TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

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Deadline for next issue:
Monday 16 December 2013

SUBMIT AN ARTICLE TO THE NEWSLETTER

Contributions are welcome to the newsletter at any time. The closing date for articles for each issue is approximately the 15th of each month.

Articles may be edited and used in the newsletter and/or on the website news page.

The Network will publish almost any article about plants and plant conservation with a particular focus on the plant life of New Zealand and Oceania.

Please send news items or event information to events@nzpcn.org.nz

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Ranunculus grahamii

President's report to the Annual General Meeting

Welcome to the 10th AGM of the New Zealand Plant Conservation Network. It has been a very busy and fruitful year for the Network.

First, I'd like to thank my fellow Council members who have all helped with the various events and activities the Network has been involved with over the last year, including management of the website, newsletter production, and the Network conference.

The Network is in a very healthy state, with a 16% increase in membership over the last year. This is more than 102 new members, giving us a new total of 730. The website has been updated and expanded, the new version was launched last December, and visitation has doubled, to 1 million visits over the last year. Each visit is on average 7–10 minutes. We have continued with various annual activities, such as New Zealand's Favourite Native Plant, and also our prestigious Annual Awards, which will be presented at the end of this meeting.

The mobile phone version of the website was launched recently. This was funded by Auckland Council and will ensure that the Network can be accessed by all potential users. The tree and shrub Smart Phone app will be launched within the next few months and the wetland and streamside manual is being polished and will soon be ready for publication.

John Sawyer is one of our key members and has been instrumental in setting up and progressing the website to where it is today, amongst many other contributions. John is leaving us for a year to go back and spend time in Edinburgh. He will be missed, and we wish him all the very best and no doubt he will be in contact, especially considering the ease with which people on either side of the world can stay in touch these days. I am sure that when he returns he will have many new ideas and we look forward to this. He has mentored Jesse Bythell over the last year or so and she is now in a good position to step into the Webmaster role, which she will take over shortly.

In March, I attended an all-day meeting in Palmerston North with representatives of Massey University, AgResearch, Landcare Research and Kew Gardens, to discuss a potential MOU to underpin the future of indigenous seed-banking in New Zealand. NZPCN was critical to this MOU because the initial agreement guiding seed-banking in New Zealand was between Kew and NZPCN. Each organisation brings individual skills to support the collection, study, and conservation of seeds of the New Zealand flora. Over the subsequent few months, following many discussions, we successfully negotiated an MOU between these organisations, and DOC and NZPCN, which was signed in July. This is an important agreement as it enables organisations such as AgResearch, Kew Gardens, and Massey University to commit resources to the project to bank seed for the New Zealand flora. A training day for collectors was held in May, in conjunction with our conference (more about the conference later). The training day was very interesting and quite an eye-opener

PLANT OF THE MONTH – *RANUNCULUS GRAHAMII*

Ranunculus grahamii. Photo: David Norton.

Plant of the month for November is *Ranunculus grahamii*. This is a localised endemic found in Aoraki Mount Cook National Park in the South Island. Often seen only by rock climbers, it grows in the high alpine zone 2300–2800 m above sea level, in rocky crevices and cliff faces in the permanent snow line. Because of this habitat, it has a very short growing season in mid to late summer, blooming in February–March with neat yellow buttercup flowers. Exact numbers are unknown due to the nature of its habitat, but provided numbers of thar and chamois are kept low, *R. grahamii* is not considered to be under serious threat. You can see the Network fact sheet for *Ranunculus grahamii* at: www.nzpcn.org.nz/flora_details.aspx?ID=655

for many of the attendees as to the detail and care that is required for successful seed collection for seed banks, and how much it differs from seed collection for plant propagation. The training was led by Kew Gardens personnel Michael Way and Peter Giovannini. The MOU also enabled Massey University to prepare two funding applications for a full time Seedbank Coordinator, both of which have been successful. One is from the Massey University Vice-Chancellor's Strategic Innovation Fund, which enabled a Seed Bank Coordinator to be employed to coordinate the location, collection, and conservation activities to be brought into the project. The person in this role recently started work (*Editor's note: see later in newsletter*) and the collection strategy for the 2013–14 collection season is being finalised now. There are to be two collecting trips: one to the central North Island and one to the lower North Island. The second funding application, to the Lotteries Commission, for almost half a million dollars, was also successful, and this will provide a further three years of funding for the Seed Bank Coordinator and fund the purchase of a $120,000 seed xray machine, which is used to determine whether seed is viable. This is great news for the long-term seed-banking opportunities for some of our threatened species.

In August, along with several other NZPCN representatives, we had an all-day meeting with Landcare Research to discuss how information on our flora is presented and managed on the website. This was a very productive meeting from which we developed a mutually agreed protocol for presenting the latest information on the website. Furthermore, we are now in the process of developing an MOU with Landcare Research. We also met and had similar discussions with the Royal Society.

The conference this year was a great success with 290 people attending the conference or associated events: 175 came to the conference days, 80 attended the training courses, with the remainder attending one or more of the welcome event, the dinner and auction, and the field trips. The standard of papers was excellent, the single session format was very effective, and we were very privileged to have Dame Anne Salmond as our keynote speaker on the Saturday, speaking on the connections between Rivers, Plants and Networks.

At the conference we launched our new Plant Conservation Endowment Fund to fund restoration work into the future. There is already $12,000 in the fund. It is a long-term project and we will continue to fund raise to grow this fund. We would like it to eventually be large enough—a million dollars or more—so that we can fund the implementation of larger scale restoration projects. The auction at the conference also added another $1,700 to the David Given Trust.

It is great to see such a good turnout tonight. Thank you all for coming, and I hope you enjoy Nick Head's presentation later this evening.

The Council met today, to discuss initiatives for the next year, and we are all looking forward to another interesting and productive year.

Sarah Beadel
President
6 November 2013

Network awards recognise outstanding plant conservation achievement across New Zealand

From wetlands in the Waikato to the drylands of Canterbury, and from kakabeak on the cliffs of Hawke's Bay to the urban forests of Wellington and Auckland, this year's Plant Conservation Network awards span the full breadth of activity required to protect New Zealand's native plants.

