



# 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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Deadline for next issue: Monday 14 August 2006

## Message from the President

What are you going to do on New Zealand Native Plant Day? Have you made any plans? Will it be a special community effort or will you just get some more work done on that magnificent plant project? You don't know the date for 2006? Well there is no date and this is just a suggestion. What do you think about the idea of establishing a day in the yearly calendar that is special for the New Zealand Flora? What do you think about the idea of having a New Zealand Native Plant Day—or a week for that matter? As a suggestion (if it were to be a dedicated day) it could be on the day we announce the results of the annual vote for New Zealand's most favourite native plant. This year that will take place during the Conference— and you all know when that is.

So—please let me know what you think about the idea. I am very grateful for the feedback that I do receive from members. Bu the way, the 2006 annual vote for the most favourite New Zealand Native Plant will be launched during conservation week (7–13 August).

You would not have known the date for the New Zealand native plant day but you will know what is the most visited plant information system in New Zealand. It is astonishing that there have been over 10 million hits on the Network web site in the few short years that it has been in existence. This is surely proof of the value of the site and also suggests that there is a tremendous interest in our native flora. On average, about a 1,000 people a day a using the site. But there is more. There are improvements to the web site and so we go from strength to strength as you will read below.

The results of a major project have become available and that is an updated version of the vascular plant checklist. This is indeed a timely and very significant milestone. It will prove to be an extremely valuable resource and I am sure that everyone will obtain a copy. Talking about publications, you will have perhaps already heard about the book 'An Illustrated Guide to New Zealand Hebes'. What a wonderful book that is—and it would make an equally wonderful present.

And finally, talking about books—a way back in last December I offered to give away a copy of 'Going native' to the person sent in the most interesting contribution to the Newsletter during the first half of 2006. You have one last opportunity to enter and that is by Monday 14 August! There is a Council Meeting on 18 August and at that time we will identify the winner. So, please—we need to hear about your projects. The length of the contribution is not important—it could be one short interesting paragraph. Please share your news! Have a go!

*Professor Ian Spellerberg, Lincoln University*

## Plant of the Month

Plant of the month for July is the kowhai (*Sophora* spp.). In 2005, kowhai was voted as New Zealand's second most favourite plant. If it had not been for overseas votes it would have easily won the competition reflecting New Zealanders love of the plant. There are 8 distinct kowhai taxa: *Sophora chathamica*, *Sophora fulvida* (Gradual decline),



*Sophora prostrata*. Photo: Jeremy Rolfe.

*Sophora godleyi*, *Sophora longicarinata* (Range Restricted), *Sophora microphylla*, *Sophora molloyi* (Range Restricted), *Sophora prostrata* and *Sophora tetraptera*. These are all Dicot trees and shrubs and are all endemic. The main threat facing all wild New Zealand kowhai species is the risk posed through planting for revegetation and horticultural purposes of hybrid material. Use of foreign species, such as the Chilean Pelu (*S. cassioides*), and also of native kowhai species outside their natural range also pose a threat. The Network fact sheets may be found at the following links:

*Sophora chathamica*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=1332](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=1332)

*Sophora fulvida*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=212](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=212)

*Sophora godleyi*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=1333](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=1333)

*Sophora longicarinata*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=699](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=699)

*Sophora microphylla*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=1334](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=1334)

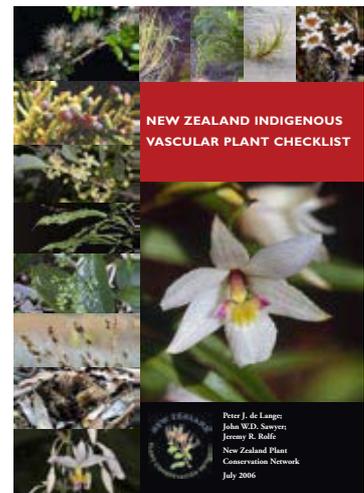
*Sophora molloyi*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=700](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=700)

*Sophora prostrata*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=1335](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=1335)

*Sophora tetraptera*: [http://www.nzpcn.org.nz/vascular\\_plants/detail.asp?PlantID=1336](http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=1336)

## New Zealand vascular plant list – new version

The Network has just published an updated version of its vascular plant checklist. This list has been compiled largely by Vice President Peter de Lange. This list includes the names of all 2352 indigenous vascular plants, their families and chromosome numbers and indicates whether or not they are endemic. This is a substantial revision of the 2005 list. Network members can download the list for free as a pdf file from the website or can order a hard copy by emailing the Network at [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz) and posting a cheque to the Network (\$12 including postage). Non-members can order a hard copy only by posting a cheque to the Network (\$20 including postage). This list will be valuable to anyone involved in plant conservation, botany, horticulture or plant research.



