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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 91. JUNE 2011 Deadline for next issue: Friday 15 July 2011

President's Message

While we are often dealing with or hearing messages about the ongoing decline of biodiversity, it is great to come across some good news stories. I recently found a Chatham Islands' newsletter (www.chathams.co.nz), where there was a story from last year about how the threat status of four Chatham Island plant species had improved over time. The "star" plant was the Chatham Island sow thistle (*Embergeria grandifolia*). This species had been identified as being under threat over the past fifty years, but the good news was that in the recent threat listings it had been downgraded from Nationally Endangered to At Risk/Recovering. This amazing recovery was due to Department of Conservation staff working alongside landowners to fence off sow thistle sites, collect seed from remnant populations and plant in more secure sites. Chatham Island sow thistle is now thriving and expanding its range. Department of Conservation officers are engaged in this sort of critical work on an ongoing basis around the country. Hopefully, the planned re-structures will not affect the capacity of the organisation to continue to do this critical work.

In the May newsletter, I mentioned that the Network has become a member of the Global Partnership for Plant Conservation (GPPC). In July, an international conference is being organised by GPPC in association with the Secretariat of the Convention on Biological Diversity and Botanic Gardens Conservation International. It is being held in Missouri and is titled: "A global partnership for plant conservation – supporting the worldwide implementation of the Global Strategy for Plant Conservation". The goal of the conference is to bring together plant conservation scientists, policy makers and practitioners from throughout the world to share methods and results that will advance plant conservation. The Network is grateful for funding it has received from the Department of Conservation to send one of our members to the conference, as a New Zealand representative. John Sawyer will be attending on our behalf and will update us on the conference outcomes in the next newsletter.

Philippa Crisp
Greater Wellington

What's up in the Santalales?

Peter de Lange, Department of Conservation (pdelange@doc.govt.nz)

The New Zealand Plant Conservation Network (NZPCN) has, virtually since its inception in 2003, tried to stick to one classification scheme that seems to have an increasing global acceptance, namely that advocated by the Angiosperm Phylogeny Group (APG) (APG I, 1998, APG II, 2003, APG III, 2009). One area of much controversy within the last three APG revisions has been the treatment of the Santalales. The Santalales are a distinct clade of mostly parasitic angiosperms that have been the source of considerable debate by those wishing to base plant classification schemes on modern phylogenetic principles. In New Zealand, we have nine genera representing the order, e.g., *Alepis*, *Exocarpos*, *Ileostylus*, *Korthalsella*, *Mida*, *Muellerina*, *Peraxilla*, *Trilepidea*, and *Tupeia*. The *Alepis*, *Ileostylus*, *Muellerina*, *Peraxilla*, *Trilepidea*and *Tupeia*, all in the Loranthaceae, present no problem,

PLANT OF THE MONTH - *Baumea complanata*

Plant of the month for June is *Baumea complanata*. This is an endemic sedge found only in the North Island, from Te Paki south to the Kaipara harbour. It grows in coastal and lowland sites, usually associated with open damp areas such as lake and river margins, estuaries, gumland scrub, and acidic peat bogs.

Baumea complanata's deep green leaves (4-8mm wide) can grow to around 0.5-0.9m tall. Erect red-brown flower panicles appear in spring and summer. *Machaerina sinclairii* is similar to *Baumea complanata* but has light green, much wider leaves and a more pendulous inflorescence.

Fresh seed is easily germinated, but the plants dislike root disturbance and need to be carefully handled at the seedling stage. Once plants are established it is easy to grow. Large plants can be successfully divided and transplanted, but do not seem to like being shifted between soil types and moisture gradients.

Baumea complanata is has a nationally vulnerable threat classification. Its scarcity is in part due to habitat loss and also to lack of recruitment. Seedlings are scare within its known populations; indications are that this is a light demanding plant which in the wild is succumbing to natural succession. In heavy shade plants will not flower.

The Network fact sheet for *Baumea complanata* can be found at:
http://www.nzpcn.org.nz/flora_details.asp?ID=373

but *Korthalsella*has, having vacillated between the Viscaceae (de Lange 2005) and alongside *Exocarpos* and *Mida*, the Santalaceae (de Lange et al. 2006; de Lange & Rolfe 2010).

Traditionally, New Zealand has had only the two genera of Santalaceae—indigenous *Exocarpos* and (depending on whose view you take) either a monotypic, endemic *Mida* or an indigenous ditypic one shared between New Zealand and Juan Fernandez. *Korthalsella* was placed by Allan (1961) within the Loranthaceae, however, Webb et al. (1990), in their treatment of the Loranthaceae, advised that *Korthalsella* belonged to the Viscaceae, which I followed in 2005 (de Lange 2005). However, the past two published listings sponsored by the NZPCN have placed *Korthalsella* alongside *Exocarpos* and *Mida* in the Santalaceae (de Lange et al. 2006; de Lange & Rolfe 2010). This decision follows that advocated by the APG for Viscaceae. The APG (see APG III 2009) has adopted a very conservative view that it will accept only those clades that are readily recognisable and whose retention, resurrection or, more rarely, formal proposal as new orders or families, will result in a robust classification that will minimise nomenclatural disruption. Because the Santalales and especially Santalaceae presented as a polytomy, both APG II (2003) and APG III (2009) recommended the merger of a number of families, including the Viscaceae into the Santalaceae (which has priority as the older name) to minimise nomenclatural disruption. At the time, APG III (2009) admitted that this decision was hardly satisfactory and that further research into the Santalales was warranted.

