



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 26. JANUARY 2006

Deadline for next issue: Monday 13 February 2006

Message from the President

May I wish every one of you the very best wishes for 2006. I do hope very much that this year we can make an even greater contribution to much needed plant conservation in New Zealand. With that in mind I do urge every one of you again to write a short piece for the Newsletter. We are a network and much of our success depends on networking. So please, start the year by sending me or the Network a short piece for the Newsletter (email info@nzpcn.org.nz).

You will all know by now about the very sad news about David Given. Unfortunately I was overseas at the time of the funeral but I was able to spend precious time with him every day up until the weekend when he passed away. David was a close friend and colleague and I shall miss

him more than I can say. His lifetime work on plant conservation was very significant and has been well recognised both in New Zealand and overseas. A small group of us are discussing how we can establish a tribute to David and his work. It is highly likely that we will establish a Trust Fund to sponsor research on plant conservation, particularly rare plant species. I am exploring ideas with some colleagues in New Zealand and with some of David's colleagues from overseas, particularly those connected with the IUCN. More details will follow but meanwhile I would welcome any comments or suggestions.

I returned from Europe just after Christmas and was greeted with news about the top ten most favourite New Zealand native plants. I am told that many people were watching the results up to the last minute and were very excited about the way the positions changed right up to the last minute. There are some interesting surprises for the 2005 vote. I was so pleased to hear that there were some excellent articles in the media about the results of the 2005 vote. This year, there will be another vote and we are going to select dates for the 2006 voting process so that it links with important 'plant conservation' dates in the year.

I was reading *New Scientist* during my travels through Europe and I was interested to come across the following in the November issue: "Green Fingers to Blame – Gardeners are to blame for importing almost three-quarters of the non-native species and hybrids now growing wild in England, says a report published on 9 November by English Nature, ecological advisors to the UK Government. It reveals that of 2721 non-native species and hybrids documented, 1798 (73 percent) are plants that escaped from gardens". Makes you think doesn't it?

Finally, may I once again wish you all best wishes for 2006—and wish you every success for whatever project that you are working on this year. I look forward very much to sharing your experiences.

Professor Ian Spellerberg, Lincoln University

Plant of the Month



Metrosideros bartlettii in flower at Kohuronaki, Te Paki.

Photo: Peter de Lange.

Plant of the month for January is the Nationally Critical *Metrosideros bartlettii* (Bartlett's rata). This plant came Number 4 in the 2005 national poll to find New Zealand's favourite plant. It is an emergent or canopy tree up to 30 m tall and is endemic to New Zealand. It is found in Te Paki (Northland) where it is only known from three forest remnants near Spirits Bay. There are only 34 adult Bartlett's rata known from the wild. Most of these occur on private land. Many trees are isolated from each other so seed set is low and because nectar feeding birds are scarce in its habitat, pollen transfer between trees is negligible. Recent DNA studies have revealed that there is minimal genetic variation, and most of this occurs on private land. Aside from reproductive and genetic problems, the species is at risk from browsing animals, and fire. Furthermore the largest population located on private land is vulnerable to potential changes in land management. Although in cultivation, the majority of cultivated plants come from a single tree. The Network fact sheet may be found at the following link: http://www.nzpcn.org.nz/nz_threatenedplants/detail.asp?PlantID=26

Website reaches 200,000 visitors

The popularity of the Network website continues to grow. The total number of visitors that have used the site since it was established in August 2003 has now reached 200,000. The annual visitation is also now running at 200,000 visitors. The Network has a range of improvements planned for 2006 including completing the threatened fungi fact sheets, adding fact sheets for animal pests (that influence native plant survival) and also adding fact sheets for threatened mosses, liverworts and lichens. We welcome other suggestions for improvements and these may be sent to the Network at info@nzpcn.org.nz.

Kakabeak (*Clianthus maximus*) now at serious risk of extinction

Bec Stanley, Department of Conservation (Auckland Conservancy)



Clianthus maximus. Photo: Bec Stanley.