The 2013 award winners are:

- *Individual involved in plant conservation:* Jan Simmons (Hamilton)
- *Community Plant Conservation Project:* Otari-Wilton's Bush Trust (Wellington)
- *School Plant Conservation Project:* Vogeltown Primary School (New Plymouth)
- *Young Plant Conservationist of the Year:* Tim Logan (Darfield, Canterbury)
- *Lifetime Achievement Award:* Mike Wilcox (Auckland)
- *Special Award:* Forest Lifeforce Restoration Trust (Hawke's Bay)
- *Special Award:* John Sawyer (Auckland)

Individual

Jan Simmons works full-time as a Community Relations Officer for the Department of Conservation in Hamilton. In addition to this, she works on a voluntary basis to promote the planting of native plant species around Hamilton and areas beyond. She has been the convenor of Eco-sourced Waikato since its inception in 2000 and is a founding member of the Waikato Biodiversity Forum. In 2005, she helped establish the Tamahere Community Nursery to provide eco-sourced plants for the Hamilton gullies restoration initiative. This concept has now expanded to the growing of thousands of specialist enrichment plants for Waiwhakareke Natural Heritage Park project near Hamilton Zoo (www.waiwhakakareke.co.nz). Other voluntary biodiversity projects Jan is involved with include weed clearance in Whewells Bush (a Department of Conservation reserve at Matangi); providing plants and labour for restoration of a wetland at Pirongia and for bush enhancement in a QEII covenant on a Waitomo farm, and supplying plants and volunteers for enhancement of the National Wetland Centre based at Lake Serpentine. In 2013, using a grant from the Waikato River Clean Up Fund, Jan will lead a

NZPCN President Sarah Beadel (left), presents the individual award to Jan Simmons.
Photo: Astrid van Meeuwen-Dijkgraaf.

group of volunteers to collect seeds of the more difficult to locate and grow on species to be reared at the Tamahere Nursery. Jan is passionate about all aspects of growing native plants for restoration projects, and she freely shares her knowledge and enthusiasm with volunteers working at the nursery.

Community Group

Wilbur and Liz Dovey receive the Community Group award on behalf of the Otari-Wilton's Bush Trust from Sarah Beadel. Photo: Astrid van Meeuwen-Dijkgraaf.

For nearly a decade, Wellington City Council, the Wellington Regional Council and the Otari-Wilton's Bush Trust worked together to clear and revegetate a 20 ha gully along the Kaiwharawhara stream in Wellington. The partnership, known as Project Kaiwharawhara, has been a great success, with over 20,000 native seedlings being planted, and the majority of weeds being removed. As we know, planting is the glamorous part of restoration work, but is by no means the end of the task. Since the downscaling of the partnership between Councils' and community in 2007, Wilbur and Liz Dovey, members of the Otari-Wilton's Bush Trust, have led the charge and co-ordinated a team of volunteers who have consistently visited the gully every month for the last six years. Wilbur and Liz organise the monthly weeding bees, arrange for any new plants required from Wellington City Council, and have purchased tools for other community volunteers to help them. The team of 12 they co-ordinate weed around young plants, fill gaps wherever new plantings fail, and control persistent problem weeds such as old man's beard, broom, and blackberry. Wilbur and Liz's efforts have been a huge contribution to the continued success of this project and they certainly deserve recognition for continuing to restore a once weed-choked gully into the lowland coastal forest it once was.

School

Vogeltown School has been helping to look after Huatoki Domain in New Plymouth as part of a long-term school-based environmental project. Right from the beginning, one class adopted a particular focus on the remnant, and now regionally uncommon, population of swamp maire or waiwaka, as it was known in Taranaki. Only a small population of waiwaka remains in the domain, with little or no natural regeneration occurring. Over the last few years, the children have been collecting seed from the Huatoki Domain, propagating it, and planting the plants back into the domain, usually on Arbour Day. The original population of about 15 waiwaka trees has now been boosted by 70, and another 200 seedlings are being grown on and will be planted out when they reach a suitable size. The children also undertake weeding around trees in the domain, and have had an open day there, when they share their knowledge about propagation and provide guided tours. This is a long term project. The first class of children involved has moved on to intermediate or early high school, but current classes are continuing with equal enthusiasm. In many cases, younger siblings are taking over from older brothers or sisters no longer at the school. In all, about 120 children from Vogeltown School have been involved with this project. The school has now had a request from New Plymouth District Council to supply some of the waiwaka grown by the children for a wetland development in another part of the city. The children are supported in their endeavours by members of the Huatoki Conservation Group and New Plymouth District Council.

Young Conservationist

Sarah Beadel presents the Young Conservationist Award to Tim Logan.

Tim Logan is a 16 year old student from Darfield High School who is passionate about native plants, particularly some of our less well-known dryland plants. Tim is a member of the West Melton Environmental Community and the Eco-Club at school, and has undertaken the planning and research to establish his own 'Greendot' planting site as part of the Te Ara Kakariki Greenway Network (http://www.kakariki.org.nz/what-we-do/greendots/). In developing the site planting plan, he sought advice from experts in the field to ensure his plants were appropriate for the site. Part of this plan included a rockery to provide habitat for some of the rare herbs and brooms found in dryland ecosystems. Tim also developed a thorough management plan for the site. In addition to this restoration project on his parent's property, Tim has initiated his own research project to investigate factors that may hinder regeneration of dryland plants. Tim is not only passionate about native plants but he is actively taking steps to prevent further loss from this threatened environment. His passion and enthusiasm are so great that staff at Environment Canterbury have nicknamed him "the next Colin Meurk"!

Lifetime Achievement

Mike Wilcox receives the Lifetiume Achievement Award from Sarah Beadel.
Photos: Astrid van Meeuwen-Dijkgraaf.

Mike Wilcox has been President of the Auckland Botanical Society for at least 10 years. He has been the leader of numerous botanical field trips, both locally and overseas to Tasmania, New South Wales and Caledonia. He is the editor of the definitive book on the *Natural History of Rangitoto* and has recently published a book on native and exotic trees in Auckland called *Auckland's Remarkable Forest*. He is also Auckland's leading authority on monocotyledons, especially grasses. Mike is an Honorary Research Associate at the Auckland Herbarium, and is currently preparing a book on the marine algae of Auckland.

Special Award

A special ward this year goes to The Forest Lifeforce Restoration Trust, which is involved with many conservation projects, but one of the key projects in the *Maungataniwha Native Forest* is increasing the wild population of threatened kakabeak (*Clianthus maximus*), a 'Nationally Critical' species with very few plants left in the wild. The Trust undertakes a variety of seed collection and propagation activities. Plants are grown within two protected propagation enclosures near Waiau Camp to prevent browsing rabbits, hares, deer, pigs and goats, and at other sites around Hawke's Bay. A nursery population of kakabeak has been planted on Roberton Island (Motuarohia) in the Bay of Islands, Northland, to provide another safe location. The Trust works closely with the Department of Conservation on kakabeak conservation in the wild, and has developed a ground-breaking technique to establish plants in inaccessible locations—blasting

seeds onto cliffs from a shotgun. The Trust hopes this innovation will allow future dispersal of seed from helicopters, creating the potential for an aerial propagation effort on a scale that hasn't yet been possible. At *Pohokura* the Trust is helping to remove *Pinus contorta* to assist with restoration of native vegetation—so far 264 mature *Pinus contorta* and 2,729 seedlings and shrubs have been removed from Pohokura and DOC land. Within this area, the Trust is also controlling possums to help protect an important population of *Pittosporum turneri*, a 'Nationally Vulnerable' tree species. The total number of plants here exceeds 1,000—estimated to be 5–10% of the national population. The Trust is also helping to manage the *Maungataniwha Pine Forest*—over 4000 hectares—back into regenerating native forest. The Trist is also reducing predator populations in a 'core area' of about 600 hectares within the *Maungataniwha Native Forest* to provide a safe place for a variety of native bird species to breed.

