of Hans Sloane, whose collection formed the basis of the British Museum. He soon came to the notice of Joseph Banks, who encouraged Solander to come as naturalist on Captain Cook's expedition in the Endeavour to observe the transit of Venus and explore the southern continents. On the voyage Banks and Solander collected hundreds of plant specimens, described them in Latin, and had many adventures along the way. Their specimens were drawn on board by Parkinson, the artist, who unfortunately died of malaria. His botanical paintings were not published until 1980, over 200 years later! There is a copy of the Florilegium containing them in the Hocken Library. Green, the astronomer, also died of malaria in Batavia, along with a quarter of the crew.

Despite this, Banks was so keen to come on Cook's second voyage that he had a third deck built on the Resolution for his retinue. Unfortunately this made the ship so unstable that the royal Navy insisted it be dismantled. So Banks and Solander mounted

an expedition to Iceland instead, which was not nearly so botanically interesting. On their return to London Solander lived with Banks in Soho and become Keeper of Natural History at the British Museum. He was reluctant to let Linnaeus see any of his specimens, and died of a cerebral haemorrhage at the age of 49.

Since Solander brought Linnaeus' binomial system to the English speaking world, and was the first professional botanist to visit New Zealand, Ted suggested setting up a Solander Garden in Dunedin in 2007, to honour Solander and to mark the 300<sup>th</sup> anniversary of the birth of Linnaeus. The other significance of the 2007 anniversary, and an appropriate time to set up the Solander Garden, is that the IK Foundation in Britain plans the publication that year of the works of the pupils, "apostles" if you like, of Linnaeus, who travelled the world in search of natural history specimens. The Otago Scandinavian Club supports this idea of a Solander Garden, as does the Botanical Society. If you would like to be involved in this historic botanical project, see page 22 for details of the meeting at Ted's place on 21 September.

## **Lichens on twigs workshop**

*Robyn Bridges*

Tony Druce is reputed to have said that once you have been introduced to a plant, then 'shaking hands' with it each time you come across it is a really good way to familiarise yourself with the species. I am pleased to say, having spent several happy hours at the recent Lichens on Twigs Workshop, that I have been introduced to several cosmopolitan lichens in my garden. These unassuming members of my garden's habitat give an extra dimension to the garden. Of course being introduced is only the first step, but thanks to the workshop, I am well on my way to getting to know them better!

Like last year's lichen workshop, Lichens on Twigs, was a great success. Under the able guidance of Jennifer Bannister and Allison Knight I was taken through the many steps involved with lichen identification. Lichen keys are not for the uninitiated and I appreciated not only the facilitators' expertise, but also having on hand glossaries, websites, keys and reference books. And thanks to the Department of Botany for letting us use their excellent laboratory facilities.

## **BSO foray to Orokonui Reserve**

*Norman Mason*

Dunedin really outdid itself weatherwise for the Bot. Soc. Trip to Orokonui reserve on August 9<sup>th</sup>. The group of 20 or so phytophiles could not have wished for a better day. The trip was led by local botanist Dr. Ralph Allen, who, as a member of the Dunedin Natural History Trust, is currently working to establish a mainland island reserve at Orokonui. The term mainland island derives from the habit that New Zealand's conservationists have of evacuating endangered fauna to predator-free, offshore islands. The point of mainland islands being the establishment of predator-free areas on the mainland to accommodate endangered and threatened species. The plan for Orokonui



will follow the example of Karori mainland island reserve in Wellington. Here the reserve was surrounded by a predator-proof fence (tests have shown it keeps *all* of the usual nasties out). Then all the predators within the fenced area were 1080ed or cyanided out of existence. Dr. Allen told the group that predators were completely eradicated from the Karori reserve within several years, and therefore is hopeful that predator-free status is achievable at Orokonui also. Apart from the conservation of endangered species, a major goal of the reserve is to act as an advocacy tool to raise public awareness. The hope is that once people have experienced first hand exactly what we risk losing, they will be inspired to give the conservation of the nation's biodiversity more serious consideration. As part of this advocacy role the Dunedin Natural History Trust hopes to offer a range of eco-tourism options including both independent and guided walks through the reserve, and will provide education opportunities for school and other groups.

