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 72. NOVEMBER 2009 Deadline for next issue: Monday 14 December 2009

The President's report for 2008–09

Delivered to the Annual General Meeting, Auckland, 12 November 2009

Introduction

It gives me great pleasure to present the President's report for the last year. After four years, I have decided not to stand again for President and therefore this is my last President's report.

The New Zealand Plant Conservation Network is the largest NGO in New Zealand with a focus on native plants. The Network makes substantial contributions to plant conservation and, indeed, I believe the quality and scale of those contributions is greatly underestimated by both the public sector and the private sector. The Network needs continuing support from both outside and from its membership. It is imperative therefore that we all support the Network Strategy 2010–2015 and work hard to achieve those goals.

Though there is much to report on a positive note, I feel that I must draw everyone's attention to the fact that the conservation status of our vascular flora is worsening and that there are continuing threats to native plants and native plant communities throughout New Zealand on both public and private land. The publication by Peter de Lange *et al*. in the New Zealand *Journal of Botany* sadly confirmed that over one-third (38%) of native flora is now included as threatened or uncommon.

Over the last 12 months, I have heard about or read about many cases of the destruction of native plant communities on private land. One example was the destruction of some remnant kanuka stands in the Selwyn District. It is not just vascular plants that are under threat. Another new threat would appear to be the taking of kelp for commercial purposes. I have yet to see a case for harvesting kelp that is based on principles of sustainability. The New Zealand Conservation Estate has long been the envy of the World and yet it would seem that our protected areas are no longer safe from exploitation. I think that it is shocking that there are discussions currently taking place about the possible extraction of minerals from National Parks and other protected areas.

What does not help is the continued under funding of the Department of Conservation. Nature conservation is no luxury. It is a fundamental basis for sustainability and quality of life. We have a moral obligation to conserve and restore our natural heritage, particularly our native plants and native plant communities.

I continue to be saddened by the reluctance of local governments to accept requests to use native plants and thereby miss the opportunity to help to reverse the historical loss of native plants and native plant communities. There is still much work to be done to educate, engage and inspire New Zealanders to restore, appreciate and protect our native plant species. In my opinion, never before has there been such a need for plant restoration and conservation, now and in the next five years.

1. Council meetings

A Council meeting was held in Wellington on October 23. One other meeting was held in Wellington on March 12, 2009, and a third was held today, November 12. The next meeting is planned for March 2010.

2. Council membership

The officers of Council for the last year were as follows:

Ian Spellerberg (President)	Shannel Courtney
Philippa Crisp (Vice-president)	Rewi Elliot
John Sawyer (Secretary)	Rebecca Stanley
Mike Oates (Treasurer)	Mike Thorsen
Sarah Beadel	

Our Membership Secretary and Administrator was Eric Scott.

Our two Patrons were Peri Drysdale (Untouched World) and Rob Fenwick (The Living Earth Co.).

3. Finances

Our finances are in a very good condition. Many factors have contributed to this state including the number of contracts awarded to the Network. Mike Oates has provided sterling work in ensuring that the finances are correctly reported. Sponsorship is helping to offset the ongoing expenses of running the Network. However, there is still need for concern about the longer term costs of running the Network.

4. Sponsors

It is my considerable pleasure to report that our two main sponsors (Treescape New Zealand and Phytomed Medicinal Herbs Ltd.) have both made very generous contributions to the running of the Network. On behalf of the Network, I would like to express my gratitude to these two companies for their generous support.

In addition, I am very pleased to say that the royalties from the book '*Living with Natives: New Zealanders talk about their love of native plants* have been donated to the Network and will continue to be donated.

Also, it has been agreed that the royalties from the forthcoming book "*Threatened Plants of New Zealand*" to be published by Canterbury University Press will also come to the Network. We thank MWH also for their sponsorship of this book; without that assistance, it would have been impossible to publish it.

5. Network Membership (as of 1 November 2009)

I am most grateful to Eric Scott for his continuing and enthusiastic administrative help. We continue to receive applications for membership on the basis of about two every week. We have gained more corporate members. Overall, membership has increased.

Individual	290
Student/Unwaged	105
NGO	16
Corporate	30
Honorary	4
Total	445

Personally, I feel that the number of members is too low and certainly does not reflect the considerable and widespread use of the Network's web site. The membership fee has been kept very low for many years and that should not be a barrier for people applying for membership. On one hand the Network is obliged to provide information in the public domain, on the other hand we need a much larger membership basis to help maintain the ongoing work of the Network.

6. Highlights from the past year

6.1 Conference

The 2008 Conference: *Celebrating our Native Plant Life was* held at Te Papa 8–10 August, 2008. That event was sponsored by Wellington and Hutt City Councils and the Department of Conservation. It was also supported by Enviroschools and Te Papa Tongarewa. The Conference organising team was made up of Peter Heenan and David Norton in Christchurch and Mike Oates, Philippa Crisp, Karyn Burgess, Jennifer Todd, Emma Best and John Sawyer in Wellington. They all very worked hard to make the event a very fitting one for the five year celebrations.

The Proceedings of the 2008 Conference are on the website and they have also been published and widely distributed in book form.