Last year, Nickrent et al. (2010) published a new classification of the Santalales in *Taxon*. This was a paper I had inadvertently overlooked whilst helping prepare de Lange & Rolfe (2010) but now, having read it, I think it sensible to adopt their proposed scheme, being, as it is, a firm holistic treatment based on evidence gleaned from multiple DNA marker sequences and morphological data sets, and one that minimises nomenclatural disruption. Their scheme affects New Zealand as follows (New Zealand representatives indicated by bold print):

Santalales

Family: Erythropalaceae Planch. ex Miq.
Family: Strombosiaceae Tiegh.
Family: Coulaceae Tiegh.
Family: Ximeniaceae Horan.
Family: Aptandraceae Miers
Family: Olacaceae R.Br. emend Nickrent et Der
Family: Octknewmaceae Soler
Family: Schoepfiaceae Blume
Family: Misodendraceae J.Agardh
Family: Loranthaceae Rchb.
  Tribe. Nuytsieae Tiegh.
  Tribe. Gaiadendreae Tiegh.
  Tribe. Elytrantheae Engl. - includes ***Alepis, Peraxilla*** and ***Trilepidea***
  Tribe. Psittacantheae Horan.
    Subtribe. Tupeinae - monotypic –*Tupeia*
    Subtribe. Notantherinae Nickrent et Vidal-Russell
    Subtribe. Ligarinae Nickrent et Vidal-Russell
    Subtribe. Psittacanthinae Engl.
  Tribe. Lorantheae Rchb.
    Subtribe. Ileostylinae Nickrent et Vidal-Russell - ditypic - *Ileostylus*, *Muellerina*
    Subtribe. Loranthinae Engl.
    Subtribe. Amyeminae Nickrent et Vidal-Russell
    Subtribe. Scurrulinae Nickrent et Vidal-Russell
    Subtribe. Dendrophthoinae Nickrent et Vidal-Russell
    Subtribe. Emelianthinae Nickrent et Vidal-Russell
    Subtribe. Tapinanthinae Nickrent et Vidal-Russell
Family: Opiliaceae Valeton
Family: Comandraceae Nickrent et Der
Family: Thesiaceae Vest
Family: Cervantesiaceae Nickrent et Der
Family: Nanodeaceae Nickrent et Der - ditypic - Nanodea (one species Southern South America - Patagonia, Terra del Fuego, Falkland Islands) – **ditypic *Mida* (New Zealand, Juan Fernandez Islands)**
Family: Santalaceae R/Br. emend Nickrent et Der –*Exocarpos*
Family: Amphorogynaceae (Stauffer ex Stearn) Nickrent et Der.
Family: Viscaceae Batsch – *Korthalsella*

The Nanodeacae is a new family established for the southern South American and Falkland Islands genus *Nanodea* and the New Zealand/Juan Fernandez genus *Mida*. The family is characterised by the tree and shrub parasitic habit, alternate leaves, bisexual 4-merous flowers subtended by a calyculus, hairs placed opposite the stamens, lobed glandular disc, inferior to half inferior ovary, straight placental column, which in *Mida* extends beyond the ovules as an apical, conical projection running to the base of the style, presence of 2-3 ategmic ovules, and an embryo sac that extends well beyond the ovule or placenta. The fruit is a pseudodrupe crowned by persistent perianth parts. The family is strongly supported on DNA evidence where it sits as the sister clade to the Santalaceae, Amphorogynaceae and Viscaceae.

The treatment of *Mida* by Nickrent et al. (2010), however, caught my eye. While the establishment of the Nanodeaceae makes considerable sense, comments made about *Mida* did not. Nickrent et al. (2010) stated that there is only the one species of *Mida*, *M. salicifolia*, which is disjunct between New Zealand and Juan Fernandez Islands. However, the Juan Fernandez occurrence of *Mida* is usually treated as a species of *Santalum*, *S. fernandezianum* Phil. (see comments by Harbaugh & Baldwin 2007). *Santalum fernandezianum* is an extinct species, having suffered the fate of so many other Pacific *Santalum*, whose aromatic wood (i.e. "sandalwood") commanded huge prices in Asian markets during the 1800s, resulting in their indiscriminate and widespread felling, which, in turn, led to their endangerment and in some cases extinction. Long after it was extinct, *Santalum fernandezianum* was transferred to the New Zealand genus *Mida* as *M. fernandezianum* (Phil.) Sprague et Summerhayes by Sprague & Summerhayes (1927) on account of its short, copular perianth tubes and sessile stigmas that are said to characterise the type species of *Mida*, the New Zealand endemic *M. salicifolia*. However, these authors (p. 198) also noted that "*M. salicifolia* exhibits tendencies to alternate leaf arrangement, lateral inflorescence and polygamy, none of which appears to be present in *M. fernandeziana*, which in these respects approaches *Santalum*". Now from my admittedly limited handling of herbarium material of *Santalum fernandezianum* and examination of images of it, I did not believe that the New Zealand *Mida salicifolia* and Juan Fernandez plant were conspecific. They look so different. I also thought it significant that Nickrent et al. (2010) never stated whether they sequenced both species of *Mida*. I make this point because Harbaugh & Baldwin (2007) had already sequenced the Juan Fernandez plant using the chloroplast DNA marker 3' trnK and they found that the species was closest to *Santalum acuminatum* (A. DC.) R.Br., an Australian species. So I decided to ask Dr Dan Nickrent about the comment in his paper and he admitted (D. Nickrent *in litt.*) that the statement concerning *Mida* was an accidental oversight carried over from an earlier draft of the paper "where [the] two species were included in the [same] genus (*M. salicifolia* and *M. fernandezianum*). I had no intention of indicating that these two taxa were conspecific". Dr Nickrent also kindly told me that, aside from the differences I already knew about, the Juan Fernandez plant also lacks the short calyculus diagnostic of *Mida*. So there we have it, a very minor distraction from an otherwise excellent and comprehensive overview of the Santalales helps answer another question that has bugged me ever since I reviewed John Dawson & Rob Lucas's upcoming book on native trees of New Zealand for Craig Potton Publishing, which is, whether *Mida* was an endemic New Zealand genus or not. The draft of that book I reviewed said that it wasn't, I really thought it was, so the accidental discovery whilst reading *Taxon* is all the more pleasing since it resulted in a final answer. Yes, *Mida* is an endemic New Zealand genus. The Juan Fernandez plant is not a *Mida* it is in fact a species of *Santalum*, *S. fernandezianum*.

