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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 68. JULY 2009 Deadline for next issue: Friday 14 August 2009

Message from the President

The Network Council met in Wellington Thursday 16 July and, as usual, I would like to report briefly on the main items of discussion. We received a report from Eric Scott on the status of our membership. It currently stands at 407 (=582 people because of corporate and NGO members) and is slowly increasing. However, we should be able to increase this given what the Network offers for a small subscription. We have had a poster produced (thanks largely to the efforts of Sarah Beadel) that is to be used to advertise the Network. This will be distributed electronically to all members very soon and, in addition, we will have some A3 versions printed. Please make good use of these posters and help us to advertise the Network. Looking ahead, we are planning to have the 2009 AGM in Auckland in late October or early November. At the same time as the AGM, we plan to have a lecture or some kind of event and the topic may well be 'ecosourcing'. You will see from the contents of this newsletter that this topic is the focus of much attention. Looking further ahead, we plan to have a Conference in 2010 (the U.N. Year of Biological Diversity). A small group of Council Members is to prepare a proposal in which they will consider the location and the main theme. If you have any suggestions about location or theme, please let me know or contact any member of Council.

The main item for discussion at the Council Meeting was the NZPCN Strategy for the next five years. By way of explanation, the Network Conference held in Wellington last year, marked the end of the first five years of the Network. During those first five years, much has been achieved and, indeed, for a small and new voluntary organisation, the achievements of the Network have been outstanding. Much of the first five years was spent in addressing the 16 targets of the Global Strategy for Plant Conservation. If you are not familiar with these, then I do urge you to take a look. They are easily found on the internet or any Council Member could send you an outline of the 16 Targets. By the way, the date for completion of these targets is 2010! That makes a Conference next year all the more relevant in both a national and international context.

At that Conference in Wellington last year, we held a series of workshops in which participants were asked what they thought were the priorities for plant conservation in the next few years. We recorded all of the suggestions and these (thanks largely to Bec Stanley) have now been put into a **DRAFT NZPCN STRATEGY 2010-2015.** The content of this document is the very much driven by the membership of the Network – and indeed that is how it should be. On Thursday, we spent some considerable time working on the format of the Strategy and we will now send this out to all members for comment.

We need you to comment! We need you to identify the priority areas! Once we have your comments, we then plan to launch the Strategy later this year.

Finally I should just say that the Strategy has a large number of goals and actions. It is not expected that the Network can work on all of these actions. However, the Network can help to identify who could help to achieve these actions. As I have always said, I look forward very much to hearing from you.

PLANT OF THE MONTH – *Hebe tetragona*

Hebe tetragona subsp. *tetragona*. Photo: Jeremy Rolfe.

When traversing the mountainous areas in the central North Island you might stumble across what appears to be a small, green conifer nestled in the scrublands. In summer, however, you would be surprised to see this apparent relative of totara with little white flowers at the tips of its branches. This attractive little plant is *Hebe tetragona*, an alpine species of the well-known *Hebe* genus. There are two described sub-species, both are endemic to the North Island. *Hebe tetragona* subsp. *tetragona* is found in Raukumara, Kaimanawa, the northern Ruahine Ranges, and volcanoes of the Central Volcanic Plateau; *Hebe tetragona* subsp. *subsimilis* is endemic to the Tararua Ranges.

The similarity to conifers is so great that, in the 1830s, *H. tetragona* was apparently nearly named *Podocarpus dieffenbachii* after being sent to Kew Gardens in England and being mistaken for a conifer in the same genus as totara (*Podocarpus totara*) by distinguished scientist Ernst Dieffenbach. Botanical embarrassment was avoided, however, because another specimen, this time in flower, arrived at Kew before the mistaken identity was officially published.

Hebe tetragona, is a 'whipcord hebe' referring to their stems' tight, cord like appearance. Commonly, their small leaves are pressed hard against the stems like scales, which accounts for their resemblance to the branchlets of conifers. In *H. tetragona*, the leaves press against, and completely enclose the stem. This growth form helps reduce water loss from the leaves in the bleak mountainous environments the species commonly inhabits. The species name, 'tetragona' means four-angled, and refers to the shape of the stems in cross section .

