TRILEPIDEA

NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK

Please send news items or events to events@nzpcn.org.nz
Postal address: P.O. Box 16-102, Wellington, New Zealand

E-NEWSLETTER: NO 98. JANUARY 2012 Deadline for next issue: Monday 13 February 2012

Council Member's Message

Merry Christmas and Happy New Year to all Network members, I hope you had a wonderful festive season with family and friends. I spent Christmas in Bridge Pa, Hawke's Bay, where I have to say I was struck by the absence of native plants. I did spot a couple of ti kouka planted on the roadsides, hopefully it catches on, and had a good walk through Ball's Clearing on Pakaututu Road about an hour's drive east of Taradale, which was a treat.

Sightings should be a bit better in Taranaki where I am heading next week with the Wellington Botanical Society on the annual field trip. Anyone who has the opportunity to join up with like-minded enthusiasts should do so without delay. It's such a privilege to learn from other people, professional and amateur, who have been in this plant game for a while. I always return from trips like this around the country with my admiration reinvigorated for New Zealand plants and the landscapes we find them in. A couple of years ago I visited the Denniston Plateau on a similar trip and spent the day wandering around that spectacular West Coast spot. I heard talk late last year in the news about potential mining in Denniston. After visiting I definitely feel more strongly involved about the issue in the area. If you haven't been in touch with your local 'botsoc' about its fieldtrips, maybe it's time to do so.

We all know threatened plants are an issue and, right now, the threat listing of New Zealand Indigenous Vascular Plants is due for revision. The panel involved with compiling this list is seeking contributions from the botanical community to assist with the process. If you have an observation, now is your chance—see the article in this issue.

Also in this issue are a couple of articles arising from the Favourite Plant vote. We had thousands of votes with over 140 species nominated. The winning species was bamboo rush, or giant wire rush, *Sporadanthus ferrugineus*. The Network achieves a good amount of publicity for native plants through the annual vote; thanks to all who took the time to vote for their favourite plant.

For those who are interested in more publicity, we have posters available that advertise the new online "book making system" on the Network website. If you know of any school, university and office walls that need one of these A3 posters please email the Network (info@nzpcn.org.nz) and provide a postal address and an indication of how many posters you want. We'll send you one for free—it's that easy!

Kia ora,

Rewi Elliot
Wellington City Council

Favourite Plant Vote prize winner

In association with the voting for people's favourite plant, there was a prize for one lucky voter. That voter was Ally Mullord of Christchurch who wins a copy of the recently published book *Native By Design*. Congratulations, Ally, we hope that you enjoy and make use of the book.

PLANT OF THE MONTH – *SOPHORA FULVIDA*

Sophora fulvida. Photo: Jeremy Rolfe.

Plant of the month for January is one of our beautiful kowhai species, *Sophora fulvida*. *Sophora fulvida* is endemic to New Zealand, occurring in Northland, Auckland and the Waikato, down to Mt Karioi on the south side of Raglan Harbour. It grows in open areas on base-rich volcanic rock in mixed podocarp-hardwood forest.

It grows to a small tree up to 10 m tall, with pinnate leaves that have many small, hairy, yellow-green or grey leaflets. The young branches are also hairy, and juvenile plants do not have a divaricate stage. Yellow flowers appear from October to November followed by the familiar hanging seedpods.

Sophora fulvida is easily grown from seed, which should be nicked with a sharp knife or abraded with sandpaper to expose the endosperm under the testa (the seed coat). You can also soak the seed in water overnight to soften the testa; this often improves germination.

Sophora microphylla, *S. chathamica*, *S. godleyi* and *S. tetraptera* are similar, but all tend to have fewer leaflets on each leaf (*S. fulvida* has 60–90 leaflets per leaf) and leaflets that are often larger, broader, crowded and sometimes overlapping or widely spaced.

The Network fact sheet for *S. fulvida* may be found at: www.nzpcn.org.nz/flora_details.asp?ID=206

Rare restiad wetlands: Waikato remnants and re-creations

Monica Peters, Waikato Regional Coordinator, NZ Landcare Trust

Sporadanthus ferrugineus at Kopuatai Swamp. Photos: Monica Peters.

Simply put, *Sporadanthus ferrugineus* is unique. Cockayne (1910), in his excellent "*New Zealand Plants and their story*", mentions the restiad being found "… in the far north… near Kaitaia". Today, however, the distribution of *Sporadanthus* is limited to only three sites in the Waikato. Each site has its own characteristics: Moanatuatua Scientific Reserve, to the south east of Hamilton is a straight edged piece that is surrounded by heavily drained fields while Torehape, situated on the Hauraki Plains, is part of a peat mine. Kopuatai Peat Dome (adjacent to Torehape) is the most complete restiad ecosystem and forms part of a vast mosaic of wetlands.

