



# TRILEPIDEA

NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK

Please send news items or events to [events@nzpcn.org.nz](mailto:events@nzpcn.org.nz)

Postal address: P.O. Box 16-102, Wellington, New Zealand

E-NEWSLETTER: No 51. FEBRUARY 2008

Deadline for next issue: Friday 14 March 2008

## Message from the President

*Environment New Zealand, 2007.* Surely no one can have missed the fact that we now have a second State of the Environment Report—be it 10 years after the first one was published. The media mentioned the report but I felt that more attention was given to the “missing chapter” rather than the report itself and what needs to be done. I have it on good authority that the 1997 report also had sections omitted from it.

I think that it is to be regretted that the media do not give more attention to reporting on the state of the environment and indeed I have been working closely with one newspaper to try to make this happen. For me, however, there is another issue that does not seem to be mentioned and that is the need to ensure that we have sufficient human resources and well qualified people to work to work in the areas of environment and conservation. I am prompted to mention this not only because of the state of the environment report but also because of the news from the Department of Conservation about cost-cutting—yet again!

If New Zealand is really serious about sustainable development, then it would be putting more resources into the Department of Conservation and it would be ensuring that we have appropriate education and training throughout the various stages of formal education and beyond in terms of professional development. In general we need to be expanding and strengthening the environment profession (and that includes conservation).

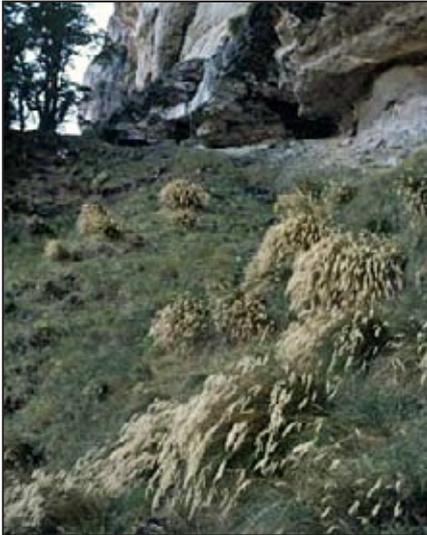
Partnerships are important in conservation. I am delighted to see the news in this month's Newsletter about the Biodiversity Advice funds being made available to the Weedfree Trust based in Waitakere in partnership with the New Zealand Plant Conservation Network. I look forward very much to seeing other similar partnerships and indeed the topic of partnerships in conservation could be a suitable topic for discussion at the Conference when we explore the next five years for the Network.

*Ian Spellerberg  
Lincoln University*

## Job cuts likely as DOC faces budget deficit

The Director General of the Department of Conservation, Al Morrison, recently announced that the department faced deficits of \$8 million for each of the next three years. Job losses are likely though it has been claimed that no conservation projects will be affected. These losses arise from a combination of factors including salary increases, cost inflation and implementation of Treaty settlements. Mr Morrison announced that there will be a “significant review” of the head office and the regional offices but staff cuts in operational areas will be avoided. Speaking on behalf of ECO, Cath Wallace said that DOC does not need any more cuts; cost-cutting can only worsen what are already urgent problems with our natural heritage. Meanwhile the Public Service Association expressed the opinion that cost-cutting should be focussed on IT equipment and vehicles rather than people.

## Plant of the Month



*Chionochloa spiralis*.  
Photo: Kelvin Lloyd.

Plant of the Month for February is the Range Restricted *Chionochloa spiralis*. This grass is confined to the Murchison Mountains, Cameron Mountains and the Kepler Mountains. It grows in the upper montane to subalpine zone on and around limestone bluffs, talus and associated soils. It is a slender tussock with narrow leaves falling and leaving inwardly spiralling sheaths. Known populations are small and some are being impacted by deer. However, there is insufficient evidence to satisfactorily assess this species as being threatened. Further field work and monitoring to resolve this uncertainty is much desired. It is not commercially grown. The Network fact sheet for *Chionochloa spiralis* may be found at:

[www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=456](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=456)

## QEII Trust: a new website for open space in New Zealand

QEII Trust helps private landowners protect significant natural features on their land in perpetuity including forest remnants, wetlands, threatened species habitats, landscapes, and archaeological and cultural sites. Landowners throughout New Zealand voluntarily protect over 110,000 hectares of private land through over 3,300 QEII open space covenants, many of which protect rare and threatened biodiversity.