Special Award

A special award also goes to John Sawyer. Johnhas stepped down from the Network Council and is moving to Edinburgh for a period of time. He had a major role in starting the New Zealand Plant Conservation Network and has been the driving force behind setting up and managing the website. As you all know, the website is the flagship of the Network, and is now widely used by a large number of people and organisations. The popularity of the Network had grown dramatically over the years through John's ideas and hard work behind the scenes. John obtained funding from TFBIS and other organisations. This has allowed the Network to develop the website factsheets and other projects that have enhanced and underpinned the strength of the website. He initiated and carried out work on a number of the Global Plant Conservation Strategy goals, including the establishment of a seed bank in New Zealand, the development of the marae-based plant conservation courses, and the NIWA aquatic weeds project. In addition, John has been a major contributor to Department of Conservation publications that highlight the threat status of plant species, or help to identify plants. John will be missed during his absence, but we are sure that he will have many more new ideas to contribute to the growth of the Network when he returns.

John Sawyer receives a Special Award in recognition of his efforts in establishing and developing the NZPCN and its website. Photo: Astrid van Meeuwen-Dijkgraaf.

NIWA helps Network deliver quality aquatic plant information

Over the last year and a half, scientists at NIWA (especially Paul Champion, Debra Hofstra and Mary de Winton) have been preparing descriptions for all aquatic weeds in New Zealand to plug gaps in the native plant species pages. Information has now been updated for close to 200 aquatic plants in New Zealand. Over 500 new images of aquatic plants taken by 16 photographers have now been loaded on the website by volunteers.

Feedback from website users about the aquatic weeds pages is welcome; please let the Network know if you have images that could be used to improve these pages (info@nzpcn.org.nz). This work was funded by the government's TFBIS (Terrestrial and Freshwater Biodiversity Information System) that was set up to support conservation of New Zealand's indigenous biodiversity by increasing awareness of and access to fundamental data and information about terrestrial and freshwater biota and biodiversity.

Greetings from the new Seed Bank Coordinator

Jessica Schnell, Seed Bank Coordinator, Institute of Agriculture and the Environment, Massey University (j.l.schnell@massey.ac.nz)

Kia ora and greetings from the new Seed Bank Coordinator to bank seed of New Zealand Flora. I am based at Massey University Manawatū! It is with great enthusiasm that I enter this role and hope to meet up with many of you as the project progresses. My name is Jessica Schnell and I have a background of working at Massey as a research assistant with Associate Professor Alastair Robertson. At Massey, I have also been a laboratory demonstrator working alongside students taking the Biology of Plants first year paper and graduated with my Bachelor of Science in Zoology and Ecology in 2009. A brief introduction to our project is below:

"Protecting our biodiversity"

The project to bank seed of the New Zealand flora is now under way; it builds on the Memorandum of Collaboration signed between the NZPCN and the Royal Botanic Gardens, Kew. A New Zealand Seed Bank group comprising the NZPCN, AgResearch, the Department of Conservation, Landcare Research and Massey University has been established. Each organisation will bring skills and facilities to support the collection, study and conservation of seed. A key task for the first part of the project is building a network of seed collectors. Over the coming months, contact will be made with potential collectors. Collectors will need to undergo some training. One training day was held in conjunction with the NZPCN Conference in May. The training was led by Michael Way and Peter Giovannini from The Royal Botanic Gardens, Kew. Further training sessions are planned for the coming months.

How you can help? This is where I need your help! Are you familiar with the identification of the New Zealand flora species or have you collected seeds in the past and would be interested in being involved? If so, please feel free to contact me for further information. I look forward to hearing from you (ph: 06 356 9099, ext 85794, j.l.schnell@massey.ac.nz)

Gleichenia inclusisora in the Charleston–Westport area

Fred Overmars (fred@sustainability.net.nz)

Gleichenia inclusisora (pitted tangle fern) is a recently described endemic New Zealand fern (Perrie et al., 2012; Perrie, 2013). Characters that readily distinguish it from the other three New Zealand *Gleichenia* species are the unpouched and abaxially white ultimate segments, the rounded bicoloured scales, and the sori embedded in the lamina (fig. 1). Once the sori are seen, on turning the frond over and examining it with a hand lens, this is never forgotten (indeed the experience can be astonishing—see Perrie, 2012). It's easy then to get an 'eye in' for its upper (adaxial) appearance to distinguish it from *G. dicarpa* (fig. 2), and *G. alpina*. However, the adaxial surfaces of *G. inclusisora* and *G. microphylla* are not so readily distinguishable (you need to turn them over).

Figure 1. Abaxial surface of *Gleichenia inclusisora*, showing pitted sori and 'flat white' ultimate segments. *Gleichenia dicarpa* can also appear whitish underneath, but is variably pouched, never flat. Denniston Road, 1/9/2013.

Plants range in height from as low as 20 cm to over two metres. The species' habitat is pakihi wetlands and open shrubland/treeland. There are excellent photos of the plant and its habitats at http://collections.tepapa.govt.nz/taxon.aspx?irn=64956.

Figure 2. *Gleichenia inclusisora* (lighter, brighter green) at lower right, amongst *G. dicarpa*. Sanatorium Ridge, Charleston, 20/7/2013. The two species are not always as clearly distinct as this.

In the Westport area, Perrie et al. (2012) recorded *G. inclusisora* from three sites on the Denniston and Stockton plateau and two pakihi sites near Charleston. While in Charleston for several weeks recently, I spiced up my exercise by looking for the fern at other pakihi, taking geo-referenced photos on an Apple iPhone. *Gleichenia inclusisora* was present at 11 of 12 pakihi visited; the exception was Addisons Flat (and it was also not seen in the western part of the Costello Hill pakihi). I had earlier recorded the species at four other sites in the Westport area: German Terrace, Denniston Road, southeast Denniston Plateau and Waimangaroa Valley/Kiwi Fault (see fig. 3).

Compared with *G. dicarpa*, with which it was always seen, *G. inclusisora* occurred more on sites that were better drained and/or had higher gradients, and possibly a longer interval since previous fire. However, their relative abundance varied greatly at any one site. *Gleichenia inclusisora* was the only *Gleichenia* species over about three-quarters of the Sanatorium Ridge pakihi (fig. 4), *G. dicarpa* over about 20%, and inter-mixtures on the balance. On the Denniston Plateau, *G. inclusisora* occurred in patches on better drained slopes (at times in full sunlight, but also under a manuka canopy up to 1–2 m high); *G. dicarpa* on more poorly drained, downslope sites; and *G. alpina* on near-flat, very poorly drained sandstone pavement surfaces. On the Mary's Creek pakihi, *G. inclusisora* occurred on the pakihi edges and on low dams and other slightly disturbed sites associated with historic gold mining; *G. dicarpa* was the only *Gleichenia* species over most of the pakihi. On German Terrace, just one patch of *G. inclusisora* was seen, among a great expanse of *G. dicarpa*.