From the air, Moanatuatua looks quite extraordinary. It's like a brown coloured rug in a landscape largely dominated by the greens of a ryegrass-clover landscape. Blueberry orchards add a bit more texture as do the odd windbreak or island of kahikatea. For all of its botanical

and ecological value, the entry to the site is very low key; there are no signs. You just have to know which road to go down, which race to follow, which cowshed to pass before reaching a deep drain that requires a leap of faith to cross. Then you climb to the site. Climb, because the surrounding landscape has sunk, oxidised with continual land development, dried out through a detailed latticework of drainage to make the land suitable for growing grass, cows and fruit.

Despite the fragmented nature of Moanatuatua, follow a rough path into the site and, after very few metres you are surrounded almost without exception by native flora. Large clumps of *Sporadanthus ferrugineus* rise from a wiry tangle of *Empodisma minus*; the white flowering shrub *Epacris pauciflora* is another distinctive species found here. As for exotics, blackberry and gorse just cling to the margins, unable to gain a foothold further into the site.

Torehape is a 'work in progress'. As the peat is being carefully mined to supply the horticultural industry, the *Sporadanthus* cover is being simultaneously restored following well established methods developed by Bev Clarkson (Landcare Research www.landcareresearch.co.nz/research/research_details.asp?Research_Content_ID=7). Because of the mined nature of the site, and the presence of a buffer of original vegetation, it was a matter of trapping the wind-borne seeds of *Sporadanthus* using an initial cover of manuka. The results of the trials are impressive and restoration techniques have been further refined by the mine managers. Due to the rapid establishment of *Sporadanthus*, the site has been used to collect 1–2yr old plants for colonising new sites.

The final site, Kopuatai, is unique because of its size (10,201 ha) and intactness. As a Ramsar site, its significance is also internationally recognised. At Kopuatai, the relationship between the low nutrient needs of *Sporadanthus* and the peat dome structure can be better understood because the margins, unlike at Moanatuatua, are still largely in place. Walk in from the surrounding farmland and the further into Kopuatai you venture, the greater the nutrient gradient—in this case from high on the margins to very low in the centre. The vegetation changes accordingly from willow and kahikatea to *Sporadanthus* co-dominating with *Empodisma minus.*

Given the scarcity of such an intriguing plant coupled with its function as a peat former, restoration was a logical step. The aforementioned Landcare Research trials carried out at Torehape paved the way toward recreating restiad-dominated wetlands in other parts of the Waikato. The formerly known Sustainable Management Fund supported a project to develop a feasibility study for restiad wetland recreation and then provided further funding to carry it out. The project was lead by the NZ Landcare Trust (www.landcare.org.nz) with technical guidance from Landcare Research (www.landcareresearch.co.nz). The 3-year project resulted in two sites being successfully established, with a third following, using best practices learned through the experiments.

The experimental sites at Lake Serpentine east to the south of Hamilton (and just a few kilometres as the crow flies from Moanatuatua), and Lake Komakorau, to the north of Hamilton, were set up to determine best practice and associated costs for doing the work. The sites were identified through a set of criteria that included environmental factors (…within the original range of the species? …has deep peat?), economic factors (….land available without needing to be purchased?) and social factors (… can be accessed by the public and used for education?).

Sporadanthus ferrugineus ready for planting out.

Planting *Sporadanthus ferrugineus*.

An enormous amount has been learned in the process, namely, that *Sporadanthus* is quite a hardy plant and that young plants (1–2 yrs old) transplant readily. Of the approaches trialled (planting into herbicided grass/planting into milled peat; weeding/non-weeding), the quickest-to-establish were plots with milled peat. However, given the size of the *Sporadanthus* planted (1 m+ tall), over time, few differences were noted between the "Rolls Royce" sites (milled peat, weeded) and a more basic low budget approach (herbicided pasture, no weeding). Despite the experimental design, more noxious weeds, such as blackberry and grey willow, as well as vigorous natives including manuka and bracken, were removed throughout. Nearly five years on, all experimental plots at both sites have nearly 100% restiad cover.

The project has demonstrated that an initially slightly crazy idea (recreate a rare restiad wetland!) can yield great results through creative thinking, great partnerships and a fair bit of spade work.

Further reading

Peters, M. 2006: *Action Plan for Recreating Rare Restiad Wetlands.* Technical paper, New Zealand Landcare Trust, Hamilton. 38pp.

Peters, M. 2007: *Restiad Wetland Monitoring and Management Plans.* 2007. Technical paper, New Zealand Landcare Trust, Hamilton. 62pp.