To explain the benefits of protecting nature features with open space covenants and how to protect special areas, QEII has launched a new website [www.openspace.org.nz](http://www.openspace.org.nz). The website also includes covenant management information such as fencing and pest and weed control, and stories of the work of the many inspired people who are creating a legacy for future generations by covenanting their special areas in perpetuity.

Downloads of the QEII *Open Space*<sup>TM</sup> magazine and links to related organisations such as NZPCN are proving popular with website visitors. Check out the new QEII website at [www.openspace.org.nz](http://www.openspace.org.nz)

The screenshot shows the QEII National Trust website interface. At the top left is the QEII logo, a stylized green and blue shape. Below it, the text reads "QE II National Trust", "For open space in New Zealand", and "Nga Kairauhi Papa". To the right is a search bar with a "Go" button. The main banner image shows a lush wetland with a pond. Below the banner is a navigation menu with links: Home, About QEII, Covenants, Open Space, Places to visit, Resources, Links, Support QEII, Contact Us. The main content area features a large tree image on the left with a quote: "Inherent in open space protection is landowner involvement and...". To the right of the quote is the text: "QEII National Trust", "For open space in New Zealand", "Helping you protect the special nature of your land", and "QEII Trust helps landowners in New Zealand protect significant natural and cultural features on their land through open space covenants in perpetuity. Features protected include landscapes, forest". On the far right is a "Support QEII Trust" sidebar with buttons for "Join QEII Trust", "Make a donation or bequest", and "Shop".

## Current State of Environment report released

“*Environment New Zealand 2007* presents a thorough snapshot of the health of our environment and will help inform and prioritise decisions that will lead to a sustainable New Zealand,” Mr Logan said.

The 450-page report is the country’s second state of the environment report, but quantifies a range of key indicators in a way that the first report issued a decade ago did not. “The environment means much more to us than just iconic landscapes. As this report shows, a sustainable environment is also vital to our social and economic well-being and our standard of living,” Mr Logan said.

The report confirms that while we have an enviable environment compared with many countries, some trends are going in the wrong direction. “The report shows that key pressures on our environment are growing as our population increases, our economy grows and evolves, and our lifestyles change,” says Hugh Logan. “Our everyday activities and choices—both past and present—have put pressures on our soil, water and air and other natural resources.”

“This report isn’t just for policy makers and environmentalists. It will be used to make decisions—by both central and local government, businesses, iwi, communities and families—which will lead to a sustainable New Zealand. Most of all, the report highlights the need to continue to protect and reinforce New Zealand’s environmental standing and our clean green reputation,” says Hugh Logan. “This report will form an important basis for improving those areas which the report shows need attention.”

The Environment Ministry will use the findings to engage with key sectors and interest groups about where we go from here. For more information, and to download the report, go to: [www.mfe.govt.nz](http://www.mfe.govt.nz)

## Invasive weed and native seedling identifiers: new project

Recently, the Department of Conservation Biodiversity Advice Fund made funds available to the Weedfree Trust based in Waitakere, in partnership with the NZPCN, to develop an electronic resource designed to assist in the identification of invasive weed and native seedlings. Once completed the resource will be freely available for download and, in various forms, developed as a



Chinese privet (*Ligustrum sinense*).  
Photo: Neil Henderson.

hard copy field guide. The resource is to be a nationwide initiative aimed at serving the many volunteer and professional conservation groups engaged in land management. For this two-year project to be a success, we will rely on volunteer support for the following material.

- Clear high-resolution photographs of native plant and invasive weed seedlings encountered in local areas.
- Plant lists of the top 40 (or more) weeds and natives encountered in local land management projects.
- Locality information and relevant observations that might aid identification.

In order to keep a uniform style we would be grateful if images submitted could follow the design of the accompanying image. All images and copy used will be credited and, in some circumstances, funds may be available to assist contributors. Please contact me for detailed information: Neil Henderson, Weedfree Waitakere Trust, ph: 09 826 4276 or e-mail: [info@weedfree.org.nz](mailto:info@weedfree.org.nz). Please pass this message on.