Growing at fewer than 20 sites, with only 153 wild plants known, kakabeak (*Clianthus maximus*) is now more threatened with extinction than previously thought. This moves it from the "Acutely Threatened/Nationally Endangered" category up to "Acutely Threatened/Nationally Critical" categories under the NZ threat Classification system. The new figures are a result of a kakabeak recovery group exercise where every known population was listed and the latest survey data for each collated.

Clianthus is an endemic genus in NZ most closely related to our native brooms (*Carmichaelia* species) and overseas to the Norfolk or Philip Island Glory Pea, *Streblorrhiza speciosa* (which was placed in the genus *Clianthus* when first described). The story of Philip Island Glory Pea is worth thinking about in relation to kakabeak conservation. It was last collected in the wild by Allan Cunningham in 1830 but was eaten out by goats and pigs in its Island habitat. It has as second chance however as its red showy flowers made it attractive to gardeners and it was grown as far away as Britain early in the 20th century. But, possibly it was fickle in cultivation, it died out and is now regarded as totally extinct.

The group exercise stimulated discussion on the key threats to kakabeak in the wild. In Te Urewera National Park deer have “switched” to kakabeak when they have never before targeted this species. On the East Cape goats are in record numbers and invading kakabeak habitat from adjacent pine forestry blocks. At Boundary Stream Mainland Island in Hawkes Bay, hares are the key predator, now goats and deer have been removed. These animals are a landscape scale problem with constant ongoing animal control (and funding) required. Kakabeak will not recover if it is restricted just to animal inaccessible sites.

The impact of these predators over the past 150 years has also meant that the ecological strategy of kakabeak to ‘boom and bust’ at disturbed sites such as slips is a distinct disadvantage. Because these habitats are naturally scattered in the landscape at any one time for kakabeak to establish in these sites it needs to be present nearby. Unfortunately is now so rare that it is unlikely to be near a slip, and if it is, it has to compete to grow there with numerous exotic ground cover plants such as Mexican daisy. Being an early successional species it is also quickly over-topped by developing forest e.g. tutu and kanuka. While this is natural it is not desirable while kakabeak is so rare. The one advantage for kakabeak, and probably the reason kakabeak still remains in the wild, is its long-lived seed bank. Kakabeak seed may still be viable for up to 30 years which means it can sit and wait (underground and safe from predators) for a disturbance to make the habitat suitable for it again.

The latest effort by the recovery group to document the situation for kakabeak has lead to an increased understanding of the fragility of the remaining sites. A few years back the largest wild population was estimated to have around 1000 plants but natural forest succession and continued goat browse has reduced this by over 90% to just 80 plants today.

Many New Zealanders may be surprised to hear about the rarity of kakabeak whose popularity was recognised when it made the “top ten” in the NZPCN’s web-based poll to find “New Zealand’s favourite plant”. It is a plant many people battle to keep in their gardens and Recovery Group leader Bec Stanley says that “gardeners know how tricky kakabeak can be to keep in the garden, it is very susceptible to all manner of pests, which fairly accurately mimics the fight it has for survival in the wild”. Oddly, it seems to do best in the South Island, particularly in Southland, where many fine plants now grow, and where it often gets sprinkled with snow.

Because genetic diversity is important in conserving kakabeak having one in your garden is not enough to save the species. Plants grown in gardens are invariably raised by cuttings (not seed) and most of the *C. maximus* cv. Kaka King sold today originate from a single plant collected from the Waipare Highlands in the 1980s. Thus their contribution to the species long term survival is minimal. Furthermore cultivated lines from cuttings (clones) and accidental and deliberate selection often end up severely bottle-necked, ideally suited for gardens where water is guaranteed, diseases (mostly) held at bay, and browsing animals avidly controlled. So garden plants, while better than nothing, have usually lost critical genetic diversity and are unlikely to adapt to wild conditions as well as might be hoped. However, far from dissuading people growing kakabeak Bec advocates it for one very important reason “If everyone had a kakabeak, and told 3 people about how rare it was in the wild, we’d be winning. The answer to saving kakabeak in the wild is involving the community and enthusing people to help”.