6.2. Website management, development and use

The Network website is currently being redeveloped to future proof the system against hackers and to provide a new structure and lots of new features. The new website is now being tested for launch in mid November 2009. The site continues to receive high numbers of visitors (more than half a million each year). There are now more than 13,000 plant images on the site although more are welcome. We are about to add a search engine and fact sheet area devoted to plant communities so images for dunes, estuaries, salt pans, tussock grasslands and forests are all welcome. We will also be adding an on-line forum for people to use to ask questions and debate plant conservation issues. I encourage you to regularly visit the site, provide feedback on what we can do to improve it and send us image or news items for us to publish.

6.3. Launch of the Tane Ngahere lecture

It was with great pleasure for us all to learn that Brian Molloy had kindly agreed to present the inaugural Tane Ngahere Lecture. This presentation was delivered at the Network Conference in Wellington on Friday 8 August, 2008. The presentation was outstanding and provided a deep insight into an equally outstanding life time contribution to plant conservation. Not surprisingly, there was a standing ovation at the end of his address. I am pleased to say that Brian Molloy is a lifetime member of the Network.

6.4 The threatened plant book

The forthcoming book "*Threatened Plants of New Zealand*" will be a stunning production thanks to a huge effort by Canterbury University Press, the authors and many photographers around the country. Thanks also to MWH who sponsored this project. The book will be available for pre-publication sales at a discount for New Zealand Plant Conservation Network members. Watch out in *Trilepidea* for news of how to purchase your copies. The book will be important for raising awareness of the plight of our native flora.

6.5. The NZPCN Strategy 2010–2015 and progress towards meeting the 16 targets of the Global Plant strategy

Following the workshops held at the 2008 Conference, Council agreed to prepare a draft NZPCN Strategy. Thanks to Bec Stanley, this draft has been completed and subsequently has been made available for comment. This is our most important working document because it provides us with specific goals over the next five years.

6.6. The Network awards

The six awards will be made later today.

6.7. Marae based training courses

The Network has developed a series of plant training modules for delivery during 2-day courses. The first module "*Introduction to plant life in New Zealand*" has been published and is available for sale from the Network ($35 to Network members). The second and third modules are being formatted for publication (*Covenant management* and *Nursery management and plant propagation*). The Network will be announcing courses that will be run in various parts of the country in 2010.

6.8 The 2010 conference

Next year's conference – "**Plants in a human landscape – conservation outside nature reserves**" – will be held in Christchurch from Friday 8 to Sunday 10 October 2010. This will be an important event for anyone involved in plant conservation so please put it in your diary and start planning to attend. More details will come in due course. A Conference team has been established and a draft programme has been prepared.

7. The David Given Threatened Plant Scholarship

The rules for the David Given Threatened Plant Scholarship were finalised in 2008 and the scholarship was launched at the Conference Dinner on Saturday 9 August, 2008. The purpose of this scholarship is to fund research into the biosystematics and conservation management, protection and recovery of New Zealand's threatened plant and fungi species and their communities.

There was considerable interest in the Scholarship and the quality of the entries was very high. I am very pleased to note that the first recipients were Peter Heenan and Rob Smissen from Landcare Research, Lincoln. Their research is on the conservation genetics and taxonomy of *Convolvulus* "glabrous" on the Awahokomo limestone outcrop, North Otago.

I would like to invite more financial contributions to the David Given Threatened Plant Scholarship so that we will be able to fund more research.

8. Publicity and promotion of the Network

The website provides the most effective way of promoting the Network.

However, Council felt that more efforts were needed to promote the Network. An A3 poster has been designed, printed and laminated. These are now being distributed to universities, regional government, CRIs and environmental consultancies.

The Network has been promoted in the media and several members of Council continue to give interviews about topical plant conservation issues.

9. The vote for New Zealand's most favourite native plant

There was no vote in 2008 because the website had to be improved following malicious hacking. However, the 2009 vote will be launched shortly.

The vote for the most favourite native plant has been greeted by some members as something so trivial that it is not worth bothering with. Others have said to me that it's impossible to have a favourite without defining the purpose of the native plants. Overall, there has been tremendous support for the vote from both NZPCN members and from schools. It has been welcomed enthusiastically as a valuable teaching tool.

10. The Newsletter

The production of the monthly newsletter has been reduced to a fine art with the help of Eric Scott. There was an issue every month! The process is quite complicated and requires rapid input from several people in quick succession. I am most grateful to everyone who has contributed—and I am delighted at the increased number of contributions to the newsletter. We have introduced a new section 'notes and queries' and we are expecting all members of Council to take it in turns to write something for the newsletter. It has also been suggested that recipients of permits from the Department of Conservation be expected to write something for the newsletter. I have received many comments congratulating the Network on the value of the newsletter. I would like to thank Jeremy Rolfe for his work during the year putting the newsletter together in such a stylish and professional way and for designing and producing the Network's other publications such as plant training modules.

11. Acknowledgements.

In presenting this report, it is my pleasure to thank my colleagues on the New Zealand Plant Conservation Network Council. In particular, I would like to thank both the Secretary (John Sawyer) and the Treasurer (Mike Oates) for their generous and tireless commitment to the work of the Network. I would also like to thank the rest of the Council, that is, Rewi Elliott, Mike Thorsen, Bec Stanley, Sarah Beadel, Shannel Courtney and Philippa Crisp for their work on the national council.