Orokonui was chosen as the site of the mainland island reserve, in part, for the value of its vegetation. The reserve covers an area of 270 ha, encompassing a range of habitats. It contains large areas of kanuka (*Kunzea ericoides*) forest-scrub, varying in age from 70-120 years. Within the kanuka stands, typical secondary forest species such as lancewood (*Pseudopanax crassifolius*), broadleaf (*Griselinia littoralis*) and red mapou (*Myrsine australis*) are establishing, with the occasional occurrence of young miro (*Prumnopytis ferruginea*) and Cunningham's totara (*Podocarpus cunninghamii*) giving evidence of the potential for succession to mixed podocarp-broadleaved forest. A feature of the reserve is a gully that has apparently escaped burning. Here are found a number of large rimu (*Dacrydium cupressinum*, one of which received an unsolicited hug from a bearded stranger), miro, Cunningham's totara, and at least one matai (*Prumnopytis taxifolia*). Also on offer are an abundance of tree ferns, and areas of well-developed broadleaved forest containing kotukutuku (*Fuchsia excorticata*), broadleaf, and tarata (*Pittosporum eugenioides*). The reserve extends to Orokonui lagoon, containing a reasonable area of valley floor. The trust hopes that this area will be suitable for the development of alluvial forest containing kahikatea (*Dacrycarpus dacrydioides*), totara, matai, manatu (*Plagianthus regius*) and lacebark (*Hoheria* sp.), since lowland alluvial forest is almost extinct on the east coast of the South Island.

The area to the north of Dunedin seems to have been the place to be if you were mad, as psychiatric hospitals were formerly sited near Waikouaiti, at Seacliff and at Orokonui (may explain why I like the area). The hospital at Orokonui owned a small mountain ash (*Eucalyptus regnans*, also known as regal gum to Latin lovers) plantation, which is currently inside the boundary of the reserve. There is nothing small about the gum trees themselves, since this stand contains what is thought to be New Zealand's tallest tree. At 69.1 m the regal tree was rendered somewhat less impressive than it might have been by neighbours almost its equal in height. There is apparently one doubter who wants to climb the aussie giant with a tape measure for irrefutable proof or denial of the tree's title.

Overall Orokonui reserve proved a pleasant place for a gentle stroll in the bush. I'm not alone in that opinion. The beautiful day seemed to have gone to the heads of the self-

confessed, unfit, fogies (Dr. Allen among them), since the entire group completed a circuit of the reserve. Stretching from sea-level to hill-crest, the reserve offers a range of habitats, and with its potential for succession to mature forest may develop into an important forest reserve. It also has the potential to support a wide range of bird species, and, given its proximity to other large areas of native forest, may be important in enriching the avifauna of the hills to the north of Dunedin. Orokonui and the neighbouring areas of forest would certainly suit an avian cacophony in addition to the chirpings of assorted nature-trippers.

**Footnote.** Our circumnavigation of the Orokonui Reserve involved a walk (some skipped) down an unformed 'paper road' on the western side of the reserve. The DCC Planning Department have confirmed that the public do have legal right of access down this road. However, it would be courteous to inform the landowner, Mr E Davis, before you cross his land, especially as the route is close to his house. – Ed.

## Book review

# Gum

## The story of eucalypts and their champions

by Ashley Hay

Published in 2002 by Duffy & Snellgrove, NSW (275 pages)

The subjects of the book are the trees, ubiquitous in Australia, which were collected by Daniel Solander and Joseph Banks in 1770 and given the name gum trees because they "oozed a thick, sticky resin". Banks failed to publish the descriptions of the gum trees and it was not until 1786 that the name *Eucalyptus* was coined by the amateur French botanist Charles Louis L'Héritier. The genus name refers to the cap (calyptra) on the gum nuts that covers the flower bud. The complexity of eucalypt taxonomy is mentioned, although we are spared the details and instead readers are given many interesting facts about gum trees. One such example is that Italian monks created a eucalypt liqueur called *Eucalitino* to celebrate the draining of a marsh by a blue gum plantation (*Eucalyptus globulus*) at the monastery at Tre Fontane.