A Wollemi Pine Tribute to David Given

On behalf of Wollemi Australia (the company licensed by the Royal Botanic Gardens Sydney to propagate and market the Wollemi Pine), we would like to pay tribute to Dr. David Given.

David first contacted our organisation in early 2004 to investigate the possibility of acquiring a Wollemi Pine for display at the Christchurch Botanic Gardens. David was very passionate about the Wollemi Pine and despite the anticipated hurdles he volunteered to lead the charge in terms of soliciting the necessary approvals to import the ancient Pine to New Zealand.

David was tireless in pursuing the relevant authorities, using his connections and experience to pave the way for the introduction of the Wollemi Pine which would set a major precedent for other new plant introductions in New Zealand. To recognise David's commitment to the Wollemi Pine, a grove of five trees that were auctioned by Sotheby's in Sydney in October were named in his honour and all the proceeds (\$A15,300) donated to the New Zealand Plant Conservation Network. Just prior to David's sad passing, he advised us that the Environmental Risk Management Authority (ERMA New Zealand) had approved the importation of the Wollemi Pine. The only step remaining is for the Ministry of Agriculture and Forestry (MAF) protocols to be finalised.

We are hoping that the Wollemi Pine will be available to the New Zealand public by 2007. The introduction of the Wollemi Pine will mark the first time a new plant has been introduced to New Zealand since 1998. We would like to extend our deepest sympathies to David's family and friends for the loss of such an inspirational man. The introduction of the Wollemi Pine to New Zealand (a relative of the local Kauri Pine) is David's legacy for plant enthusiasts in the country and will be a constant reminder of David's passion for the need to conserve threatened plant species globally.

For information about the introduction of the Wollemi Pine to New Zealand, please contact Greg Kitson from Ambrosia Nursery on ggreg@ambrosia.net.nz and visit www.wollempine.com.

Fantastic West Coast mistletoe

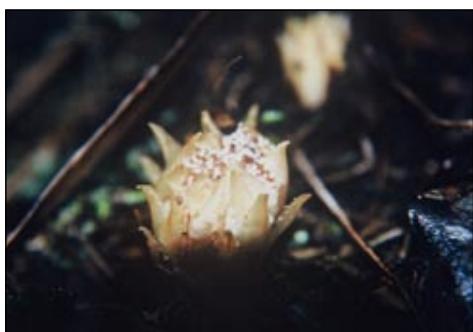


Fiona Bockett with *Peraxilla colensoi*.

Possum control is brightening South Westland's forests with a festive splash of red along this summer holiday season. Department of Conservation ecologist Fiona Bockett says that this is the best mistletoe flowering since the summer of 1999/ 2000. "A spectacular mistletoe flowering can be seen all along State Highway 6 in South Westland from Paringa south to the Haast Pass," Ms Bockett said. Prior to the introduction of possums mistletoe would have been a very common sight around Christmas throughout New Zealand's beech forests. Today it can only be easily seen in mistletoe strongholds like South Westland. Ms Bockett said monitoring this week in the Haast Valley has confirmed that scarlet mistletoe are in good condition inside possum control areas. But, few intact mistletoe plants remain in areas where possum numbers are high. The mistletoe flowering is a bonus for forest birds like tui, bellbird, and kaka which feed on mistletoe nectar. Mistletoe is not the only plant flowering well this year. All beech species and kamahi have also flowered heavily on the West Coast this year.

Future management of *Dactylanthus taylorii*

Graeme La Cock, *Dactylanthus* Recovery Group leader.



Dactylanthus taylorii.

Photo: © Department of Conservation.

Many of us that work with dactylanthus see it as the kiwi of the plant world i.e., a population dominated by old individuals, with very few young being recruited to the system. Collection for wood roses used to be a major problem, but this has slowed down. However, possums still see it is an ice-cream plant and are considered the primary threat to recruitment. Without active management there is virtually no chance of seed set. The focus of the recently published “*Dactylanthus taylorii* Recovery Plan, 2004-2014” by the Department of Conservation (www.doc.govt.nz/Publications/004~Science-and-Research/Biodiversity-Recovery-Unit/PDF/tsrp56.pdf) is on improving the chances of this recruitment. The long-term goal of the plan is to have at least 15 populations with 500 clumps and at least 100 females in each.