Reference

Cockayne, L. 1910: *New Zealand Plants and their story.* R.E. Owen, Govt Printer, Wellington.

FREE "MAKE YOUR OWN BOOK" POSTERS AVAILABLE

Please contact the Network if you would like a free poster to promote the new online book making system on the Network website. The Network would like to ensure these new posters are used to promote the new book making system on school, university and office walls.

If you would like a copy of the poster to put up at work, or would like several copies to send to colleagues or your local school or community restoration groups, then please email the request to the Network (info@nzpcn.org.nz) providing a postal address and an indication of how many posters you want.

New Zealand conservationist celebrated in pioneering botanical publication

A newly described species of New Zealand liverwort marks a pioneering effort by international plant scientists to enter a brave new world in the realm of the electronic age. Lead authors, Dr Matt von Konrat (Field Museum, Chicago) and Dr Peter de Lange (Department of Conservation) described the new liverwort species under the revolutionary new rules that allow electronic publication.

The new liverwort species, named *Frullania knightbridgei*, is noteworthy because it involved national and international participants from universities, museums, and government departments", said von Konrat, "and was named after a prominent New Zealand conservationist, Phil Knightbridge, who passed away last year and who epitomized the dedication and commitment of staff at the Department of Conservation." "The continued collaborative efforts between agencies such as DOC and international research institutes, such as The Field Museum and its partners, will help uncover more of the as yet hidden biodiversity of this plant group. The new species was first discovered on Rakiura/ Stewart Island, an area of high rainfall, which is particularly significant as this group of plants, together with mosses, are able to soak up water like a sponge and critical in preventing the deleterious effects of high rainfall," said von Konrat.

Frullania knightbridgei is found growing on the branches of coastal trees and shrubs. Photo: Matt von Konrat.

The newly described species is from the group of plants commonly referred to as liverworts. "This group of generally small-sized plants forms an incredibly conspicuous and significant component in New Zealand ecosystems. Based on our present knowledge, New Zealand may have almost 10% of the world's species of liverworts—a little-known but widespread group of plants related to those that first colonized land millions of years ago. That is an astonishing figure", said Dr von Konrat.

New Zealand has a high proportion of endemic plant species. Some of them are like the tuataras of the plant world, and are very significant in our understanding of early land plant evolution. On the other hand, "The new species underscores how this enigmatic group of plants has been largely overlooked compared with seed plants and our fauna, especially on many of our offshore islands which harbour significant biodiversity," commented Dr Peter de Lange.

Liverworts are being increasingly recognised by everyday New Zealand people and worldwide as beautiful and important contributions to global biodiversity, as important environmental indicators and as potential indicators of global warming. Indeed, in 2011, two liverworts—the highly threatened *Frullania wairua* (itself known only from a seriously threatened tree, Bartlett's rata) and *Lejeunea hawaikiana*—received a top 10 listing in the annual New Zealand Plant Conservation Network "vote for your favourite plant" competition. The new species is listed on the New Zealand Plant Conservation Network website, possibly the first conservation website to list the species, which is known from very few collections.

Grasp the nettle: sage advice for the brave and the beautiful

Geoff Davidson, Oratia Native Plant Nursery (oratia@ihug.co.nz)

It was an English author, Aaron Hill in 1750, who first advised that it is better to grasp a nettle like a man, for a tender-handed stroke will sting you for your pains. But perhaps he based his advice on an ancient Greek, Philautus, who is quoted as advising "that he who toucheth ye nettle tenderly, is soonest stoung" (John Lyly, Euphues 1578).

New Zealand's stinging nettles

Nettles have traditionally got a bad press. They are plants that don't tolerate nonsense and fight back when disturbed. The average New Zealander has probably never encountered one and never will unless they go out of their way to find one. Yet they are spread throughout the country and grow from lowland swamps to high alpine slopes. Preferring rich fertile soil with high nitrogen content, they have been eradicated from most farms and arable country in favour of more economic crops. There are five native species, which now tend to hang around on the outskirts of bush and, inconveniently, along the side of little-used tracks. With pioneering zeal, we have eliminated them whenever they have crossed our paths. This is understandable, since they give a fearsome jolt when encountered, no matter how gently.

The four smaller species almost look innocuous and although comparatively mild can still cause an irritating and painful reminder to be more careful next time. Ironically, our zeal to eradicate them has allowed a niche for the several exotic species to lurk behind milking sheds where the slurry of manure is regularly washed out.