Hay describes how initially gum trees were considered ugly by the colonists, but soon their unfamiliar form became recognised as majestic and beautiful. A personal history of the eucalyptographers provides little known information including how Mueller was progressively ousted from the Botanic Gardens in Melbourne that he had helped to establish. May Gibbs personalized eucalypts through the gumnut baby cartoon characters, Snugglepot and Cuddlepie. Through her stories, Gibbs also educated

Arlene McDowell

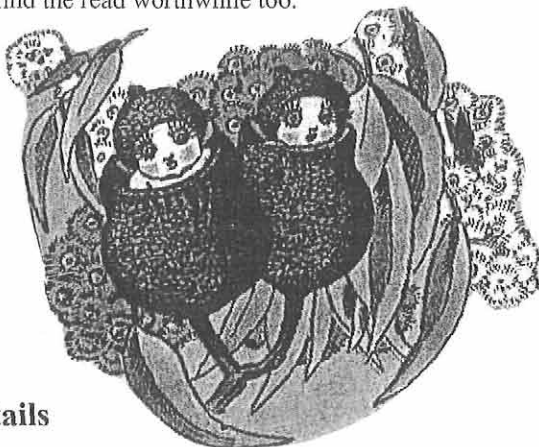


children about the flora and fauna of the Australian bush and the importance of conservation. Conservation is also raised with the issue of logging old-growth eucalypt forest in the Styx Valley in Tasmania.

The language used was non-technical and accessible, although sometimes the writing style was a little awkward because of long sentences. A useful (and diverse) bibliography of works that have been directly quoted is included. Hay also acknowledges the people she consulted in the preparation of the book, however I am aware of some prominent eucalypt scientists who were not included. The book is not a complete treatment of all those who have been involved with eucalypts, however I don't think that was the aim of the author. Hay is a new convert to the magic of gum trees, and has interwoven the many facets of society that involve gum trees – from botany, through art subjects to their utilitarian value as timber. I hope that I have not been misguided in my enjoyment of the book (because it reminds this Aussie of home) and that others interested in botany will find the read worthwhile too.

*Available for purchase from  
University Book Shop \$29.95  
(less 10% with a UoO staff/  
student ID card).*

*Snugglepot and Cuddlepie,  
the gumnut babies  
May Gibb, Australia*



## Special Book deals and details

**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.

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.....and Neill Simpson was the last to know. When his mother flew down from Auckland with his sister from Wellington and his 3 sons converged on Queenstown Neill thought that was a wonderful surprise. Then when they all went out to dinner to celebrate his 70<sup>th</sup> birthday and arrived at a hall full of people Neill was almost overwhelmed. But he soon warmed to the occasion, with around 100 friends, colleagues and relations gathered to wish him well, a live band, a blazing fire and mountains of celebratory food. The presents were especially appropriate – a towering kauri in a pot, and a very good likeness of Neill in a very unlikely botanical setting, painted by a local street artist.

Next morning, when I admired Neill's own botanical artistry, transforming the council's weedy roadside verge into a spectacular showcase for native plants, it reminded me how richly he deserved the Allan Mere awarded to him by the New Zealand Botanical Society for services to botany. And when he instantly gave me permission to chip an interesting *Physcia* from his lichen-swathed rocks I was even more convinced. May there be many more years of happy botanising, Neill!