## Website fact sheet update

The NZPCN website fact sheets are one of the most commonly used sections of the website. Since August 2003, funded by the Government's TIFBIS fund, the NZPCN has been populating fact sheets starting with the threatened and uncommon vascular plants. In 2005, fact sheets for threatened bryophytes and fungi were added and collectively these have been populated with images sent in by a host of individuals including NZPCN members and other website users. The Network contracted Dr Peter J. de Lange to write most of the moss, liverwort and all of the indigenous vascular plant fact sheets. Dr Eric Mackenzie of Landcare Research was contracted to write the fungus fact sheets. This process involves collation and sorting available information and, in some cases, drawing up new descriptions when existing information is scant, inadequate or absent.

Fact sheets are now routinely proofed by website users and Network members. Over 13,000 images have also been added to the website. All of this work is done voluntarily and, at times, can be painstakingly slow especially when images are of poor quality or lacking, and new descriptions are needed.

Over the last year, the Network has targeted plant groups perceived as "difficult" by many field botanists such as the Cyperaceae and the Poaceae. In particular within the latter family, and at members' specific request, the so-called snow tussocks (*Chionochloa* spp.) have been a focus. For most taxa in these families, available information is of high quality but in a few cases new descriptions have had to be prepared.

Currently, most fact sheets for threatened taxa are completed but fact sheets for 200 "At Risk/Range Restricted" taxa still require completion.

In preparing the fact sheets, the Network would like to acknowledge the considerable assistance received from Peter Heenan, Mike Thorsen, John Barkla, Phil Garnock-Jones, Mike Bayly, Pat Enright, Jeremy Rolfe, Bec Stanley, Paul Cashmore, Andrew Townsend, Leon Perrie, Barbara Parris, Brian Molloy, Henry Connor, Murray Dawson, Elizabeth Edgar, John Braggins, Matt Renner, Matt von Konrat, John Engel, David Glenny, David Norton, Allan Fife, Jessica Beever, Carlos Aedo, Neville Walsh, Hellmut Toelken, Mark Mort, Dick Brummitt, and Brian Murray. One of the strengths of the website has proved to be these fact sheets and it is fitting to acknowledge that, like plant conservation management, their preparation is a team effort.

## Network conference to be held August 2008

The Network's next national conference will be held from 8 – 10 August 2008 at Te Papa Tongarewa in Wellington. Day 1 will be devoted to the "*Science of plant conservation*". It will also feature the Tane Ngahere Lecture by Brian Molloy entitled "*Reflections on 50 years of New Zealand botany and plant conservation*". Day 1 will also feature a concurrent EnviroSchools Forum at Te Papa. During lunchtime we plan for each EnviroSchool from the region to present posters about their plant conservation work to conference attendees. The conference dinner will be held that night. Day 2 will be devoted to "*Plant conservation in practice*" including workshops on where the Network should go during the next five years and the AGM. Several plant field trips will be offered on Sunday 10 August. More information about the conference will be sent out in the next few weeks. If you would like to assist with organising this conference (whether you are based in Wellington or not) or have good ideas for the conference that you would like to share, such as the subjects for workshops, please contact the Network: email [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz). Mark the dates in your diary now and get in early to obtain the cheaper air fares.

## Executive meeting

The Network executive will meet in Wellington on Thursday 6 March. If any member has an item that they would like to have discussed please contact the President ([Spelleri@lincoln.ac.nz](mailto:Spelleri@lincoln.ac.nz)) or Secretary ([jsawyer@doc.govt.nz](mailto:jsawyer@doc.govt.nz)).

## More surprise finds of *Fissidens berteroi* in Auckland

The waterways of Auckland City are now largely given over to naturalised plants, and sad to say, mostly seriously polluted. Over the last few summers botanists Drs Peter de Lange and Rhys Gardner have been documenting the indigenous vegetation of waterways draining into the Waitemata Harbour along the Three Kings lava flow. This lava flow, the largest in Auckland City, extends from the ruins of the Three Kings volcanic vents north and west into the Waitemata Harbour. Several waterways drain this area, and these, along with a series of associated springs have been investigated by the pair. Despite the rank weed growth, rats, and rubbish choking the waterways they have been surprised at the indigenous flora that still persists in these areas.



*Fissidens berteroi* at Kelly Tarlton's Underwater World. Photo: Peter de Lange.

A number of regionally significant finds have been made. However, the most impressive from a conservation viewpoint are several large populations of *Fissidens berteroi*, the largest New Zealand species in the genus, and one of the most threatened. Previously, in 2005, de Lange had found this moss in Auckland gracing the eel tank at Kelly Tarlton's Underwater World where it had appeared on a log that had been collected from an "urban Auckland stream". Frustratingly, the staff could not say where this stream was, because the person who had placed the log had left Underwater World, and no records had been kept.