It is ongaonga, the larger 3–4 m high tree nettle, *Urtica ferox*, that has justifiably given the genus a deadly reputation, but, for most encounters, it merely sends a stinging message that it is not to be tangled with. It is a message that repeats itself for up to a week, every time you wash the offended portion of your anatomy. The fearsome *U. ferox* has triangular, 15 cm long serrated leaves, bristling with ominous spines on all its parts including the two stipules at every node. It is dioecious and, of course, needs both male and female plants to produce fertile seed. This point is overlooked in many restoration projects that want no more than a token nettle.

Urtica ferox. Photo: Jeremy Rolfe.

The stings are delivered by stiff hairs like hypodermic syringes with fragile needle tips that can penetrate skin with the lightest brush and then break off with an injection of a toxin named triffydin. It appears to be a cardiac depressant and attacks the nervous system. Growing in disturbed sites, nettles are frequently found in association with a *Rumex* species, usually an exotic one, which is fortunate because docks are the prescribed antidote by 'Old Wives'. Certainly, from my experience, docks moderate the pain for a while, but it returns repeatedly.

You have to be brave to consider planting these nettles in the garden. But we must.

Without nettles, our most beautiful butterflies will surely disappear. The admiral butterflies rely on the nettles for the correct balance of food to feed their rapacious caterpillars as they grow to become a beautiful gold-encrusted chrysalis. Admirals have two mainland forms, the red admiral (*Vanessa gonerilla*) and the yellow admiral (*V. itea*), with a red admiral subspecies on the Chatham Islands (*V. gonerilla ida*). The admirals have their preferences of which nettle to lay their eggs on and so provide the right food for their young caterpillars, but it seems that the Chatham Island *Urtica australis* is favoured by all the species. That half metre high nettle has the attribute of the biggest leaves to provide the most fodder with perhaps the least potent stinging spines. If you can find a remote

corner of the garden that you seldom visit, the butterflies will surely thank you for providing a host plant for their young to feed on.

The most common nettle species is the smallest, *U. incisa*, which tends to scramble across the ground in amongst other vegetation, making it difficult to see until after your encounter has shocked you into realising its presence. It occurs throughout the country and inhabits forest margins to higher montane areas. Being monoecious, with female racemes being produced after and above the male flowers, it generally cross pollinates with other plants, but can self-pollinate to some extent. Australian plants appear more robust.

More localised is a swamp dwelling liane, *U. linearifolia*, which scrambles through scattered lowland wetlands from Urewera Ranges south. An endemic species, it is also monoecious and has a flowering pattern similar to *U. incisa*. It is easily distinguished by its habitat in swamps and its narrow lanceolate leaves. Unfortunately, loss of habitat has resulted in this species being designated as Declining (de Lange et al. 2009).

Urtical linearifolia in fruit. Photo: John Barkla.

Urtica aspera is an endemic species confined to the South Island, east of the Alps. Perhaps the most threatened native nettle, it is categorised as Naturally Uncommon (de Lange et al. 2009), both loss of habitat and hybridisation with exotic species are threats. It is easily confused with the exotic *U. dioica,* a stout herb with ovate leaves. The other exotic species is *U. urens*.

A much under-rated aspect of nettles in New Zealand is their potential medicinal properties. Overseas, nettles are drunk as a tonic like tea, and some aver the sting of the nettle minimises arthritis. Why should the admirals have all the good food?

Reference

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.

Nettle soup

Here is a recipe for nettle soup thanks to Molly Watson (http://localfoods.about.com/).

Tame stinging nettles by cooking them in this easy, super-nutritious, and delicious spring soup. Like all soups, this one tastes best when made with homemade stock (but works just fine with store-bought broth). Makes 4 to 6 servings of stinging nettle soup.

Prep Time: 15 minutes

Cook Time: 20 minutes

Total Time: 35 minutes

Ingredients

2 tbsp. butter, divided

1 onion, chopped

1 tsp. salt, plus more to taste

450 g potatoes, peeled and chopped

6 cups chicken or vegetable broth

225 g stinging nettles

½ tsp. freshly ground black pepper

¼ tsp. freshly grated nutmeg

½ cup heavy cream (optional)

Sour cream, yogurt, or horseradish cream (optional)

Preparation

1. In a large pot, melt 1 tbsp. butter over medium-high heat. Add onion and 1 tsp. salt. Cook, stirring occasionally, until onions are soft, about 3 minutes.
2. Add potatoes and broth and bring to a boil. Reduce heat to maintain a steady simmer and cook 15 minutes.
3. Add nettles and cook until very tender, about 10 minutes. Stir in remaining 1 tbsp. butter, pepper, and nutmeg.
4. Puree soup with an immersion blender or in a blender or food processer in batches. For a silken, less fibrous texture, run mixture through a food mill or sieve.
5. Stir in cream, if using. Season to taste with additional salt and pepper, if you like.
6. Serve hot, garnished with sour cream, yoghurt, or horseradish cream, if you like.