## Botanical Diary

### Premier Event

**Don't miss the BSO Premier talk of the year, jointly sponsored by the Botanical Society of Otago and the Department of Botany, University of Otago:-**

**29 October**, Wed 5.20 pm **2nd Annual Geoff Baylis Lecture**. Distinguished guest speaker **Dr Peter Wardle** *New Zealand's forest limits and the vegetation above them, compared with South America and other regions*.

**Abstract:** Species introductions and climatic comparisons show that hardy trees from the northern hemisphere can grow well above the altitudinal limit of native forest in New Zealand. Instead of the subalpine conifer forests of the northern hemisphere we have a belt of tall tussocks, shrubs and large forbs, occupying an environment very similar to that occupied by deciduous beeches in the southern Andes. While this tall-tussock belt is essentially unique to New Zealand and its subantarctic islands, it does share features with vegetation on tropical high mountains. As well as large tussock grasses, these features include temperature climates with muted seasonal variations, and large-leaved rosette plants, some of the tropical examples being arborescent. On the tropical high mountains, this vegetation zone also contains low forest which has been reduced by fire, and as in New Zealand it is receptive to introduced tall-tree species. The term *tropicalpine* has been used because this vegetation does not fit the altitudinal zonation that has been derived for north temperate mountains; to recognise the similarly special nature of New

Zealand vegetation lying between the upper forest limit and typical alpine vegetation, I have proposed the term *penalpine*.

Peter Wardle is one of New Zealand's foremost plant ecologists with an unrivalled knowledge of how New Zealand's vegetation, environment and ecological processes compare with the rest of the world. His highly regarded book, *Vegetation of New Zealand*, is the definitive book on the subject. It covers succession, invasion, disturbance, regeneration and many other complex processes. The book is dedicated to Professor Geoff Baylis, whose contribution to botany is honoured in this lecture series. After Peter's talk we plan to go out to dinner at a local restaurant. If you would like to join us please book by Mon 27 October through Trish Fleming, Ph 479 7577, email: trish@planta.otago.ac.nz

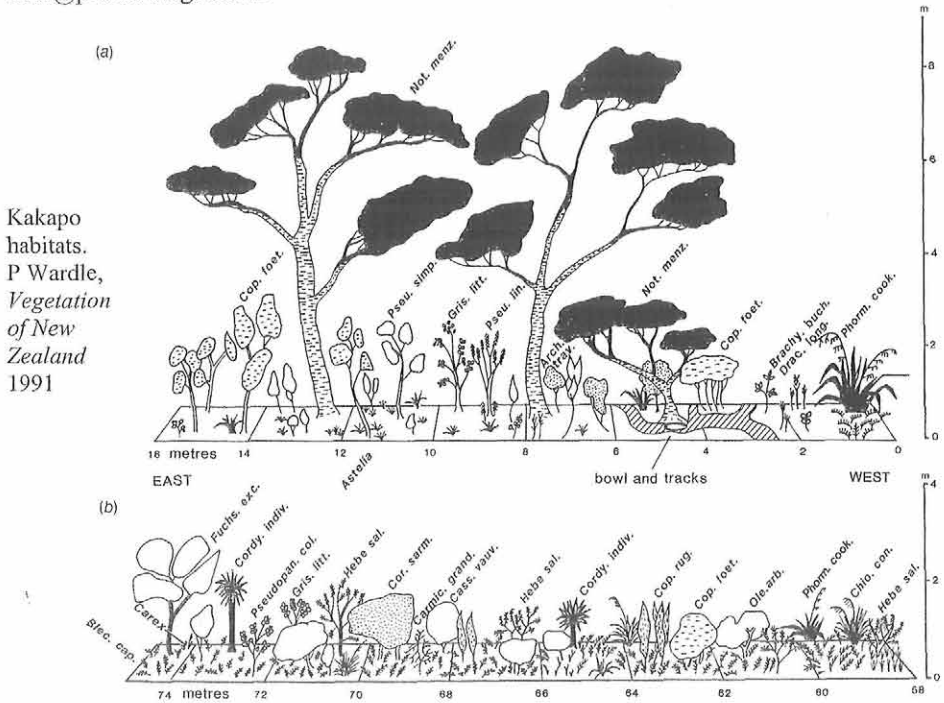


Fig. 7.33. Profiles of 1 m wide transects across silver beech forest and successional vegetation representing a territory (a) and 'garden' (b) of the almost extinct kakapo parrot (*Strigops habrotilus*); 860 m and 600 m respectively, Milford Sound, Fiordland (Johnson 1976a).