The cover photo of the recovery plan is of a tuber with a bud from a seeding trial at Waipapa. This is indicative of the progress that has been made by this group since the publication of Chris Ecroyd's original recovery plan in 1995. The review of this original plan by Avi Holzapfel has also just been published by DOC (www.doc.govt.nz/Publications/004~Science-and-Research/DOC-Research-and-Development-Series/PDF/drds224.pdf). The new recovery plan was based on this review. I believe it's a good model for others working on threatened plant recovery groups. Both documents are available free through the links provided, or through the publications group at DOC's Head Office. If you have any queries about dactylanthus or the work of the recovery group please contact me at glacock@doc.govt.nz, or your local DOC office in the North Island.

Can you help provide images of Dicot trees and shrubs for the website?

We are seeking images for the following plant species to plug gaps in the Network website fact sheets. If you can help, please send them through to the Network (info@nzpcn.org.nz) or to John Sawyer (jsawyer@doc.govt.nz).

The list of Dicot trees and shrubs for which images are required:

<i>Alseuosmia banksii</i> var. <i>linearifolia</i>	<i>Hebe colensoi</i>
<i>Brachyglottis bifistulosa</i>	<i>Hebe corriganii</i>
<i>Carmichaelia astonii</i>	<i>Hebe crenulata</i>
<i>Coprosma pseudociliata</i>	<i>Hebe divaricata</i>
<i>Coriaria sarmentosa</i>	<i>Hebe haastii</i>
<i>Dracophyllum longifolium</i> var. <i>cockayneum</i>	<i>Hebe laingii</i>
<i>Dracophyllum longifolium</i> var. <i>septentrionale</i>	<i>Hebe leiophylla</i>
<i>Dracophyllum palustre</i>	<i>Hebe macrantha</i> var. <i>brachyphylla</i>
<i>Dracophyllum pearsonii</i>	<i>Hebe mooreae</i>
<i>Dracophyllum politum</i>	<i>Hebe murrellii</i>
<i>Dracophyllum rosmarinifolium</i>	<i>Hebe paludosa</i>
<i>Dracophyllum townsonii</i>	<i>Hebe rakaiensis</i>
<i>Dracophyllum urvilleanum</i>	<i>Hebe recurva</i>
<i>Gaultheria rupestris</i>	<i>Hebe rupicola</i>
<i>Hebe amplexicaulis</i> f. <i>hirta</i>	<i>Hebe stenophylla</i> var. <i>oliveri</i>
<i>Hebe angustissima</i>	<i>Hebe stricta</i> var. <i>lata</i>
<i>Hebe benthamii</i>	<i>Hebe strictissima</i>
<i>Hebe brachysiphon</i>	<i>Hebe truncatula</i>
<i>Hebe cockayneana</i>	<i>Helichrysum selago</i> var. <i>acutum</i>

<i>Heliohebe hulkeana</i> subsp. <i>evestita</i>	<i>Olearia polita</i>
<i>Heliohebe pentasepala</i>	<i>Pimelea concinna</i>
<i>Hoheria populnea</i>	<i>Pimelea crosby-smithiana</i>
<i>Homalanthus polyandrus</i>	<i>Pimelea poppelwellii</i>
<i>Metrosideros parkinsonii</i>	<i>Pimelea sericeovillosa</i>
<i>Myrsine coxii</i>	<i>Pimelea urvilleana</i>
<i>Olearia colensoi</i> var. <i>argentea</i>	<i>Pomaderris amoena</i>
<i>Olearia coriacea</i>	<i>Solanum aviculare</i> f. <i>aviculare</i>
<i>Olearia lyallii</i>	<i>Sprengelia incarnata</i>
<i>Olearia oporina</i>	

Threatened plant calendar for sale

MWH - New Zealand have recently published a beautiful threatened plant calendar for 2006. This was prepared in conjunction with the Network. MWH is supporting the New Zealand Plant Conservation Network in 2006 in its aims to encourage regional threatened native planting initiatives within local communities. As a staff-owned engineering and environmental consultancy much of their work involves the restoration or mitigation of planting as part of infrastructure development. This means that many areas of their business can play a part in encouraging the planting of threatened species. Copies of the calendar are available for sale from the Network price \$5 incl. postage. Email the Network at info@nzpcn.org.nz and post cheques to P.O. Box 16-102, Wellington.