New Zealand threatened indigenous vascular plant relisting – call for submissions

P.J. de Lange, Ecosystems & Species Unit, C/o Auckland Conservancy, Department of Conservation, Private Bag 68908, Newton, Auckland (pdelange@doc.govt.nz)

Under the terms and conditions set out by the New Zealand Threat Classification System (see Townsend et al. 2008) the last threat listing of New Zealand Indigenous Vascular Plants (de Lange et al. 2009) is now due for revision, and a call for submissions has now been posted on the New Zealand Department of Conservation (DOC) website (www.doc.govt.nz/getting-involved/consultations/). As part of that process, the New Zealand Indigenous Vascular Plant Panel will convene some time in late April or early May 2012 on the Lincoln campus of Landcare Research to undertake this task. Accordingly, the panel now seeks contributions from the botanical community to assist with this process. The role of the wider botanical community in threat listing is important. To that end, panel members encourage those of you who have an interest in the threat status of our vascular flora to prepare submissions (see form attached to end of newsletter). This form is also available from the OC website in PDF and MS Word format or may be completed on-line at www.doc.govt.nz/getting-involved/consultations/current/new-listing-of-the-threatened-status-of-new-zealand-vascular-plants/ . However, handwritten or emailed submissions outlining the candidate taxa and providing supporting comments and data are also quite acceptable. These may be mailed or emailed to any of the panel members (see below).

Submissions may include support for existing threat listings, suggested changes to these or proposals for new taxa that may not yet have been listed by the panel. Submissions for informally recognised plant entities may also be provided. This is on the understanding that any such entity proposed is supported by an accessible herbarium voucher specimen lodged within an officially recognised herbarium (see Holmgren et al. 1990), which, for New Zealand, includes the following herbaria: AK, CANU, CHR, LINC, MPN , NZFRI, OTA, WAIK, WELT, WELTU.

We strongly encourage botanists to be part of this process.

Submissions will NOT be accepted after 10 April 2012.

The 2012 New Zealand Indigenous Vascular Plant Panel

Chair: Peter J. de Lange (pdelange@doc.govt.nz or pj.delange@xtra.co.nz)

Facilitator: Rod Hitchmough (rhitchmough@doc.govt.nz)

Panel (North to South)

Ewen Cameron – Auckland Museum Herbarium (ecameron@aucklandmuseum.com)
Jeremy Rolfe – Wellington/Hawke's Bay Conservancy, Department of Conservation (jrrolfe@actrix.co.nz)
Shannel Courtney – Nelson/Marlborough Conservancy, Department of Conservation (scourtney@doc.govt.nz)
David Norton – School of Forestry, University of Canterbury (David.norton@canterbury.ac.nz)
Peter Heenan – Allan Herbarium, Landcare Research (heenanp@landcareresearch.co.nz)
John Barkla – Otago Conservancy, Department of Conservation (jbarkla@doc.govt.nz)

References

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.

Holmgren, P.K.; Holmgren, N.L.; Barnett, L.C. 1990: Index Herbariorum Part I: The herbaria of the world (8th ed.). Regnum Vegetabile, New York Botanical Gardens, New York.

Townsend, A.J.; de Lange, P.J.; Norton, D.A.; Molloy, J.; Miskelly, C.; Duffy, C. 2008: The New Zealand Threat Classification System manual. Wellington, Department of Conservation.

Banks Peninsula Conservation Trust celebrates its 10th anniversary

The Banks Peninsula Conservation Trust (BPCT) was formed in the summer of 2001. Two years later, the then Minister of Conservation made the trust a covenanting authority—the only NGO other than the Queen Elizabeth II National Trust with the power to place covenants over private land. Since that time, the trust has established 47 covenants over 431 ha. One result is that, in the Kaituna and Western Valleys, two large covenants connect with Department of Conservation reserves to form over 700 ha of contiguous protected land. With such a number of covenants put in place is reason enough for celebration but that it has been achieved in such a relatively short time is all the more meritorious.

The trust's first covenant, registered in 2005, is only a 1.4 ha slice off a paddock at Robinsons Bay on the road to Akaroa. It has involved restoration rather than regeneration. In place of a swampy bit of paddock where the sheep used to get stuck there is now flax, kahikatea, toetoe and cabbage trees with pukekos and herons.

Well known botanist, Hugh Wilson, of Hinewai on Banks Peninsula, is an adviser to the trust. He is the force behind much of the trust's planning. Others heavily involved in the trust's work include Kit Grigg (current vice-chairman of the trust and treasurer), Rachel Barker (coordinator), Brooke Turner (covenants officer) and Annelies Pekelharing (restoration officer).