In addition, I would like to thank the 2008 Conference Organising Committee especially Karyn Burgess who organised the excellent Enviroschools Native Plant Forum, which has been running concurrently with this year's conference. They have worked very hard over the last year or so and in doing so have committed much of their personal time.

Finally, I would like to thank our two Patrons, Peri Drysdale and Rob Fenwick for their continued support for the Network and the Network's mission.

Ian Spellerberg, November 2009
Lincoln University

PLANT OF THE MONTH – *Coprosma repens*

Coprosma repens. Photo: Jeremy Rolfe.

Plant of the month for November is *Coprosma repens*. *Coprosma repens* (taupata) is an endemic woody shrub found along beaches and in coastal forests in the North and South Islands as far south as Greymouth in the west and Rarangi in the east, and on the Three Kings Islands. Its characteristic wind-sculptured form can be seen spread out low across the coastline, or crouched down on the lee side of a rocky outcrop.

The generic name *Coprosma* is an amalgam of two words: *kopros*, meaning dung and *osme*, meaning smell. The genus was so-named because of an unpleasant odour arising from the leaves of some species (such as *C. foetidissima*) when crushed. Taupata's specific name, *repens,* refers to creeping, so poor old taupata ended up with a name that translates as "creeping dung smell".

Taupata has thick oval-shaped leaves with an almost plastic feel to them. They are shiny green on the upper surface and matt cream/green on the underside. At the beach, the leaves are often partly rolled up to decrease their surface area, which helps avoid moisture loss from the wind.

Taupata can grow in a variety of conditions, but does best in a sunny spot, without frosts, in a loose, sandy soil. In the garden, or where conditions are a little less harsh than the coast, the leaves grow broader and flatter, and taupata can reach up to 8 m tall. It can be easily grown and pruned to a hedge 1–2 m tall.

Taupata is wind pollinated and plants are usually boys or girls (dioecious), rather than having flowers of both sexes on the same plant. Clusters of attractive bright orange berries appear on female plants in the warmer months. Taupata is not threatened. The Network fact sheet can be found at: www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=1776.

(A new NZPCN website is currently being built and is due to go live soon. The link to the fact sheet will change to www.nzpcn.org.nz/flora_details.asp?ID=1730.)

New Council members

At the AGM two new members of Council were elected, Danielle Hancock and Susan Wiser. A brief introduction to Danielle is given here, a profile of Susan will feature next issue.

Danielle Hancock

Danielle is a Parks Officer at Waitakere City Council, coordinating ecology and policy initiatives. Danielle has been with Council for two and a half years and in that time has written the Waitakere Threatened Species Management Policy, the Agrichemical Reduction Policy, the Water Safety Policy and the environment chapters of the Parks and Open Space Strategic Plan. In addition to policy work, Danielle also manages the Green Network Conservation Covenant Programme, which includes the new Heritage Covenants under the Waitakere Ranges Heritage Area Act 2008.

Danielle graduated from the University of Auckland in 1996 with a BSc majoring in Botany and worked as a Biosecurity Officer for MAF Quarantine, appearing on Border Patrol in its first season. Since then, Danielle has worked for the Auckland Regional Council in Environmental Officer roles, fulfilling a dream of being able to influence local government to better manage the environment and influence developments towards low impact design. Danielle is passionate about New Zealand's ecology and looks forward to contributing to the NZPCN.

Growing protection of native plants bears fruit – the Network awards

Rescuing a lowland swamp forest, protecting native plants on private land, and raising awareness of the endangered kakabeak are all initiatives recognised in awards announced by the New Zealand Plant Conservation Network (NZPCN) this week. Those honoured have been described as New Zealand's "leading guardians" of the country's native plants. They include a Nelson school, plant nursery and community group, a North Island city council and a legendary Department of Conservation plant conservation ranger.

Newly elected NZPCN President Philippa Crisp said the awards highlighted a growing awareness and enthusiasm of the issues facing indigenous flora. "They recognise the remarkable efforts of a range of people and organisations, and the growing depth of feeling for New Zealand's indigenous flora," she said. "These individuals and groups are the leading guardians of our country's native plants."

Department of Conservation Ranger Graeme Atkins, based in Ruatoria, received the Network's Individual Award for his efforts caring for indigenous plants on the East Coast. "Graeme has a remarkable history of successful conservation projects, including setting up one of the largest plant protection areas in New Zealand and developing the Atkins detection method for *Dactylanthus taylorii* (wood rose)," said Ms Crisp. "He's also worked tirelessly with schools to save kakabeak—one of the country's most threatened species—from extinction."

Developing a new threatened species policy designed to protect endangered plants on private land won Waitakere City Council the Network's Council Award. The council also engaged contractors and volunteers to survey for threatened plants and was the first in New Zealand to develop an eco-sourcing policy for restoration plantings.

In the South Island, the NCPCN's Community Award went to the Friends of Mapua, who are restoring a Moutere lowland and lowland swamp forest adjoining Aranui Park. The work has involved planting, protecting and weeding the area focusing on the district's rare and threatened species and collaborating with Mapua School in an environment education programme for older pupils.

Nelson's Titoki Nursery, a specialist wholesale native plant nursery, won the Nursery Award for growing plants in bulk quantities for conservation, revegetation, wetlands, farm planting, land development and shelter. Nursery staff have been significant supporters of conservation for many, many years.