Flora of Aotearoa/New Zealand 2006

(Summer course At Waikato University (Department of Biological Sciences):

Enrol now for 10–24 February 2006

Open to students with genuine botanical interests in the following three categories:

- Students completing first year biology and intending to major in plant biology
- Second and third year plant biology students
- Others with a background in horticulture or botany (will be admitted at discretion of Course Coordinator)

The course begins with a weekend field trip where a wide range of plant species and habitats will be studied. This is followed by two intensive weeks of lectures and labs at the University, after which students will be expected to complete an individual assignment. The course is internally assessed and final results will be available mid-year.

Topics covered during the course include:

- The origin of New Zealand's unique flora
- The basics of plant taxonomy
- Modern methods of plant classification and identification
- Field identification of plants
- Harakeke: tikanga and raranga

What to do now

Obtain a **FLORA ENROLMENT FORM** from the Dean's office (F1.07) or the Biology Office (E2.20). Forms must be signed and stamped by Dr. Chrissen Gemmill (R2.12) or Dr Bruce Clarkson (E2.20) before enrolment can proceed.

Enquiries to:

Dr. Chrissen Gemmill, email c.gemmill@waikato.ac.nz (phone 07 838 4053) Dr. Bruce Clarkson, email b.clarkson@waikato.ac.nz (phone 07 838 4237) Or contact the Department of Biological Sciences (phone 07 838 4022), Waikato University, Private Bag 3105, Hamilton

Plants as Infrastructure – Royal New Zealand Institute of Horticulture Conference, 24–25 March, 2006

You are invited to attend a conference at Unitec, Mt Albert, Auckland, 24–25 March, 2006. ‘Unitec, Auckland local government, the Royal New Zealand Institute of Horticulture and the New Zealand Institute of Landscape Architecture are coming together to consider the vital topic of plants as infrastructure in our cities. The conference will showcase several green infrastructure projects, with a focus on matching theory with innovative best practice. Topics will include: water, weeds, trees, teams, planning, design and management.

Our keynote speaker will be Joan Nassauer, Professor in Landscape Architecture at Michigan University. Joan’s expertise in water management is at a wide variety of scales, including peri-urban, suburban and fully urban areas. The programme will consist of invited papers, oral papers, poster presentations and fieldtrips. Enquiries to: pcliffin@unitec.ac.nz. There will be a range of fieldtrips available to visit initiatives around greater Auckland, with a possible post conference tour to Tiri Tiri Matangi Island. This conference will be of interest to greenspace managers, landcare groups, planners, landscape professionals, horticulturists, ecologists, students, educators and local body politicians.

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):

Waikato Botanical Society – Field trip Saturday/Sunday 21 & 22nd January. Droseras to Peraxillas Waitaanga Forest and NG Tucker Reserve

Ever wondered about the big swampy plateau land between Ohura and SH3 in the southern King Country? Take this opportunity to investigate some of this fascinating area for two days with Barry Hartley, renowned New Plymouth naturalist, to guide us. It is an area renowned for rain so wet weather gear may be essential and R18, 1:50,000 is the Topo map for here. Accommodation is available at \$10pp/night. Cooking facility: an oven with 3 elements, toaster, electric kettle. There is some cutlery, crockery, pots and pans. One shower and one bath, two toilets. Trip limited to 10, one room sleeps 3, rest 2's. You will need sleeping bags, pillows, towels and all food, absolutely no shops available. Contact: Jane Hart ph. 06 752 3688 or jane.hart@xtra.co.nz please RSVP for accommodation arrangements and location details. Meet: Friday night 20 Jan, at the farmhouse accommodation on SH40, Waitaanga

Wellington Botanical Society Field trip: Saturday 21 January: Gilberd Bush reserve

Botanise this WCC reserve in Newlands, high on the Ngauranga Escarpment, and possibly Seton Nossiter Park, Mark Ave, Paparangi, Wellington. MEET: 9 a.m. Bayswater Place, off Baylands Drive, Newlands. CO-LEADERS: Mick Parsons ph 473 1142 and Robyn Smith ph 236 6086.

