



# TRILEPIDEA

NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK

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

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

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## President's message

The New Zealand Plant Conservation Network will be 10 years old in April! It is hard to believe that the Network will have been in place for a decade, but so much has been achieved in that time. Around 2,000 people read this newsletter and our website use is huge. The 7,300 plant species pages, 23,000 plant images, 1.4 million plant distribution records and other website information/features provide a very valuable plant conservation resource that did not exist before the Network began. We will be celebrating this birthday with a conference, so book that May date in your diaries (see later in this newsletter). Also in this edition, are details of another major celebration (75 years this time!)—Auckland Botanical Society's Diamond Jubilee Celebrations will feature a programme of lectures and a celebration dinner in late October (see Events for more information).

This month, we have an article about a fantastic find on Banks Peninsula. *Pittosperm obcordatum* has been rediscovered after 170 years—well done Melissa. Two new features have been added to the website; an illustrated glossary and species pages of all of New Zealand's marine algae, so check them out. We are calling for nominations for the NZPCN Plant Conservation Awards. I'm sure that you know of a person, group, council, school or nursery that you could nominate for the great work they are doing for plant conservation. Finally, look out for our AGM invitation in the next newsletter.

*Philippa Crisp, Greater Wellington*

## PLANT OF THE MONTH – *LITSEA CALICARIS*



*Litsea calicaris* and (inset) inflorescence.  
Photos: Jeremy Rolfe.

Plant of the month for September is *Litsea calicaris* (mangeao, tangeao). *Litsea calicaris* is a stout spreading tree that can grow to around 18 m tall. It is endemic to coastal lowland and lower montane forest on the Three Kings and North Islands. It is common to about Mokau in the west and the Rotorua lakes area and Mahia Peninsula in the east.

The leaves are a glossy dark green to yellow-green, sometimes mottled with dark red or purple on the upper surface and are glaucous on the lower surface. The bark is dark grey to grey-brown and is firm, not flaking. Flowers appear in pale green, cream (often red-tinged) inflorescences during spring months.

*Litsea calicaris* is not threatened at a national level, but is experiencing a decline over some parts of its range. Possum browse is a factor in some areas, but an unusual die back of apparently healthy trees where possums are scarce is of concern. The Network fact sheet for *Litsea calicaris* may be found at: [www.nzpcn.org.nz/flora\\_details.asp?ID=940](http://www.nzpcn.org.nz/flora_details.asp?ID=940)

## Illustrated glossary now online

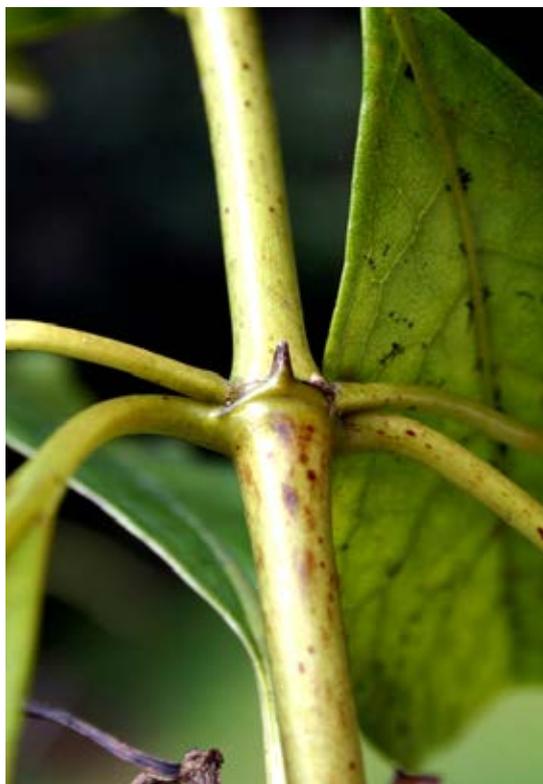
Over 300 technical and botanical terms have now been illustrated on the Network's online glossary. Thanks go to Network members Tony Foster and Sue Wickison who provided the fabulous photographs and drawings to illustrate each glossary term.

Follow the Glossary link (found under the Help tab on the right hand end of the home page website menu).

For examples of the glossary terms see the stipule on *Coprosma grandifolia* (right) taken by Tony Foster and the illustration of a lobed leaf by Sue Wickison (below).



Lobed leaf. Illustration: Sue Wickison.



Stipule on *Coprosma grandifolia*.  
Photo: Tony Foster.

See: [Glossary](#)

If you can help illustrate more of the glossary terms please send in your images to the Network ([info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)).

## NZPCN conference dates set for 2013

The Network's next conference will be held in Parnell, Auckland from Thursday 23 till Sunday 26 May 2013. As with the Network's previous six conferences, this will be a great opportunity for those involved in plant conservation (research, cultivation, survey and monitoring and education) to come together to share their knowledge and experiences and to network with others.