The School Award also went to the South Island; Richmond's Salisbury School provides special education to female students with intellectual impairments and, since 2004, students have been working on planting and caring for a native bush area. "The students funded the project by growing vegetables and shrubs to sell," said Philippa Crisp. "They've learnt a great deal from the project and now have an emotional connection with the area. It's yet another example of the wonderful work being done in native plant protection all over the country, and the New Zealand Plant Conservation Network congratulates all award winners."

Threatened species in Southland protected by 3,000th QEII covenant

Loralee Hyde, Queen Elizabeth II National Trust (Lhyde@openspace.org.nz)

The Queen Elizabeth II National Trust was set up in 1977 to protect significant natural and cultural features on private land, usually by way of an open space covenant. It took 19 years to register the first 1,000 covenants. Eight years later, in 2004, the 2,000th was registered. It took only a further four years to reach 3,000. As per the New Zealand Threat Classification System (de Lange *et al.*, 2009), 36 Threatened plant species and 47 At Risk species are recorded in QEII covenants.

Tupeia antarctica in kowhai-ribbonwood tree on land protected by a QEII covenant in Southland. Photo: Gay Munro.

In October 2008, along the meandering Otapiri Stream near Winton, two hectares of riparian kowhai-ribbonwood tree land were protected by John and Rhonda Cowie with the 3,000th open space covenant. Highly representative of the forest that once covered floodplains in Southland, Threatened and At Risk species protected include *Olearia hectorii* (Nationally Endangered), *O. fragrantissima* (Declining), *Coprosma wallii* (Declining), *Pseudopanax ferox* (Nationally Uncommon) and the mistletoe *Tupeia antarctica* (Declining).

A Department of Conservation planting programme is re-establishing the threatened species in the covenant. In addition, the Southland District Council has protected an adjoining area with a 3.8ha Landscape Protection Agreement (used where the land does not have title). The Cowies have also protected a podocarp-broadleaf forest remnant on a prominent limestone scarp with a 9 ha covenant.

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.

Will New Zealand's traditional plant icons win the annual poll?

The Network's annual poll to find New Zealand's favourite native plant has opened for 2009 so please get on-line and start voting.

The vote continues to raise questions about our choice of national emblems. Now in its seventh year, the poll has identified familiar species such as pohutukawa and the cabbage tree as New Zealand's most loved plants, but has also revealed the popularity of lesser known species such as the 2007 poll winner, willowherb (*Epilobium microphyllum*) and, in 2005, Cook's scurvy grass (*Lepidium oleraceum*). Silver fern and kowhai – two of New Zealand's iconic species – have never made it to the top spot and silver fern has never made the Top 10.

"Perhaps it is time our traditional emblems were retired in favour of some of the more popular species," says new NZPCN President Philippa Crisp. "This poll really highlights the importance of such unique plant life in our lives and to our national identity."

Voting in this year's poll opened on Monday 16 November via the Network's website (www.nzpcn.org.nz) and will continue until Sunday December 20.

Recent polls have identified Poor Knights lily, kowhai, cabbage tree, Bartlett's rata, parapara (the bird catching tree) and the scarlet mistletoe as firm favourites. In 2006, the poll was topped by the Chatham Island Christmas tree.

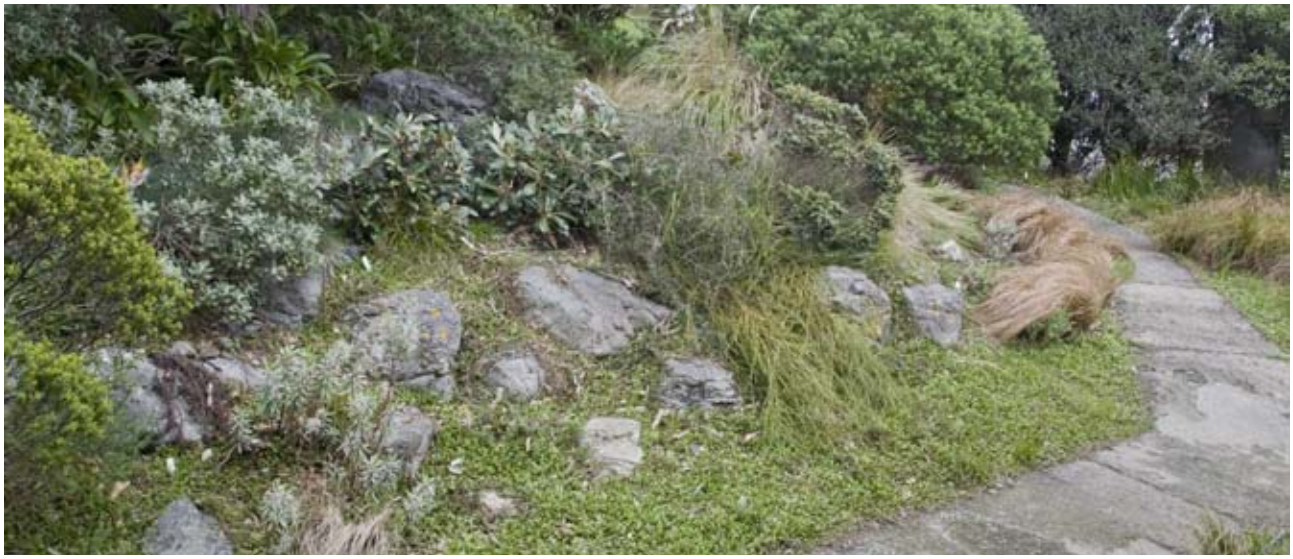
New Zealand alpines – safe havens; the Dench and Percy Scenic Reserve collections

Jill Broome, Percy Scenic Reserve (Jill.Broome@downerediworks.co.nz)

The Percy Scenic Reserve has had a long association with Arnold and the late Ruth Dench. Arnold and Ruth have donated plants and plant material to Percy S.R. over many years; the first record is in 1996 of *Leptinella serrulata* from the Mackenzie Basin. Others, such as *Scleranthus uniflorus, Ranunculus crithmifolius, Hebe anomala,* and *Hebe rupestris* soon followed.