Wellington Botanical Society Field trip: Saturday/Sunday 4/5 February: Paton's Bush, Wairarapa

Day 1: Botanise Clive Paton's covenant in the Wairarapa. See regenerating kanuka and totara, with a range of broadleaf species on the flats, and forest species at the top and bottom of a steep terrace with drought-tolerant shrubs, ferns and herbs on its face. The upper portion of the stream contains mostly broadleaf forest, with nagi and kowhai prominent, while in the lower reaches kahikatea, matai and totara share dominance on any one part of the river flat. MEET: 9 a.m. at Dorset Square Native Reserve, cnr SH2 and Moore St, Featherston. ACCOMMODATION: Clive Paton's two-bunk bach and tenting space tba. In the event of poor weather we will seek woolshed accommodation. Pot luck dinner. Check website for final details. MAP: S27. LEADER: Tony Silbery 06 372 5620 (h), 06 375 8004 (w).

Day 2: In Aorangi Forest Park see uncommon plants of Wellington Conservancy; e.g. *Anemanthele lessoniana*, *Hymenophyllum cupressiforme* and *Doodia mollis* plus others. Also a good chance to get acquainted with the Cyperaceae family which is well represented in the area. This is a fairly steep-sided valley. Access can be made shorter if you have a 4WD or car with reasonable clearance but walking ok. LEADER: Pat Enright ph 06 308 8278 (h), 495 0786 (w). Wellington contact for both trips: Sunita Singh 04 387 9955.

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At Unitec, Mt Albert, Auckland. ‘Unitec, Auckland local government, the Royal New Zealand Institute of Horticulture and the New Zealand Institute of Landscape Architecture are coming together to consider the vital topic of plants as infrastructure in our cities. The conference will showcase several green infrastructure projects, with a focus on matching theory with innovative best practice. Topics will include: water, weeds, trees, teams, planning, design and management. See earlier article in Newsletter.

20th NEW ZEALAND FUNGAL FORAY - WESTPORT, West Coast, South Island, New Zealand 7–13 May 2006

The **20th New Zealand Fungal Foray**, and the inaugural meeting of the **Fungal Network of New Zealand** will be held at the Westport Field Station from 7–13 May 2006. The Field Station is run by the University of Canterbury. We will have access to the teaching laboratory (with lecture room) and associated accommodation for 36 people in 9 bunkrooms. In addition we have booked the research laboratory with a suitable workroom and 3 additional double bedrooms. See wwwffc.canterbury.ac.nz/westport.shtml. Please complete the registration form (copies of this form are available from <http://wwwfunnz.org.nz>) and mail by 31 March 2006 to: Paula Wilkie, Landcare Research, Private Bag 92170, Auckland, New Zealand. For New Zealand participants please provide a deposit of NZ\$50 per person: Cheques payable to ‘**Fungal Network of New Zealand**’, or by Direct Payment of NZ\$50 to the FUNNZ account: ASB acc. no. 12-3086-0214758-00. If paying by direct transfer, please ensure that your name and “Foray2006 registration” appears on the Payee’s (recipient’s) statement.

8th International Mycological Congress (IMC8)

Mycological Congresses are held in different parts of the world every 4 years, but never before in the Southern Hemisphere. Next year is our opportunity for several New Zealanders to participate in IMC8 at Cairns, Queensland, on 20–25 August 2006. For details of the programme, registration, associated workshops, etc, please see their website <https://www.sapmea.asn.au/imc8>

New Zealand mycology symposium

Following soon after IMC8 there will be a two-day conference in Auckland to take stock of our knowledge of New Zealand fungi. This is still being planned and notification of its timing, programme, and location will be advised early 2006.