## International Events

16 – 21 August, 2004 **5th International Association of Lichenology Meeting (IAL5)**, Tartu, **Estonia**, with associated lichenological field trip to **Russia**, 10 – 15 August.

Call for papers for an international conference on ECO-ENGINEERING: 'the use of vegetation to improve slope stability' to be held in Thessaloniki, Greece, September 13 – 17, 2004, contact Sanna Dupuy, email: [sanna@lrbb3.pierroton.inra.fr](mailto:sanna@lrbb3.pierroton.inra.fr)

13 – 16 July 2004. **XVII International Botanical Congress**, Vienna, Austria.  
<http://www.abc2005.ac.at>, email: [office@abc2005.ac.at](mailto:office@abc2005.ac.at)

## **Australasian Events**

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

### **Wellington Botanical Society Summer Field Trip 31 Dec 2003 – 11 Jan 2003, West Coast and Murchison**

31 Dec – 4 Jan, Kokiri Lodge, 8 km east of Stillwater, near Greymouth  
6 Jan – 11 Jan, Matakia Lodge, Tutaki Valley, 33 km east of Murchison  
Botanise West Coast Forests, Nelson Lakes National Park and Lake Matiri/Thousand Acres Plateau. More details next newsletter.

## **Local Events**

### **Solander Garden Project – your chance to be involved**

Dr Ted Nye, who recently spoke at one of our meetings, is keen to form an ad hoc committee to look at setting up 'The Solander Garden' in the City's Botanic Garden. Ted would particularly like representation and support from the botanical community in this exciting project honouring the name of Daniel Solander (1733 - 1782), and commemorating the 300<sup>th</sup> anniversary of the birth of Linnaeus. The first meeting will be at Ted's house, 51 Irvine Road, The Cove, Otago Peninsula, 11 am, **Sunday 21 September**. Members keen to be involved in this project please contact Ted: Phone 03 454 2160, Fax 03 454 3466, email [ted.nye@stonebow.otago.ac.nz](mailto:ted.nye@stonebow.otago.ac.nz).

### **Botanical Buy, Sell and Share Table**

We have been trialling a botanical sales table at our last two monthly meetings, where members can donate to a good home, or purchase (usually for a gold coin donation) plants, seeds, produce, botanical art or literature. So far all the native plants have gone to a good home, and quite a few of us are pleased to have seeds from Audrey Eagle's perennial runner beans, especially after she showed us several pods around 30 cm long from her last crop. There are still a few more of these beans which will be available at the next meeting. They are best not planted til November, when the soil warms up.

Also of interest on the table in August were the flowers of *Pittosporum umbellatum* and *Pittosporum cornifolium*, which Cliff Donaldson brought in. These are seldom seen this far south, and are an indication of the wide range native plants that Cliff will show us on the field trip to his garden on Oct 11. So, do think about bringing along items of interest to share or sell (and a few extra gold coins) for the sales table at meetings.

**27 September, Saturday.** Field trip to **Warrington and Seacliff**. Carol and Chuck Landis live at the old James Powell Convalescent Home in Warrington. Their large garden contains ornamental trees and an extensive variety of shrubs. Many rhododendron, including several original species, will be in bloom and a range of unusual Magnoliidae is also present. An adjoining area of "bush" contains a range of New Zealand trees, shrubs and ferns. The central part, containing about 95 species of East Otago provenance, is surrounded by a belt comprising natives including many sourced from outside the local area. Highlights include *Pennantia baylisiana*, *Alseuosmia* spp. and three *Ixerba brexioides*. The possible effects of companion plants on *Ixerba* growth are very interesting (- as Geoff Baylis pointed out in an earlier issue - ed) The **Enchanted Forest** at the nearby **Seacliff Reserve** will also be visited. It contains a variety of beautiful mature trees (native and exotic) on the grounds of the old Seacliff psychiatric hospital. Many were planted by Sir Truby King 100 yrs ago. A new list of significant trees on the reserve will be provided. Trip times on front page.