Six symposia have been selected (see **flyer overleaf**) that focus attention on several priority plant conservation themes including threatened species recovery and defining and understanding New Zealand's plant life through systematics and research on plant autecology, biogeography, seed banks and plant diseases. Several field trips will be offered including a trip to Rotoroa Island and the Kaipara Harbour.

Please contact the Network if you can help with organising the conference, if you would like to sponsor the conference (or part of it) or if you have suggestions of people we should invite to speak at any of the symposia. Please also email us ([info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)) if you want to be placed on the conference mailing list (**Note:** members need not do this because they will automatically receive information about the conference). A call for papers, posters and displays will be made in due course and more details will be posted on the Network website ([www.nzpcn.org.nz](http://www.nzpcn.org.nz)) and in the Network newsletter over the coming months. We look forward to seeing you at the conference in 2013.

## **Are we there yet?**

### **10 years of the Plant Conservation Network**

**NZPCN Conference to be held in Parnell, Auckland**

**Thurs 23 – Sunday 26 May 2013**

In conjunction with Auckland Botanical Society, Landcare Research Manaaki Whenua and Massey University

#### ***Symposia***

- 1. Back from the brink – threatened plant recovery on islands, on private land, in sanctuaries and in the city**  
Recovery, monitoring and adaptive management of threatened plant populations by government, communities and landowners
- 2. Defining, understanding and banking our biota**  
Understanding our biota through systematics, biogeography and research on seed banks, plant diseases and autecology
- 3. Naturalising natives – friend or foe?**  
The biogeography and impact of native weeds such as karaka, pohutukawa, mangrove and pohuehue amongst others
- 4. Beyond the converted – plant conservation advocacy**  
Promotion of the indigenous flora—engaging with business, farmers, communities, gardeners and the public to use and protect native plants
- 5. The urban native plant oasis – the importance of trees and urban habitats**  
The importance of parks, road corridors, natural fragments, trees and the urban forest and novel, human induced ecosystems in the urban matrix
- 6. What price conservation?**  
Offsets, natural capital, nature's services and the economic importance of native plants

Papers highlighting and providing case studies for these symposia will be acceptable. There will also be general sessions for papers that do not readily fit into these symposia.

#### ***Field trips***

***Mataia Farm and Atuanui Scenic Reserve (Kaipara Harbour)***—a private 3000 acre property (including bush remnants, salt marshes and retired restoration areas). Atuanui Reserve contains 615 hectares of mature native forest reserve and is the largest area of native forest between the Waipoua Forest and the Waitakere Ranges.

***Rotoroa Island***—an 80 hectare island being revegetated by the Rotoroa Island Trust, which has established a public arts and conservation estate. The island has undergone a transformation with 20,000 pine trees felled and almost 400,000 plants sourced from local seed, propagated and planted on the island. A state-of-the-art exhibition centre and museum now showcase the island's fascinating history and heritage buildings such as the jail, chapel and schoolhouse, have been restored.

***The final conference programme is yet to be finalized  
because other field trips and events are still being planned.***

## Back from the dead: the rediscovery of *Pittosporum obcordatum* on Banks Peninsula after 170 years of local extinction

Melissa Hutchison, Wildland Consultants, Christchurch ([melissa.hutchison@wildlands.co.nz](mailto:melissa.hutchison@wildlands.co.nz))

In February 2012, *Pittosporum obcordatum* (heart-leaved kohuhu) was rediscovered on private land on Banks Peninsula by Wildlands ecologist Melissa Hutchison during an ecological survey for Christchurch City Council (Figure 1). This rediscovery is of national importance because Banks Peninsula is the type locality for the species, but it had not been seen on the Peninsula for over 170 years and was presumed to be locally extinct (Wilson 1992). The species was first discovered in the Akaroa area by Etienne Raoul and named in 1844, but was never found again on Banks Peninsula, despite intensive searching by a number of experienced botanists. Other populations of *P. obcordatum* have been discovered at scattered locations in the North Island (Northland, East Coast, Hawke's Bay, Taihape, Wairarapa) and the southern South Island (Manapouri and The Catlins). However, the Banks Peninsula population remained elusive.

*Pittosporum obcordatum* is an endemic shrub or small tree that grows to about 5 m tall. It is cryptic and easily confused with several other small-leaved shrub species (Figure 2). Its typical habitat is alluvial forest or shrubland below 500 m a.s.l., particularly sites that are periodically flooded or waterlogged, frost-prone in winter and drought-prone in summer (Clarkson & Clarkson, 1994). The species has a threat ranking of "Nationally Vulnerable" (de Lange et al., 2009), because existing populations are small and isolated, and most have little or no recruitment. Threats include habitat destruction and modification, browsing animals, and competition with introduced weeds (Dopson et al., 1999).



Figure 1. Melissa Hutchison with the first *Pittosporum obcordatum* seen on Banks Peninsula in over 170 years.  
Photo: Jon Sullivan



Figure 2. Close-up of *Pittosporum obcordatum* showing immature (green) and mature (black) fruit.  
Photo: Melissa Hutchison.

