



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 75. FEBRUARY 2010

Deadline for next issue: Monday 15 March 2010

Message from the President

It is heartening to read this month about the Queen Elizabeth II covenants and the work being completed by Selwyn District Council. Canterbury has the highest number of threatened and at risk plants in New Zealand (de Lange *et al.*, 2009) and is second only to Otago in the extent of land environments that have 20% or less remaining in indigenous cover (www.mfe.govt.nz/issues/biodiversity/rare). Every piece that can be protected or cared for helps in the challenge to protect indigenous vegetation on private land. Well done to the Queen Elizabeth II Trust that has achieved a steady growth in covenanted area and number since 1980. We hope that that growth continues (and increases!). Check out their website (www.openspace.org.nz).

Preparation for the October conference in Christchurch has begun and some stimulating themes associated with conservation outside nature reserves are being developed. These include plant conservation and the gardener, the economy, the law, the farmer and iwi. There will also be field trips to a range of sites in Canterbury. The NZPCN Council will be meeting in March to discuss the way forward for the Network. If you have any matters you wish to raise, please let your local Council members know or email me at Philippa.crisp@gw.govt.nz.

Reference

de Lange, P.J.; Norton, D.A.; Courtney, S.; Heenan, P.B.; Barkla, J.W.; Cameron, E.K.; Hitchmough, R.A.; Townsend, A.J. 2009: [Threatened and uncommon plants of New Zealand \(2008 revision\)](#). *New Zealand Journal of Botany* 47: 61–96.

Philippa Crisp

Greater Wellington Council

Rare orchid found

In *The Press*, 6 February, it was reported that the rare orchid, *Pterostylis irwinii*, had been found in Arthur's Pass. This orchid has distinctive split sepals. The article claimed that this was only the third time the species had been found in the South Island; previous records in the South Island were near



Pterostylis irwinii. Photo: Ian St George.

Takaka and in the Nelson Lakes area. The find was made during a survey of Arthur's Pass by about 20 members of the Network NGO member, the New Zealand Native Orchid Group, as part of the group's native orchid-mapping scheme. Between 1893 and 2009, 46 orchid species had been recorded from the Pass. Two different teams combed each of 14 sites from high alpine areas to bogs and river flats. The survey found 30 of the known species plus seven more not previously known from the area. Gordon Sylvester, coordinator of the mapping scheme said that the team was thrilled with the number of species found and the size of some colonies. Among the group of surveyors was retired BBC filmmaker, Graham Giles, who travelled to New Zealand specifically to take part in the survey. No orchid flowers were picked during the survey.

PLANT OF THE MONTH – *Lepidium kirkii*



Lepidium kirkii. Photo: John Barkla.

Plant of the month for February is *Lepidium kirkii* (salt-pan cress). This small herb inhabits patches of high-sodicity clays (sometimes termed salt pans) on the valley floor and lower slopes of Central Otago. It shares this habitat with other halophytic (salt-loving) plants usually found close to the sea coast (e.g., *Apium prostratum*, *Atriplex buchananii*) as well as the Nationally Critical grass *Puccinellia rariflorens*. These sites have one of the harshest environments for plants anywhere in New Zealand—they are sun-struck and wind-blasted, drought prone, the soil is almost concrete-hard in mid summer and has a high chemical toxicity from the accumulation of salts. In winter, the ground

can freeze, sometimes for weeks, and frost and snow are regular occurrences. *Lepidium kirkii* has evolved a lifestyle to cope with these extremes: for most of the year (late summer to spring), it exists as a very long taproot extending down at least 1 m, in early spring 3–5 small leaves appear and the lateral flowering stems start to extend. These continue to grow, flower, and set seed, until the summer sun dries the soil and the leaves wither and fall. The seed is relatively large to hold sufficient reserves for the seedling in a race to establish a taproot after germination in spring, before being fried by the summer sun. Though in the same genus as Cook's scurvy grass (*Lepidium oleraceum*) and other inland cresses, it is genetically and morphologically very distinct. It is a pity that this fascinating, tiny plant is so close to extinction—only 12 sites remain, the total area occupied is less than a hectare and this area is shrinking rapidly due to irrigation, cultivation, and invasion by (often unusual) weed species. Conservation efforts have begun, and show some promise, but it will be a difficult job to protect this unique plant and habitat of Central Otago. The Network factsheet for *L. kirkii* can be seen at: www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=70