Gleichenia inclusisora co-occurred with *G. microphylla* on the pakihi margin at Sanatorium Ridge, and with *G. microphylla* and *G. dicarpa* at Lockington Pakihi, but co-occurrence with *G. microphylla* was not seen at the other pakihi. *Gleichenia microphylla* was seen occasionally elsewhere in taller open manuka scrub and regenerating forest.

Figure 3. Occurrence of *Gleichenia inclusisora* in one km^2 grid squares in the Westport-Charleston area. Data from Perrie et al. (2012) and personal observations. Topographical map sourced from LINZ. Crown Copyright reserved.

Most *G. inclusisora* sites in the Westport area are on older Pleistocene marine terraces (Nathan et al., 2002). Sites on the Denniston Plateau,

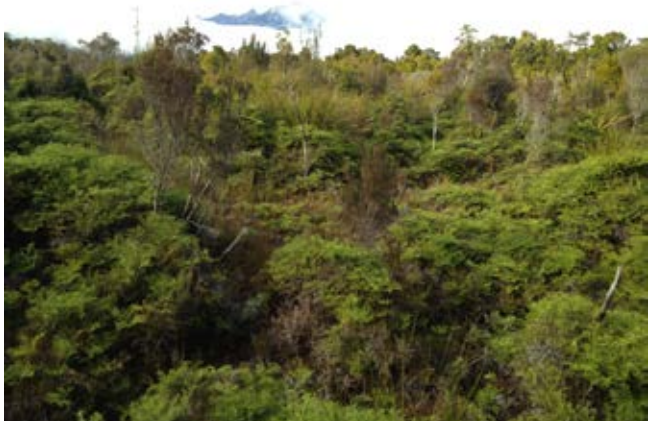

Figure 4. Abundant *Gleichenia inclusisora* on Sanatorium Ridge pakihi, Charleston, 20/7/2013.

Waimangaroa Valley and Stockton Plateau/Granity area (Perrie et al., 2012) are at higher attitudes (420–830 m asl) on Brunner coal measures rocks. Soils on these surfaces are very infertile and poorly drained, and support characteristic pakihi vegetation subject to disturbance by fire (Williams et al., 1990). Perrie et al. (2012) recorded *G. inclusisora* from two sites in the North Island (Mt Moehau, Taupo?), the five sites in the Westport area, four sites in the Grey Valley and three sites in Westland as far south as Haast. The species was rated as Naturally Uncommon under the New Zealand threat classification system (Townsend et al., 2008). There were only 23 collections from these 14 sites amongst the more than 800 *Gleichenia* specimens in the main New Zealand herbaria. These and other *G. inclusisora* records with precise locations occurred within 17 NZTM map squares (each 1 km^2), and total national area of occupancy (using this measure of AOO; cf. IUCN Standards and Petitions Subcommittee 2013) was estimated to be up to 300 km^2.

Is the species naturally uncommon? The low number of herbarium records certainly supports that, but this could also reflect the cryptic appearance and lack of recognition of *G. inclusisora* to date. Perrie et al. (2012) refer to extensive populations in some places (e.g. Stockton, Bruce Bay), and it was at least locally abundant at several of the sites they visited. My observations show it is widespread and relatively abundant in the Westport–Charleston area. These increase the confirmed local area of occupancy from 5 to 37 one km grid squares, and the national total to 46 grid squares, still well under the 1000 km^2 upper limit for the Naturally Uncommon category (Townsend et al., 2008).

If you wish to add a botanical hunt to your summer holiday, there is an unconfirmed report of the species from Opepe near Taupo (Perrie et al., 2012), and there are many other places where the species might yet be found (e.g., other infertile upland sites in the North Island, Golden Bay, Karamea, and other locations down the West Coast). I would be pleased to receive new location records.

Acknowledgments

I thank Dr Leon Perrie (Museum of New Zealand Te Papa Tongarewa, Wellington) for encouragement and review of a draft, and Campbell Robertson (Buller Coal Ltd, Westport) for permission to use records from the Denniston Plateau.

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The naming of things

George Monbiot (www.monbiot.com)

Published in The Guardian *15 March 2010 and reproduced here with the author's permission.*

Here's one small way in which the collapse of biodiversity could be slowed. The names alone should cause anyone whose heart still beats to stop and look again: Blotched woodwax, Pashford pot beetle, Scarce black arches, Mallow skipper, Marsh dagger. Each is a locket in which hundreds of years of history and thousands of years of evolution have been packed. Here nature and culture intersect. All are species that have recently become extinct in England.

I cannot claim that I've been materially damaged by their loss, any more than the razing of the Prado would deprive me of food or shelter. But the global collapse of biodiversity hurts almost beyond endurance. The sense that the world is greying, its wealth of colour and surprise and wonder fading, is so painful that I can scarcely bear to write about it. Human welfare, as measured by gross domestic product, is doubtless enhanced by the processes which drive extinction. Human welfare, as measured by the heart and the senses, is diminished. We have no use for most of the world's natural exuberance; it cannot be commodified or reproduced. Biodiversity does not belong to us: that is why it is worth preserving.

In Doha today, governments are engaged in their annual festival of frustration: the endless arguments over the Convention on International Trade in Endangered Species[1]. They are struggling against what often looks like an inexorable assault by technology, economic growth and sheer bloody idiocy. The latter is exemplified by the battle over the Atlantic bluefin tuna. Many governments want to ban the trade in this species for several years, but Japan is resisting furiously. Whether or not a ban is imposed, the effect on Japanese industry will be roughly the same, as the species is likely to become commercially extinct next year if current fishing levels continue[2]. But the government would prefer one more year of raw exploitation to indefinite supplies in the future. There is no reasoning with this madness.

But it's the new report by Natural England which hit me hardest[3]. English plant and animal species are still disappearing at the rate of two a year. All the goodwill, the billions of pounds and millions of hours poured into conservation work, the global treaties and concordats seem to be no match for the amplification of our presence on earth. If we can't even get this right in England, where the two biggest membership organisations are both conservation groups, where does hope lie?

There were several shocks in the report, but it was a different set of names that hammered into my mind. Some of the most endangered species have very ordinary, even—if I might be so rude—common names. The common frog, common gull, common skate and common smoothhound are all in trouble. The common eel is now listed as critically endangered everywhere. I remember, years ago, sitting beside a chalk stream whose entire bed was a writhing black conveyor belt of eels moving upriver. The eel was a universal, indestructible species. It can live almost anywhere, even stagnant water in which no other fish can survive; it can eat any old carrion and travel overland between ponds on dewy nights. Nobody valued them because they were everywhere. Had someone told me, on the bank of that river, that within my lifetime they would be threatened with extinction, I would have laughed out loud. If the common eel is now critically endangered, is any species safe?