Acknowledgements

I'd like to thank Dr Dan Nickrent for his prompt reply to my email about *Mida*, especially that status of *Mida fernandezianum*, and also for allowing me to quote his comments. I thank, too, Jane Connor of Craig Potton Publishing who asked me to review John Dawson's and Rob Lucas's upcoming book on native trees of New Zealand and John Dawson especially for tolerating my crusade to demonstrate that *Mida* is an endemic New Zealand genus. Jeremy Rolfe and Eric Scott, I thank for suffering many versions of this article – all written in haste so that *Trilepidea* had some copy from me when I was away in May.

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New Zealand residents and plants: Results of a survey

*Dr Pamela Kaval (*pam98k@yahoo.com*)*

Native biodiversity is important to the country in numerous ways. However, if people around the country are not interested in it, then it would be hard to gain their support for native biodiversity projects. Therefore, I set out to determine whether people in New Zealand are interested in native plants. To accomplish this goal, and with the help of several colleagues, Richard Yao and I conducted a New Zealand biodiversity enhancement survey. The survey consisted of 8 pages of questions and was mailed to people throughout the country. Many of the survey questions focused on plants: plants inside their homes, plants on their properties, and plants they desire to have in the future. In total, data were collected from 729 New Zealand residents located throughout the country.

A Greater Wellington respondent's plants, with their houseplants in the foreground.

A Lower Hutt respondent's kowhai tree, frequented by tui.

In this article, I will elaborate on the biodiversity survey questions that I believe are of potential interest to NZPCN members. One of the questions asked respondents about the plants inside their homes. An open ended question was used to let them elaborate on the names of the plants; in this way, they would not feel intimidated if they did not know specific plant names, such as genus and species. Overall, 75% of respondents stated that they had plants growing inside their homes. Using the respondents' terminology, I illustrate the most commonly grown indoor plants in the figure

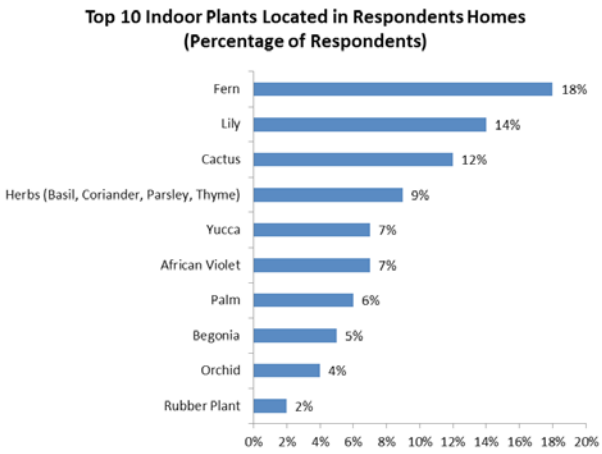
below. Note that only 3 plants, ferns, lilies and cactuses, were found in over 10% of homes, 18%, 14%, and 12%, respectively.

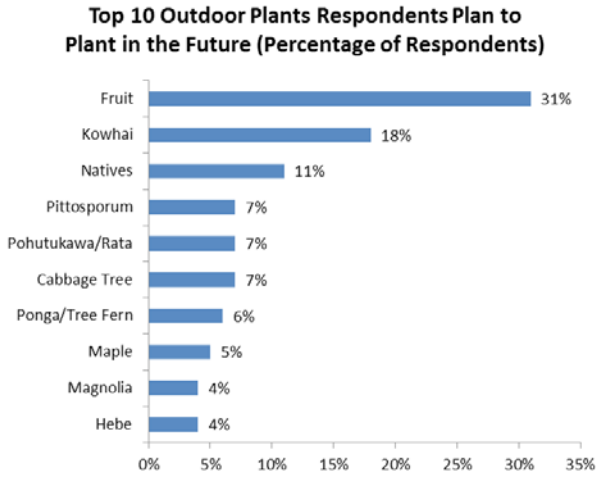
As can be expected, what people have in their yard differs significantly from what people have inside their homes. Though only 75% of respondents had plants inside their homes, approximately 98% had trees or other plants on their properties, of which 86% had a mixture of native and non-native species, 7% solely had introduced species, but only 2.7% had solely native plants. Not only did the survey reveal that people like plants on their own properties, it also revealed that 93% of the respondents believed that it is important for their neighbours to have plants on their properties, with 60% of them preferring their neighbours to have a combination of natives and non-natives.