The current known population of *P. obcordatum* on Banks Peninsula consists of 14 plants occupying a small gully on private farmland (see Figure 3). The vegetation at the site is a mosaic of small-leaved shrubland and regenerating podocarp-hardwood forest currently grazed by sheep and cattle. The total size and distribution of the Banks Peninsula population are unknown, but there are likely to be more individuals, since the species is cryptic and there has only been a very brief search for *P. obcordatum* in the area.

The good news is that I am about to begin a project to determine the distribution and status of *P. obcordatum* on Banks Peninsula funded by the DOC Biodiversity Advice Fund. The objectives of the project are to:

1. Conduct a thorough survey of the known *P. obcordatum* population and search nearby potential habitat in order to establish the total population size and distribution on Banks Peninsula.
2. Determine the condition and age structure of the population and if there is any recruitment of seedlings.
3. Collect seeds for cultivation.
4. Collect foliage from all individuals for use in taxonomic/genetic analyses.
5. Identify any current or potential threats to the Banks Peninsula population.
6. Determine the most appropriate management strategy in order to protect and enhance the existing population and discuss protection options with the landowners and relevant agencies.
7. Identify suitable sites for potential establishment of new populations of *P. obcordatum* on Banks Peninsula.



Figure 3. Mixed open shrubland with *Pittosporum obcordatum*.  
Photo: Melissa Hutchison.

The project will provide critical information on the conservation requirements of *P. obcordatum* on Banks Peninsula and help to ensure its continued survival there. Now that the species has escaped from local extinction, Melissa is keen to ensure that it does not disappear from the Peninsula again!

### References

- Clarkson, B. D. & Clarkson, B. 1994: Ecology of an elusive endemic shrub, *Pittosporum obcordatum*. *New Zealand Journal of Botany* 32: 155–168.
- de Lange, P.J., Norton, D.A., Courtney, S.P., Barkla, J.W. & Cameron, E. K. 2009: Threatened and uncommon plants of New Zealand (2008 revision). *New Zealand Journal of Botany* 47: 61–96.
- Dopson, S.R., de Lange, P.J., Ogle, C.C., Rance, B.D., Courtney, S.P. & Molloy, J. 1999: *Threatened Species Occasional Publication No. 13*. Department of Conservation, Wellington. 194 pp.
- Wilson, H. 1992: Banks Ecological Region, Protected Natural Areas Programme, Survey Report No. 21. Department of Conservation, Christchurch. 342 pp.

## Te Wao Nui – Five Precincts, One Journey

Hugo Baynes, Curator of Horticulture, Auckland Zoo ([Hugo.Baynes@aucklandcouncil.govt.nz](mailto:Hugo.Baynes@aucklandcouncil.govt.nz))

Auckland Zoo's New Zealand precinct, Te Wao Nui, opened in September 2011. Before this, Zoo visitors were able to experience seeing just a handful of New Zealand native species, held in exhibits of varying quality scattered throughout the Zoo. Additional New Zealand native species were held off-display.



Part of the 'Island Sanctuaries' area—nikaus find a home. Photo: Terry Evans

This visitor experience of old is worlds away from what the new award-winning Te Wao Nui precinct offers. Home to around 60 different New Zealand native animal species (over 350 individual animals), over 200 native plant species and stunning Maori artworks, Te Wao Nui takes visitors on an immersive journey through five iconic New Zealand environments. These include The Coast, The Islands, The Wetlands, The Forest, and The High Country. A sixth exhibit area, The Night (an indoor space), showcases a range of New Zealand nocturnal animals.

Te Wao Nui is a journey that covers one fifth of the Zoo's footprint (4 hectares) and

is framed by iconic New Zealand visual botanical features. Walking through these environments is a complete immersion experience where the flora defines and accentuates the character of the various habitats and links the spaces between them.

Te Wao Nui is a celebration of New Zealand's natural world and a showcase for the Zoo's conservation efforts. It explores the past and showcases the present, while focusing strongly on the future as it invites us all to play a role as kaitiaki (guardians) for our unique wildlife and wild places.

### 1. The Coast (Takutai)

This is the entry to Te Wao Nui with over 50 plant species that represent three aspects of a northern New Zealand coastal ecosystem. These are the coastal foreshore (dominated by a canopy of pohutukawa), sand dune and rocky shoreline (with its display of rare and regionally threatened coastal plants) and regenerating coastal forest (a mix of primary colonisers and successional species). This precinct pre-existed as 'Sea Lion and Penguin Shores' but much of it has been redesigned and replanted, and it displays the robust character of coastal vegetation.

### 2. The Islands (Moutere Rahui)

From The Coast one enters The Islands that now act as sanctuaries for many species in the wild. Tuatara, geckoes, skinks and Campbell Island teal exemplify the adaptive qualities of the animals that call these islands home. This area profiles a lava forest within the existing strengths of the site, its rocky terrain. It also displays many endemic offshore island plant species (some as living roofs), riparian ferns, reeds and rushes (some deciduous) and low shrubby grassland in the aviary, grazed by Antipodes Island parakeets. From the bird aviary of The Islands, a boardwalk leads to a kauri dam that is representative of a key engineering feature of pioneering European settlement on Great Barrier Island and many other places in northern New Zealand.