**1 November, Sat. 9 am.** Field trip to **Nugget Point and Cannibal Bay**, Catlins. **John Barkla**, DOC Otago, will lead a full day trip, first to Nugget Point and then to nearby Cannibal Bay. Nugget Point is the premier wildlife-viewing site in the Catlins but also has fantastic veg. Wind-shorn shrubby vegetation contains a large population of *Olearia fragrantissima* and herbfields have the megaherb *Anisotome lyallii* and the Catlins endemic *Celmisia lindsayi*. Just south of Cannibal Bay are ephemerally wet dune slacks with large populations of the threatened herbs *Mazus arenarius* and *Libertia peregrinans* and the small shrub *Pimelea lyallii*. NZ sealions are regularly encountered here. Trip departs from Botany Dept. carpark 9 am sharp. Carpool rates are 10c/km/passenger payable to driver. Return mid-late afternoon. Bring lunch and drinks and warm, wind-proof clothing. For enquiries contact John Barkla 476 3686 evenings.

### **Another lichen workshop – call for expressions of interest.**

Our next workshop will broaden to include any lichens growing in the Otago area that you would like to identify, whatever they are growing on – twigs, bark, rocks, soil, moss, footpath, concrete, glass, etc. Remember, lichens are much easier to remove intact when they are wet, and then it is best to dry them thoroughly and record where you found them and what they were growing on. We'd be keen for you to try out and give feedback on the key to common foliose lichens in the Dunedin area that we've drafted. There will also be a chance to delve into the intricacies of the microscopic characters needed to identify crustose lichens, for those who would like to progress further. This workshop will be on demand, so if you are interested let us know when you can and can't come in early October or mid November 2003, or late February or later in 2004. Please indicate which option you'd prefer:

- a) another one day laboratory based workshop, looking at local lichens you bring in.
- b) a one day mixture of local field trip and laboratory identification

- c) a 2-day mixture of local field trip(s) and laboratory identification
- d) a whole weekend away, perhaps looking at all those lichens smothering the rocks in Central Otago, and taking microscopes etc to set up a field lab.
- e) other suggestions welcome

To express interest, email: [bsc@botany.otago.ac.nz](mailto:bsc@botany.otago.ac.nz), or phone Allison Knight, 487 8265, or Jennifer Bannister 467 2142. Then we'll arrange the most suitable option.

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

**10 Sept** Wed 12 noon. Botany Dept seminar. **Abi Loughnan**, Botany Dept, University of Otago. **Stressed out seaweed: What determines the vertical limits of *Stictosiphonia arbuscula* on the seashore?**

**18 Sept** Thur 6.00 pm **Annual John Smailie Tennant Lecture** -Union St Lecture Theatre. **Assoc Prof Laurie Melton**, Director, Food Science Prog, Chemistry Dept, Auckland University. **Why fruit and vegetables are good for you**

**19 Sept** Fri 1.00 pm Union Street Lecture Theatre. **Assoc Prof Laurie Melton**, Director, Food Science Prog, Chemistry Dept, Auckland University. **All you ever wanted to know about plant cell walls**

**21 Sept** Sun 11.00 am. **Solander Garden meeting** at Ted Nye's house. Details p 22

**24 Sept** Wed 12 noon, Union St Lecture Theatre. Student research:

**Sonia Lilly**, Botany Dept, University of Otago. **Identification and characterisation of Tomato ringspot virus (ToRSV) from *Senecio jacobea* and *Prunella vulgaris***

