



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 14. JANUARY 2005

Deadline for next issue: Monday 7th February 2005

Message from the President

The Global Strategy for Plant Conservation has provided a basis for much of the work achieved or planned by the Network. However, members were aware from the inaugural workshop in Wellington 18 months ago of the need to tailor the Global Strategy targets to our unique culture and values. In particular, there was a need recognised to develop a partnership with iwi and make the Network a truly multicultural organization. One of the targets set at the workshop was “*Integration of iwi in threatened species recovery and education programmes*”.

We have a long way to go to achieve this target but an important start has been made with the approval of a funding application by the Biodiversity Advice Fund just prior to Christmas. Our application was for a Marae-based Plant Conservation Training Course and had three objectives:

1. Develop a 3-day, marae-based plant conservation training course targeted at iwi throughout New Zealand.
2. To strengthen links between the New Zealand Plant Conservation Network and Maori (including educators, rongoa experts, weavers, hapu that wish to be involved in plant conservation projects and those who make customary use of native plants)
3. To provide a valuable education resource for iwi.

The application was supported by several iwi around the country who were consulted during the preparation of the application.

Na taku rourou, nga tou rourou, ka ora te iwi

From your basket and mine, life will prosper

Mike Oates

Plant of the Month



Olearia adenocarpa. Photo: Peter Heenan.

Plant of the month for January is the recently described *Olearia adenocarpa*. This is a lowland species whose habitat is recently deposited alluvial gravels and sands. Endemic to the Canterbury Plains, it is known only from the vicinity of Christchurch and has been given a conservation status of Nationally Critical. The species is the subject of a major management programme initiated by Dr(s) Peter Heenan and Brian Molloy in partnership with Environment Canterbury. To date numerous seedlings have been planted out in existing habitats, and some of the more seriously threatened populations fenced off to

exclude cattle/sheep. Research is underway into managing plants from weed encroachment, and creating ideal conditions for natural recruitment. The Network fact sheet for the species can be found at the following link: http://www.nzpcn.org.nz/nz_threatenedplants/detail.asp?PlantID=798

Marae-based Plant Training Course

The Network has been successful in its bid to the Government's Biodiversity Condition and Advice Fund for funding to develop a marae-based plant training course. This important project is to be completed by the Network over the next 18 months. It will initially involve hui with iwi nationwide, then the development and delivery of plant conservation modules. These are expected to cover a wide range of topics which may include: learning about and making use of local native plants, plant propagation, medicinal plants, monitoring and translocation of threatened plants. Please contact the Network if you believe you can help with this project.

Good news for threatened plants

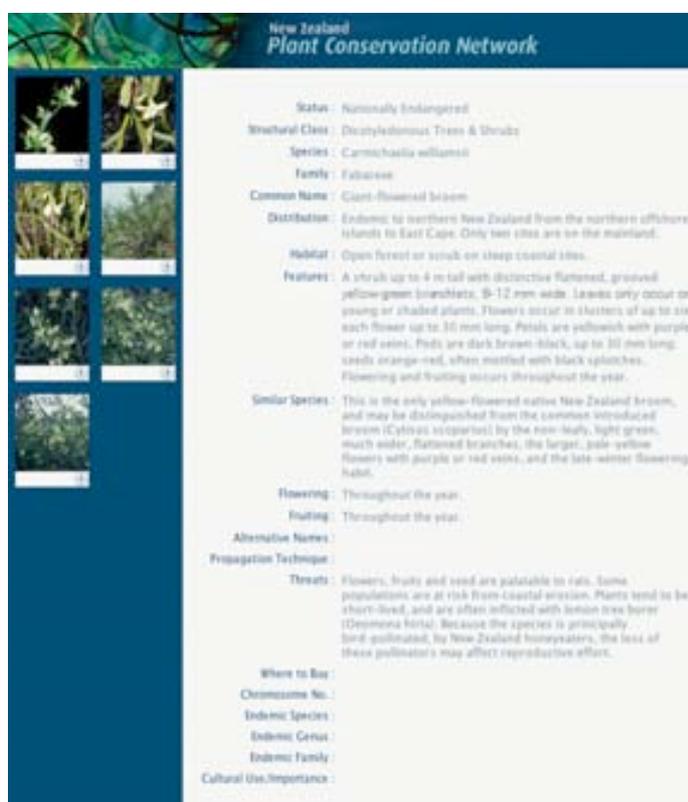
The BBC (UK) recently reported the results of a study by Botanic Gardens Conservation International (BGCI) that says about 9,000 plant species that are threatened in the wild are thriving in botanic gardens. This is approximately one-quarter of all plants known to be 'at risk'.