*Correction: The correct name of a species mentioned in this item last month is *Simplicia buchananii* and not *S. buchani*. A future item will present a further report about the species in this genus.*

Marae-based plant training course: Wellington 13–14 March 2010

An Introduction to plant life in New Zealand—a 2-day marae-based plant training course—will be run from Saturday 13 to Sunday 14 March at Tapu Te Ranga marae, Island Bay, Wellington. This module introduces plant life in New Zealand including both native and exotic species. The course covers plant names, where plants grow and why, plant communities, the life cycle and growth form of plants, the identification of plants using flowers, spores, seed and fruit, leaves, stem and bark and the collection of plant specimens for identification. There are 25 places so if you would like to enrol please email the Network at info@nzpcn.org.nz. There is no charge for attending although a koha donation towards food for the two days and the cost of the course book would be appreciated. For those registering from out of town, you will have to arrange your own accommodation. For more information about the Network's marae-based plant courses see the Network website (under Conservation > Training).

Editor's note: Last month I managed to delete the second half of the story about Rata Moehau so it is repeated in full this month.

Rata Moehau—the big rata asleep on the hill (aka Bartlett's) gets going

Janeen Collings, DOC Threatened Plants Ranger, Kaitiāia (jcollings@doc.govt.nz)

The big rata (*Metrosideros bartlettii*) might be asleep on the hill but the local community is wide awake in its efforts to protect this Taonga. Thanks to the efforts of many, Rata Moehau, the unique white flowering forest giant, is well on the way to recovery. It was under serious threat of extinction with only 31 adult trees in the wild. The trees were clinging to existence in three discrete sites all within a short distance of each other in the Far North.



Troy Kaaka and Pereniki Conrad. Photo: DOC.

growing this first lot of trees. Also thanks go to all the local people who came out and played in the mud with us for the planting. The wider conservation programme for Rata Moehau will see a range of protected sites throughout the Far North established with trees sourced from all three sites.

The Rata Moehau population has not been faring well on private land due to the build up of possum numbers but we can look forward to a better future. DOC has worked closely with iwi Ngati Kuri to support the development of a Kawenata (Covenant) at the Unuwahao site, which is a stronghold for Rata Moehau. This has come to fruition and now possum control is happening with iwi, DOC, and Nga Whenua Rahui all adding their various expertise to the mix. The aim is to create a safe and stable habitat for existing plants and to return to Unuwahao plants sourced from there. It is time to bring people and their Taonga plant species together.

Terry Hatchet of Joy Nurseries has been growing Rata Moehau, holding the insurance policy against extinction, and has kindly gifted plants back to Ngati Kuri. The gifted plants, being sourced from the Unuwahao site, are culturally very significant. Add to this the fact that plants from this site contain the highest genetic diversity for the entire wild population and you have a good basis for a successful conservation programme.

Wayne Petera of Ngati Kuri has set up a beautiful nursery and is now working with the rata that will go back to Unuwahao. Some of those working with Wayne at the nursery took the initiative to propagate from these trees to begin a planting programme immediately around the nursery to complement other propagating initiatives. Wayne is also caring for some really big Rata Moehau. These specimen trees are targeted for planting at interpretation sites telling some of the stories along the spiritual pathway to Te Rerenga Wairua. All in all, the activities and korero are providing opportunities for encounter and understanding within a local context which is integral to the conservation of this magnificent species.

Project Crimson has been working diligently in the background providing funding and continues to provide valuable support for the ongoing conservation of Bartlett's rata. Over the next two years, Project Crimson is providing 300 trees that will be planted in the most protected sites in the Te Pahi Ecological District. Watch this space!