In the wild, *Fissidens berteroi* had previously been recorded from Auckland at two sites, a small drainage pipe near Onehunga – all that remains of a formerly important natural spring that had supplied water for that suburb – and from Motions Creek, near Jaggars Bush, Westmere.

The Onehunga site still persists thanks to careful water management but the Motions Creek site population is believed to have died out not long after Auckland City Council removed willows from the stream banks in 2005.

De Lange was the first to notice *Fissidens berteroi* in Auckland Zoo during a visit in November 2007 when he fortuitously noticed a strand floating near the zoo outlet for the creek. Not long afterwards he and Dr Gardner found a few plants near the upper end of the creek. It seemed clear that *Fissidens* should be in the zoo section of the creek. Permission from the zoo was sought and Mr Hugo Baynes, Zoo Horticultural Curator, agreed to allow the pair to wander the zoo portion of the creek. Within minutes several large populations were found, mostly in and around the stone bridges that cross the creek, but also on boulders near small seepages and springs that enter the waterway.

The zoo staff members are of course delighted with the find, because it is a first for them to have a natural population of an endangered species occurring within the grounds. The zoo is currently refurbishing its threatened indigenous biota displays for a major exhibit "Te Wao Nui o Tane", and in the process had been actively seeking suggestions from the Department of Conservation about what threatened flora they should showcase. A naturally occurring threatened moss, and an aquatic one at that, is certainly an unexpected bonus, and one that provides numerous useful opportunities to educate the public about the importance of Auckland's freshwater waterways.

This find along with another found by de Lange and Gardner elsewhere within the city adds to other recent (2007) discoveries of the moss on the Chatham Islands and in the Wairarapa. Despite these discoveries, *Fissidens berteroi* is still hardly secure and in Auckland remains mostly at threat from ongoing willow tree clearance, which increases light levels entering the waterways, leading to massive algal blooms that seem to choke out the moss.

## Research confirms *Crassula hunua* synonymous with *Crassula ruamahanga*

Until now, *Crassula hunua* has been regarded as a very rare plant (Acutely Threatened/Nationally Critical) because it was believed to be restricted to two sub-populations, at Hunua Falls and the Chatham Islands. Collectively the known population occupied an area of less than one hectare. However, there has been some doubt over the distinctiveness of *C. hunua* from *C. ruamahanga* so, following a detailed analysis of *C. hunua* and *C. ruamahanga* populations spanning the country, de Lange *et al.* (2007) failed to find any obvious, consistent, taxonomic differences between



*Crassula ruamahanga*, cultivated plant ex Hunua Falls. Photo: Colin Ogle.

them. On this basis, the authors considered that it is not possible to recognise two species and preferred to regard them as conspecific. Because both species were named simultaneously within the same publication by the same author (the late Tony Druce), under the rules that govern naming conventions when both species are merged both names have equal standing and so are available for use for the emended species. The authors elected to use the name *Crassula ruamahanga* because it is the more widely occurring of the two species, and because the characters that were used to recognise *C. hunua* proved unstable, with cultivated plants developing over time characters

more typical of *C. ruamahanga* as it was original circumscribed. As a result of their findings, *C. ruamahanga* is now found throughout the country but it is still regarded as uncommon. The authors have suggested its revised conservation status should now be “At Risk/ Sparse” taking into account that it has seemingly disappeared from some sites where it was found in the past and that it occupies ephemeral habitats often dominated by exotic plants. The paper also discusses the conservation implications of species complexes that evolve through interspecific hybridization and polyploidy resulting in high levels of chromosomal and DNA sequence variation. For more information, the authors to contact are B. Murray ([b.murray@auckland.ac.nz](mailto:b.murray@auckland.ac.nz)) or Peter de Lange ([pdelange@doc.govt.nz](mailto:pdelange@doc.govt.nz)) or see:

de Lange, P.J., Heenan, P.B., Keeling, D.J., Murray, B.G. Smissen, R., Sykes, W.R. 2007. Biosystematics and conservation: A case study with two enigmatic and uncommon species of *Crassula* from New Zealand. *Annals of Botany* 1–19.