### 3. The Wetlands (Nga Repo)

A boardwalk adjacent to Motions Creek leads from the kauri dam in The Islands to The Wetlands after passing through an arch in the old stone bridge. Pest plants were removed from the Motions

Creek bank and now natural native regeneration is being enabled. Adjacent to the boardwalk, vegetation is dominated by flax, manuka, cabbage tree (all kept outside the wetlands aviary to minimise animal husbandry issues) and a living roof of climbing rata and swamp astelia before entering the aviary with its native fauna, ferns and many riparian species around the waterfall and ponds. One then progresses past swathes of oioi amongst swamp kauri to longfin eels migrating 'from the sea' before you enter the 'house of the night'.

#### 4. The Forest (Te Wao Nui a Tane)

From The Night, visitors can take a quick return trip up the stone bridge steps to get great multi-precinct views before walking back through another arch of the Zoo's original old stone bridge to The Forest, past distinctive divaricating plants. This former free-flight New Zealand native aviary, home to a variety of forest birds, has been replanted and redesigned to ensure structural integrity. It also features new running streams, visitor pathways and stunning viewing platforms. The habitat, from forest floor to canopy, represents plant associations of the podocarp/broadleaf rainforest of Auckland's Waitakere Ranges. This walk takes you through the carefully under-planted but enhanced existing coastal lowland forest dating back to the early years of Auckland Zoo. This work has increased native biodiversity, removed pest plants and showcases the Zoo's existing botanical assets.



Transplanted nikaus receiving TLC.  
Photo: Terry Evans.

#### 5. The High Country (Whenua Waotu)

From the forest, one enters the two High Country landscaped aviaries of kea/weka and blue duck/parakeets set amongst rocky outcrops, dead trees for perching, logs, rapids, pools and waterfalls. The



Some of 'The High Country'. Photo: Kathrine Simon.

planting combinations in these habitats represent aspects of the texture, tapestry and colour of the tussock, montane and alpine environments of New Zealand's high country. Some lowland New Zealand native plants have been used to replicate the look and feel of actual high country species, as most would not survive in Auckland's warm and humid climate. Species were also chosen that would be able to withstand some of the delightfully inquisitive, and at times, destructive nature of kea, weka and parakeets. The journey ends as you cross the bridge over Motions Creek with great views looking back through Te Wao Nui.

*(Editor's Note: This development at the Auckland Zoo has been independently recognised as an excellent development as the following press release indicates. Congratulations to Hugo and his team.)*

## Zoo scoops gold for Te Wao Nui in landscape awards

Auckland Zoo's curator of horticulture, Hugo Baynes, has won Landscaping New Zealand's supreme award in the 2012 Landscapes of Distinction Awards as landscape designer for the New Zealand precinct, Te Wao Nui – the Zoo's largest ever project.

Along with winning the Landscape of the Year Award and three golds—for Landscape Design, Horticulture, and Garden Management – Te Wao Nui also won the Best Sustainable Landscape, Best Use of Native Plants, Best Horticulture, and Best Garden Management (large project) awards.

The overall award recognised consistency in quality and excellence throughout the planning, planting and maintenance of Te Wao Nui's habitats—The Coast, The Islands, The Wetlands, The Forest, and The High Country. The Judges said: “This design shows sensitivity and expertise at all levels and results in a magical journey for visitors, which highlights the very best and special natural character of New Zealand. Zoos are much more than animals! The renewed focus on flora, as well as fauna, is extraordinary and educational...and the planting design of this space is inspirational.”

The Zoo's curator of horticulture, Hugo Baynes, says the win is both tremendous and humbling and the result of many passionate people. “It was a truly collaborative effort. The Zoo's horticultural team and Natural Habitats contractors did a superb job helping install the landscape on a canvas beautifully designed and compiled by designer Logan Brewer and proudly built by New Zealand Strong. It's been a once-in-a-lifetime opportunity and a real joy to be involved in a project where New Zealand native flora and fauna are showcased in representative iconic habitats that, by their very nature, encourage visitors to explore, connect and protect our natural heritage,” says Mr Baynes.

Auckland Zoo director, Jonathan Wilcken, says local and overseas visitors have flocked to see Te Wao Nui since it opened last September—a major catalyst for the Zoo attracting a record 710,000 visitors in the 12 months ended 30 June. “It's wonderful to receive these landscaping awards for Te Wao Nui—the biggest and most important project in our 90-year history, and a real tribute to Hugo and his team, and everyone involved,” says Mr Wilcken.

Landscaping New Zealand's Landscapes of Distinction Awards is a biennial event that recognises excellence in the fields of landscape design, construction and maintenance, encompassing commercial and residential projects.