The two year survey by BGCI involved the development of the Plant Search Database. This allows botanic gardens to check what they hold in their collections against an international list of plants and their IUCN conservation status as recorded in their threatened species Red Data Book.

Peter Wyse Jackson, Secretary-General of BGCI, said: "This is an important step in helping to reverse the current extinction crisis that we face. BGCI is working with the botanic garden community to raise awareness about the plants they hold and the importance of these collections to future conservation efforts - they represent a living gene bank".

The world's botanic gardens attract over 200 million visitors a year and are home to about 6.1 million living plants. As well as acting as sanctuaries for plants, they help to educate visitors about the devastating impact humans are having on many species.

New Zealand Flora live – Fact sheets for all NZ vascular plants now on-line



The screenshot shows a fact sheet for the plant *Carmichaelia williamsonii*. The page has a blue header with the text "New Zealand Plant Conservation Network". On the left side, there are several small photographs of the plant. The main content area is white with black text. The information provided includes:

- Status: Nationally Endangered
- Structural Class: Dicotyledonous Trees & Shrubs
- Species: *Carmichaelia williamsonii*
- Family: Fabaceae
- Common Name: Giant-flowered broom
- Distribution: Endemic to northern New Zealand from the northern offshore islands to East Cape. Only two sites are on the mainland.
- Habitat: Open forest or scrub on steep coastal sites.
- Features: A shrub up to 4 m tall with distinctive flattened, ground yellow-green branchlets, 8-12 mm wide. Leaves only occur on young or shaded plants. Flowers occur in clusters of up to six each flower up to 30 mm long. Petals are yellowish with purple or red veins. Pods are dark brown-black, up to 30 mm long, seeds orange-red, often mottled with black splotches. Flowering and fruiting occurs throughout the year.
- Similar Species: This is the only yellow-flowered native New Zealand broom, and may be distinguished from the common introduced broom (*Cytisus scoparius*) by the non-furry, light green, much wider, flattened branchlets, the larger, pale yellow flowers with purple or red veins, and the late-winter flowering habit.
- Flowering: Throughout the year.
- Fruiting: Throughout the year.
- Alternative Names:
- Propagation Technique:
- Threats: Flowers, fruits and seed are palatable to rats. Some populations are at risk from coastal erosion. Plants tend to be short-lived, and are often infested with lemon tree borer (*Demotia horticola*). Because the species is principally bird-pollinated, by New Zealand honeyeaters, the loss of these pollinators may affect reproductive effort.
- Where to Buy:
- Chromosome No.:
- Endemic Species:
- Endemic Genus:
- Endemic Family:
- Cultural Use/Importance:

The Network website now has fact sheets for every native vascular plant. These can be found by searching in the '*New Zealand Native Flora Information*' section. The Network is now working to populate those for all the high profile common species with text and photographs as well as finishing the text for the threatened and uncommon species.

800 photographs have been added to the website over the past 4 weeks. The Network would like to thank the following for providing images for use on the site: John Smith-Dodsworth, Jeremy Rolfe, John Barkla, Gillian Crowcroft, Peter de Lange, Mike Thorsen, Rick Menzies, Bruce Clarkson, Andrea Brandon, Paul Cashmore, Nick Singers, Geoff Rogers, David Norton, Peter Heenan, Phil Knightbridge, Mike Edginton, Brian Rance, Ewen Cameron and the Department of Conservation. The number of visitors to the website remains at more than 6500 every month.

Photos needed for website

Over 500 threatened and uncommon species are now illustrated on the website, with images for over 400 common species uploaded during the last few weeks. The Network still needs images of the following threatened species and would appreciate any images that members may provide. Weed fact sheets will be available soon, so after that we will seek images of environmental weeds.