Iwi Ngati Kuri supported the Department of Conservation (DOC) in the initial efforts to boost the population. A total of 360 trees were planted into Radar Bush and Kohuroa in the winter of 2007. These sites are intensively managed for possum control on an annual basis. Many of those planted are now reaching into the light at over 2 metres tall and looking very healthy. I would like to say a big thank you to all the volunteers at the Kerikeri Nursery for doing such a wonderful job of

Queen Elizabeth II covenants protect hidden treasures on uncultivated land in Canterbury

Loralee Hyde, QEII National Trust, (lhyde@openspace.org.nz)

In May 2009, on the outskirts of Christchurch near Yaldhurst, two neighbours protected rare remnants of original Canterbury Plains dryland, shrub land, grassland and moss field vegetation with QEII covenants. On former river-channel soils of the Waimakariri River, Tricia and Ian Crumpton's 0.6 ha covenant and Tim and Keryn Stark's 1.4 ha block are on land that has never been cultivated.



QEII covenants now protect the habitat of threatened shrubs including *Olearia adenocarpa* (Nationally Critical), *Aciphylla subflabellata* (Declining), *Muehlenbeckia ephedroides* (Declining) and *Melicytus* aff. *alpinus* ("Hinds") (undescribed species). Photo: Miles Giller.

Editor's note: Because I knew the Crumptons, I contacted them to let them know that the Network was publishing the story about their covenant. As a result, I heard about a field trip held by the Selwyn District Council—Selwyn is that area west of Christchurch between the Waimakariri and Rakaia Rivers through to Arthur's Pass.

Selwyn District Council Old West Coast Road Field Trip—networking neighbours with an interest in native restoration initiatives

Kristina Townsend, Selwyn District Council (Kristina.townsend@selwyn.govt.nz)

Within Selwyn District, there are about 150 sites that identified as being potentially significant natural areas for protection. These sites were identified through information from two ecological surveys carried out in the District. In Selwyn, our biodiversity is diminishing at a rapid rate as we have less than a rapid rate as we have less than 5% on the low and high plains and, within the District overall, less than 20% indigenous native cover leaving little natural food source for our native birds, insects and lizards that rely upon it. Existing biodiversity should be treated as living antiques and the Council is working on protecting those remnants by working alongside landowners.

Landowners on Old West Coast Road were part of the first stage of the Significant Natural Area (SNA) Project and had ecological assessments carried out on their properties. As part of the assessment, recommendations were made on weeds, threats, plants species lists and recommended planting. This assists landowners because they are able to use this to supply to nurseries and develop a "plan" of what to do.

As a result of the ecological findings and the introduction to Miles Giller from the Queen Elizabeth II Trust, two landowning couples went on to put QEII covenants on their properties. For others, the exclusion of stock, or isolated protection of plants has protected remnant vegetation. Others successfully applied to the Selwyn District Council Natural Environment Fund to go towards rabbit

Although outwardly austere, the covenants protect *Olearia adenocarpa*, a new species described by Brian Molloy and Peter Heenan in 2004. Distinguished from *O. odorata* by its smaller and open growth habit and short-lived and slender spreading branches, only about 650 plants are known. The covenantors found out about the occurrence of this rare plant on their land during a Selwyn District Council biodiversity workshop. With the council's help, they are now restoring the native vegetation and controlling exotic invaders.

Reference

Heenan P.B., Molloy B.P.J., 2004. Taxonomy, ecology and conservation of *Olearia adenocarpa* (Asteraceae), a new species from braided riverbeds in Canterbury, New Zealand. *New Zealand Journal of Botany* 42: 21–36.

fencing, plants, spray, and fencing material. For others, management remained the same but their understanding of the importance of the plants increased.



Landowners discussing restoration management issues.
Photo: Kristina Townsend.

The purpose of the field day was for neighbours to see what each other has in terms of plant biodiversity and compare the different techniques and diversity that exists along a short stretch of the Old West Coast Road. It was a bit of a 'show and tell' exercise and thus an opportunity for landowners to share success stories and challenges that they experienced. Six properties were visited, offering an inside view to different management problems, stages of plant growth, and more of a hands off approach.

Properties along the Old West Coast Road have geological features of the old river sand dunes shaped by alluvial sand blown up by the

Waimakariri River and the river channels reflecting its paths across the plains. Some of the dryland species identified on the properties that participated in the SNA ecological assessments are listed in the table below. Though the national threat status (de Lange et al. 2009) of most is Non Threatened, many are rare or regionally significant.