Hebe tetragona grows best in a well-drained soil in a sunny position. It can grow to around 1 m tall and should have the stem tips pruned back when young to promote lateral branching. It can be propagated by cuttings, which is best done in late summer.

The Network fact sheets for the two sub-species can be found at: www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=2064 and www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=2403

Going Native: Growing and using New Zealand native plants

This book, edited by Network President Ian Spellerberg and the late David Given, has been reprinted (with corrections) and is now available from Canterbury University Press. Please see the end of the newsletter for an order form.

Dracophyllum longifolium var. *septentrionale* photographed on Mt Maharahara

Dracophyllum longifolium var. *septentrionale* was listed as Data Deficient in this year's New Zealand Threatened Plant List but has recently been relocated and photographed by Lara Shepherd and Leon Perrie on Mt Maharahara. Over 100 plants were found, alongside a 100 m stretch of track just to the west of the summit, within *Olearia colensoi*-dominated scrub with emergent *Halocarpus*. The tallest plants seen were about 1.5 m tall (level with the scrub's height). Images of the plant can now been seen on the Network website. The plant was listed as Data Deficient because no one had visited the site for years and more information was needed to ascertain more accurately the species' status. It is a heavily branched shrub or small tree 5–8 × 2–4 m. Branches and branchlets are very leafy, slender, spreading. Leaves are stiff at first then arching, crowded toward branch apices. More information would be welcome about other occurrences of the plant. In particular, a survey of the eastern side of Mt Maharahara would be useful. Photographs of flowering material (and collection of flowers if you have a permit) would also be useful. For more information about the tree see the Network fact sheet at: www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=105

Dracophyllum longifolium var. *septentrionale*. Above: juvenile plant; top: mature. Photos: Leon Perrie.

Editor's note: *Last month's item about ecosourcing by Pim de Monchy and the President's comments resulted in four responses spanning from personal observations to principles and good practice with respect to ecosourcing. All responses are reproduced below.*

Ecosourcing (1)

Jim Dahm, Coromandel Beachcare (jdahm@xtra.co.nz)

Further to the email from Pim de Monchy and the comments from Ian Spellerberg, I am happy to advise that Coromandel Beachcare does in fact eco-source plant material used in our restoration work and has done since we started community-based restoration of dunes in New Zealand using native vegetation 17 years ago. We have only ever used west coast spinifex on east coast on a couple of occasions—both towards end of year when our east coast stock had been used up. It's not something we lose sleep over, but certainly not something we adopt or recommend as a general practice either. Of the 750,000+ natives planted by Waikato Beachcare groups over the last 17 years most have been eco-sourced and there are no plans to change that. It is something that Environment Waikato, which runs the programme is also very strong on.

As Ian Spellerberg notes in his editorial, there are very good reasons for this. I remember a pingao provenance trial David Bergin set up at Whitianga in the mid 1990s using stock from various places around New Zealand (yes—well away from the coast to avoid cross contamination!). The difference in the performance of plants from different ecological provenances was spectacular. In terms of east coast versus west coast spinifex, I agree with Pim over the notable differences but suspect it is different conditions on the two coasts that largely drive the differences rather than different species.

On a related matter, I have been concerned in recent years with the increasing use of urea on east coast spinifex. I wonder if this is in fact an attempt to try to reproduce the west coast appearance.

Communities love it because of the vigorous response and there is no question it can be a useful one-off treatment to thicken up sparse areas (though we rarely use it these days). However, I am concerned when I hear of it being used repeatedly at sites, given our general philosophy of working with nature. East coast spinifex may look a bit washed out compared with west coast plants but that is the way it is. *Vive la différence*.

I think there should be certification for ecosourced plants. Can NZPCN get something started?