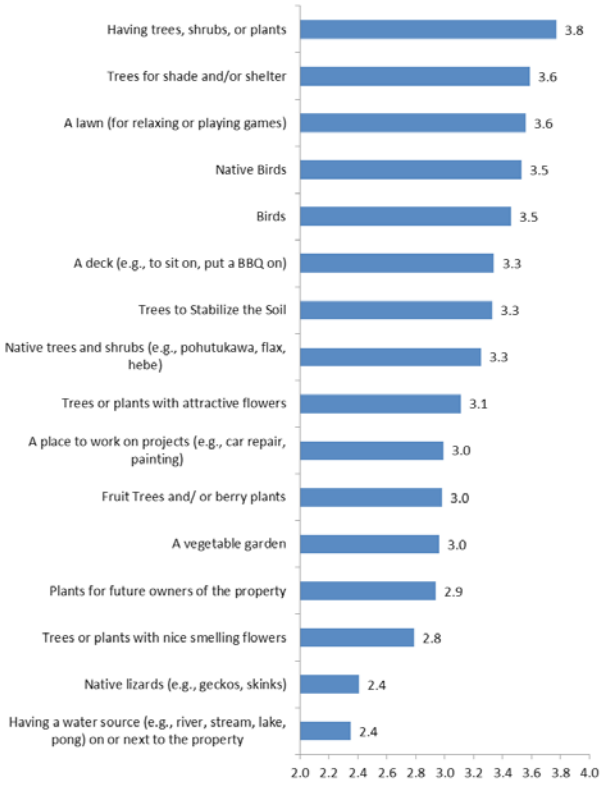
Another native biodiversity related question was whether the respondents intended to plant a tree on their property in the future; 53% of the respondents stated that they did. Those respondents were then asked an open ended question that enabled them to elaborate on the types of trees they plan to plant in the future. The most popular response was fruit trees (31%), with most of these respondents using the term 'fruit trees,' however, a few specified which particular fruit tree, these included lemons, plums, feijoas, apples and oranges. The next two most popular trees people stated they wanted to plant were kowhai (18%) and natives (11%). In terms of biodiversity, it was exciting to learn that slightly over half of the top 10 trees to be planted in the future are natives.

During the course of the survey, many respondents discussed their awareness of using native plants to attract native birds. One respondent from Lower Hutt even sent us a photo of her kowhai tree being visited by many tui.

Respondents were then asked to rate 16 features of an ideal property. These features were developed during a series of focus groups. The most important features were 'having trees, shrubs, or plants,' 'trees for shade and/or shelter,' 'a lawn (for relaxing or playing games),' 'native birds,' and 'birds.' On the other hand, the three







Average rating of the features of trees and plants on an ideal property (1=not important, 2=slightly important, 3=important, and 4=very important)

least important features of an ideal property were 'trees or plants with nice smelling flowers,' 'native lizards (e.g., geckos, skinks)' and 'having a water source (e.g., river, stream, lake, pond) on or next to the property.'

Even though most respondents were not solely interested in native plants, they did elaborate on their love of plants, with 60% being willing to volunteer to help plant trees in their neighbourhoods. Consequently, I recommend that you keep this information in mind if you are organizing a local native plant restoration project, because if people are aware of the project, it appears that several people will be willing to help you out!

This article is only a short summary of the survey results. The full report Kaval et al. (2009) is available at:
http://researchcommons.waikato.ac.nz/bitstream/10289/3656/1/Economics_wp_0905.pdf

Acknowledgements

I thank Terry Parminter, Richard Yao, the Foundation for Research, Science and Technology (FRST), Thomas Wilding, Bruce Burns, Kirsten Forsyth, Michelle Bird, Amber Bill, Tim Porteous, Caren Shrubshall, Frank Scrimgeour, Riccardo Scarpa, 20 focus group participants, and 709 anonymous respondents for their help with this project.

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New Website for plant enthusiasts in Southland

Brian and Chris Rance, Invercargill (rances@ihug.co.nz)

Southland Community Nursery (www.southlandcommunitynursery.org.nz) is known as the nursery that doesn't sell plants. It has been run by Chris and Brian Rance for over 15 years, and recently the website had a "makeover".

Basic resources written by Chris and Brian were turned into a well ordered website by botanist and illustrator Janet Hodgetts. Janet was a new resident to Southland and came to the nursery as a volunteer. Chris quickly appreciated Janet's expertise and Chris and Janet worked with web designer Robin Sallis (www.cerulean.co.nz) to create a website that they are very proud of. The information presented is basic plant information aimed at the beginner and to celebrate Southland's native plants but there are numerous links to the NZPCN website for those who wish to learn more.

"We were conscious of the questions people had been asking at the nursery over the 15 years and were also keen to have a website with plant information specific to the Southland Region," say Chris and Brian.

The Southland Community Nursery offers free advice, nursery facilities and native seedlings to the Southland public. The nursery facilities are on the property of Chris and Brian Rance and have been built up from a bare paddock to now include shadehouses, plant standing areas and an education room. All labour involved in running the nursery, including their own, is voluntary.