Nationally Critical: *Anisotome patula*, *Brachyscome pinnata*, *Gentianella calcis* subsp. *manahune*, *Gentianella calcis* subsp. *taiko*, *Gentianella calcis* subsp. *waipara*, *Gentianella scopulorum*, *Hebe societatis*, *Myosotis angustata*, *Myosotis cheesemanii*, *Pachycladon exilis*, *Poa spania*, *Poa sudicola*, *Uncinia perplexa*, *Wahlenbergia pygmaea* subsp. *tararua*.

Nationally Endangered: *Heliohebe raoulii* subsp. *maccaskillii*, *Olearia polita*, *Triglochin palustris*, *Uncinia strictissima*.

Nationally Vulnerable: *Dracophyllum longifolium* var. *septentrionale*, *Dracophyllum urvilleanum*.

The woman who planted 30 million trees

Wangari Maathai was awarded the 2004 Nobel Peace Prize for her contribution to sustainable development, democracy and peace and becomes the first female African to be awarded the prize.



Wangari Maathai receiving her Nobel Prize from Ole Danbolt Mjøs, Chairman of the Norwegian Nobel Committee.

She founded the Green Belt Movement where, for nearly thirty years, she has mobilized poor women to plant 30 million trees. Deforestation and loss of forests have led to desertification in Africa and threatened many other regions of the world. Protecting forests is vital for strengthening the living environment. Through education, family planning, nutrition and the fight against corruption, the Green Belt Movement has paved the way for development at grass-root level.

She is a leader in the promotion of ecologically viable social, economic and cultural development in Kenya and in Africa. She has taken a holistic approach to sustainable development that embraces democracy, human rights and women's rights in particular. She

thinks globally and acts locally. Maathai combines science, social commitment and active politics. More than simply protecting the existing environment, her strategy is to secure and strengthen the very basis for ecologically sustainable development. Maathai is a strong voice speaking for the best forces in Africa to promote peace and good living conditions on that continent. She represents an example and a source of inspiration for everyone in Africa fighting for sustainable development, democracy and peace.

New species of *Myrsine* recognised

In the December 2004 issue of the *New Zealand Journal of Botany* (online publication 9 December 2004), two new species of *Myrsine* (Myrsinaceae) have been recognised, and a partial revision of the *M. divaricata* complex completed. The paper provides a formal name *M. aquilonia* for the commonly cultivated *Myrsine* 'Poor Knights', and also recognises a new species, *M. umbricola* apparently endemic to the Tararua Ranges north of Wellington. Aspects of their ecology, biogeography and conservation are discussed.



Myrsine aquilonia. Photo: Gillian Crowcroft.

Myrsine aquilonia (epithet meaning “northern”), was first recognised as potentially distinct by W.R.B. Oliver who collected specimens from the Poor Knights Islands in 1924. The species was subsequently illustrated as *Myrsine divaricata* form (i) by Audrey Eagle (Eagle 1982). Long considered endemic to the Poor Knights de Lange & Cameron (1999) noted that it also occurred on rock stacks near Tutukaka Harbour and in two isolated sites near Kaitaia and Te Pahi. Despite its superficial similarity to *M. divaricata* it is perhaps closest to the Chatham Island endemic *M. coxii* and the newly described *M. umbricola* from both

of which it is reliably distinguished by the light green or green leaves, obvious orange marginal glands, deeply notched leaf apex, bushy, branching habit, very leafy branchlets, prolific ring-like constrictions on the trunk, and absence of underground rhizomes. From *M. divaricata* it is easily distinguished by the virgate, leafy branchlets, with leaves extending to the branch apices, absence of a dark blotch at the leaf petiole junction. Other distinctions are offered by Heenan & de Lange (2004).