**Katrina Spencer**, Ecology, University of Otago **Nutrient limitation of phytoplankton in primary productivity in three shallow lakes in NZ**

**Jolene Thompson**, Ecology, University of Otago.

**Patterns of periphyton abundance and composition in two geological zones**

**24 September**, Wed 5.20 pm. **"An introduction to New Zealand gecko and plant associations"** Guest speaker **Mandy Tocher**. **Details on front page.**

**26 Sept** Friday 1.00 pm Union St Lecture Theatre. Student research

**Monica Peters**, Ecology, University of Otago **When is a hole a hole? Data validity and community-based environmental monitoring**

**Matt Dale**, Ecology, University of Otago **Novel predator recognition by common bullies using chemical cues**

**Scott Dunavan**, Ecology, University of Otago **Regeneration of woody native plants in bracken (*Pteridium esculentum*) in North Otago**



**27 September** Saturday. Field trip to a **Warrington Garden & the Enchanted Garden** at **Seacliff Reserve**, with **Carol and Chuck Landis**. Details on front page and p 23.

**1 Oct**, Wed 12 noon. MSc proposals:

**Rob Cadmus**, Ecology, University of Otago **The potential use of paleolimnology in ecosystem based restoration of wetlands**

**Richard Clayton**, Ecology, University of Otago  
**Seedling regeneration on Rakiura (Stewart Island)**

**Brent Denny**, Botany Dept, University of Otago  
**Viruses affecting *Trifolium repens* in southern New Zealand pastures**

**8 Oct** Wed 12 noon MSc proposals:

**Adrian Lill**, Ecology, University of Otago  
**Mysid shrimp populations in the Kaikorai Estuary**

**Dylan Robertson**, Ecology, University of Otago **Transplantation of Waddensee biota to observe the effects of *Arenicola* burrowing in Sylt, Germany**

**11 October** Sat. 1.30 pm. **Donaldsons' Garden & Moore's Bush**. Details front page.

**15 Oct** Wed 12 noon **Denise Hunter**, Botany Dept, University of Otago **Recipe for a good salad - How culture conditions influence lettuce regeneration *in vitro***

**22 Oct** Wed 12 noon, Botany Dept seminar.

**Emeritus Professor Alan Mark**, Botany Dept, University of Otago  
**The Conservation status of New Zealand's indigenous grasslands**

**29 October**, Wed 5.20 pm, The Botanical Society of Otago and the Department of Botany, University of Otago present the 2<sup>nd</sup> annual **Geoff Baylis Lecture**. Guest Speaker **Dr Peter Wardle**, Canterbury; ***New Zealand's forest limits and the vegetation above them, compared with South America and other regions*** Abstract p 20. Venue Rm 2.25, Commerce Building. NOTE VENUE. Dinner out afterwards. Bookings for dinner to Trish Fleming, Secretary, Department of Botany, by Mon 27 October, **phone** 479 7577, **email:** [trish@planta.otago.ac.nz](mailto:trish@planta.otago.ac.nz)

**1 Nov**, Sat 9 am, Field trip to **Nugget Point** and **Cannibal Bay**. Details p 23.

**5 Nov**, Wed 5.20 pm, **Monica Peters** ***Mongolia 2001-2002***". Details on front page.

**6 Dec**, Sat 9 am, Field trip to **Mt Watkin** podocarp forest, with **Ralf O**. Details at front.

## 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, 9 am, 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://otagoinstitute.otago.ac.nz/>**

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

**Otago Alpine Garden Group** Meets every 3<sup>rd</sup> 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.

## Cover pictures

**Front cover** and membership form. Cross sections of lichen fruiting bodies (apothecia), containing sexual spores inside an **ascus** (fruit sac). (a) **Lecideine** type, where the rim is of the same colour as the apothecial disc, and made solely of fungal material. (b) **Lecanorine** type, where the dark dots represent algal cells, and the rim is the same colour as the lichen body (thallus). Lichen Flora of Great Britain and Ireland, OW Purvis et al., eds. British Lichen Society, 1992

**Back cover** Profile of a Fiordland treeline (wilding conifer added). Adapted from *Vegetation of New Zealand*, Peter Wardle, Cambridge University Press, 1991.