## Network website changes

This last month, the Network website passed through 10 million hits making it the most visited plant information system in New Zealand. We continue to improve the site and make it more useful for members. Some changes and developments that have occurred this last month are:

- An author field has been added to the Publication search engine. So you can type your name in and see if we have any of your plant lists or reports online. If you want to add publications to the database please send them as pdfs. [www.nzpcn.org.nz/newsletter\\_publications/index.asp](http://www.nzpcn.org.nz/newsletter_publications/index.asp)
- An animal pest database has been added. This has fact sheets for many of the animal pests that affect native plant life. We welcome photos of damage to native plants caused by a known pest [www.nzpcn.org.nz/animalpests/index.asp](http://www.nzpcn.org.nz/animalpests/index.asp)
- A tool has been added to search the threatened fungi database by place name. So for example, if you type in Canterbury into the District field you will get all the threatened fungus that occur there. [www.nzpcn.org.nz/fungi/advanced\\_search.asp](http://www.nzpcn.org.nz/fungi/advanced_search.asp)
- A threatened moss and liverwort (bryophyte) database (under Threatened Species) has been added. Members can search fact sheets for all our threatened bryophyte taxa. The fact sheets will be completed over the next 12 months. [www.nzpcn.org.nz/liverwort/advanced\\_search.asp](http://www.nzpcn.org.nz/liverwort/advanced_search.asp)
- A link has been added to all plant fact sheets for species sold by Oratia Plant Nursery (one of our Network Sponsors) to their website.
- Text describing “What’s a moss” has been prepared by Peter Beveridge and added along with photos by Bill Malcolm. See <http://www.nzpcn.org.nz/mosses/index.asp>
- A link has been added at the top of the plant fact sheets to allow you to email the page link to other people. This is entitled “Email this page to a friend”

Feedback on the website may be sent to the Network at [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)

## An Illustrated Guide to New Zealand Hebes

### TE PAPA PRESS - New book announcement - An indispensable guide to hebes

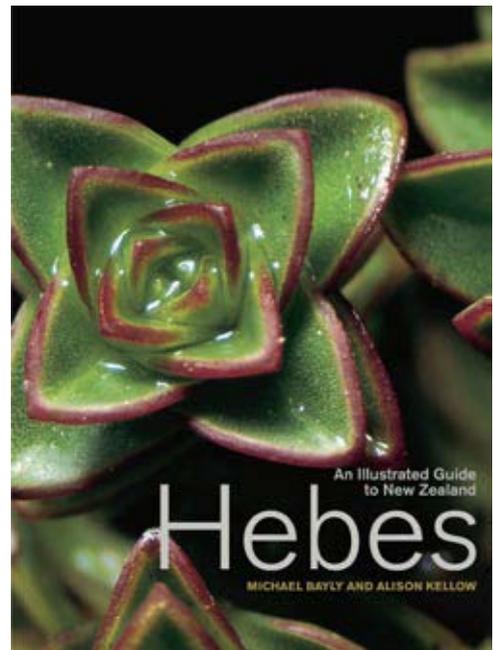
Author/Editor: Michael Bayly and Alison Kellow with contributions from Phil Garnock-Jones, Peter de Lange, Ken Markham and Patrick Brownsey and photography by Bill Malcolm.

NZ RRP (incl. GST): \$99.99 – Publication date: July 2006

This book is the most comprehensive guide yet to the identification, classification, and biology of the flowering plant genera *Hebe* and *Leonohebe*. Hebes are grown throughout the world. Of 88 wild species, all but three are endemic to New Zealand. This book focuses on hebes found in the wild and provides keys to identify all taxa—88 species of *Hebe* and five of *Leonohebe*. For each species, the book dedicates two pages of detailed information, photographs, and distribution maps. General chapters discuss evolution, reproductive biology, conservation, and other topics. This is an indispensable reference for professional botanists, conservation managers, gardeners, students, and plant photographers.