This species has been commercially available under the names *Myrsine divaricata* ‘Poor Knights’ and *M. ‘Poor Knights’* for at least the last 10-15 years. It is very fast growing and tolerant of a range of moisture regimes, soils and climates. All cultivated material seen seems to be male, and so does not set fruit. As *Myrsine* aff. *divaricata* (AK 228797; Poor Knights) the species is listed as Taxonomically Indeterminate/Sparse. Heenan & de Lange (2004) suggest that following the formal recognition of the species that this rating is still appropriate. However, they observe that aside from the Poor Knights Islands where it is very common, it is known from only a handful of trees and faces imminent extinction at two of the three mainland sites. As with other newly described taxa formal conservation assessments await the next listing by the Department of Conservation Threatened Panel.

The second species, *Myrsine umbricola* (epithet meaning “shade loving”) was discovered by accident in the process of resolving some problematic herbarium species from Mt Holdsworth, Tararua Ranges that had been labelled as *M. divaricata*. Initially assumed to be hybrids, critical vegetative characters and the constancy of the collections suggested that field work was needed to determine their exact status. Fieldwork rapidly ascertained that these collections represented a true breeding stable, population widely sympatric with true *M. divaricata*.

The new species is only known from the upper limits of silver beech (*Nothofagus menziesii*) cloud forest. Here it tends to grow in deeply shaded terracettes, slumpages and along the base and margins of slip scars. From its presumed close relatives *M. coxii*, and *M. aquilonia* it is recognised by the narrower, dark green, glossy (almost as if varnished with high gloss) leaves with obvious orange marginal glands an entire to weakly notched leaf apex. Unlike the uniformly green leaves of the other two species, the leaf petiole junction of *M. umbricola* often has a faint, dark mark parallel to the midrib this is never as prominent as the dark blotch seen in *M. divaricata*. The new species is a bushy shrub up to 4 m tall and with a spread of 4-5 m (adult plants are invariably broader than high), and with slender trunks and in adult trees horizontal branches. The branching pattern and growth form of *M. umbricola* is very similar to silver beech such that when growing in association with young silver beech saplings, it can be hard to separate from them! From *M. divaricata* it is easily distinguished by the horizontal branching pattern, absence of a weeping branching habit, and by the very leafy branchlets with the leaves extending to the branchlet apices. Other distinctions are offered by Heenan & de Lange (2004).

Myrsine umbricola was not recognised until May 2003, so it was not considered for listing by the Department of Conservation Threatened Plant Panel (which last met and undertook listings in 2001). Heenan & de Lange (2004) recommend that *M. umbricola* should be rated as “Acutely Threatened/Nationally Endangered” because at present here are <500 mature individuals known within ≤ 5 subpopulations, and with ≤ 300 adults known in the largest subpopulation. Currently the species is known from an area of ≤ 5 ha. A decline rate based on the limited sampling of $\sim 30\%$ over the last 100 years was considered not unreasonable. Widespread evidence of severe deer browse causing recruitment failure was also noted. However, the authors acknowledge that it is easily overlooked, and that additional plants probably occur elsewhere in the ranges. For these reasons they recommended that the conservation assessment is qualified as Data Poor (DP) and RF (Recruitment Failure). As with other newly described taxa formal conservation assessments await the next listing by the Department of Conservation Threatened Panel.

Myrsine umbricola is not commercially available and only limited material is held in cultivation. So far it has proved drought sensitive and tricky to maintain in cultivation.

References

- de Lange, P.J.; Cameron, E.K. 1999: The vascular flora of Aorangi island, Poor Knights Islands, northern New Zealand *New Zealand Journal of Botany* 37: 433-468.
- Eagle, A.L. 1982: Eagle’s trees and shrubs of New Zealand. Second series. Auckland, Collins.
- Heenan, P.B.; de Lange, P.J. 2004: *Myrsine aquilonia* and *M. umbricola* (Myrsinaceae), two new species from New Zealand. *New Zealand Journal of Botany* 42: 753-769