Part of the Druce alpine collection held at Percy S.R. has been duplicated and one of the 'insurance' properties is the Dench Garden in the hilly Wellington suburb of Newlands. The Dench garden has been converted from a windswept bare paddock into a sanctuary for New Zealand natives including areas for alpines, coastal plants, orchids, ferns, shade and damp-loving plants and rare shrubs and trees from all areas of the New Zealand floral regions.

The front section is windswept, sunny and open and slopes down to the house and is a great place for coastal plants. (The drainage was improved by the addition of rocks and gravel). The sides of the house are utilised for cushion plants in raised beds; sub-Antarctic plants and fussy *Ourisia* spp. are thriving on the shady windy side.



Part of the front section of the Dench Garden. Photo: Jeremy Rolfe.

The rock garden, built down the side of a slope below the house, is home to many alpines and threatened species. There is a small stream running through the lowest part of the property; this is home to a number of damp and shade-loving plants. Finally, the far side of the gully is home to larger trees and shrubs, many threatened or uncommon native plants.

Very often it can be quite balmy at Percy S.R. (located at the base of the Korokoro Hills in the Hutt Valley) and extremely windy and cool at the Newlands property, making it an ideal site for growing alpine plants. Between the two locations (Newlands and Percy S.R.) Arnold and I have managed to keep a number of 'fussy' alpine plants alive and thriving.

The *Myosotis* genus is well represented; although not all the species are cultivated; many of the rarer plants are:

M. australis var. *lytteltonensis*
M. colensoi
M. eximia
M. explanata
M. laeta
M. matthewsii
M. petiolata var. *pansa*
M. petiolata var. *pottsiana*
M. pygmaea var. *minutiflora*
M. spathulata

There are several others, as yet unnamed, that are cultivated and awaiting a taxonomist to revise the genus:

M. "Mossburn"
M. "Otuhie"
M. "Serpentina"
M. "Tiropahi"

We also have an incomplete collection of the *Ourisia* genus:

O. caespitosa
O. "Hope"
O. macrophylla subsp. *lactea*
O. modesta

And, not forgetting the *Ranunculus* collection:

R. crithmifolius × *nivicola*
R. enysii
R. godleyanus
R. gracilipes
R. insignis
R. lyallii
R. nivicola
R. piliferus
R. recens
R. recens var. 'Volcanic Plateau'
R. verticillatus

Myosotis matthewsii (top) and *Ranunculus enysii*.
Photos: Jeremy Rolfe.

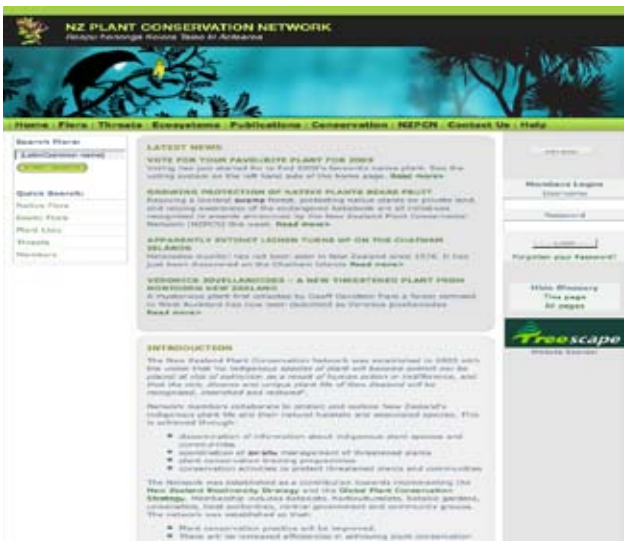
These species mentioned above all suffer from mildews, especially in pot culture, and are difficult to maintain in cultivation. Trying to replicate the conditions that these herbaceous plants have in their natural environment can be extremely difficult, sometimes impossible. But, given similar conditions: sun, shade, soil medium, nutrient values, sheltered, exposed, microclimates and extremely good observation skills, it is amazing what can be achieved.

Other difficult plants successfully cultivated at the two sites are cushion plants such as *Leucogenes leontipodium, Luzula crenulata, Celmisia argentia, C. philocremna, C. macmahonii* ssp. *macmahonii, C. sessiflora, Colobanthus* spp., *Argyrotegium* spp., *Raoulia* spp, *Hectorella and Chionohebe* spp.

For both these sites (Dench and Percy S.R.), we need to thank Helen and the late Tony Druce of Pinehaven for supplying the 'bones' of the collection and entrusting the plants to the staff at Percy S.R. to nurture and duplicate for posterity.