Ecosourcing (2)

Sue Jarvis (Sue.jarvis@orcon.net.nz)

I heard something recently from a person who had bought a plant from a local nursery that they were told was ecosourced, but it turned out to be a cross with a garden variety. Of course, this may have been accidental. I always quiz the garden manager, of any plant nursery where I buy natives, about how they procured them. However, we normally get plants only from the Department of Conservation Motukarara (near Christchurch) nursery because we can be pretty confident when buying plants there. There needs to be more publicity about ecosourcing since most people seem to think that all natives are equal (especially landscape gardeners, council employees, etc.). Best wishes

Ecosourcing (3)

Danielle Hancock Waitakere City Council (Danielle.Hancock@waitakere.govt.nz)

Waitakere City Council promotes eco-sourcing and, through our Green Network programme, gives out free eco-sourced plants to local residents and community groups, as well as planting them in our parks. Chris Ferkins has developed our Ecosourcing Code of Practice (see www.waitakere.govt.nz/AbtCit/ne/nativeplants.asp#ecosourcing), which is available on our website .

This Code of Practice is used by local nurseries who wish to be 'accredited' as selling certified eco sourced plants. We have only two nurseries that are currently certified and these are Oratia Native Plant Nursery (a Network sponsor) and Bilfinger Berger (a major contractor to WCC). Chris Ferkins is responsible for auditing and providing the certification to local nurseries. If you are keen to know more, please feel free to contact Chris Ferkins (Chris.Ferkins@waitakere.govt.nz) to find out more.

Ecosourcing (4): Ecosourced Waikato Ecosourcing Assurance Process

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

Introduction

Ecosourcing is the propagation of native plants from a representative sample of the local wild population. This is important where plants are intended to naturally regenerate. Ecosourcing both reinforces local populations and avoids the possibility of introducing into a population genes not naturally there. The purpose of this assurance process is to ensure the survival of genes, species and ecosystems specific to particular localities. There are many examples of genetic variation, within a species, across the landscape. (e.g., Mark 1965, Ogden 1974, Wardle 1979). Some of these variations are directly linked to environmental conditions like frost resistance or soil type (e.g., Lew et al. 1983, Greer et al. 1989, Bannister and Fagan 1989, Bannister and Lee 1989). Others are genetically distinct without obvious phenotypic differences (e.g., Harris et al. 2003). Some of these like *Sophora*, *Dianella* and *Selliera* have subsequently been recognised as distinct species (Heenan 1997, Heenan et al. 2001; Heenan and de Lange 2007). Developing sound ecosourcing practices should avoid the transfer of these genetically distinct forms outside their natural range, help maintain local character and avoid the possibility of mixing what may, in the future, turn out to be distinct species. There are also examples of the loss of genetic variability due to inbreeding depression (Hedrick and Kalinowski 2000). This has happened in natural populations fragmented and depleted by development as well as in planted or restored populations. Ecosourcing is a practice designed to avoid loss of biodiversity. It may help to consider ecosourcing as mimicking natural dispersal and ecological restoration as contributing to the restoration of natural dispersal processes.

Background

Since the retreat of ice at the end of the last glacial period 10,000 years ago, the Waikato Lowlands have supported highly productive and species rich ecosystems. With the coming of humans 800 years ago and especially with pastoral and urban development in the last 140 years, these ecosystems have been fragmented and modified. What were once, large, closely spaced interbreeding populations, are now small isolated remnants. The trend to planting natural areas with native plants for amenity, weed control, erosion reduction or wildlife habitat has the potential to improve this situation and reduce the resulting loss of biodiversity, but only if the plantings follow natural patterns and restore natural processes. In the Waikato, there are plant users who require ecosourced plants. Regional and district councils as well as Department of Conservation, property developers and industrial developers all require ecosourced plants in order to restore natural patterns and processes or mitigate various environmental effects. In addition, there is interest in ensuring that ecosourced plants suitable for local gully restorers and lifestyle block owners are available from local garden centres. This assurance process can provide assurance to all users of plants that the plants were produced following sound ecosourcing practice and genuinely represent the range of genes and characteristics naturally found in the local area. This should have the dual benefits of providing a robust assurance process for all plant buyers and providing a single assurance process for all producers, avoiding unnecessary duplication.