Beside the clanking rigours of commerce and technology, our concerns about biodiversity sometimes appear almost effete. That there are pay-offs here is undeniable. The major cause of extinction in most countries is habitat loss. Most of this is caused either by clearing land for farming or by intensifying farming methods, in both cases to increase production. Even in the UK, where hundreds of millions have been spent on schemes to make farms hospitable to wildlife, Natural England blames changes in farm practices—cutting grasslands early, ploughing in winter stubble, the replacement of mixed farms with arable deserts—for many of the losses. The right wing think tanks, which demand a further intensification of farming, argue, as they always do these days, that their real concern is not the welfare of the rich (the businesses and bosses who pay them to develop these arguments) but the welfare of the poor. If we were to farm with wildlife rather than only profit in mind, the decline in productivity would raise the price of food, at an intolerable cost to the poor.

There is some truth in this, as far as it goes. But I have never heard these people argue on the same grounds against unregulated urban sprawl, which every year takes millions of acres of good farmland permanently out of production. Far from it: they demand the scrapping of planning rules.

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1 http://www.cites.org/eng/news/press_release.shtml
2 http://www.cites.org/eng/cop/15/doc/E15-52.pdf
3 http://naturalengland.etraderstores.com/NaturalEnglandShop/NE233

Nor do I see them making the case for reducing the rich world's consumption of meat, to release grain for feeding humans. The immediate choice we have to make is not between biodiversity and feeding the world, but between biodiversity and blithering stupidity.

As a child I, watched chalk downlands, where rare orchids and wild strawberries, adonis blues and marbled whites, whitethroats and hobbies, flint pits and burial mounds had survived since the Neolithic, being wiped clean by ploughs, to produce grain that fed nothing but the subsidy mountains. Now I watch the remaining scraps of our collective memory erased to grow biofuels, which produce more greenhouse gases than the petroleum they replace. This week's issue of *Fishing News* tells us that around two million tonnes of the fish sold in Europe is used for feeding other fish or terrestrial livestock, and a further one million tonnes of edible fish are dumped back into the sea, dead, as they are over-quota catches[4]. Much of this bycatch consists of species like the once-common skate and once-common smoothhound, which are now in danger of extinction. Japanese fishing policy might be stark raving mad; ours is scarcely saner.

So where does hope lie? I'm often struck by the strength of national feeling when an artwork – even one that scarcely anyone has seen—is stolen or damaged or bought by a foreign collector. Yet our animals and plants slip away unknown and unmourned. This country's wildlife groups are admirable in many ways, but they have somehow failed to ignite our interest in most of the species threatened with national extinction, many of which are small and unobtrusive.

It seems to me that one of the handicaps conservationists suffer is that few of these species have common names. It is hard to persuade people to care about something they can't pronounce. Nature is most valued when it intersects with culture. I would love to see a body like Natural England launch a public competition to name the country's nameless species: the micromoths and creeping mosses, the bashful beetles and unassuming mushrooms known only in Greek or Latin. It need simply list their characteristics, habits and locations and let the public do the rest. But it should set one condition: don't call any of them common.

4 *Fishing News*, 12th March 2010, page 6.

New and changed names in the indigenous vascular flora

Peter J de Lange, Principal Science Adviser, Science & Capability Group, Department of Conservation, Auckland (pdelange@doc.govt.nz)

Several new and altered plant names that have recently been published in scientific literature have been adopted by the Network. So, when you search for a long familiar name on the website, you may encounter a new name that you weren't expecting. Presented here is a brief summary of the new and changed names.

LYCOPHYTES

Lycopodiaceae

Old name	New name
Huperzia varia (R.Br.) Trevis	*Phlegmariurus varius* (R.Br.) A.R.Field et Bostock

Notes

Further critical investigation of the range of variation in New Zealand *P. varius* is needed. As currently circumscribed, the New Zealand plant is polymorphic and one or more distinct races within it warrant further study using modern taxonomic methods.

Reference

Field, A.R.; Bostock, P.D. 2013: New and existing combinations in Palaeotropical *Phlegmariurus* (Lycopodiaceae) and lectotypification of the type species *Phlegmariurus phlegmaria* (L.) T.Sen & U.Sen. *PhytoKeys 20*: 33–51. http://dx.doi.org/10.3897/phytokeys.20.4007

FERNS

Hymenophyllaceae

Old name	New name
New taxon	*Hymenophyllum pluviatile*

Notes

Perrie et al. (2013) describe a new endemic *Hymenophyllum* based on plants that had previously been referred to as either *H.* aff. *flexuosum* (AK 177370; Mt Burnett) or *H. australe* Willd. (see de Lange et al., 2004; de Lange et al., 2009). Perrie et al. (2013) also confirm that *Hymenophyllum atrovirens* Colenso is indeed a synonym of *H. australe* Willd.

References

de Lange, P.J.; Norton, D.A.; Heenan, P.B.; Courtney, S.P.; Molloy, B.P.J.; Ogle, C.C.; Rance, B.D.; Johnson, P.N.; Hitchmough, R. 2004: Threatened and uncommon plants of New Zealand. *New Zealand Journal of Botany 42*: 45–76.

de Lange, P.J.; Norton, D.A.; Courtney, S.P.; Heenan, P.B.; Barkla, J.W.; Cameron, E.K.; Hitchmough, R.; Townsend, A.J. 2009: Threatened and uncommon plants of New Zealand (2008 revision). *New Zealand Journal of Botany 47*: 61–96.

Perrie L.R.; Shepherd, L.D.; de Lange P.J.; Batty, E.L.; Ohlsen, D.J.; Bayly, M.J.; Brownsey, P.J. 2013: *Hymenophyllum pluviatile*, a new and uncommon fern from New Zealand. *New Zealand Journal of Botany* (2013). http://dx.doi.org/10.1080/0028825X.2013.834830

MONOCOTS—COMMELINIDS

Centrolepidaceae

Old name	New name
Centrolepis minima Kirk	*Centrolepis glabra* (F.Muell. ex Sonder) Hieron.

Notes

Ford (2013) determined that the type of *Centrolepis minima* was synonymous with the earlier named *C. pallida* (Hook.f.) Cheeseman but that the circumscription of *C. minima* in Moore & Edgar (1970) included material of another species, *C. glabra*, hitherto believed endemic to Australia. Ford (2013) does not mention, however, another Australian species present in New Zealand, *C. fascicularis* Labill., which was recorded from the Waitakere Ranges, West Auckland by Gardner (2000). The biostatus of *C. fascicularis* needs further investigation as it was found in an area where insectivorous plants had been deliberately established, though *Centrolepis* are hard to grow and not especially attractive, so this species seems rather unlikely to have also been deliberately planted there.