**About the authors:** Mike Bayly and Alison Kellow have written many scientific papers on the classification and evolution of Hebe. The pair researched and wrote *An Illustrated Guide to New Zealand Hebes* while employed as Research Scientists at the Museum of New Zealand Te Papa Tongarewa. Currently, Mike is a Research Fellow at the University of Melbourne's School of Botany and Alison is a Research Scientist at Te Papa. They are married and live in Melbourne with their daughter Frances.

Extent: **350 p HB. Contains c. 100 full-page colour plates and distribution maps, c. 50 line drawings.** Format: **285 x 205 mm. ISBN: 0909010129**



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### **Special Offer 10% Discount for *Trilepidea* readers**

Offer closes 31 August 2006

Name: \_\_\_\_\_ Credit card: Mastercard / Visa / Amex / Diners (circle one)  
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Delivery Address: \_\_\_\_\_ Cheques made out to Te Papa

*An Illustrated Guide to New Zealand Hebes* \$99.99 incl. GST

10% discount \$10.00	\$89.99	Qty _____	x \$89.99	_____
		P&P		\$ 5.00
		Total		_____

Te Papa Press: Tel 04 381 7470, Fax 04 381 7280, Email [TePapaPress@tepapa.govt.nz](mailto:TePapaPress@tepapa.govt.nz)

## Unsung heroes save plant from imminent extinction

The coastal peppercress (*Lepidium banksii*) was so poorly known that when Harry Allan undertook his treatment of the genus for Volume I of the Flora of New Zealand series he was reduced to quoting Thomas Kirk's original description without any further comment. He had seen no recent gatherings and he did not know the species. *Lepidium banksii* was subsequently rediscovered in the Abel Tasman National Park by Allan Esler in 1963, and later during a survey of the Waimea Estuary, Nelson, another population was found by Department of Conservation botanist Shannel Courtney. By 1990 only 26 plants were known from the wild. Shannel Courtney and another Department of Conservation botanist Simon Walls have been battling to prevent this unusual peppercress from going extinct. It's an incredible story...



*Lepidium banksii*.  
Photo: Gillian Crowcroft.

Coastal peppercress (*Lepidium banksii* Kirk: Brassicaceae) is perhaps the most threatened of New Zealand's of 11 indigenous species. Kirk described the species from material collected by French explorers during the Dumont d'Urville survey of the coastline of what is now the Abel Tasman National Park. He also recorded its presence in the Marlborough Sounds. The species is superficially similar to Cook's scurvy grass/nau (*L. oleraceum* Sparr. ex G.Forst.) but has notably darker green consistently deeply toothed leaves, the plants die back completely to the root stock in winter, and the seed pods (silicles) are much larger, distinctly broadly ovate with the apex deeply notched. The pedicels are conspicuously covered in clavate hairs.

Since Kirk's description the species remained known only from the original French gatherings and also those made in the late 1800's by Rutland and McMahan from Pelorus and Kenepuru Sounds. Although it has never been seen in the Marlborough Sounds since, it was discovered by botanist Alan Esler near Totaranui in 1963. Esler did not know his specimens were *L.*

*banksii*—he called them *L. oleraceum*—and their identity remained unknown until the New Zealand lepidia were being revised by Phil Garnock-Jones for his Flora 4 treatment of indigenous and naturalised Brassicaceae. A quick survey rediscovered plants along the coastline north of Totaranui, and at about the same time the species was found by Shannel Courtney during a survey of the vegetation and fauna of the Waimea Estuary near Nelson.

The conservation of the species has been particularly frustrating for this plant perhaps more than any other of currently accepted 11 indigenous lepidia seems to want to go extinct. Plants are prone to a wide range of introduced plant pests and pathogens, are extremely difficult to maintain in cultivation (best treated as an annual) and have proved well nigh impossible to plant out successfully in the wild.