Guidelines

Guidelines for ecosourcing were adopted by Ecosourced Waikato in February 2004. A number of community and commercial nurseries produce plants according to these guidelines. However, there has been difficulty distinguishing between natural populations and plants naturalised from introduced stock. This is most likely with species that are common in cultivation like *Sophora* species, *Pittosporum tenuifolium, P. eugenioides, Phormium* species and *Dodonaea viscosa.* Sound ecosourcing requires seed collection procedures to be robust enough to adequately sample the local genetic variability. Ecosourcing may depend on commitment from a chain of individuals or organisations, each responsible for one's own contribution ensuring the others in the supply chain follow appropriate ecosourcing practice.

Record keeping

Record keeping is essential to sound ecosourcing. Records should be accurate, complete and secure. Records should show the location of the source, the number of parent plants and the area or distance they are spread over.

Seed collection

Ecosourcing is the propagation from a representative sample of the local wild population. In order that seed collection adequately represents the local population, two criteria must be achieved:

1. The collector must be confident that the plants whose seed is collected are natural to that area and not naturalised from planted stock or themselves planted. Parent plants meeting these requirements are typically:
    - Growing alongside others of the same species.
    - Growing alongside other species with which they are naturally associated. Within a landscape setting that suggests the seed source plant and others of the same species nearby are unlikely to have been planted. In some instances, the age/size of the parent plant may indicate that it is an "original" and has not been planted.
    - Sufficiently far from non-ecosourced plants of the same species/genus to make cross-pollination unlikely.
2. Seed collected should come from a range of plants sufficient to represent the natural diversity of the area. Requirements will vary for each species and more research is needed. However, as

a general guide, total representativeness may not be possible from a single site or a single seed collector. But if clear and honest records are kept, those selecting seed for propagation or plants for planting out can optimise the diversity by selecting from all ecosourced seed available.

Plant Propagation

The key to sound ecosourcing is sound record keeping. Propagation of ecosourced plants depends on good records at the time of seed collection. It may be wise to back up computer records and duplicate plant labels for security. Care should also be taken to ensure plants from one source are not placed adjacent to or where they can be confused with the same species from another source.

Plant procurement

1. Those procuring ecosourced plants can facilitate sound ecosourcing by ensuring that only ecosourced plants of species naturally occurring in the area they are sourced from are requested. This knowledge may come from written records or personal experience although verified by both is preferable.
2. As with plant propagation, sound secure records are the key to this link in the ecosourcing chain. When writing specifications or selecting plants, records of provenance should be checked to ensure the plants are appropriate for the intended area.
3. Care must be taken to minimise the chance of inbreeding depression in restored populations. Where the project is likely to result in an isolated population, priority should be given to maximising the number of source plants seed is collected from and introducing sufficient plants to minimise the risk.
4. It may be possible to source satisfactory quantities and appropriate species of ecosourced plants ex stock from ecosourced plant producers but, if contract growing is required, then sufficient advance warning must be allowed for the collection of suitable seed at the time it is available and for the propagation and production to the size required.

Use of ecosourced plants

Ecosourcing is particularly important where plants are intended to naturally regenerate. Planting native plants where they are expected to regenerate is in fact introducing that species into that area. Care must be taken to ensure that new species or ecotypes are not introduced into natural areas because this may likely lead to net loss of biodiversity by replacing unique local genes with ones found elsewhere.

Providing assurance

No process can guarantee absolute assurance of the soundness of ecosourcing practice. Ecosourcing always depends to some extent on integrity and trust. However, a good understanding of the importance of ecosourcing and its role in restoring natural patterns and processes is a prerequisite to sound practice. This process combines education, assessment and audit to assure those involved in ecosourcing that the previous steps in the process have followed sound practice.

Education

Ecosourced Waikato has run seed collection workshops for the past few years. These workshops focussed on successful seed collection but included a component on ecosourcing. Seed collectors, propagators and ecosourced plant propagators will be consulted to asses the level of understanding of ecosourcing and training workshops will be offered where required. There may also be a need for guidance for larger procurers of plants to ensure that their procurement process permits and encourages sound ecosourcing practice.