For more information, refer to the trust's website: www.bpct.org.nz.

(Condensed from The Press*, 7 January 2012)*

Offer: Lucid 3.3 key builder software

Lucid is celebrating the 10th anniversary of its initial release of the "Lucid Professional" identification tool by providing FREE copies of "Lucid 3.3". Initially released in 2006, Lucid 3.3 operates on Windows 98, ME, NT, 2000, XP, 2003, Vista; Mac-OSX; Linux; and Solaris, and is capable of producing keys for deployment on CD or the Internet. To take advantage of this free offer, please go to the website (www.lucidcentral.org) and click on "Lucid 3.3 free offer".

This offer is likely to be of particular interest to lecturers and trainers who can now provide their students with free Lucid key builders for project and field work, although anyone is eligible to download this free product. Lucid 3.3 is forward compatible with the latest Lucid 3.5 builder, so that any keys developed using Lucid 3.3 can be imported to Lucid3.5.

Lucid is arguably the best interactive, matrix key software available, especially in combination with the fact sheet compiler – Fact Sheet Fusion (www.lucidcentral.org/en-us/software/factsheetfusion.aspx). Keys developed using Lucid.3 software enable students, natural resource managers and others to use line drawings, images and a range of Lucid database functions to identify biological taxa.

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):

Taonga o Te Hiku o Te Ika Treasures of the Far North

Conference: Dune Restoration Trust 2012 national conference, February 14-17, Taipa Northland.	**Programme, registration forms and conference information:** www.dunetrust.org.nz or contact: info@dunestrust.org.nz

8th Asia Pacific Conference on Algae Biotechnology for the Asia Pacific Society for Applied Phycology

Conference: Adelaide, Australia, 9–12 July (www.sapmea.asn.au/apcab2012). Proposals are invited for oral and poster presentations as part of the APCAB 2012 and the 1st ICCB Conference Programme. The deadline for submission of abstracts is 24 February.	**Information and online submissions:** www.sapmea.asn.au/apcab2012 **Contact:** Conference Secretariat: ph: +61 8 8274 6048; fax: +61 8 8274 6000; email: apcab2012@sapmea.asn.au

Auckland Botanical Society

Field trip: Friday 27 – Monday 30 January, Anniversary Weekend camp at Mayor Island.	**Contact:** Maureen Young, email: youngmaureen@xtra.co.nz
Field trip: Saturday 18 February to Destruction Gully, Whatipu, Waitakere Ranges. **Leader:** Peter Hutton.	**Contact:** Maureen Young, email: youngmaureen@xtra.co.nz

Waikato Botanical Society

Field trip: Saturday 11 February to Koropupu Scenic Reserve, Waitomo, to do a *Teucridium* survey (back-up day Sunday 12 February). **Grade:** medium.	**Leader:** Lyneke Onderwater, email: londerwater@doc.govt.nz, ph: 07 878 1055.
Field trip: Saturday 18 February to Tongatongarerewa Wetland, Pureora, combined with the Rotorua Botanical Society, see details below.	**Leader:** Thomas Emmitt, email: temmitt@doc.govt.nz, ph: 07 878 1080 (work), 07 878 4737 (home).

Rotorua Botanical Society

Field trip: Saturday 18 February – Tongatongarerewa Wetland, Pureora, combined with the Waikato Botanical Society. **Meet:** Pureora DOC centre at 9.00 a.m. **Grade:** easy but wet (bring gumboots). **Accommodation:** if you want to stay at Pureora on Friday night there are DOC cabins (2-bunk, $24.50; 6-bunk, $49).	**Leader:** Susan Carrodus, ph: 07 343 9017 extn 221, mobile: 027 408 4374, email: susan.carrodus@wildlands.co.nz
Field trip: Sunday 4 March to Te Ananui Falls, Woodlands Road, Kaimai Mamaku Forest Park. **Meet:** car park, Rotorua, at 8.00 a.m. or Katikati town centre at 9.30 a.m. **Grade:** moderate, two creek crossings.	**Leader:** Graeme Jane, ph: 07 570 3123, email: gtjane@clear.net.nz

Wellington Botanical Society

Field trip: Saturday 4 February to Korokoro Valley true left. Meet: 9.45 a.m. at Oakleigh St entrance, Maungaraki.	**Leader:** Chris Horne, ph: 04 475 7025, deputy-leader: Barbara Mitcalfe, ph: 04 475 7149.
Meeting: Monday 20 February at 7.30 p.m. a talk titled 'Hutt City Council reserves real estate' by Kelly Crandle, Reserves Planner, Hutt City Council.	**Venue:** Lecture Theatre M101, ground floor Murphy Building, west side of Kelburn Parade; enter building off Kelburn Parade about 20 m below pedestrian overbridge.