References

Ford K.A. 2013: Taxonomic notes on the New Zealand flora: a new species of Centrolepis for New Zealand, Centrolepis glabra (F.Muell. ex Sonder) Hieron., and the taxonomic status of *Centrolepis minima* Kirk (Centrolepidaceae). *New Zealand Journal of Botany* (2013). http://dx.doi.org/10.1080/0028825X.2013.846268

Gardner, R.O. 2000: More new or noteworthy adventives – some of them in my garden. *Auckland Botanical Society Journal 55*: 98–99.

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Wellington, Government Printer.

CORE EUDICOTS

Amaranthaceae

Old name	New name
Chenopodium ambiguum R.Br.	*Oxybasis glauca* subsp. *ambigua* (R.Br.) Mosyakin
Chenopodium pusillum Hook.f.	*Dysphania pusilla* (Hook.f.) Mosyakin et Clemants
Einadia allanii (AEllen) Paul G.Wilson	*Chenopodium allanii* Aellen
Einadia triandra (G.Forst.) A.J.Scott	*Chenopodium triandrum* G.Forst.
Einadia trigonos (Schult.) Paul G. Wilson subsp. *trigonos*	*Chenopodium trigonum* Schult.

Notes

A combination at species rank for *Chenopodium ambiguum* R.Br. in *Oxybasis* is unavailable. The taxonomic status of *Dysphania pusillum* (apparently extinct) needs further investigation as it seems scarcely distinct from *D. pumilio*.

Reference

Fuentes-Bazan, S.; Uotila, P.; Borsch, T. 2012: A novel phylogeny-based generic classification for *Chenopodium* sensu lato, and a tribal rearrangement of Chenopodioideae (Chenopodiaceae). *Willdenowia 42*: 5–24. http://dx.doi.org/10.3372/wi42.42101

Apiaceae

Old name	New name
New taxon	*Gingidia amphistoma* Heenan
New taxon	*Gingidia haematitica* Heenan

Reference

Heenan, P.B.; Telford, I.R.H.; Bruhl, J.J. 2013. Three new species of *Gingidia* (Apiaceae: Apioideae) from Australia and New Zealand segregated from *G. montana*. *Australian Systematic Botany 26*: 196–209. http://dx.doi.org/10.1071/SB13007

Boraginaceae

Old name	New name
Myosotis petiolata var. *pansa* L.B.Moore	*Myosotis pansa* (L.B.Moore) Meudt, Prebble, R.J.Stanley et Thorsen subsp. *pansa*
Myosotis petiolata var. *pansa* L.B.Moore	*Myosotis pansa* subsp. *praeceps* (L.B.Moore) Meudt, Prebble, R.J.Stanley et Thorsen
Myosotis petiolata Hook.f. var. *petiolata*	*Myosotis petiolata* Hook.f.
Myosotis petiolata var. *pottsiana* L.B.Moore	*Myosotis pottsiana* (L.B.Moore) Meudt, Prebble, R.J.Stanley et Thorsen

Reference

Meudt, H.M.; Prebble, J.M.; Stanley, R.J.; Thorsen, M.J. 2013: Morphological and amplified fragment length polymorphism (AFLP) data show that New Zealand endemic *Myosotis petiolata* (Boraginaceae) comprises three rare and threatened species. *Australian Systematic Botany 26*: 210–232. http://dx.doi.org/10.1071/SB13023

Brassicaceae

Old name	New name
New taxon	*Cardamine cubita* Molloy, Heenan et Smissen

Reference

Heenan, P.B.; Molloy, B.P.J.; Smissen, R.D. 2013: *Cardamine cubita* (Brassicaceae), a new species from New Zealand with a remarkable reduction in floral parts. *Phytotaxa 140*: 43–50. http://dx.doi.org/10.11646/phytotaxa.140.1.4

Nothofagaceae

Old name	New name
Nothofagus fusca Hook.f.	*Fuscospora fusca* (Hook.f.) Heenan et Smissen
Nothofagus menziesii (Hook.f.) Ørsted	*Lophozonia menziesii* (Hook.f.) Heenan et Smissen
Nothofagus solandri (Hook.f.) Ørsted var. *solandri*	*Fuscospora solandri* (Hook.f.) Heenan et Smissen
Nothofagus solandri var. *cliffortioides* (Hook.f.) Poole	*Fuscospora cliffortioides* (Hook.f.) Heenan et Smissen
Nothofagus truncata (Colenso) Cockayne	*Fuscospora truncata* (Colenso) Heenan et Smissen

Reference

Heenan, P.B.; Smissen, R.D. 2013: Revised circumscription of *Nothofagus* and recognition of the segregate genera *Fuscospora*, *Lophozonia*, and *Trisyngyne* (Nothofagaceae). *Phytotaxa 146*: 1–131. http://dx.doi.org/10.11646/phytotaxa.146.1.1

Common names as a tool to persuade

John Sawyer, Auckland Council (john.sawyer@aucklandcouncil.govt.nz)

As George Monbiot states in his article "The Naming of things" (see this newsletter), "it is hard to persuade people to care about something they can't pronounce. Nature is most valued when it intersects with culture."

Imagine my surprise when reading the latest list of threatened plants published by the Department of Conservation in September (de Lange et al., 2013) to see that 57 (25% of all threatened plants) do not yet have a common name on the Network website, 29 of them Nationally Critical, 12 Nationally Endangered and 16 Nationally Vulnerable (see Table 1). Note that some gaps may just be Network oversights so please email us (info@nzpcn.org.nz) if you know the common name of any of these species. Monbiot will be relieved to know that the word "common" is not used in any of the common names for the other threatened plants.

In the last newsletter, Peter de Lange raised several important issues that the NZPCN has had to deal with when managing common names in its website species database. Those issues were: What common names take precedence? Should some of them be censored? And the need for local common names to be preserved before they are lost forever. That article also questioned the time devoted to creating new common names.

I believe common names are important and some time is needed to plug the gaps for our most threatened species. My experience over the last 20 years dealing with a range of audiences (including Network members, website users, media agencies and funding bodies and businesses) is that they all benefitted from knowing a species' common name for their work in conservation, promotion and sponsorship.

That some of our most threatened plant species do not yet have a common name worries me. Do they not have a strong enough intersect with our New Zealand culture to be yet deserving of a common name? Do the communities where these species live know that they exist? Are these communities happy conversing about *Juncus holoschoenus* var. *holoschoenus* or *Lobelia fugax*? Or is it that scientific nomenclature is a barrier to future conservation efforts? This appears to me to be quite a significant barrier to us aiding the recovery of a quarter of New Zealand's threatened plants. I know we already use some Latin names such as Clematis and Rhododendron but would your neighbour know the Latin name of Maui's dolphin?

Muehlenbeckia astonii, shrubby tororaro. Photo: Jeremy Rolfe.