Assessment

Waitakere City requires completion of a questionnaire as part of its ecosourcing accreditation process. Waikato Rivercare has adopted a similar questionnaire adapted and condensed from

the Waitakere model. These questionnaires help identify the level of understanding of the plant producers and help clarify what training, if any, may be required.

Audit

In addition to the assessment, it is intended that each producer of ecosourced plants be audited at least once every three years and at critical times such as a change of management. It is important that the audit is perceptive, independent and affordable. The audit cost may be related to the number of ecosourced plants produced. The audit may be contracted to a body such as RNZIH, as Waitakere City does, or reciprocal arrangements may be made with other regions.

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Drive for plant checklists

The Network is about to go live on its website with a new map search function for locating plant checklists for sites throughout New Zealand. This will have a Google Earth map interface that will allow you to find a plant list for a particular reserve or bush fragment, wetland or dune. You will also be able to identify gaps in our database where no list has been prepared or submitted. If you have written, or know of plant lists that already exist, for reserves or natural areas in your district that we do not have please email them through preferably as pdf or Word documents. Please include the name of the author and (if possible) the grid reference of the centre of the site for which the list has been compiled. These lists will be added to the database. Lists should be sent to info@nzpcn.org.nz. If you want to search the current database use the existing search engine at: www.nzpcn.org.nz/newsletter_publications/index.asp?checklists=1

LucidKey now available for NPPA weeds

*IanPopay, Department of Conservation, Hamilton (*ipopay@doc.govt.nz*)*

A LucidKey identification key is now available for the weeds listed in the National Pest Plant Accord (NPPA) at: www.landcareresearch.co.nz/research/biosystematics/plants/nppakey/.

The National Pest Plant Accord (NPPA) is a cooperative agreement between the Nursery and Garden Industry Association, regional councils and government departments with biosecurity responsibilities. All plants on the NPPA are unwanted organisms under the Biosecurity Act 1993. These plants cannot be sold, propagated or distributed in New Zealand. If you have not come across LucidKeys before, they are an easy-to-use online keys for identifying species. Unlike ordinary keys in floras, you can start with the easiest characteristics (like flower colour, for example) and work through the other characteristics. A useful key is available for New Zealand grasses at: www.landcareresearch.co.nz/research/biosystematics/plants/grasskey/.

Are you interested in *Dactylanthus* conservation?

Dactylanthus taylorii. Photo: Nick Singers.

The *Dactylanthus* recovery group "friends" newsletter comes out periodically and is sent to volunteers who help with *Dactylanthus* management, ex-collectors and anyone interested in this curious plant. If you would like to hear updates on how you can be involved in protecting this plant, and more about management to protect this plant email Paul Cashmore, the DOC Recovery group leader, at pcashmore@doc.govt.nz asking to be added to the friends newsletter distribution list

Website upgrade – happening soon

The Network is currently redesigning its website to improve the search engines and add new features. Members at last year's Network conference in Wellington identified many of the changes that will be made. The new features include:

- A New Zealand flora search engine that will allow you to search for native and exotic vascular plant species at the same time
- A map system to search for plant lists
- A new navigation bar
- An on-line forum for members to use to discuss plant conservation issues
- An on-line payment system

As soon as the site goes live, we will advise members by e-mail. Please then help us by checking the areas of the site that you use the most to ensure it is working correctly. Testing will be done, but your help in ensuring that mistakes are corrected quickly will be much appreciated. Some rarely used features will be removed from the site, but tell us if you want them re-instated. Ideas for new website features are always welcome—send them to info@nzpcn.org.nz.

UPCOMING EVENTS

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

Auckland Botanical Society

Meeting: Wednesday 5 August at 7.30 p.m. a talk by Mike Wilcox titled "Auckland's remarkable urban forest". **Venue**: Unitec School of Natural Sciences Gate 3, Building 023, Room 1018.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).
Field trip: Saturday 15 August to Kepa Bush, Orakei. **Leader**: Rhys Gardner.	**Contact:** Maureen Young (e-mail: youngmaureen@xtra.co.nz).