The 2012 Landscaping New Zealand awards won by Auckland Zoo were:

- 2012 Landscape of the Year
- The Living Earth: Best Sustainable Landscape
- The Dalton's Landscape Supplies: Best Horticulture Large Project
- NZ Landscape Supplies: Best Garden Management
- Naturally Native: Best Use of Native Plants
- GOLD: Landscape Design – large project category
- GOLD: Landscape Horticulture – large project category
- GOLD: Garden Management – large project category

The 2012 judges were Renee Davies, Head of Department of Landscape Architecture at Unitec, Grant Eyre from Growing Spectrum Plant Nursery, and Richard Hart, architect.

Te Wao Nui has also just recently won the 2012 Zoo Aquarium Association (ZAA) award for Best Large Exhibit Development. (ZAA is an Australasian body of zoos and aquariums, of which Auckland Zoo is a member.)



The winning zoo horticultural team holding the trophy. Photo Jane Healy

## **New Zealand Alpine flora and SW Australia – differences and similarities.**

Warren Jowett, Tussock and Beech Ecotours ([ecotour@nature.net.nz](mailto:ecotour@nature.net.nz))

### **Introduction**

Over the past few years, I have visited Western Australia during August and September and enjoyed its colourful and diverse flora. Each summer, over the past 12 years, I have run alpine flower tours in the conservation and national parks of Canterbury. The floras of these two areas are obviously so different. However, on reading George Gibbs' excellent book *The Ghosts of Gondwana* (Gibbs, 2006) I have been moved to reflect on the differences and similarities of these two floras.

### **Geological past**

New Zealand and Australia were both part of the ancient super continent Gondwana that began to break up approximately 130 million years ago (MYA). Although the Australian continent remained intact, Western Australia, like New Zealand, became isolated from eastern Australia. In Western Australia's case, it was a separation caused by a vast desert that dates from the early Cretaceous 100 MYA. In New Zealand's case, the isolation was a result the separation from the eastern coast of Australia that began 80 MYA. The widening of the Tasman Sea ceased 60MYA.

However, what happened then was very different in Western Australia and New Zealand—stability versus instability. Southwest Western Australia is geologically simple—largely granite and one of the oldest areas of this rock in the world. Where the granite was subjected to great pressure it was reformed into gneiss. The geology of New Zealand is, of course, largely very young and complex. Whilst Australia has remained a largely intact landmass since the break-up of Gondwana, New Zealand certainly has not. During the Oligocene epoch (43–23 MYA), much of the landmass of New Zealand was submerged beneath the sea. It was during this period that the limestone found throughout New Zealand was laid down. During the Miocene and Pliocene epochs that followed the Oligocene climatic conditions were warmer than at present.

### **Evolution of flora**

During the Pleistocene, commencing 2 MYA, world climates experienced a series of fluctuations—long cold glacial spells with intervening warm interglacial periods. This impacted on the vegetation of both areas. Western Australia remained stable and flat but New Zealand experienced a period of massive uplift and mountain building.

The flora and fauna of Western Australia and New Zealand have evolved in isolation for a long time – 100 million years for Western Australia and 80 million years for New Zealand. Before the Pleistocene, the vegetation of both areas would have had many similarities. Proteas, she-oaks, wattles, eucalypts and araucarias were common in New Zealand's flora. The floras of both areas now are, of course, very different. What has caused this change? Mainly the differences in climate and geological processes in the two areas.

In the stable geological regime of Western Australia there was little change although the ice ages did have an impact. As an ice age retreated, the westerly low-pressure systems would have moved south meaning a drier climate in the southwest. Plant species that were used to wetter conditions would have retreated to small moist microenvironments. The fragmentation of populations that resulted would have led to speciation and new species forming. Also the sand plains north of Perth have their origin in the ice ages.

In New Zealand, however, the impact of the ice ages was severe. The plants used to warmer conditions disappeared. There was a waxing and waning of the two main types of flora – lowland and montane forest and low alpine vegetation, particularly in the South Island. As temperatures lowered during an ice age, the forest flora retreated to lower altitudes to be replaced by an expanding alpine flora. The reverse happened during the warmer interglacials.

### Similarities of the floras

Recognising that the floras of Western Australia and New Zealand have, since the Cretaceous, evolved on isolated islands (albeit a land based one for Western Australia), it is interesting to consider some similarities in their characteristics.

- Both have high levels of endemism—over 80%.
- There is a quick response to environmental changes in both areas. In Western Australia, this is seen in the rapid regeneration after fire and the short time it takes for plants to germinate, develop and flower in the spring following the winter rains. In New Zealand, we observe the rapidity with which alpine plants develop and flower following the melting of snow.
- Both areas are species rich—although this richness is far greater in Western Australia. For example, the southwestern corner has over 4000 species (New Zealand has 2500 species of native vascular plants).
- Both have endemic genera, although these differ in the number of species. Compare some Western Australia endemic genera such as *Dryandra*—92 spp., *Conostylis* (cottonheads)—50 spp., and *Chamelaucium* (waxflower)—30 spp., with New Zealand alpinines *Notothlaspi*—2 spp., *Haastia*—3 spp. and *Leucogenes*—4 spp.