The plight of the species was so bad that by 1990 only 26 plants were known from the wild, the all time low of 22 was reached the following year. In 1994 Simon Walls was delighted to find a large natural population (450 plants) growing on sand dunes at remote Mutton Cove. Sadly so were—of all things—the local wild pigs, within months none were left at this site. The battle to save the plant continued, various low lying islets, rock stacks and islands were commandeered across the Tasman Bay, with plants optimistically planted out each year. All died, some within weeks, all within a year. By 2000 it was agreed that the strategy of growing plants up and planting these out was doing little for the species. A new tactic was trialled, Simon Walls armed with a grubber, a bag of seed and lots of optimism, sallied forth along the Abel Tasman coastline looking for sites where seals, shags, penguins, terns or gulls congregated. Often forced to construct mini walls from the hard granite

rock on otherwise improbably steep cliff faces, he grubbed out weeds, scratched the ground to gather enough of the coarse soil, and scattered handfuls of seed. Within weeks his efforts produced seedlings and miraculously at most sites these grew. By 2003 Walls efforts had produced 265 plants. By 2005 there were 183 wild plants. Though numbers vary the species appears to be holding it sown and some natural recruitment is now taking place. Oddly Walls found that during drought years the species did the best, wet summers appear to favour rank weed growth and disease. Walls is modest of his work "Its only gardening but in what a landscape!". What is clear is that gardening or not, without this dedication the species would now be extinct. There are no naturally occurring wild plants left, all that are known are the product of Walls, Courtney's and other Motueka based Department of Conservation staff efforts. While numbers continue to fluctuate the methodology adopted has proved sufficient to maintain the species until other more long-term techniques can be trialled.

Currently the efforts of these two men are now the subject of a four year genetic study being undertaken by Landcare Research. It is hoped to DNA finger print every plant, and to use this information to determine the level of genetic variation in the species. From that information the Department of Conservation hopes to mitigate against any future potential loss of genetic variability. The funny thing about this is that almost no one in New Zealand knows about this conservation battle. Yet the coastal peppercress, despite its non-assuming character is every bit as important to global diversity as many other high profile animals whose conservation is backed to the hilt by sponsors and conservation resources. Funny how two men, a grubber, and lots of dedication have prevented yet another unsung plant extinction.

### **Register now for the Network Conference 2006**

See the Network website (under Conservation info>Events>Conference) for more details and to download the registration form. A full programme will be available in the near future.

**When:** Monday 20 – Wednesday 22 November 2006 (including field trip)

**Where:** Conference Centre, University of Auckland

This year's Network conference will be the Cheeseman Symposium 2006—to celebrate the centenary of the publication of the first full flora treatment to be published by a resident New Zealand botanist, Thomas F. Cheeseman's *Manual of the New Zealand Flora* (1906). This will be held in conjunction with the New Zealand Botanical Society, Auckland Museum, Auckland Botanical Society, Landcare Research and the University of Auckland.

### ***Callitriche* specimens required**

Peter Raven and his team are doing comparative work on genes in *Callitriche*, and in this connection would like to have a few samples from the rather distinct species that occur in the Southern Hemisphere. For now, they simply want several (or more) strains of *Callitriche* to see if differences can be picked up in the genes being surveyed. If you are willing to help please collect some vegetative material and put it into a sealed plastic bag with silica gel and post to Phil Garnock-Jones. Peter suggests the material should be blotted dry first, and naturally also requires a voucher herbarium specimen to stand as a permanent record of the DNA sample. Any costs can be reimbursed. If you see *Callitriche* in your travels please try to make a collection for this project. If you need assistance or silica gel please contact Phil Garnock-Jones (see contact details below). Please note, you will require a permit for plant collection from land administered by the Department of Conservation.

Phil Garnock-Jones, P.O. Box 600, Wellington, New Zealand

Tel: +64 (04) 472 1000. Email: [Phil.Garnock-Jones@vuw.ac.nz](mailto:Phil.Garnock-Jones@vuw.ac.nz)

## 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)):

### **Auckland Botanical Society. Evening talk by Leon Perrie: The demise of *Polystichum richardii*, and hen & chicken ferns galore**

**5 July:** Evening meetings - 7.30 pm, Unitec School of Natural Sciences, Pt Chevalier. Contact: Maureen Young, [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz) (09) 4257162.

### **Wellington Botanical Society. Evening meeting – The genus *Aciphylla***

**Monday 17 July:** Speaker: David Glenny, Landcare Research. A brief overview of the genus, including new evidence on the moa-browsing hypothesis. Then discussion of the taxonomic problems within the *A. monroi* group of eight species, relating to geographic variation, particularly north-south and east-west clines. Victoria University, Wellington, Lecturer Theatre M101, ground floor Murphy Building, west side of Kelburn Parade. Enter building off Kelburn Parade about 20m below pedestrian over bridge.