Waikato Botanical Society

Field trip: Saturday 8 August to Hauraki Forest Remnant-Hapuakohe. The bush remnant we are exploring is untracked and steep in places, so a reasonable level of fitness will be required. **Meet:** 8.30 a.m., Landcare Research car park, Gate 10 Silverdale Rd, Hillcrest.	**Contact:** Catherine Beard ph: 859 0999, e-mail: Catherine.Beard@ew.govt.nz

Rotorua Botanical Society

Meeting: Monday 22 June will be the Annual General Meeting. **Time:** evening (to be confirmed). Following the AGM and a meal there will be a slide show. Everybody is asked to bring along some slides of their botanical expeditions to share with the group.	**Venue:** 99 Sala Street, DOC office (to be confirmed).
Field Trip: Sunday 5 July to Pongakawa Ecological Area. **Meet:** The car park at 8.30 a. m. or the corner of Pongakawa and Rotoehu Roads Grid ref V15 178 511 at 9.15 a.m. **Grade:** Medium.	**Leader :** John Hobbs ph: 07 348 6620, email: jffhobbs@paradise.net.nz.
Field trip: Saturday 1 August to Lake Matahina (inland from Te Teko). **Meet:** The car park at 9 a.m. or at Matahina Dam at 10 a.m. **Grade:** easy.	**Leader:** Willie Shaw, ph: 07 345 5912; e-mail: willie@wildlands.co.nz. Please contact Willie to book in because boats need to be arranged.

Wellington Botanical Society

Meeting: Monday 20 July at 7.30 p.m. a talk by Heidi Meudt, research scientist, Te Papa, titled "Biogeography, phylogeny, and taxonomy of *Ourisia* – A research synopsis".	**Venue:** Victoria University, Wellington, Lecture Theatre 101, Murphy Building, Kelburn Parade.
Field trip: Saturday 1 August to Orongorongo Track and valley. Learn some of the common Wellington-region native species along the well-formed, mainly level track. **Meet**: 9.30 a.m. in Rimutaka Forest Park car park. Drive 12 km from Wainuiomata to park entrance, turn left, then 2 km to car park (far end near toilet block). Allow c. 1 h from Wellington.	**Co-Leaders:** Jill & Ian Goodwin, ph: 475 7248 (h), 021 211 7720 (mob).
Meeting: Monday 17 August at 7.30 p.m. the AGM followed by the AP Druce Memorial Lecture titled 'Backcountry botanists' by Neill Simpson, consultant botanist.	**Venue:** Victoria University, Wellington, Lecture Theatre 101, Murphy Building, Kelburn Parade.

Nelson Botanical Society

Field Trip: Sunday 16 August to Marsden Valley forest. **Meet**: Nelson Cathedral steps at 9.00 a.m.	**Leader and contact:** Sue Hallas ph: 03 545 0294.
Meeting: Monday 17 August at 7.30 p.m. a talk by Peter Heenan, Landcare Research, titled "Origins and diversity of the Chatham Islands flora".	**Venue:** Founders Park, Nelson.

Canterbury Botanical Society

Meeting: Friday 7 August at 7.30 p.m. a talk by Colin Meurk, Landcare Research titled "The state of botany and conservation in Canterbury".	**Venue:** Room A5 University of Canterbury.
Field trip: Saturday 15 August to Landcare Research Gardens, Lincoln, and Prebbleton Nature Park. **Meet**: at 10.00 a.m. at the main Landcare Research entrance, Gerald St, Lincoln.	**Contact:** Bryony Macmillan ph: 351 2886 or 351 9241 (for messages).
Show Weekend Camp 2009: 13–15 November, South-Eastern Bays, Banks Peninsula.	**Contact:** Gillian Giller, ph: 03 313 5315, for further information.
Summer Camp 2010: 15–22 January at the Glen Mary Ski Club, Lake Ohau.	**Contact:** Gillian Giller, ph: 03 313 5315, for bookings or further information.