## Volunteer botanists sought for adoption by Enviroschools

As part of this year’s Network conference, we are holding a concurrent Enviroschools Native Plant Forum on Friday 8 August. Schools from around the region will be attending and putting up displays about their work conserving native plants. To help schools prepare for the conference we seek volunteers who would be willing to answer questions from the school children in the lead up to the event. These questions may come via letter, email or phone. Please tell us in the next few weeks if you are willing to be adopted by a school for this work – email your contact details to the Network at [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz).

## Subscriptions

Annual subscriptions for the 2007–08 year are now well due. Corporate and NGO invoices were issued some time ago. The other categories of membership, Individual, Unwaged and Student, were sent their reminders last month. Please pay promptly either by cheque to PO Box 16-102, Wellington or by direct credit to the Network’s bank account the details of which are on the reminder. If you use the direct credit method please ensure that your name appears on our statement.

## Australian Network for Plant Conservation

Our sister organisation is holding its annual conference in Mulgoa, near Penrith, west Sydney in April next year. The organisers would love to see a significant number of New Zealanders at the conference. Contributions by way of papers or posters are very welcome. The theme of this the 7th annual conference is: “*Our declining flora – tackling the threats*”. Plan to be there; the earlier you make your flight bookings, the cheaper they are likely to be. For more information and registration see: <http://www.anpc.asn.au/conferences>

## Vacancy: project coordinator – biodiversity Northland, NZ Landcare Trust

The NZ Landcare Trust seeks a highly motivated person to work with organisations and rural landowners to encourage collaboration, coordination and community action on the ground towards biodiversity protection and enhancement in Northland. The position is *part time* based in the Trust’s Whangarei office.

Applicants need a sound knowledge of biodiversity and sustainable land management, planning and organisational ability, initiative, innovation and creativity, problem solving and written and verbal communication ability. GIS knowledge would be an advantage. We offer a great work environment, and the opportunity to be part of an innovative team. The position is for a 12 month fixed term. The person will require flexibility in the hours they can work, and have the ability to travel. A current drivers license is essential. A relevant tertiary qualification and experience within a professional services environment would be an advantage.

For a copy of the job description contact Sharon Hillier, ph: 0508 526322 or email: [sharon.hillier@landcare.org.nz](mailto:sharon.hillier@landcare.org.nz)

## Upcoming Events

If you have important events or news that you would like publicised via this newsletter please email the Network ([events@nzpcn.org.nz](mailto:events@nzpcn.org.nz)):

### Dune Restoration Trust of New Zealand (formerly Coastal Dune Vegetation Network)

**Annual conference:** Wanganui Yacht Club from 5–7 March 2008. Details and the registration form can be found on the Dunes Trust website: [www.dunestrust.org.nz/index.html](http://www.dunestrust.org.nz/index.html)

### Auckland Botanical Society

**Meeting:** Wednesday 5 March, in the Unitec School of Natural Sciences a talk by Jonathan Boow of Auckland Regional Council on Californian Plants. **Contact:** Maureen Young (email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz)).

**Field trip:** Saturday 15 March to Waiomu Kauri Grove, Coromandel Peninsula. **Contact:** Maureen Young (email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz)).

**Meeting:** Wednesday 2 April, in the Unitec School of Natural Sciences, a talk titled “Highlights from summer camps at Kaikoura and Okataina” by Ewen Cameron and Alison Wesley. **Contact:** Maureen Young (email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz)).

**Field trip:** Saturday 19 April a trip to Anawhata to investigate coastal vegetation and west coast seaweeds. **Contact:** Maureen Young (email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz)).

## Waikato Botanical Society

**Field trip:** Saturday 23 February to Matarangi Coastal Wetland. Explore a large freshwater wetland at Matarangi on the northern shores of Whangapoua Harbour, Coromandel Peninsula. Details to be confirmed. **Meet:** 10 am at the intersection of Matarangi Drive and Waimaire Ave (in Matarangi itself); follow the Matarangi road in from SH25 and veer left once you get to the settlement. Waimaire Ave is about 800 m along on the right, the wetland is opposite.

**Contact:** Catherine Beard, email: [Catherine.Beard@ew.govt.nz](mailto:Catherine.Beard@ew.govt.nz) or ph: 855 5479 (hm).