All native seed is locally sourced and, for a few hours of work, volunteers, landowners, farmers and conservation groups can take away native plants for free. Training days are held for propagating native plants and school children visit regularly. The nursery has also become a major networking place for a wide range of people - volunteers, landowners, farmers, youth training groups, schools, guide groups, gardeners, new residents, overseas travellers – all interested in the environment. The

pot-luck morning teas people bring along made of local produce are legendary and contribute to the friendly atmosphere that the nursery provides for all ages!

Also on the Rances' property is a native forest remnant protected by a QEII Covenant, wetland restoration areas, native shelterbelts and a threatened plant garden – all open to the public. These are intended to provide practical examples and be an inspiration to others.

Environmental funding covers the annual costs of potting mix, pots and some minor nursery materials; the land and infrastructure of the nursery, sheds and land are donated to the project by Chris and Brian Rance. One-off grants, through Forest and Bird, have been used for a shadehouse and an irrigation system including a water tank. The nursery website was funded by DOC's Biodiversity Advice Fund.

A few of the results achieved by the nursery

- The production of over 8000 eco-sourced native plants planted into the Southland environment each year.
- Influencing people across the Southland Region to take an interest in their own environment and do something practical to protect it. Influencing overseas volunteers, giving them a good impression of the region and providing tourists with an ecotourism activity.
- Providing a friendly and hospitable environment for people to meet, share ideas, enjoy company while learning about native plants and growing plants in general.
- As the volunteers and visitors learn skills they are able to pass on their skills to new people and their communities to improve our environment.
- Many schoolchildren (over 2000 have visited) are influenced, including visits to the nursery by the home school association and student teacher groups.
- New residents are welcomed – in a partnership with Southland Multi Nations society all new New Zealand citizens are given a Southland native plant at their citizenship ceremony.
- A number of similar community nurseries have been set up throughout Southland.

Learn about all of these aspects at www.southlandcommunitynursery.org.nz

The field trip

By Gabrielle Milne

On an ordinary Thursday my classroom went to the nursery in Otatara for some gardening tips because we are working on the gardens at our school, Otatara Primary school. When we got there Chris talked to us for a while and then said we were going on a bushwalk and I've been on this bush walk thousands of times but I actually learnt a few things. I learnt that there is such thing as a sticky seed and that they are on kohuhu plants, also that cabbage trees are really easy to shake because I shook one and all this water came down on my principal, Mrs Livingstone. Whoops! On the bushwalk Chris gave us these bags to put the seeds we saw in there into it so when we get back to the shed we can plant them. After we walked for a bit we all came to a pond with the oldest but friendliest duck I had ever seen in my life his name is DJ, he is a different kind of duck to the others. When we got back to the shed Chris got this tray with dirt in it, she said that we should tip out our seeds, squish them, and put them in the dirt, so we did that and then she put a little tag that said "Otatara School". We are going back in October or September and I am really excited because that was fun. I can't wait to go back.

New weed identification key online

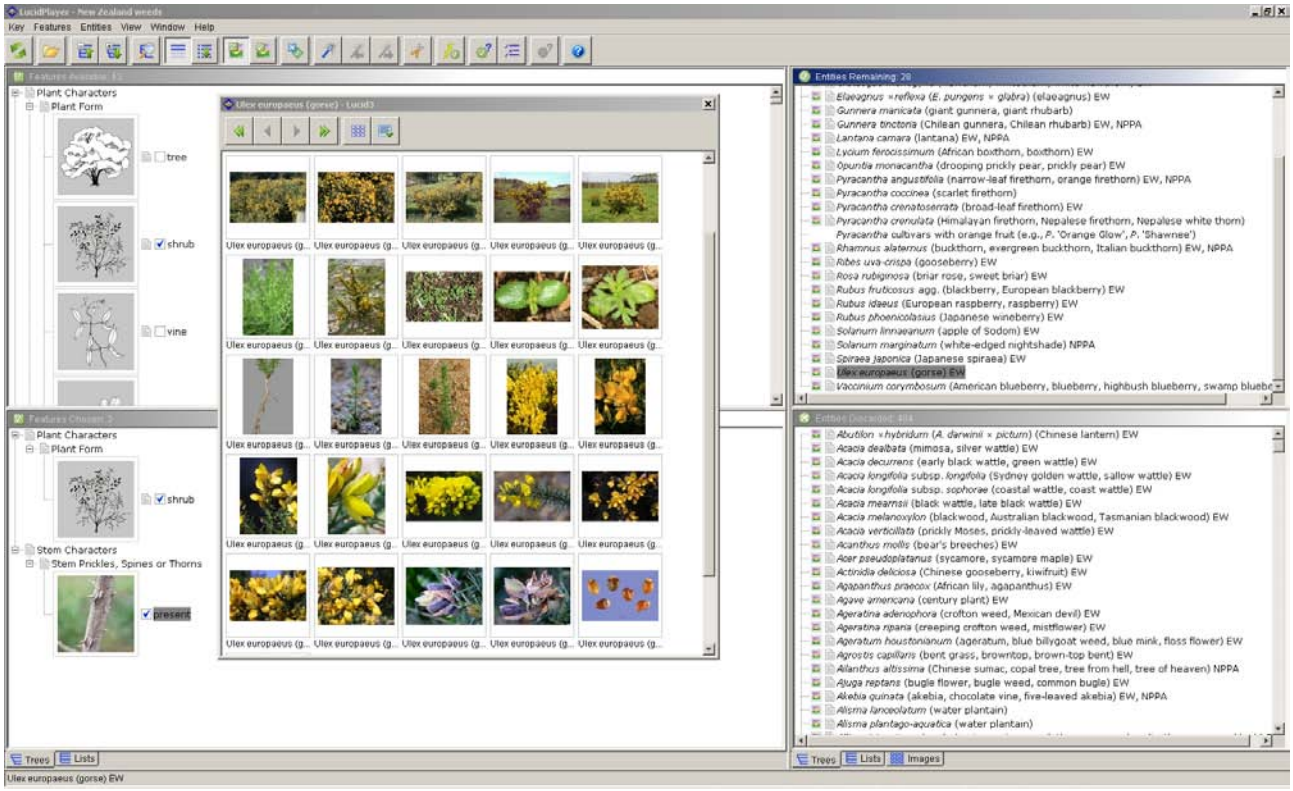
Murray Dawson and Julia Wilson-Davey, Landcare Research(dawsonm@landcareresearch.co.nz)