New Network website imminent

The Network website attracts over 500,000 visits a year, providing evidence or New Zealanders' continuing interest in native plant species. The new Network website will go live around about the time this newsletter is published. This new site includes a flora search engine that allows searching of all plant groups, a built in glossary for botanical terms, a discussion forum, links to videos, a restoration portal, information about New Zealand ecosystems as well as all the old content (including 14,000 images, more than 6,500 species pages and 1500 plant checklists).



The Network website team has expanded considerably over the past few months as we work to launch the new website. A diverse group of people has been writing text and providing images for inclusion on the new site that will go live during late November.

The Network would like to thank the following for their work on the site: Bev Clarkson (bogs), Geoff Rogers (cliff ecosystems), Paul Champion (aquatic plants), Wendy Nelson (seaweeds), Ian St George (orchids), Amir Sultan (pygmy mistletoes), Nick Singers (forest ecosystems), Pat Brownsey (ferns), Ian Spellerberg (garden plants), Kate McAlpine (ecosystem services), Rachel Standish (novel ecosystems), Amber McEwan (pest fish), Clayson Howell (weeds), Bec Stanley (climate change and habitat destruction), Eric Scott (insects), Chris Bycroft (geothermal ecosystems), Mike Bayly (hebes), Dave Galloway (lichens), David Glenny (liverworts), Nic Head (glossary).

When you first visit this new site, we would be keen to hear feedback about what is working and what needs improving. The website is the primary interface for people seeking accurate information about plant life in New Zealand so we want to make sure it is up-to-date and working properly. We also want to her from you if you can contribute more information or images. E-mail your feedback to info@nzpcn.org.nz.

Ecosourcing: the Waikato Experience

Wayne Bennett, Ecosourced Waikato (wayne@forestflora.co.nz)

By New Zealand standards, Hamilton City is a biodiversity desert. Early European settlers found the surrounding land ideal dairying pasture and now it is rapidly being transformed into residential development. Hamilton is built on a fertile plain of volcanic ash and alluvium with shallow overlaying peat in depressions. The Waikato River and tributaries cut through this soft material creating deep gullies that form a network of natural landforms amongst the concrete and tar sealed jungle.

In 2000, the University of Waikato and Hamilton City Council hosted a workshop on the future of Hamilton City gullies. These gullies have been a headache for developers and planners and have been valued mostly as a place for old cars, fridges and garden waste. They, however, hold the last vestiges of indigenous biodiversity in the city; home to kingfisher, morepork, fantail grey warbler and the occasional tūī and shining cuckoo. Many of the remaining native plants are isolated individuals or small fragmented populations. The workshop resulted in a number of new initiatives, including an ecosourcing steering group. This group comprised representatives of Department of Conservation, Hamilton City Council, Environment Waikato, Waikato District Council, University Of Waikato, the nursery industry and restoration groups.

We had noticed regional differences in plant morphology; some of us had been influenced by people like Eric Godley and Philip Simpson and were aware of the work done by Chris Ferkins and the Waitakere City Council. Ecosourced Waikato was established to ensure gully restoration in Hamilton preserved the distinctive local character. I was appointed as coordinator for Ecosourced Waikato in 2003. We developed guidelines for ecosourcing, tried to establish a seed bank and worked to encourage ecosourcing amongst local nurseries. Funding was most forthcoming where the activity was seen to be of a practical nature and I found myself advocating for ecosourcing through practical workshops. We did, however, develop ecosourcing guidelines, confined to one A4 page. We defined ecosourcing as "*The propagation of native plants for restoration from a representative sample of the local wild population*". I think at that time we saw ecosourcing as protecting the genetic distinctiveness of the plants of our area but were less focussed on maintaining what diversity remained in the local populations.

Ecosourcing as a practice has not been universally popular. Regional differences are frequently physiological, leading to varying frost tolerance, flowering time or flavour and even where there are morphological differences these are not always noticed by lay people. It seems a lot easier to collect seed from a tree planted in ideal conditions in the nursery than go out to remote places on the off chance that seed is available.

I think that we are still uncomfortable with the idea that the little trees that we plant will one day grow up to become sexually active. Too often we are of a landscape design rather than an ecological restoration perspective, seeing plants grow to maturity, but not reproduce, disperse and compete for space, water and nutrients. We have been slow to realise that by planting trees in a natural area we are introducing them into a wild population, and so wonder why it really matters what the plants look like.

More recently, we have been confronted with the mix or match debate. Whether, when reintroducing a species to the gullies we should match the local type or mix with a wide range of genes from various sources to maximise diversity and so enhance survival. To mix, risks swamping the remaining local population with genes from elsewhere, leading to a net loss of genetic biodiversity. To match, risks propagating an already inbred population with the threat of further inbreeding depression and consequential lack of fitness and adaptability in the population.

Nursery production for amenity purposes has not traditionally taken into account restoration genetic considerations. For amenity purposes, with no expectation of regeneration, it has been perfectly acceptable to propagate seedlings or even clones from one parent tree. For ecological restoration purposes, where we are restoring a breeding population, we propagate from a representative sample of the local wild population. This means that we collect seed from enough individuals, over sufficient distance to ensure we have captured sufficient natural diversity of that species to avoid inbreeding and to minimise loss of locally endemic genes. In Hamilton, that means exploring the riverbanks, streams, gullies and forest fragments to find the last remnants of the forest and wetland plants of our district. In the Hamilton basin, I know of five small populations of swamp maire, totalling around 50 trees. In order to do the best job we can, seed is collected from four of those five sites by various nurseries. Hundreds of trees are propagated each year and, in time, it is hoped that natural dispersal patterns will be restored across the district.