**Meeting:** Wednesday 5 March, 6pm, University of Waikato, Room S 1.01, S Block, Gate 8 Hillcrest, a talk by Bev Clarkson and Monica Peters titled 'Wetland Restoration of *Sporodanthus* (native cane rush)' followed by planting some of the plants and a free BBQ. **Contact:** Liz Grove ph 846 0965 [eg3@waikato.ac.nz](mailto:eg3@waikato.ac.nz)

## Rotorua Botanical Society

**Field trip:** Saturday 8 March to Kemp Rd (Maroa Hill)/Tutukau Bush, southern Kinleith Forest, off SH1 between Atiamuri and Wairakei. Leaders: Robin Black (Hancock Forest Management) and Paul Cashmore, ph: 07 348 4421 (hm), 07 349 7432 (wk) email: [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz). **Meet:** Rotorua District Council car park on Fenton St at 8 a.m. or Tram-Ellis Road junction (these are forestry roads) on west side of SH 1. Grade: Medium-hard.

**Meeting:** Monday 17 March in the Rotorua Women's Club, Hinemaru St., near Princes Gate Hotel at 7.30 pm a talk titled "Pollen can tell a story" by Dr. Yanbin Deng (Environment Waikato).

## Wellington Botanical Society

**Meeting:** 7.30 pm Theatre 101-Murphy Building, Kelburn Parade a Members' Evening. Bring your slides, photographs, paintings, drawings, your favourite botanical readings and plant specimens

**Field trip:** Saturday 23 February, a working bee at the Druce garden. Help with maintenance of this nationally important garden containing many threatened indigenous plant species established by Tony and Helen Druce over 40 years ago. It is a QEII National Trust Open Space Covenant. **Meet:** from 9.30 a.m. at 123 Pinehaven Road, Pinehaven. Bring food; hot drinks provided. Bring gloves, kneeler, weeder and secateurs. Leader: Helen Druce, ph: (04) 970 7853.

**Field trip:** Saturday 1 March to Gracefield Scrub, Wainuiomata. See *Ranunculus macropus*, *Baumea rubiginosa*, *Gahnia xanthocarpa* and a variety of Carexes. Bring gumboots for the swamp. **Meet:** 9 a.m. at the car park, east side of Woburn Station. Transport: Catch 8.35 a.m. train from Wellington Station or 8.30 a.m. train from Upper Hutt Station. **Leader:** Chris Hopkins, ph: (04) 564 3980.

**Field trip:** Friday 21 March – Monday 24 March, Easter field trip to the Western Ruahine Range. Accommodation: Sixtus Lodge, east of Apiti, via Table Flat Rd, and Limestone Rd; \$10 pp/night; bring own pillows and bedding. Pot luck dinners please confer with Chris; bring own breakfast and lunch. Co-leaders: Chris Horne, ph: (04) 475 7025; Barbara Mitcalfe, ph: (04) 475 7149.

## Canterbury Botanical Society

**Meeting:** Friday 7 March at 7.30 pm, Room A5 University of Canterbury an evening of "Show and tell", an opportunity for members to bring to the meeting anything of a botanical nature.

**Field trip:** Saturday March 8 to Lake Lyndon. Please meet at the Yaldhurst Hotel for carpooling, leaving from there at 8.30 am. At 9.15 am members from North Canterbury will join us at Springfield.

**Winter Camp:** Tuesday 26 August – Monday 2 September 2008, to Broadbeach, Gold Coast, Australia. For further information contact: Margaret Geerkens (ph 03 352-7922, email: [bert.marg@xtra.co.nz](mailto:bert.marg@xtra.co.nz)) or Russell Moffitt (ph: 03384-1979).

### **Botanical Society of Otago**

**Meeting:** Thursday 21 February, at 5.10 pm a talk titled ‘Cliff ecology’ by [Prof. Ulf Molau](#), Otago University William Evans Fellow, Department of Environmental Science, Goteborg University, Sweden. At the Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the Captain Cook Hotel. Use the main entrance of the Benham Building to get in and go to the Benham Seminar Room, Rm. 215, 2nd floor. Please be prompt as we have to hold the door open.

**Contact:** [Robyn Bridges](#), phone: (03) 479 8372.

**Barbecue:** Friday 29 February, at 12 noon, a welcome to new botany/ecology students and new BSO members on the front lawn, Botany House Annex, Great King Street (across the road from the main Botany building). Sausage sandwiches and drinks provided free by the Botanical Society of Otago. All current and prospective BSO members welcome! **Contact:** [David Orlovich](#), phone: (03) 479 9060.