### Differences between the floras

The resulting floras that we now see are so very different. Not only have the dominant families and genera changed in New Zealand but so have the flowers and specifically the colours. Whereas our original flora would have been very colourful, like Western Australia's, it now is much more subdued. It has been estimated that over 70 per cent of our alpine flora and 35 per cent of lowland plants have white or near-white flowers.

The colourful nature of the flowers of Western Australian native flora is attributed to their need to attract pollinators. Jim Barrow (Wildflower Society of Western Australia) (pers. comm.) likens it to “a sort of arms race where each species tries to outdo the others in competition for pollinators”. The stability of the flora has allowed specialisation of pollination from a wide variety of pollinators – birds, insects and even small mammals such as the honey possum. In the alpine and subalpine areas of New Zealand, where there are no native long-tongued insects and comparatively few butterflies, colour is not a priority. It has been suggested (Gibbs, 2006) that the lack of colour, and the mass of flowers (especially alpinines) allow the plants to be pollinated by a variety of insects (promiscuous pollination).

The huge diversity of species and the many families unknown here in New Zealand make it a daunting challenge to try to get to grips with plant identification. However, that does nothing to lessen the pleasure and excitement of enjoying the spectacular and diverse colours of the Western Australia flora. It surely is one of the outstanding flowering plant locations of the world – even following a dry winter.

### Reference

Gibbs, G.W. 2006: *The Ghosts of Gondwana*. Nelson, Craig Potton Publishing. 232 p.

## New Zealand's marine algae now online

The Network has now added all New Zealand's marine algae to its website. This includes over 700 taxa of green, brown and red algae. This work was done with the help of Jennifer Dalen and Wendy Nelson, research scientists at Te Papa Tongarewa and NIWA, respectively.

Examples of the species pages may be seen by clicking on the names below:

[Neptune's necklace](#)

[Bull kelp](#)



Bull kelp. Photo: Jeremy Rolfe.

Algaebase has also provided all their URL web links so these will be added in the near future along with links to Te Papa's online database.

These algae web pages are not yet complete and help is sought with illustrating all species. If you have information or images for any of these taxa please send it to the Network at: [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)

For more information about macroalgae see Wendy Nelson's overview on the Network website:

[Macroalgae](#)

## Specimen request

My name is Corin Gardiner, a PhD candidate at Auckland University. I am currently studying trap morphology in *Utricularia* (bladderworts) and am looking for preserved and live specimens of the introduced *U. arenaria*, *U. livida* and *U. sandersonii* as well as *U. dichotoma* and *U. delicatula*. I am looking to try and establish greenhouse populations of any or all of these species and will collect whole undamaged traps for 3D imaging.

If anyone in the Network will be visiting sites where these plants are present and are able/permitted to collect samples for me it would be much appreciated. I realise it is time consuming, but including GPS co-ordinates and a brief site description (with attention to water level and substrate in particular) with any samples would increase their value to me.

## Plant conservation awards 2012

The prestigious New Zealand Plant Conservation Network Awards are now in their eighth year and we are now calling for nominations for the 2012 awards (see attached nomination form). The purpose of these awards is to acknowledge outstanding contributions to native plant conservation. The award categories are:

- Individual involved in plant conservation
- Plant nursery involved in plant conservation
- School plant conservation project
- Community plant conservation project
- Local authority protecting native plant life
- Young Plant Conservationist of the Year (under 18 years at 30 June 2012)

More information about the awards scheme and nomination forms are available on the Network website—[www.nzpcn.org.nz](http://www.nzpcn.org.nz). A copy of the nomination form is also attached to the newsletter. We look forward to your nominations; you may make multiple nominations under different categories. Anyone is eligible to make nominations, not just Network members. The awards will be presented at the Network Annual General Meeting to be held on Thursday 28 November 2012 in Christchurch. Nominations close on Tuesday 9 October 2012. See the Network website for more information.

## UPCOMING EVENTS

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

### 11th Conference of the Parties to the Convention on Biological Diversity

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**Hyderabad, India 8–19 October. Sessions include:** World flora online by 2020; The Global Strategy for Plant Conservation — Building capacity to support national implementation; Towards the delivery of Aichi Targets 4 and 6 through The Global Strategy for Plant Conservation: sustainable use of wild plant resources; and Museums, Zoos and Botanical Gardens in support of the UN Decade on Biodiversity.

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**Further information:** contact Suzanne Sharrock ([suzanne.sharroock@bgci.org](mailto:suzanne.sharroock@bgci.org)).

### 9th National Conference of the Australian Network for Plant Conservation (ANPC)

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**Conference:** Canberra 29 October to 2 November. Early bird registration closes 24 August. For full details, including list of plenary speakers, registration details, and abstract submission form, please see the conference website at [www.anpc.asn.au](http://www.anpc.asn.au).