Nelson Botanical Society

Field trip: Friday 27 – Monday 30 January, Anniversary Weekend Camp to Sedgemere, Rainbow Road, Molesworth Station (4WD). If interested please book.	**Leader:** Cathy Jones ph: 03 546 9499.
Field trip: Sunday February 19 to Rainbow Ski Field to survey *Crassula multicaulis*.	**Leaders:** Shannel Courtney, ph: 03 546 9922 and Rebecca Bowater, ph: 03 545 1260.

Canterbury Botanical Society

Field trip: Friday 3 to Monday 6 February –Arthur's Pass Waitangi weekend field trip. **Accommodation:** Arthur's Pass Outdoor Recreation Centre, with shared bunk rooms and large kitchen and lounge. **Cost:** $20 per night per person; bring your own food and a sleeping bag and pillow; a deposit of $20 can be made to the Treasurer, Canterbury Botsoc, PO Box 8212, Christchurch.	**Book with Zuni:** email: mas210@uclive.ac.nz or ph: 03 342 1427 (evenings). **Contact:** Gillian Giller, ph: 03 313 5315, email: ggillerma1@actrix.gen.nz.

University of Canterbury

Summer course: Practical Field Botany (BIOL305) is 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:** 17 January – 25 January 2012.	**More information:** www.biol.canterbury.ac.nz/biol305 or contact Dr Pieter Pelser, email: pieter.pelser@canterbury.ac.nz ph: 03 364 2987 ext 45605.

Botanical Society of Otago

Meeting: Wednesday 15 February at 5.20 p.m. a talk titled 'Structure of plant communities in edaphic and alpine deserts of the Japanese Archipelago' by Zaal Kikvidz, University of Tokyo. **Venue:** 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:** Bastow Wilson, ph: 03 479 7572.

Threatened indigenous vascular plant submission form

Please copy this form as many times as required to complete a questionnaire for every species or lower-level taxon in your taxonomic group that you consider to be threatened, or data deficient and potentially threatened. Please snail mail or email completed form to Rod Hitchmough (rhitchmough@doc.govt.nz) or any of the New Zealand Indigenous Vascular Plant Panel members before 10 April 2012.

Your name

Address

E-mail

Telephone numbers

Taxon:
Scientific name

Common name

General status:
Does the taxon have a formally published name that is generally accepted by those working on the group? **Yes / No**

Is the taxon (please tick correct choices)

- ❑ Introduced and naturalised
- ❑ A vagrant visitor with no resident breeding population, or a rare migrant with <15 individuals reaching New Zealand per year
- ❑ A regular migrant (>15 individuals per year) to New Zealand not breeding in New Zealand
- ❑ A colonist which has established without human assistance and begun breeding in the wild in the last 50 years, and which is still uncommon
- ❑ Native but non-endemic, including natural colonists which are now abundant and/or have been established for more than 50 years, and migrants which breed or spend the great majority of their lives in New Zealand but are also breeding or resident elsewhere
- ❑ Endemic, including migrants which breed or spend the great majority of their lives only in New Zealand
- ❑ Believed to be extinct after adequate search effort?

For non-endemic taxa, please consider only the New Zealand populations when answering the questions below (please also answer the questions for endemic taxa):

Is the taxon extinct in the wild, but surviving in captivity or cultivation? **Yes / No**

Is the taxon sufficiently well-known to meaningfully answer the questions below? **Yes / No (if no, then stop here)**

Population:
Is the total population size
- ❑ <250 mature individuals
- ❑ 250-1000 mature individuals
- ❑ 1000-5000 mature individuals
- ❑ 5000-20 000 mature individuals
- ❑ 20 000- 100 000 mature individuals
- ❑ >100 000 mature individuals
- ❑ unknown?

Please provide more accurate estimate if possible: .....

Is the total area occupied
- ❑ <1 ha (0.01 km^2)
- ❑ 1-10 ha (0.01-0.1 km^2)
- ❑ 10-100 ha (0.1-1 km^2)
- ❑ 100-1000 ha (1 km^2)
- ❑ 1000-10 000 ha (1 km^2)
- ❑ >10 000 ha (1 km^2)
- ❑ unknown?

Please provide more accurate estimate if possible: .....

Sub-populations:
Do the data available for your assessment of the questions below allow
- ❑ Confident response for the taxon throughout its range
- ❑ Confident response for many but not all sub-populations
- ❑ Confident response for only a small subset of sub-populations
- ❑ Low confidence in all estimates?

Is the known number of sub-populations of the taxon
- ❑ ≤2
- ❑ 3-5
- ❑ 6-15
- ❑ >15?