Species	Common name	Threat status
<i>Asplenium flabellifolium</i>	butterfly fern	Non Threatened
<i>Carex breviculmis</i>	grassland sedge	Non Threatened
<i>Carmichaelia australis</i>	common broom	Non Threatened
<i>Carmichaelia corrugata</i>	dwarf broom	Non Threatened
<i>Cheilanthes sieberi</i>	rock fern	Non Threatened
<i>Cordyline australis</i>	cabbage tree	Non Threatened
<i>Discaria toumatou</i>	matagouri	Non Threatened
<i>Geranium retrorsum</i>	turnip-rooted geranium	Nationally Vulnerable
<i>Leucopogon fraseri</i>	dwarf heath	Non Threatened
<i>Melicytus alpinus</i>	porcupine shrub	Non Threatened
<i>Microtis unifolia</i>	onion-leaved orchid	Non Threatened
<i>Muehlenbeckia axillaris</i>	creeping pohuehue	Non Threatened
<i>Muehlenbeckia complexa</i>	small-leaved pohuehue	Non Threatened
<i>Muehlenbeckia ephedroides</i>	leafless pohuehue	Declining
<i>Olearia adenocarpa</i>		Nationally Critical
<i>Poa cita</i>	silver tussock	Non Threatened
<i>Sophora prostrata</i>	prostrate kowhai	Non Threatened
<i>Sophora micropylla</i>	small-leaved kowhai	Non Threatened

After a slightly fudged start to the day, the field day was a success with everyone leaving with helpful hints and restoration ideas and a better understanding and appreciation of what they have on their doorstep. It is hoped to run similar days in the other areas within the Selwyn District as part of the SNA Project. If you would like to find out more about the SNA project please contact Kristina Townsend at the Selwyn District Council, ph: 03 347 2921 or e-mail: Kristina.townsend@selwyn.govt.nz. Happy planting!

Reference

de Lange, P.J.; Norton, D.A.; Courtney, S.; Heenan, P.B.; Barkla, J.W.; Cameron, E.K.; Hitchmough, R.A.; Townsend, A.J. 2009: Threatened and uncommon plants of New Zealand (2008 revision). *New Zealand Journal of Botany* 47: 61–96.

News from overseas – Is juniper worth saving?

The Problem

One of only three native conifers in the United Kingdom, juniper is now in serious decline. Today, many of the remaining bushes are over a hundred years old and, unsurprisingly, are no longer very successful at producing a new generation!

Juniper seeds need open bare ground to germinate.

Under-grazed land stops seed from germinating and mature juniper bushes eventually succumb through the growth of scrub. Too much grazing, both from farm stock and wild animals, means that seedlings rarely survive. In Scotland, over a third of remaining juniper sites are now under threat. In Southern England, many counties have recorded losses of juniper between 70 and 80%.

Climate change projections suggest that, in 80 years, juniper will disappear from much of southern Europe. If this happens, the United Kingdom will have an even greater responsibility to conserve this much celebrated plant.

What is Plantlife doing?

Using novel habitat management techniques, Plantlife is:

- Halting the decline at key juniper sites.
- Demonstrating to land managers the right conditions for juniper regeneration.
- Restoring habitat to make it suitable not only for juniper but a range of other threatened wild plants and insects that need open ground conditions.

In addition to our ongoing juniper conservation programmes in Scotland and Wales, Plantlife is now also addressing the decline across the lowlands of England. Plantlife is working on the North and South Downs, the Chilterns, the Cotswolds, across Wiltshire, Hampshire, Dorset and on the Lizard Peninsula in Cornwall. For more information, go to [Plantlife UK](http://www.plantlife.org.uk) (website).

Notes on the appearance of tawapou, *Planchonella costata*, seedlings on Auckland's west coast

Neil Henderson, WeedFree Trust (info@weedfree.org.nz)

In recent months, I have come across two examples of emergent seedlings of tawapou in Waitakere. The first group was discovered near an old fire site under mature pohutukawa 200 metres from the road on the village side of the Whakatai stream, north Piha. At this site, about a dozen small 1–2 yr old seedlings were present as well as a similar number of saplings ranging from 0.5 m to 2 m. I have not had a chance to return to the area to assess the extent of seedlings further up the spur.