Live Plant Request

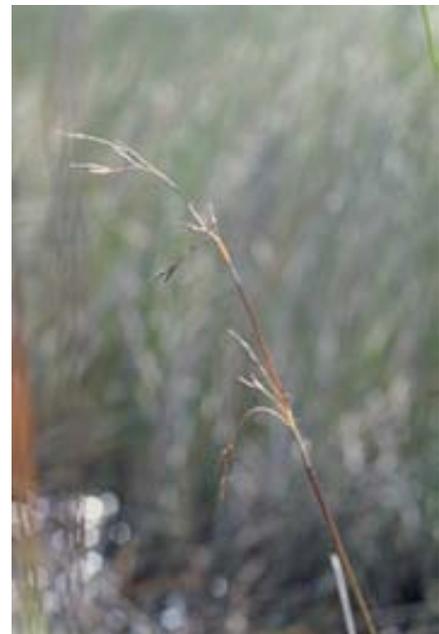
Dr Brian G. Murray is interested in receiving live plants of all New Zealand species of *Schoenus* as part of a cytogenetic and taxonomic study. Multiple accessions are welcomed. Plants should be removed from the wild with care. For the rush-like species particular care is needed because they can be difficult to transplant. Ideally take a large root ball, and trim the foliage back by two thirds, then place in plastic bags, and seal. Please remember that plants should only be removed where they are common and with the landowners permission, or with an appropriate permit. Live plants are necessary because seed has proved difficult to germinate.

As currently circumscribed New Zealand has 10 species of *Schoenus* (listed below) they are of interest because of their large and easily studied chromosomes, and presence of potentially distinct cytoraces in at least one species (*Schoenus pauciflorus*).

Schoenus apogon, *S. brevifolius*, *S. caespitans*, *S. carsei*, *S. concinnus*, *S. fluitans*, *S. maschalinus*, *S. nitens*, *S. pauciflorus*, *S. tendo*

Plants should be sent to

Associate Professor Brian Murray
School of Biological Sciences
University of Auckland
Private Bag 92019
Auckland
Email: b.murray@auckland.ac.nz



Schoenus carsei. Photo: Bec Stanley.

Project Crimson – annual funding round

In March each year Project Crimson considers funding applications for pohutukawa and rata restoration and protection projects. Applications come from community groups, iwi, schools, environmental groups, councils, the Department of Conservation, individuals and land care groups.

The projects can be on public or private land provided applicants can demonstrate there will be a value to the broader public from their work. The focus must be on pohutukawa and rata. After applications close, Project Crimson Trustees meet to determine which applications fit the goals of the Trust, and then allocate funds and resources accordingly. Successful and unsuccessful applicants are advised by mail as soon as possible. In return for their support, the Trust asks that signage supplied by them is displayed at the project site, and that they are kept advised of planting/workshop days and general progress of the project. Interested applicants should be considering their applications NOW for the 2005 funding round.

Application forms can be obtained from our website www.projectcrimson.org.nz or by contacting the Project Crimson office on 09 414 0466 or info@projectcrimson.org.nz. APPLICATIONS CLOSE 1 MARCH 2005.



Pohutukawa. Photo: DOC.

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):

Wanganui Museum Botanical Group. Field trip to 'Ben Moi' farm, Kawhatau Valley, east of Mangaweka and Utiku. Saturday 29 January 2005: This farm has several forest remnants on terraces of the true right bank of the Kawhatau River. Two years ago, on a short visit, Dr Bruce Clarkson found a lot of other divaricating shrubs here, including *Teuclidium*. What else can we find? Meet outside Wanganui Police Station, Bell St at 7.30am or by the bronze sheep dog at Hunterville at 8.15 am. Leader: Colin Ogle.

Wellington Botanical Society Field trip – Lowes Bush & Te Pamu bush. Saturday / Sunday 5–6 February. Day 1: Lowes Bush. Botanise this magnificent area described as 'the largest and most intact area of kahikatea swamp forest distinctive for its size, maturity, ecological diversity and condition within Wellington Conservancy, if not the entire North Island' and 'the best representative of the once extensive podocarp swamp forest of the Wairarapa plains'. Boots essential, likely to be wet. Meet 9.00 a.m. in park alongside Wild Oats Café, north end of Carterton shops, corner of Belvedere Rd and SH2. Map S26 Carterton. Accommodation indoors and out. Potluck dinner Saturday. Day 2: Te Pamu bush. Botanise 87 ha of private forest in the Tararua foothills due to be conveyed in the near future. See tawa, beech, totara, kamahi-dominant forest and regenerating plant communities. Leader: Pat McLean ph 021 148 0259, e-mail: mojomclean@hotmail.com. Wellington contact Dave Holey 566 3124 for transport offers / share.