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**Contact:** ANPC office:  
ph: 0061 2 6250 9509,  
e-mail [anpc@anpc.asn.au](mailto:anpc@anpc.asn.au).

### Auckland Botanical Society

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**Diamond Jubilee:** Saturday 27 October the 75th anniversary of the society will be celebrated with a day of talks, displays and an anniversary dinner. Venues: Room 2017, Building 115, UNITEC School of Natural Sciences (talks); Long Black Café, Building 001, UNITEC (dinner). Full Registration: \$95 until 30 September; \$120 during 1 – 15 October (student, day only and dinner only options are available); registrations should be sent to: Treasurer, Auckland Botanical Society Inc., PO Box 26391, Epsom, Auckland 1344.

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**Contact:** Maureen Young, e-mail: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz)

### Kaipatiki Project

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**Nursery Bites:** Tuesdays 18 September - 6 November, FREE native plant propagation workshops. **Venue:** Kaipatiki Project Environment Centre, 17 Lauderdale Road, Birkdale, Auckland, 9.00 a.m. – 12 noon.

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**Bookings, dates and topics:**  
[www.kaipatiki.org.nz/courses](http://www.kaipatiki.org.nz/courses)

**Bush Walk & Talk:** Saturday 29 September 9.30 – 11.30 a.m. at Awaruku Reserve, Torbay, Auckland. Enjoy an educational leisure walk in good company and learn to identify New Zealand native trees and other plants. **Cost:** \$15 per person.

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**Booking essential:**  
ph: 09 482 1172 or  
email: [admin@kaipatiki.org.nz](mailto:admin@kaipatiki.org.nz).

### Auckland Heritage Festival

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**Meeting:** Monday 1 October at 7.00 p.m. for a seminar titled 'Auckland's Biodiversity Jewels'. Venue: Western Springs Garden Community Hall, 956 Great North Road, Western Springs.

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**RSVP:** by 24 September to [biodiversity@aucklandcouncil.govt.nz](mailto:biodiversity@aucklandcouncil.govt.nz).

## Waikato Botanical Society

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**Field trip:** Saturday 13 October to Mt Karioi for a *Pittosporum kirkii* hunt.

**Leader:** Kerry Jones ph: 07 855 9700 (home), mobile: 027 747 0733, e-mail: [km8j1s@gmail.com](mailto:km8j1s@gmail.com).

**Meeting:** Monday 15 October at 5.30 p.m. for a talk by Dr Chrissen Gemmill, University of Waikato, titled 'Evolution of New Caledonian Winteraceae'. Venue: Environment Centre, 25 Ward Street, Hamilton.

**Contact:** Cynthia Roberts, ph: 07 858 1034 (work), mobile: 021 123 1060, e-mail: [croberts@doc.govt.nz](mailto:croberts@doc.govt.nz)

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## Rotorua Botanical Society

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**Field trip:** Saturday 29 September – Sunday 30 September (optional) to East Cape, revisit #6. **Meet:** the car park Rotorua at 7.30 a.m. or Opotiki DOC Office (cnr Elliot & St John Street) at 9.15 a.m. **Grade:** medium. **Cost:** \$20 donation for accommodation for those staying Saturday night (maximum 6), evening meal on Saturday provided, please bring lunches/breakfasts.

**Leader:** Tim Senior, ph: 0800 368 288 ext 6010 or 07 315 7371, e-mail: [tim.senior@envbop.govt.nz](mailto:tim.senior@envbop.govt.nz).

**Field trip:** Saturday 13 October to the Okareka Mistletoe Restoration Project Weed Control/Plant Releasing Work Day. **Meet:** corner of Summit and Loop Rds, Okareka (lake end) at 8:45 a.m. **Grade:** medium-hard; activities suitable for all ages and abilities will be provided, which will include releasing our plantings from weed growth and doing further weed control.

**Leader:** Paul Cashmore, ph: 07 348 4421 (hm), 07 349 7432 (wk), e-mail: [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz)

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## Wanganui Museum Botanical Group

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**Field trip:** Sunday 30 September to Gordon Park Scenic Reserve. This is not a weeding trip, but a chance for us to explore and see some of the reserve's special features; gumboots might be advisable. **Meet:** the reserve's car park, 1.00 p.m.

**Leader:** Colin Ogle, ph: 06 347 8547, e-mail: [robcol.ogle@xtra.co.nz](mailto:robcol.ogle@xtra.co.nz).

**Meeting:** Tuesday 2 October at 7.30 p.m. for a members' show and tell 'Gordon Park – past, present and future' following the weekend's field trip.

**Contacts:** Robyn and Colin Ogle, ph: 06 347 8547, e-mail: [robcol.ogle@xtra.co.nz](mailto:robcol.ogle@xtra.co.nz).

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## Wellington Botanical Society

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**Field trip:** Saturday 6 October to Caribbean Drive Reserve, Grenada North. Botanise regenerating forest with nikau, manuka shrublands, etc, on the Outer Green Belt. **Meet:** at 9.15 a.m. at the top of Caribbean Drive, Grenada North, advise the co-leaders if you are coming on the Kapiti Line train leaving Wellington at 8.44 a.m so you can be met at the station.