Thinking this was an isolated phenomenon, I was delighted to find an even more extensive population of 1–2 yr seedlings emerging under a pine plantation on private property adjoining DOC land at Bethells Beach. Older seedlings and saplings were few and none was over 1 m high. Seedling numbers are in the hundreds throughout the small plantation with many large shiny date-like seeds still to germinate.

It has been noted (Campbell and Atkinson 1999) that the introduction of kiore (*Rattus exulans*) to New Zealand may have significantly altered the composition of northern



A: Seedling density at Bethells Beach site.
B: Tawapou seeds. Photos: Neil Henderson

coastal forest because of high predation of seed from species such as tawapou. Recent anecdotal observations of increased native bird activity in the Bethells area (John Ringer, pers. comm.), as a result of intense predator control in the Cascades/Ark in the park restoration zones, seems to be contributing to greater seed survival, distribution and germination of tawapou. I would appreciate feedback on any other locations of similar tawapou seedling emergence near west coast beaches, as well as more detailed information on this species' known distribution on the mainland. If this recent seedling phenomenon is a result of depressed rat numbers we would also expect to see evidence of increased recruitment of *Pittosporum crassifolium*, *Nestegis apetala* (coastal maire) and *Streblus banksii* (Campbell and Atkinson 1999).

Reference

Campbell, D.J.; Atkinson, I.A.E., 1999: [Effects of kiore \(*Rattus exulans* Peale\) on recruitment of indigenous coastal trees on northern offshore islands of New Zealand](#). *Journal of The Royal Society of New Zealand* 29: 265–290.

Professional website development, website hosting and web marketing services

Pamela Bault, Propel Ltd (pam@propel.co.nz)

Quality, price and on-time delivery that's what **Propel Ltd** is all about. Propel is a professional website development company that provides customised service on time and on budget.

Propel has earned a strong reputation within the New Zealand market and, as a result, we've had the



privilege of working with a wide variety of clients. Working on the **New Zealand Plant Conservation Network (NZPCN)** website was a challenge but delivered great results. The new NZPCN website is a lot more user friendly, practical and is easily managed through Propel's **Admin Pro** Management System.

Propel is known for specialising in creating, maintaining or enhancing websites and internet related services. Our work is

technically excellent, practical and user friendly. Propel values your time and your money, therefore we ensure efficiency and reliability.

For more information or to speak to an expert visit: www.propel.co.nz

***Threatened Plants of New Zealand* by Peter de Lange, Peter Heenan, David Norton, Jeremy Rolfe and John Sawyer (Canterbury University Press)**

To order copies of *Threatened Plants of New Zealand* at the members-only discount price of \$80 (plus postage; full retail price is \$99.95) you may fill out the form at the back of the newsletter and post it to the Network. However, a more efficient method for both you and the Network would be for you to use the 'shop' facility that will be available on the Network's website soon. This beautifully illustrated book combines precise botanical description with lavish illustrations in describing the 189 species defined by conservation scientists as Extinct or Threatened, using the New Zealand Threat Classification System. Each description contains information on how to identify the plant in question, the specific threats it faces, and its current distribution. Books will be posted in late March or early April following the launch of the book on 25 March.

Annual NZPCN subscriptions

Invoices have been sent to all corporate and NGO members and reminder notices to Individual, Unwaged and Student members. If Individual, Unwaged or Student members have not received a reminder, please take this notice as your reminder (and you can download a notice from the website for details about how to make your payment). Payment of the outstanding subscriptions would be greatly appreciated; the Network can improve its services only as finance allows.

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 3 March at 7.30 p.m., the AGM plus a talk on Central Otago camp. **Venue:** Unitec School of Natural Sciences Gate 3, Building 023, Room 1018.

Contact: Maureen Young (e-mail: youngmaureen@xtra.co.nz).

Field trip: Saturday 20 March to Kawau Island.

Contact: Maureen Young (e-mail: youngmaureen@xtra.co.nz).

Waikato Botanical Society

Field trip: Saturday 27 February to Te Māra Reo Language Garden and Lake Hakanoa wetland. **Meet:** 9:30 a.m. at the Landcare Research car park, Gate 10 Silverdale Rd, Hillcrest.

Contact: Monica Peters, e-mail: monica.peters@landcare.org.nz, ph: 859 3725 (wk), mobile: 021 049 2036.