When I worked in the Department of Conservation, I worked with a few species for which my colleagues had created common names. These names were used to good effect to aid communication about the plight of the species and to aid their conservation. They include the pygmy button daisy (*Leptinella nana*), the shrubby tororaro (*Muehlenbeckia astonii*) and Holloway's crystalwort (*Atriplex hollowayii*). In discussions about each species, I connected with people that might otherwise have been put off by a long scientific-sounding Latin name. From a straightforward communications perspective, working with the media and gaining funding to support conservation and helping communities learn about their local threatened flora, I think common names are essential. We have not yet crunched the numbers from the last 10 years of the annual favourite plant vote but I bet that, when we do, it will show that plants with common names gain many more votes than those without.

Our most threatened species deserve a common name and that name should be appropriate for the species. The Network should invite communities throughout New Zealand including local iwi, local landowners, local restoration groups, and members of species recovery teams, to recommend common names for all these threatened plant species and for the most appropriate names to be used on the website. The process of doing this would contribute to raising awareness of the species and its conservation needs. And, finally, more people will care about potential extinctions leading to greater local engagement with recovery work.

Table 1: New Zealand's threatened plant species that lack a common name

Species without a common name	Family	Status
Acaena rorida	Rosaceae	Nationally Critical
Brachyglottis cockaynei	Asteraceae	Nationally Critical
Brachyscome linearis	Asteraceae	Nationally Critical
Brachyscome pinnata	Asteraceae	Nationally Critical
Ceratocephala pungens	Ranunculaceae	Nationally Critical
Chaerophyllum basicola	Apiaceae	Nationally Critical
Coprosma talbrockiei	Rubiaceae	Nationally Critical
Crassula peduncularis	Crassulaceae	Nationally Critical
Deyeuxia lacustris	Poaceae	Nationally Critical
Dichelachne lautumia	Poaceae	Nationally Critical
Gunnera hamiltonii	Gunneraceae	Nationally Critical
Hypericum minutiflorum	Hypericaceae	Nationally Critical
Isolepis fluitans var. *lenticularis*	Cyperaceae	Nationally Critical
Juncus holoschoenus var. *holoschoenus*	Juncaceae	Nationally Critical
Leptinella conjuncta	Asteraceae	Nationally Critical
Leptinella dispersa subsp. *rupestris*	Asteraceae	Nationally Critical
Libertia flaccidifolia	Iridaceae	Nationally Critical
Lobelia fugax	Campanulaceae	Nationally Critical
Montia drucei	Montiaceae	Nationally Critical
Myosotis angustata	Boraginaceae	Nationally Critical
Myosotis oreophila	Boraginaceae	Nationally Critical
Myosotis pottsiana	Boraginaceae	Nationally Critical
Myosotis saxosa	Boraginaceae	Nationally Critical
Olearia adenocarpa	Asteraceae	Nationally Critical
Pachycladon exile	Brassicaceae	Nationally Critical
Pachycladon fasciarium	Brassicaceae	Nationally Critical
Parahebe jovellanoides	Plantaginaceae	Nationally Critical
Phylloglossum drummondii	Lycopodiaceae	Nationally Critical
Ranunculus viridis	Ranunculaceae	Nationally Critical
Brachyglottis turneri	Asteraceae	Nationally Endangered
Coprosma waima	Rubiaceae	Nationally Endangered
Crassula multicaulis	Crassulaceae	Nationally Endangered
Gunnera densiflora	Gunneraceae	Nationally Endangered
Heliohebe maccaskillii	Plantaginaceae	Nationally Endangered
Iphigenia novae-zelandiae	Colchiaceae	Nationally Endangered
Mitrasacme montana var. *helmsii*	Loganiaceae	Nationally Endangered
Myosotis cheesemanii	Boraginaceae	Nationally Endangered
Olearia crebra	Asteraceae	Nationally Endangered
Olearia polita	Asteraceae	Nationally Endangered

Brachyscome pinnata

Hypericum minutiflorum

Brachyglottis turneri

Photos: Jeremy Rolfe

Ranunculus acraeus	Ranunculaceae	Nationally Endangered
Ranunculus brevis	Ranunculaceae	Nationally Endangered
Carmichaelia juncea	Fabaceae	Nationally Vulnerable
Crassula manaia	Crassulaceae	Nationally Vulnerable
Gratiola concinna	Plantaginaceae	Nationally Vulnerable
Hypericum rubicundulum	Hypericaceae	Nationally Vulnerable
Isolepis fluitans var. *fluitans*	Cyperaceae	Nationally Vulnerable
Lepidium naufragorum	Brassicaceae	Nationally Vulnerable
Lepilaena bilocularis	Potamogetonaceae	Nationally Vulnerable
Leptinella rotundata	Asteraceae	Nationally Vulnerable
Machaerina complanata	Cyperaceae	Nationally Vulnerable
Myosotis brevis	Boraginaceae	Nationally Vulnerable
Myosotis glauca	Boraginaceae	Nationally Vulnerable
Olearia fimbriata	Asteraceae	Nationally Vulnerable
Pachycladon cheesemanii	Brassicaceae	Nationally Vulnerable
Pimelea tomentosa	Thymelaeaceae	Nationally Vulnerable
Ranunculus recens	Ranunculaceae	Nationally Vulnerable
Ranunculus ternatifolius	Ranunculaceae	Nationally Vulnerable

Gartiola concinna

Brachyglottis turneri

Photos: Jeremy Rolfe

Reference

de Lange, P.J.; Rolfe, J.R.; Champion, P.D.; Courtney, S.P.; Heenan, P.B.; Barkla, J.W.; Cameron, E.K.; Norton, D.A.; Hitchmough, R.A. 2013: Conservation status of New Zealand indigenous vascular plants, 2012. *New Zealand Threat Classification Series 3.* Department of Conservation, Wellington. 70 p.

Voucher available for 360 Discovery Cruises

The Network has a voucher for $220 left over from the conference in May for travel on 360 Discovery Cruises which runs boat trips from Auckland to Tiritiri Matangi, Rotoroa and Motuihe Islands and to the Coromandel (see http://www.360discovery.co.nz/). Money from the sale of this voucher will go towards the Network's funds including the Endowment and Research Funds. The voucher is valid till 8 April 2014. Please contact the Network if you would like to buy this voucher: info@nzpcn.org.nz

Lucy Cranwell student grant for botanical research – Call for applications for 2014

Applications are invited for the Lucy Cranwell Grant of $2,000 from the Auckland Botanical Society to assist a student studying for the degree of PhD, MSc or BSc(Hons) in any tertiary institution in New Zealand whose thesis project deals with some aspect of New Zealand's flora and vegetation. Priority will be given to projects relevant to the northern half of the North Island. The research project to be supported will be chosen on the basis of appropriateness to the objects of the Society, namely to encourage the study of botany, and to stimulate public interest in the plant life of New Zealand and its preservation, conservation and cultivation. The grant will be administered by the student's supervisor as a contribution to expenses associated with the project.