Botanical Society of Otago

Meeting: Wednesday 22 July at 5.20 p.m. three short talks by the 2009 Botany Postgraduate Student Colloquium winners. **Venue:** 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:** David Orlovich, ph: (03) 479 9060.
Meeting: Wednesday 12 August at 5.20 p.m. a Botanical "Show and tell" evening. Bring along botanical items—anything botanical that you'd like to show others! **Venue**: 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:** Robyn Bridges, ph: (03) 479 8372.
Field Trip: Saturday 15 August a Mystery Fossil Hunt led by Assoc. Prof. Daphne Lee. Leave from Botany car park at 9.00 a.m. Backup date, Saturday August 22.	**Contact:** Daphne Lee, ph: (03) 479 7525.

4th National Wetland Restoration Symposium

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

John Child Bryophyte Workshop

Venue: Pukeora Estate (www.pukeora.com/), near Waipukurau in Hawke's Bay, 15–20 October. This is a great opportunity to learn more about bryophytes (mosses, liverworts, and hornworts) and lichens. Novices are welcome, with guidance provided for beginners. The estimated cost for accommodation, meals, and transport during the workshop is $340 per person. If attending, please make contact before 7 August.	**Contacts:** Leon Perrie, ph: 04 381 7261, e-mail: leonp@tepapa.govt.nz, or write to Te Papa, PO Box 467, Wellington before 18 August or after 16 September; Jill Rapson ph: 06 356 9099 x7963, e-mail: g.rapson@massey.ac.nz, between those dates if assistance needed is urgent.

The Island Invasives Conference

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

GOING NATIVE

Growing and using New Zealand native plants

Edited by **Ian Spellerberg & David Given**

Have you ever wondered how best to incorporate New Zealand native plants into your garden, or how to re-create a patch of native bush? *Going Native* is a rich compendium of ideas contributed by experts, describing the many and varied practical uses of New Zealand plants in home gardens, farms and institutions.

If you are wondering which New Zealand native plants are frost-tender, which prefer coastal sites or which are tall-growing species, an extensive A–Z listing will guide you.

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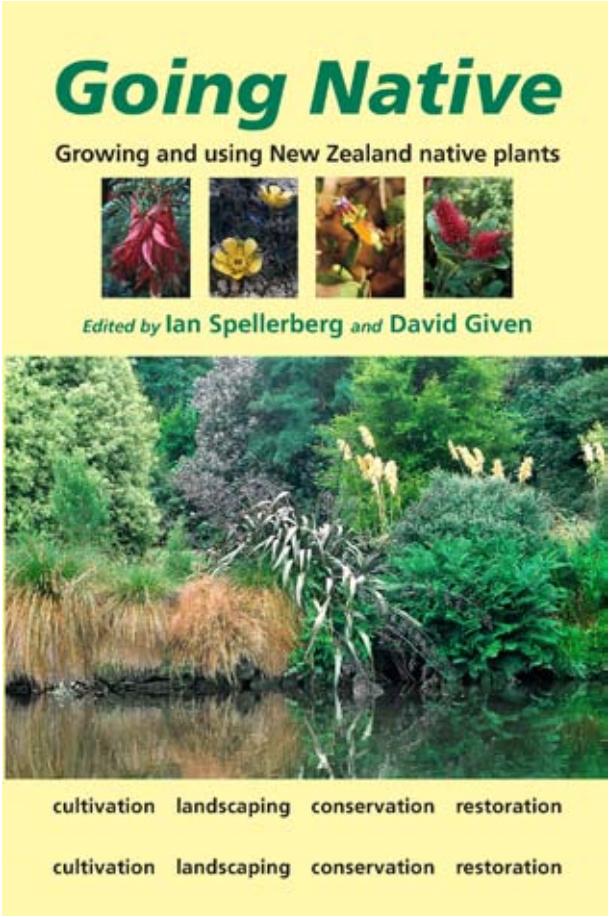

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