A new interactive key has been developed that will be a big help for people who need to identify weeds in New Zealand. The computer-based online key draws on the National Pest Plant Accord (NPPA) Key, which was completed in July 2009 (Dawson and Ford, 2007), and the Department of Conservation's consolidated list of environmental weeds in New Zealand (Howell, 2008).

The new key covers more than 500 plant taxa (species, subspecies, varieties, hybrids and cultivars), including about 150 NPPA plants, over 300 environmental weeds and many similar species and close relatives. The key is available for use, free of charge, on the Landcare Research website: (www.landcareresearch.co.nz/research/biosystematics/plants/weedskey/index.asp or use the shortcut http://tinyurl.com/weedkey)

Ulex europaeus (gorse). This iconic weed is the image used on the home page of the new key. Image: Trevor James.

As with the original NPPA Key, which it replaces, the New Zealand Weeds Key was very much a team effort. Murray Dawson, the lead developer, and Peter Heenan (both of Landcare Research) collaborated with Paul Champion (NIWA), who provided expertise on aquatic species, and Trevor James (AgResearch). Sheldon Navie (University of Queensland) provided data from similar keys he has developed in Australia. All five authors provided images for the key with the majority provided by Trevor James. Further illustrations were contributed by the Department of Conservation, Weedbusters, regional authorities, and other New Zealand and overseas contributors. The key is well illustrated with about 9000 images showing a range of features for each plant, e.g., plant form, leaf, floral, fruit and seed characteristics. Only 11 taxa currently lack images and these will be added when they become available.



Screen shot of the new weeds key. Image: Murray Dawson.

The plant names follow the Landcare Research Ngā Tipu o Aotearoa – New Zealand Plants databases (http://nzflora.landcareresearch.co.nz). There are several cases where the taxonomic names used in the new key are more recent than those listed in the NPPA Manual (2008) and the Department of Conservation list of environmental weeds (Howell, 2008). These recent names are recorded within the key with synonyms (older names) in brackets and in comparison tables linking from the home page. The names in the Weeds Key are linked to related websites such as the New Zealand Plants databases, MAF Biosecurity New Zealand (www.biosecurity.govt.nz), and Weedbusters New Zealand (www.weedbusters.co.nz), all of which provide further information on the plants.

A new feature also allows the user to retrieve lists of NPPA species and environmental weeds, and the suffixes 'NPPA' and 'EW', respectively, have been added to the names of these plants within the key.

The new interactive key to the weed species of New Zealand is a unique and extensive resource. It is a powerful tool that makes it easy to identify weedy plants without having to learn all of the complex botanical terminology. The key will work on a Mac and a PC, but you must have Java installed first (http://www.java.com/en/download/installed.jsp).

This new identification key is freely available thanks to funding from the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme. The TFBIS Programme is funded by the Government to help to achieve the goals of the New Zealand Biodiversity Strategy, and is administered by the Department of Conservation.

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A Plan for the development of a Kauri Studies Programme at Three Streams Reserve

In 1969, John Hogan began a series of kauri plantings in what is now the Three Streams Reserve in Albany. The plantings offer a number of research opportunities, including, but not limited to, (a) the conversion of a forest of exotic trees into kauri forest, (b) tracking kauri growth and survival in a semi-urban environment and (c) involvement of local education institutions in kauri studies.

Vision: A university-based research programme to conduct research and education in kauri studies at Three Streams Reserve. To achieve this vision, the following goals follow:

Goal 1: To set up a Kauri Studies Programme based at Three Streams Reserve.

Goal 2: To optimise management practices for remnant and planted kauris within urban areas, for amenity and long term sustainability.

Funding the Kauri Studies Programme: Over the long term, it is probable that the programme will be funded by a variety of private and government grants. In the short term, The Kauri Studies Trust is being established and initially funded by John Hogan, kauri champion and guardian of Three

Streams. For more information about the Kauri Studies Programme contact: Ian Barton, Tāne's Tree Trust, Chairman, Kauri Studies Group at Three Streams, ph: 09-239-2049, email: ibtrees@wc.net.nz

Working together for conservation in the Middle East and North Africa

On June 2 Plantlife (www.plantlife.org.uk), IUCN and WWF launched a conservation report following a project involving 11 countries in North Africa and the Middle East including Libya, Tunisia, Syria, Lebanon and Israel. Conservation has brought together experts across this region in an unprecedented bid to secure the region's wildlife. The project has been coordinated by Plantlife's International Programme Manager Elizabeth Radford who, with few resources and a lot of determination, brought people round the table together for the first time to discuss which areas are critical ones to conserve across the region.