Closing date for applications: **5pm Thursday 05 December 2013**

A copy of the Application Form and the Rules of the award may be downloaded from the Auckland Botanical Society website:

https://sites.google.com/site/aucklandbotanicalsociety/

Contact for enquiries: Kristy Hall, Secretary, Auckland Botanical Society; email: aucklandbotanicalsociety@gmail.com

Royal New Zealand Institute of Horticulture scholarships open for application

RNZIH has two scholarships open for applications:

The Peter Skellerup plant conservation scholarship

This scholarship is granted for research field work, publication, propagation, protection and/or cultivation of plants, production of educational resources, and any other activity likely to promote and assist the conservation of New Zealand's indigenous and exotic plant genetic resources.

The Memorial Prize Fund

The fund is to assist RNZIH members who are bone fide full or part time horticultural students with the costs of attending seminars, conferences or workshops that are being held within New Zealand. Membership application details can be found at rnzih.org.nz/pages/joinrnzih

A further scholarship **The Margaret Watling Scholarship** is awarded by Lincoln University with the approval of the RNZIH. Its purpose is to assist people to undertake further study or obtain practical experience in amenity horticulture, ornamental horticulture, nursery management or any other closely allied field.

For conditions and application forms see rnzih.org.nz/pages/awards or contact the RNZIH at office@rnzih.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):

EcoTas13

5th joint conference of the New Zealand Ecological Society and the Ecological Society of Australia: *Celebrating ecology on both sides of the Tasman: diversity and opportunity*. Auckland, 24 to 29 November, 2013.	**Contact:** Bruce Burns, Chair Local Organising Committee, email: b.burns@auckland.ac.nz or ecotas13@auckland.ac.nz. Information: www.ecotas13.org

Auckland Botanical Society

Field trip: Sunday 1 December at Tawharanui for the annual Christmas Picnic— 'Yo ho ho and a bouquet of mistletoe; Come have a peek at *Ileostylus micranthus*'.	**Leader/Contact:** Janeen Collings (janeen.collings@aucklandcouncil.govt.nz).
Field trip: Saturday 11 – Friday 14 January for the South Island Camp at Tautuku Outdoor Education Lodge, Catlins.	**Leader:** Anthony Wright. **Contact:** Maureen Young (youngmaureen@xtra.co.nz)

Waikato Botanical Society

Field trip: Saturday 30 November to Sunday 1 December to Hauhungatahi, Tongariro National Park (combined Rotorua and Waikato Botanical Society trip). See below for details.	
Meeting: Monday 2 December at 5.30 p.m. for members' botanical highlights of 2013. Venue: Environment Centre 25 Ward Street.	**Contact:** Cynthia Roberts, email: croberts@doc.govt.nz, ph: 07 858 1034.

Rotorua Botanical Society

Field trip: Saturday 30 November to Sunday 1 December to Hauhungatahi, Tongariro National Park (combined with Waikato Botanical Society). **Meet:** National Park petrol station 9.00 a.m. on the Saturday. **Grade:** hard (the track is not maintained). **Accommodation:** tents if you want to stay overnight. **Bring:** camping gear for DOC campsite.	**Leader:** Kerry Jones, ph: 07 855-9700 (hm), 027-747-0733 (mobile), email: km8j1s@gmail.com, please contact if you wish to come on the trip.

Wanganui Museum

Field trip: Sunday 1 December to Whenuakura Estuary and coast. **Meet:** at the Police Station at 8.00 a.m., bring lunch and drink.	**Leader:** Michael Parsons. **Contact:** Colin Ogle robcol.ogle@xtra.co.nz.
Meeting: Tuesday 3 December at 7.30 p.m. for the Christmas social. **Venue:** Museum's Davis lecture theatre.	**Contact:** Colin Ogle robcol.ogle@xtra.co.nz.

Wellington Botanical Society

Field trip: Saturday 30 November to Sunday 1 December to Mt Bruce National Wildlife Sanctuary (Saturday) and Fensham Bush Reserve (Sunday). **Meet:** 10.15 a.m. Mt Bruce car park, c. 30 km north of Masterton on SH2. **Accommodation:** Greytown Campground, Kuratawhiti St, Greytown; $14 pp; ph: 06 304 9281, limited tent sites booked.	**Leader:** Trevor Thompson, ph: 027 3333 243. **Wellington contacts:** Sunita Singh, ph: 04 387 9955, 027 4052 987 (*text only*) and Chris Horne, ph: 04 475 7025.
Field trip: 17–28 January 2014 for the Summer Camp at Te Urewera National Park and Whirinaki Forest Park. **Accommodation:** based 17–24/1/14 at Camp Kaitawa; then 25–28/1/14 at Whirinaki Recreation Camp, Minginui.	**Leader and Contact:** Mick Parsons, ph: 04 972 1148, or 06 273 8078 or 027 249 9663, email: mtparsons@paradise.net.nz, booking essential if you intend to go.

Nelson Botanical Society

Field trip: Tuesday November 26 to Thursday 28 November to White's Bay, Marlborough.	**Leader:** Cathy Jones, ph: 03 546 9499, email: cathy.jones@xtra.co.nz.
Field trip: Sunday 15 December the Upchurch QE II Covenant, Herring Stream Rd, Motueka Valley.	**Leader:** Kay Jackson, ph: 03 547 7264 for details and to register for the trip.

Canterbury Botanical Society

Meeting: Friday 6 December at 7.30 p.m. for a talk **by** Kerry Ford. **Venue:** Room A5 University of Canterbury.	**Contact:** Gillian Giller, ph: 03 313 5315, email: ggillerma1@actrix.gen.nz.
Field trip: Saturday 14 December to **Mt Hutt. Meet:** at 8.15 a.m. the Yaldhurst Hotel car park, Yaldhurst Rd**, to carpool from there.**	**Contact:** Marg Geerkens email: geerkensmr@xtra.co.nz or ph: 03 352 7922 if you are coming.

University of Canterbury summer course: Practical Field Botany

Practical Field Botany (BIOL305): an intensive, short summer course designed to meet the need for training in the collection, preparation and identification of botanical specimens. **Venue:** Mountain Biological Field Station at Cass, Canterbury. **Dates:** 7–15 January 2014.	**More information:** Dr Pieter Pelser, email: pieter.pelser@canterbury.ac.nz, ph: 03 364 2987 ext 45605).

Otago Botanical Society

Meeting: Wednesday 4 December at 6.30 pm for the end of year dinner at Harvest Court Cafe.	**Contact:** Bill Wilson, ph: 03 477 2282.
Field trip: Saturday 7 December to Kakanui Peak *bad weather back-up Sunday 8 December). **Meet:** 8.30 a.m. Botany Department car park, Great King Street.	**Contact:** David Lyttle, ph: 03 454 5470, email: djlyttle@ihug.co.nz.