**Leaders:** Richard & Margaret Herbert, ph: 04 232 6828, mobile 027 445 5942, e-mail [herbert.r@xtra.co.nz](mailto:herbert.r@xtra.co.nz).

**Meeting:** Monday 15 October at 7.30 p.m. for a presentation by Ciaran Sim, winner of this year's Wellington Botanical Society NIWA Science Fair prize for the best project involving native flora, who will tell us how his project "Plants vs Bacteria" compared the effectiveness of extracts from a variety of plants in inhibiting the growth of bacteria. This will be followed by a talk by Stephen Hartley, School of Biological Sciences, VUW, titled 'Restoring coastal dune vegetation'

**Venue:** lecture theatre MYLT101, ground floor Murphy Building, west side of Kelburn Parade. Enter building off Kelburn Parade about 20 m below pedestrian overbridge.

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## Nelson Botanical Society

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**Field trip:** Sunday 13 October (a week earlier than usual) to weed the Inches' threatened plant area in Wairoa Gorge.

**Leader:** Shannel Courtney,  
ph: 03 546 9922

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**Labour Weekend Camp:** South Marlborough Lowland Limestones, Friday 19 – Monday 22 October. **Location:** Waima/Ure Valley.

**Leader:** Cathy Jones, register with Cathy, ph: 03 546 9499, 021 546 9499 or e-mail [cathy.jones@xtra.co.nz](mailto:cathy.jones@xtra.co.nz)

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## Canterbury Botanical Society

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**Meeting:** Friday 5 October at 7:30 pm for a talk by Matt Walters titled 'Botanical Photography. Venue: Room A5, University of Canterbury.

**Contact:** Gillian Giller,  
ph: 03 313 5315,  
e-mail: [ggillerma1@actrix.gen.nz](mailto:ggillerma1@actrix.gen.nz).

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**Field trip:** Saturday 13 October to visit the recently rediscovered population of *Pittosporum obcordatum* on Banks Peninsula. Note: this trip includes some strenuous walking so a reasonable level of fitness advised.

**Leader:** Melissa Hutchison,  
ph: 03 960-7051 or 0210415797.

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## Otago Botanical Society

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**Meeting:** Wednesday 29 August at 12.00 noon for a talk by Jacqui Nelson titled 'Thyme travels across Central Otago: Above- and below-ground ecological studies of a space invader'. **Venue:** Union St Lecture Theatre, corner Union St West & Great King St.

**Contact:** Trish Fleming,  
ph: 03 479 7577.

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**Field Trip:** Sunday 16 September to Alexandra's Springvale and Chapman Road Reserves. **Meet:** Department of Botany car park 8.00 a.m. **Leaders:** David Lyttle and John Barkla.

**Contact:** David Lyttle,  
ph: 03 454 5470.

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**Visit:** Tuesday 25 September at 5.30 p.m. to the Banks' Florilegium at the Hocken Library. **Meet:** foyer of the Hocken Library at 5:30 p.m.

**Contact:** [Robyn Bridges](#),  
ph: 03 472 7330.

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**Field trip:** Saturday 13 October to Molteno's Regenerating Bush, Opoho. Meet: at the Botany Department car park 464 Great King St at 9.00 a.m.

**Contact:** [Allison Knight](#),  
ph: 03 487 8265.

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**Meeting:** Wednesday 17 October at 5.30 p.m. for first a talk by Kelley Frogley titled 'It's the little things that matter' followed by talks by the winners of the Botany Department Colloquium. Venue: Room 215 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, please be prompt because we have to hold the door open.

**Contact:** [David Lyttle](#),  
ph: 03 454 5470.

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## NEW ZEALAND PLANT CONSERVATION NETWORK

### **PLANT CONSERVATION AWARDS: 2012**

The New Zealand Plant Conservation Network is now accepting nominations for the 2012 awards. The purpose of these awards is to acknowledge outstanding contributions to native plant conservation.

The award categories are:

- Individual involved in plant conservation
- Plant nursery involved in plant conservation
- School plant conservation project
- Community plant conservation project
- Local authority protecting native plant life
- Young Plant Conservationist of the Year (under 18 years at 30 June 2008)

More information about the awards scheme and additional nomination forms are available on the Network website—[www.nzpcn.org.nz](http://www.nzpcn.org.nz). You can make multiple nominations under different categories. Anyone is eligible to make nominations, not just Network members. The awards will be presented at the Network conference dinner to be held on Thursday 29 November 2012 in Christchurch. See the Network newsletter or website for more information.

#### **NOMINATION FORM**

Category (please circle):

Individual	Plant	Nursery	School
Community	Local Authority	Young Plant Conservationist	

NAME OF NOMINEE: \_\_\_\_\_

Contact details for person, school, nursery, community group or local authority:

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