Ecosourcing is not always done well. Sometimes, when collecting seed, it is difficult to distinguish between a naturally occurring population and plants naturalised from planted sources. Species common in horticulture are particularly difficult. In the Waikato, these are species like *Dodonaea viscosa, Pittosporum tenuifolium, P. eugenioides, P. crassifolium, Sophora microphylla, Hoheria populnea* and *Phormium cookianum.*

A recent study by the University of Waikato showed poor understanding of restoration genetics in many restoration nurseries. Seed is often collected from a single parent plant and sometimes from restoration sites rather than natural areas, reducing the opportunity to adequately sample the local natural population. A good understanding of ecosourcing is required not only by the propagators of plants but also by the procurers. I frequently see requests for ecosourced plants from a district where those species don't naturally grow. This encourages a lack of respect for ecosourcing and penalises those nurseries with high ecosourcing standards. There have also been cases where seed is required to be ecosourced from within a council park in which all the plants have been planted from elsewhere. Ecosourcing can also be compromised by allowing insufficient time to collect seeds. Purchasers of plants must be wary of poor ecosourcing and consistently vigilant.

Ecosourced Waikato has been considering carefully the difficulty of assuring a high standard of ecosourcing. We are faced with two options:

1. Audit each line of ecosourced plants and independently trace them from seed collection in the field to planting.
2. Develop a system which involves education, assessment and audit for each player in the ecosourcing process so that each contributor understands what is important and why, whilst allowing flexibility to develop efficient systems.

Ecosourced Waikato is wary of an intensive audit process because of the cost and because it implies a guarantee that is impractical. Instead, we have prepared a draft assurance process in three parts:

1. **Education:** It is important that ecosourcing practitioners have some idea of why ecosourcing is important because inevitably they will have to make relative judgements; judgements about the number of plants to collect seed from or about the probability a plant is part of a natural population. Practitioners will always have to consider the distinction between pragmatism and expediency. Ecosourcing will also be facilitated by the provision of information that supports practitioners. In the Waikato, we regularly run ecosourcing workshops that are a practical guide to ecosourcing and we disseminate information about current seed availability by e-mail.
2. **Assessment**: Waitakere City, as part of its ecosourcing accreditation, requires the completion of a questionnaire that asks participants about their understanding of ecosourcing and the way they implement it. This is an important step in the process.
3. **Audit:** A visit to the nursery to see how well systems are actually implemented. It is expected that nurseries will have accessible, accurate secure and durable records and labelling and that they will have anticipated and circumvented potential problems.

Our ecosourcing assurance recognises that ecosourcing also depends on a good understanding by plant procurers and restoration managers. There may well be a role for NZPCN in ongoing support and guidance for those involved in planning restoration projects and procuring ecosourced plants.

Answers to the questions, "How local is local?" and "How representative is our sampling?" will continue to be refined over time as further research is done. This process is intended to encourage effective sampling during seed collection and good record keeping during propagation so that informed decisions can be made when plants are planted.

Apparently extinct lichen turns up on the Chatham Islands

A common woodland lichen of eastern Australia that has been recorded only twice from New Zealand, in 1934 and 1976, and then only from the far north of the North Island has turned up on the Chatham Islands. The lichen, *Heterodea muelleri*, is a leafy species that, in Australia, grows in moderately open woodland habitat. In New Zealand, until it was recognised from the Chatham Islands, it had only ever been recorded from dune slacks somewhere on the Ninety Mile Beach and from damp sandstone ridges in light scrub near Puheke, Karikari Peninsula.

The Chatham gatherings came from the north-western end of Ocean Bay, Chatham Island, and from the top of Hakepa Hill (Walkemup), Pitt Island. At Ocean Bay, the lichen grew on sandy peat and clay above schist on the margin of salt and wind blasted vegetation. In this habitat, it was associated with the lichens *Cladia aggregata* and *C. retipora*, and sedge *Lepidosperma australe*. On Hakepa Hill, specimens were gathered from amongst the dense drifts of *Cladonia* lichens that grow between the low, windswept fernland that covers most of that trachyte peak's summit.

New Zealand's foremost lichenologist, Dr David Galloway, is delighted with the finds, which were identified from gatherings made by New Zealand botanists, Dr Peter J. de Lange and Dr Peter B. Heenan, as part of their study of the vegetation of the Chatham Islands. Previously, Dr Galloway had undertaken three "fruitless" searches of the far north of New Zealand, the last undertaken with one of the world's *Cladonia* lichen authorities, Dr Sam Hammer of Boston University, U.S.A. Both men were keen to see if the species still survived in New Zealand. However, they found that much of the likely habitat on the Karikari Peninsula had been converted to farmland, holiday homes and a golf course, whereas that available on Ninety Mile beach had been planted in pines.

The presence of *Heterodea* on the Chathams adds to a small group of plants (*Atriplex australasica*, *Kurzia dendroides* and *Leucopogon parviflorus*) now known to be shared between the islands and Australia.