Wellington Botanical Society, Monday 21 February: Evening meeting – Recent research by Te Papa on New Zealand's ferns. Speaker: Leon Perrie, Curator of Botany, Te Papa. Leon will talk about the use of DNA analyses to investigate (1) the origins of NZ ferns, (2) taxonomic

relationships within *Polystichum* and *Asplenium*, and (3) the status of the cultivated hen and chickens fern.

Coastal Dune Vegetation Network Conference 2005, Whangarei. 23-25 February 2005. Hosted by Whangarei District Council. The conference will run over three full days with an optional weekend field trip beginning on Saturday 26 February. An evening community forum will be held on Tuesday 22 February at Forum Northland and all delegates are welcome to attend.

Conference highlights:

Powhiri at Terenga Paraoa Marae

Field trips to coastal areas north and south of Whangarei

Conference dinner at Gybes Restaurant, Whangarei Town Basin

Optional post-conference weekend trip to Poutu Peninsula, the Northern head of the Kaipara Harbour

Registration:

Please register for the conference before **Monday 7 February 2005**. Bookings for the optional trip to Poutu Peninsula need to be made by **Monday 13 December 2004**. Further details, contact greg.steward@forestresearch.co.nz

National Institute of Water & Atmospheric Research



TRAINING COURSES IN PLANT IDENTIFICATION

Please contact Course Administrator, Marnie Kent, NIWA, PO Box 8602, Riccarton, Christchurch
Telephone: +64 3 343 7835, Fax: +64 3 348 5548, Email: training@niwa.co.nz

Identification of Aquatic Macrophytes, Wellington

Course code: **07N2**

Trainers: **Paul Champion/Paula Reeves**

Duration: **2 days**

Level: **All levels**

Date & Time: **17 & 18 February 2005**

This course is a combination of the two courses run in previous years and covers all freshwater aquatic plants including native and introduced submerged, free-floating, floating-leaved, erect emergent and sprawling emergent growth forms. The course is predominantly laboratory based, with a taxonomic key provided to assist with the identity of a large range of fresh specimens. A field visit to local water bodies will follow the laboratory sessions to guide participants in using the keys in the field.

Identification of Wetland Sedges and Rushes, Wellington

Course code: **10N2**

Trainers: **Paul Champion/Paula Reeves**

Duration: **2 days**

Level: **All levels**

Date & Time: **23 & 24 February 2005.**

This course is predominantly laboratory based, with a taxonomic key provided to assist with the identity of a large range of fresh specimens that are found in wetlands. It covers how to identify all genera in the Cyperaceae (sedges) and Juncaceae (rushes) and all species of the genera *Carex* and *Juncus*. A field visit to local water bodies will follow the laboratory sessions to carry out field identification.

Project Crimson – annual funding round applications close on 1 March 2005. See article above.

8th Australasian Bryophyte Workshop. Saturday 25 June to Thursday 30 June 2005. The 8th Australasian Bryophyte Workshop is to be held in Palma Village, North Queensland, Saturday 25 June to Thursday 30 June 2005. Expressions of interest are being sought now as numbers will be limited. Enquiries should be made to Andi Cairns, Tropical Biology, James Cook University, Townsville 4811, Australia. Email Andi.cairns@jcu.edu.au



Karori Wildlife Sanctuary

A unique opportunity to participate in an innovative conservation project.

SENIOR CONSERVATION OFFICER

(Animal & Plant Pests)

The Sanctuary seeks an appropriately qualified person to plan, coordinate, oversee and carry out animal and plant pest management programmes.

Preference will be given to candidates with experience in and a sound knowledge of animal pest management and control methodology. A sound knowledge of plant pest species and control techniques is desirable.

The person will be part of a multi-skilled operations team and will be prepared to take on a broad range of conservation and operational tasks.

Information about the Sanctuary can be located at www.sanctuary.org.nz. For a job description tel. 04 920-9200 for a hardcopy. Or email pestjob@sanctuary.org.nz. CVs to Valley Manager, PO Box 9267, Wellington by Monday 7th February 2005.