### **Botanical Society of Otago. Evening talk Native biodiversity on farms and other privately owned land in Otago**

**Wednesday 19 July:** Start time: 5:20 PM. A talk by Aalbert Rebergen, Biodiversity Officer, Otago Regional Council on “The voluntary protection of native biodiversity in general and botanical values in particular, on farms and other privately owned land in Otago”. At the 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 to get in and go to the Benham Seminar Room, Rm. 215, 2nd floor. Please be prompt as we have to hold the door open. Contact [Allison Knight](mailto:Allison.Knight@otago.ac.nz), phone: (03) 479 7577.

### **Auckland Botanical Society. Evening talk by Peter Johnston: Subantarctic islands - sea lions, rata forests and fungi**

**2 August:** Evening meetings - 7.30 pm, Unitec School of Natural Sciences, Pt Chevalier. Contact: Maureen Young, [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz) (09) 4257162.

### **Botanical Society of Otago. Lichen field trip to Sutton Salt Lake with David Galloway**

**Saturday 5 August:** Start time: 9:00 AM. Led by David Galloway, author of the Lichen Flora of New Zealand. Orange Caloplaca on the shores of this lake are remarkably similar to coastal Caloplaca, while the schist tors bear rich communities of large foliose and smaller crustose lichens. Definitely bring a hand lens, or contact Allison Knight, 487 8265, if you would like to buy one. Contact [Allison Knight](mailto:Allison.Knight@otago.ac.nz), phone: (03) 479 7577.

### **Wellington Botanical Society Field trip. Queen Elizabeth Park, Mackays Crossing**

**Saturday 5 August:** See some of the surviving native dune plants, visit the nursery and consider the challenges faced by Greater Wellington Regional Council in managing the dune ecosystems. Possibly botanise Poplar Avenue wetland. MEET: 9.00 a.m. at Ranger Station Mackays Crossing entrance to Queen Elizabeth Park. LEADERS: Chris Horne 475 7025, Barbara Mitcalfe 475 7149.

## **Waikato Botanical Society. Protected significant trees of Hamilton City & Botanical Society Native Threatened Plant Collection working bee #3**

**Sunday 6 August.** Have you hugged a significant tree lately? A guided visit to see some of the protected native and exotic trees along the Waikato River in Hamilton's city centre. Helen Bailey from the Hamilton City Council will talk about the significant trees register and how the assessment process is carried out to include trees valued for their ecological, botanical and amenity contribution to the community. After lunch a further working bee to weed, plant and propagate in the Society threatened plant collection. Bring your old gardening clothes. Contact: Liz Grove ph. 07 846 0965 (hm) or [eg3@waikato.ac.nz](mailto:eg3@waikato.ac.nz) Meet: 9.30am University of Waikato Gate 9, from here we will proceed to the River walk near the central city returning to the threatened plant garden site in the glasshouse compound at the University at 1pm.

## **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 2 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.

## **Seminar Series at the Stout Research Centre for NZ Studies**

### **Winter Wednesday Seminar Series for 2006**

## **Botany in Aotearoa**

- |                    |  |
|--------------------|--|
| <b>26 July</b>     | <b>Philip Simpson:</b> Pohutukawa and rata, New Zealand's iron-hearted trees.                                    |
| <b>2 August</b>    | <b>John Dawson:</b> How to Survive in Cold High Places: New Zealand Alpine Plants.                               |
| <b>9 August</b>    | <b>Leon Perrie:</b> Ferns in New Zealand: Botanical and Cultural Icons   |
| <b>16 August</b>   | <b>Wendy Nelson:</b> Seaweeds in NZ – intriguing stories and a fascinating flora.                                |
| <b>23 August</b>   | <b>Carol West:</b> Why worry about weeds?  |
| <b>30 August</b>   | <b>Maggy Wassilieff and Mel Lovell-Smith:</b> “Cultivating our natives”  |
| <b>6 September</b> | <b>John Sawyer:</b> “Plant conservation in the new millennium and the role of the NZ Plant Conservation Network” |