The report lists, for the first time, over 200 wild plant hotspots across the region including 33 in Syria, 20 in Lebanon, 20 in Egypt, 21 in Algeria, 13 in Tunisia, 5 in Libya and 4 in the Occupied Palestinian Territories. One plant hotspot close to Benghazi, Libya, for example, has 1400 different species of wild plants (around the same number as in the whole of the UK) and is Libya's most important region for growing cereals, fruit and vegetables.

Elizabeth Radford (liz.radford@plantlife.org.uk) has recently returned from Beirut, and can give more details about how the project was set up and how she has managed to coordinate people from all the countries involved. She may also be able to put you in touch with contributing experts from the region if this is of interest. For more information contact Sue Nottingham (sue.nottingham@plantlife.org.uk).

Network subscriptions now due

Subscriptions are now due for Private Individual, Unwaged and Student memberships for 2011. All members who joined before July 2010 have already received a reminder; those who joined in July 2010 will get their reminder soon and each month will then follow in due course.

In order to renew your membership on-line using our credit card facility, follow the link below:

- Membership renewal page

Login as requested by the pop-up and you will be taken to the renewal page. You can then renew your membership for one or two years.
If you have forgotten your password use the "Forgotten your Password?" link on the right hand side of the home page to be automatically sent your username and password.

Paying by cheque or by internet banking is still possible and a subscription renewal notice may be downloaded from the website:

- http://www.nzpcn.org.nz/publications/Subscription-NZPCN.pdf

This has the necessary details for payment by cheque or by internet banking. If you use internet banking, please make sure that your name appears on our statement and preferably send an email to info@nzpcn.org.nz informing us that you have made such a payment.

New book to be published on New Zealand native plants

New Zealand native plants is the topic of a forthcoming book due to be published in August by Canterbury University Press. '*Native by Design – landscape design with New Zealand plants*' is edited by Ian Spellerberg and Michele Frey, with photography by John Maillard.

The book is lavishly illustrated with superb photographs and contains lots of ideas for using native plants in landscape and garden design. Ian Spellerberg is particularly thrilled about the book because for him it is the third he has edited in a trilogy of titles portraying the beauty and love of native plants. 'The 20 contributors provide inspiration with their amazing designs' says Ian. Co-editor, Michele Frey, adds 'This has been such an exciting adventure, meeting some fantastic and very talented landscape architects and landscape designers. Each one has shared with us some of their talent for effectively using native plants in design'.

Contributors include Xanthe White, who is exhibiting at the 2011 Chelsea flower show, Danny Kamo and Andy Ellis, successful designers at the 2009 and 2010 Ellerslie Flower Shows, and John Marsh, who has used native plants in what is the largest industrial setting for native plantings in New Zealand.

Outgoing Governor General the Rt Hon Sir Anand Satyanand, GNZM, QSO has written an enthusiastic foreword remarking "the designs show New Zealand vegetation at its best and in a variety of settings, from commercial and industrial frontages to public and private parks and urban and rural gardens". The editors, photographer and all contributors have given their time freely to bring the book to fruition. Several sponsors have generously contributed to the project, enabling all royalties to go to New Zealand native plant conservation projects.

The date for the book launch will be announced soon and more details will appear on the New Zealand Plant Conservation Network website.

Network website updated with new features

At the end of May, the Network website was updated with a new series of resource links. The resource links allow website users to ask a question about the species, record a phenological observation for that species or view existing observations. Visit the website (www.nzpcn.org.nz) to see the new features.

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):

XVIII International Botanical Congress

This year, the Congress is being held in Melbourne 23-30 July, which presents probably the cheapest option for New Zealanders to ever be able to attend this international event. Registrations are now open

More information: http://www.ibc2011.com/news/Issue3-1.htm

Conservation Biology Conference 2011

Change of venue and dates: as a result of the 22 February earthquake that damaged much of Christchurch, including the Convention Centre, the ICCB conference 2011 has had to be shifted to Auckland with a consequential change of dates. The conference will now be held 5-9 December 2011 at the Sky City Auckland Convention Centre. Please visit our website for the most current information on the meeting (www.conbio.org/2011). We will be updating it regularly over the next few weeks to bring you the latest information on the venue, accommodations, conference trips, social events, and more.

The Global Partnership for Plant Conservation conference

Conference: Tuesday 5 July – Thursday 7 July. The conference theme is Supporting the worldwide implementation of the Global Strategy for Plant Conservation. **Venue:** Missouri Botanical Garden, St Louis, Missouri, U.S.A

More information: http://www.mobot.org/gppc2011/ or email: gppc2011@mobot.org

26th John Child Bryophyte and Lichen Workshop

Workshop: Thursday 1 December– Tuesday 6 December, 2011. **Venue:** Matawai; 70km north of Gisborne on State Highway 2. Open to all who are interested in bryophytes and/or lichens. Various levels of accommodation available. A second circular will be sent out in August to those who have expressed interest and confirmation of attendance and a deposit will be called for in that circular.