## 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 or phone the **treasurer** or **secretary**, below.

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

**Robyn Bridges**, [robyn.bridges@stonebow.otago.ac.nz](mailto:robyn.bridges@stonebow.otago.ac.nz), ph 479 8244

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

**Allison Knight**, [bsa@botany.otago.ac.nz](mailto:bsa@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](mailto:francesa@es.co.nz),

Events Manager, **Arlene McDowell**, [arlene.mcdowell@stonebow.otago.ac.nz](mailto:arlene.mcdowell@stonebow.otago.ac.nz)

Program Manager, Ian Radford, [ian.radford@botany.otago.ac.nz](mailto:ian.radford@botany.otago.ac.nz)

**Kelvin Lloyd**, [lloydk@landcareResearch.co.nz](mailto:lloydk@landcareResearch.co.nz);

**John Barkla**, [jbarkla@doc.govt.nz](mailto:jbarkla@doc.govt.nz) or **Bastow Wilson**, [bastow@otago.ac.nz](mailto:bastow@otago.ac.nz)

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

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**Please submit copy for next newsletter by end of November 2003**

### Membership form: Botanical Society of Otago, 2003

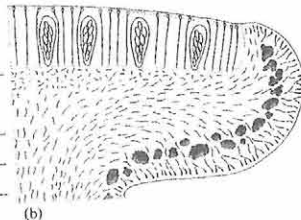
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Name: \_\_\_\_\_

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(work or home) \_\_\_\_\_

E-mail address: \_\_\_\_\_

Phone: work ( ) \_\_\_\_\_ home ( ) \_\_\_\_\_



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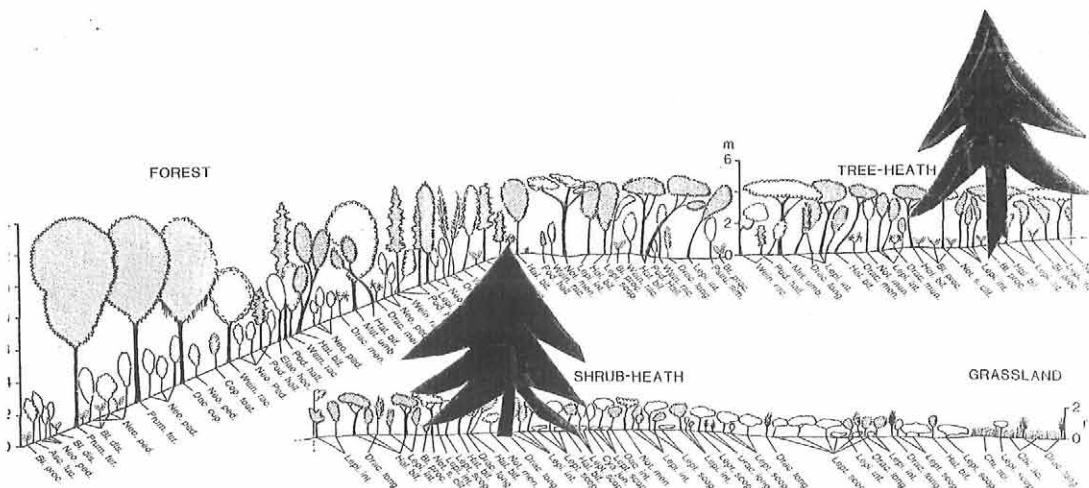


Fig. 8.16. Profile across a gradient from podocarp/broad-leaved forest in a sheltered valley, through tree- and shrub-heath to wet *Chionochloa* grassland West Cape, Fiordland (P. Wardle *et al.* 1973).