COMING EVENTS

If you have important events or news that you would like publicised via this newsletter please e-mail the Network (events@nzpcn.org.nz):

Auckland Botanical Society

Picnic: Saturday 5 December the End-of-year pot-luck picnic is at Tawharanui Regional Park, *Danhatchia* hunt, picnic lunch, then seaweeds at Phoenix Reef.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).
Summer camp: 9–15 January– Bannockburn Camp, Central Otago.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).
Anniversary weekend camp: 30 January–1 February at Turangi Camp.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).

Waikato Botanical Society

Field trip: Saturday 5 December to Waiorongomai-Pahiko (combined with Rotorua Botanical Society). **Grade**: Hard, some of the track is quite steep and we will be out all day. **Meet:** 8:30 a.m. at Waiorongomai Road End.	**Contact:** Kerry Jones ph: 07 858 1055 (w) and 07 855 9700 (h), mobile 027 747 0733; e-mail: kmjones@doc.govt.nz.

Rotorua Botanical Society

Field trip: Saturday 5 December combined with Waikato Botanical Society, see above.

Wellington Botanical Society

Field trip: Saturday 5 to Sunday 6 December to Western Wairarapa. **Accommodation**: nine beds ($5 pp), tent sites, 1 km past Ruamahanga Bridge. **Meals:** pot-luck dinner, your choice for breakfast and lunches. **Meet:** 9.00 a.m., Dorset Square Native Reserve, cnr SH2 and Moore St, Featherston.	**Leaders:** Saturday,Tony Silbery; Wellington contact: Sunita Singh ph: 9955, mobile: 2987.
Field trip: Saturday 12 December, the 7th Hutt City flowering rata walk – a 3–4 km walk, or shorter if you wish. Meet: at 9.15 a.m. at Hutt City i-SITE Visitor Centre, The Pavilion, 25 Laings Rd, Lower Hutt. Car parking nearby. **Transport:** catch: no. 91 Airport Flyer, Courtenay Place 8.31 a.m., Molesworth St, 8.43, to Queensgate; or no.83 Courtenay Place bus Eastbourne 8.45 a.m. to Queensgate; or no. 91 Airport Flyer Upper Hutt 8.30 a.m. to Queensgate. Short walk via Bunny Street to i-SITE.	**Leader:** Dave Holey, ph: 566 3124, **deputy leader**: Margaret Aitken, ph: 566 2731.

Nelson Botanical Society

Field trip: Sunday December 6 to the Wairoa Valley Rare Plant Protection (weedbusting).	**Leader:** Shannel Courtney, ph: 03 546 9922.
Field camp: Friday December 18 – Sunday December 20, Canaan Camp.	**Leader:** Shannel Courtney, ph: 03 546 9922.
Field camp: Friday January 29 to Monday February 1, Nelson Anniversary Camp, Reefton.	**Leader:** Cathy Jones, ph: 03 546 9499.

Canterbury Botanical Society

Meeting: Friday December 4 a talk by Joe Cartman titled 'Alpine plants of the Dolomites'.	**Venue:** Room A5 University of Canterbury.
Field trip: Saturday December 12 to Mt Cheeseman Ski Field.	**Contact:** Gillian Giller, ph: 03 313 5315, for further information.
Summer Camp 2010: 15–22 January at the Glen Mary Ski Club, Lake Ohau.	**Contact:** Gillian Giller, ph: 03 313 5315, for bookings or further information.

University of Canterbury

Summer Course: Biology 305 Practical Taxonomy for Field Biologists. A technique-based course with examples from the montane and alpine flora of the Cass region but focus is on general principles, so that most acquired skills are transferable to other regions and other groups of organisms.	**Information:** UC website, www.canterbury.ac.nz/courses/ or course coordinator or the School of Biological Sciences office, ph: 03 364 2500, e-mail: biology@canterbury.ac.nz. **Course co-ordinator:** Dr Julie Barcelona.

Botanical Society of Otago

End of year dinner: Wednesday 9 December, beginning at 7.00 p.m. Venue: Golden Harvest Restaurant, 218 George Street, Dunedin. RSVP to David Orlovich by Wednesday 2 December.	**Contact:** David Orlovich, ph: 03 479 9060.
Field trip: Friday and Saturday 15–16 January, an alpine plant and lichen trip to the Remarkables Ski Field area. Accommodation nearby.	**Contact:** David Lyttle, ph: 03 454 5470 for full details.

The Island Invasives Conference

Vennue: Auckland, in February 2010. Registrations are now open. See: www.cbb.org.nz/conferences.asp to read the updated information and proceed to the payments page. If you are considering presentation of a paper, the deadline for abstracts is 31 August. Details about abstracts and papers are on the web page and files attached to it. Please pass this information on to as many people as possible.	**Conference Manager:** Dick Veitch e-mail: dveitch@kiwilink.co.nz.

4th National Wetland Restoration Symposium

Venue: Rotorua on March 3–5, 2010. The theme is: "Wetland Management and Restoration (Freshwater and Estuarine)". Online registration: www.wetlandtrust.org.nz; earlybird registrations opened 1 June 2009.	**Contact:** National Wetlands Symposium 2010, The Organiser, ph: 07 343 1732, e-mail: theorganiser@RotoruaNZ.com.