Contact: Anne Redpath, email: wairataforestfarm@farmside.co.nz or Leon Perrie, email: leonp@tepapa.govt.nz

Auckland Botanical Society

Meeting: Wednesday 6 July at 7.30 p.m. a talk by Anne Gaskett titled 'Plant –animal interactions'. Venue: Unitec School of Health Sciences, Gate 4, Building 115. Room 2005.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz

Field trip: Saturday 16 July to Gill's Reserve, Albany. **Leader:** Leslie Haines.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz

Kaipatiki Project

Community Planting Day: Saturday 2 July at Domain Road, Glenfield, North Shore, Auckland. Start: 9.30 a.m. Come and plant new native trees with Kaipatiki Project, the environment centre of the North Shore. Free BBQ for all planters, bring a spade if you have one.	**More info:** www.kaipatiki.org.nz
Meeting: Wednesday 13 July, 10.30 a.m. – 12.00 noon at Kaipatiki Project Environment Centre, 17 Lauderdale Road, Birkdale, Auckland. **Theme:** Healthy Child, Healthy Planet, eco-parenting session and playgroup in one, topic: Mini-Tree planting with preschoolers. Start an urban forest with Tabitha Becroft at this action-focused session.	Free but booking essential, ph: 09 482 1172 or email admin@kaipatiki.org.nz **More info:** www.kaipatiki.org.nz

Auckland Council Northern Regional Parks

Public planting days: Sunday 3 July at Tawharanui Park; Sunday 17 July at Mahurangi Park. **Start time:** 10.00 a.m. Come and take part in the on-going ecological restoration of bush, wetland and sand dune areas in the parks. In exchange for your help, we will provide a barbeque lunch and hot drinks, hundreds of grateful trees and our thanks. We guarantee that you will leave us muddied but satisfied with a job well done! **Please bring with you:** good enclosed shoes or boots; a pair of gloves, if you have some; a spade, if you have one, cold drinks; your family and friends; your boundless energy.	**Contact:** Naomi Harrison, email: naomi.harrison@aucklandcouncil.govt.nz

Rotorua Botanical Society

Meeting: Monday 27 June at 6.00 p.m. the AGM and Slide Show. **Venue:** DOC East Coast BOP Conservancy Office, 99 Sala St, Rotorua, enter by the Scion (Forest Research) north entrance and turn left before the locked gates. Wine, juice, cheese and nibbles will be provided. Following the AGM, members will show images of recent expeditions so bring photos of recent expeditions on memory stick or CD (10 images or 10 minutes please).	
Field trip: Sunday 10 July to Waiotapu geothermal area and wetlands (including Echo Lake). **Meet:** The carpark, Rotorua, at 8.30a.m. or the Visitor Centre, Waiotapu Thermal Wonderland, at 9.00a.m. **Grade:** moderate.	**Leader:** Martin Pearce, ph: 07 349 1929,email: mpearce21@xtra.co.nz

Waikato Botanic Society

Meeting: 11th July monthly meeting from 5.30 – 7 p.m. and talk by Catherine Bryan and Fiona Clarkson who will discuss their findings from their recent Masters research on the conservation and restoration of New Zealand's vascular epiphytes. **Venue:** Environment Centre, Level One, 25 Ward St, Hamilton.	**Contacts:** Cynthia Roberts, email: croberts@doc.govt.nz 07 8581034 (day) 07 849 4935 (evening).

Wanganui Museum Botanical Group

Meeting: Tuesday 5 July at 7.30 p.m.a talk by Ian Bell titled 'Plant pollination: the usual and a few of the unusual adaptations for specialist pollinators'. **Venue:** Museum's Davis lecture theatre.	**Contacts:** Robyn and Colin Ogle, ph: 06 347 8547, email: robcol.ogle@xtra.co.nz

Wellington Botanical Society

Field trip: Saturday 2 July to Johnston Hill Reserve, Karori. **Meet:** 9.15 a.m. at the corner of Karori Rd and Standen St.	**Co-leaders:** Barbara Mitcalfe, ph: 475 7149; Chris Horne, ph: 475 7025. In case of inclement weather the trip may be postponed to Sunday 3 July. Please check with trip leaders.
Field trip: Saturday 16 July to Te Marua Bush for a working bee. **Meet:** at Te Marua Bush at 9.30 a.m. (250 m north of Te Marua Store and then left, off SH2 for 50 m, along the road to Te Marua Lakes)	**Co-leaders:** Glennis Sheppard, ph: 526 7450, Sue Millar, ph: 526 7440.
Meeting: Monday 18 July at 7.30 p.m. a talk by Dr Allison Knight titled 'Lichens illustrated'. **Venue:** lecture theatre MYLT101, 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: Sunday 17 July to Beukes' QEII Covenant, Neudorf Road, Upper Moutere. **Meet:** Selwyn Place between the Church steps and the gum tree at 9 a.m.	**Contact:** Cathy Jones ph. 03 546 9499
Meeting: Monday 18 July 7.30 p.m. talk by Chris Ecroyd on Dactylanthus. **Venue:** Jaycee Rooms, Founders Park.	

Canterbury Botanical Society

Meeting: Friday 1 July at 7.30 p.m. a talk by Nick Ledgard titled 'Native plant successions and introduced conifer management. **Venue:** room A5, Canterbury University.	**Contacts:** Miles and Gillian Giller, ph. 03 313 5315.
Field trip: Saturday 9 July to the Botanic Gardens Fern house. **Meet:** at 10.00 a.m. at the Information Centre.	**Contacts:** Miles and Gillian Giller, ph. 03 313 5315.

Botanical Society of Otago

Field trip: Sunday 17 July to Ross Creek-Woodhaugh Garden Track Network. **Start:** 10:00 a.m. at the George Street entrance to Woodhaugh Gardens.	Contact: John Barkla, ph: 03 476 3686.