Please provide more accurate estimate if possible: .....

Is the number of mature individuals in the largest known sub-population
- ❑ <200
- ❑ 200-300
- ❑ 300-500
- ❑ 500-1000
- ❑ >1000
- ❑ unknown?

Decline:
Regardless of whether or not the trend is the result of management, is the total population now

- ❑ showing a sustained recovery (>10% per 10 years or 3 generations)
- ❑ stable (+- 10%)
- ❑ in decline (>10% per 10 years or 3 generations)?

If in decline, do existing threats mean the decline in the total population in the next 10 years/3 generations is predicted to be

- ❑ >70%
- ❑ 50-70%
- ❑ 30-50%
- ❑ 10-30%
- ❑ Not applicable?

Is this decline predicted to continue beyond the next 10 years?
Yes / No / Not Applicable

Which qualifiers apply?

- ❑ **Conservation Dependent (CD):** The taxon is likely to move to a higher threat category if current management ceases.
- ❑ **Data Poor (DP):** Confidence in the listing is low due to there being only poor data available for assessment.
- ❑ **Designated (De):** A taxon that does not fit within the criteria provided, and which the Expert Panel has designated to the most appropriate listing without full application of the criteria. For example, a commercial fish stock that is being fished down to Biomass Maximum Sustainable Yield (BMSY) may meet criteria for 'Declining'; however, it could be designated as 'Not Threatened' if the Expert Panel believes that this better describes the taxon's risk of extinction.
- ❑ **Extinct in the Wild (EW):** The taxon is known only in cultivation or captivity.
- ❑ **Extreme Fluctuations (EF):** The taxon experiences extreme unnatural population fluctuations, or natural fluctuations overlaying human-induced declines, that increase the threat of extinction. When ranking taxa with extreme fluctuations, the lowest number of mature individuals should be used for determining population size, as a precautionary measure.
- ❑ **Increasing (Inc):** There is an ongoing or predicted increase of > 10% in the total population, taken over the next 10 years or three generations, whichever is longer. Note that this qualifier is redundant for taxa ranked as 'Recovering'.
- ❑ **Island Endemic (IE):** A taxon whose natural distribution is restricted to one island archipelago (e.g. Auckland Islands) and is not part of the North or South Islands or Stewart Island/Rakiura.
- ❑ **One Location (OL):** Found at one location (geographically or ecologically distinct area) of less than 1000 km2 (100 000 ha), in which a single event (e.g. a predator irruption) could easily affect all individuals of the taxon, e.g. L'Esperance Rock groundsel (*Senecio lautus* var. *esperensis*) and Open Bay

Island leech (*Hirudobdella antipodum*). Taxa with restricted distributions but where it is unlikely that all sub-populations would be threatened by a single event (e.g. because water gaps within an archipelago are larger than known rodent swimming distances) should be qualified as 'Range Restricted' (RR). 'OL' can apply to all 'Threatened' and 'At Risk' taxa, regardless of whether their restricted distribution is natural or human-induced.

- ❑ **Partial Decline (PD):** Taxa undergoing decline over the majority of their range, but with one or more secure populations (such as on offshore islands). Partial decline taxa (e.g. North Island kaka *Nestor meridionalis septentrionalis* and Pacific gecko *Hoplodactylus pacificus*) are declining towards 'Relict' status rather than towards extinction.
- ❑ **Range Restricted (RR):** Taxa confined to specific substrates, habitats or geographic areas of less than 1000 km2 (100 000 ha); this is assessed by taking into account the area of occupied habitat of all sub-populations (and summing the areas of habitat if there is more than one sub-population), e.g. Chatham Island forget-me-not (*Myosotidium hortensia*) and Auckland Island snipe (*Coenocorypha aucklandica aucklandica*). This qualifier can apply to all 'Threatened' and 'At Risk' taxa regardless of whether their restricted distribution is natural or human-induced, but is redundant if a taxon is confined to 'One Location' (OL).
- ❑ **Recruitment Failure (RF):** The taxon's current population may appear stable but the age structure is such that catastrophic declines are likely in the future.
- ❑ **Secure Overseas (SO):** The taxon is secure in other parts of its natural range outside New Zealand.
- ❑ **Sparse (Sp):** Taxa that occur within typically small and widely scattered populations.
- ❑ **Stable (St):** The total population is stable (± 10%), taken over the last 10 years or three generations, whichever is longer.
- ❑ **Threatened Overseas (TO):** The taxon is threatened in those parts of its natural range outside New Zealand.

In the period since 2004, has the species changed:

in total population by .....

in area occupied by .....

in number of existing populations by .....

What is the likely cause of this change (above)?.....

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