Field trip: Saturday 13 and Sunday 14 March the Waikawau Bay coastal forest and wetland forays, Coromandel. **Meet:** corner of Waikawau Bay Rd and Waimanu Rd at 10.30 a.m. on the Saturday morning. **For carpooling from Hamilton, contact:** Monica Peters, ph: 07 859 3725, 021 049 2036, e-mail: monica.peters@landcare.org.nz.

Contact: Wayne Todd
ph: 07 866 6928, 021 233 5888.

Rotorua Botanical Society

Field trip: Friday 26 or Saturday 27 – Sunday 28 February to the Scenic Reserves of the Motu Road – Matawai to Opotiki.

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

Meeting: Wednesday 3 March at 7.30 p.m. the Rotorua Botanical Society Lecture titled 'The botany of Northland dune lakes' by Lisa Forester.

Venue: Eric Bridgeman Room, RAVE (Rotorua Arts Village), corner of Hinemaru and Hinemoa Streets, Rotorua (next to Tamaki tours/ Millenium Hotel).

Field trip: Sunday 14 March to Endean Bush Reserve, Paradise Valley, Rotorua. **Meet:** car park by Convention Centre at 8.30 a.m. **Grade:** Medium.

Leader: John Hobbs, ph: 07 348 6620, e-mail: jffhobbs@paradise.net.nz

Wellington Botanical Society

Meeting: Monday 15 March: a talk by Robyn Smith, Team Leader, Community Environmental Projects, Greater Wellington Regional Council, titled 'Lord Howe Island—so far yet so near—connections with New Zealand'.

Venue: Victoria University, Wellington, Lecture Theatre M101, ground floor Murphy Building, west side of Kelburn Parade. Enter building off Kelburn Parade about 20 m below pedestrian overbridge.

Field trip: Saturday 6 March: to Karehana Reserve. **Meet:** 9.00 a.m., by black fence, 50 m up from 31 The Track, Karehana Bay.

Co-Leaders: Rae Collins, ph: 04 233 1367; Barbara Clark, ph: 04 233 8202.

Nelson Botanical Society

Field trip: Sunday 21 March to the Maitai Caves track.

Leader: Lawrie Metcalf, ph: 03 540 2295, e-mail: landmetcalf@xnet.co.nz for further details.

Canterbury Botanical Society

Meeting: Friday 5 March at 7.30 p.m. a talk by Colin Burrows titled 'Knowing *Pimelea* – how to examine and identify members of this genus'.

Venue: Room A5 University of Canterbury.

Field trip: Saturday March 13 to Doctors Hill, Waikari.

Contact: Gillian Giller
ph: 03 313 5315.

Botanical Society of Otago

Meeting: Wednesday 24 February at 5.20 p.m. a talk by Associate Professor Brent Ewers, Department of Botany, University of Wyoming titled 'Incorporating the Burn and Bite of Vegetation Disturbances into Climate Change Science'. **Venue:** 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: [Bastow Wilson](#),
ph: 03 479 7572.

Free BSO BBQ! Friday 5 March, 12.00 noon to 2.00 p.m. a BBQ to welcome new botany/ecology students and new BSO members. **Venue:** front lawn, Botany House Annex, Great King Street (across the road from the main Botany building). All BSO members welcome!

Contact: [David Orlovich](#),
ph: 03 479 9060.

Field trip: Saturday 27 March to The Fernery (home of Associate Professor Brian Cox). **Meet:** Botany Department car park at 8.50 a.m.

Contact: [Abe Gray](#),
ph: 03 479 7577.

4th National Wetland Restoration Symposium

Location: Rotorua, 3–5 March, 2010. The theme is: "Wetland Management and Restoration (Freshwater and Estuarine)". **Online registration:** www.wetlandtrust.org.nz; early bird registrations opened 1 June 2009.

Contact: National Wetlands Symposium 2010, The Organiser,
ph: 07 343 1732, email: theorganiser@RotoruaNZ.com.

Tuatapere Hump Track Charitable Trust

Celebrity Walk: 1 March – 4 March, four departure dates, only 24 places each day. Have your pack flown all the way and eat gourmet meals cooked for you at \$695, less than half the normal guide walk price.

See: www.humpridgetrack.co.nz or contact daman@humpridgetrack.co.nz for more details.

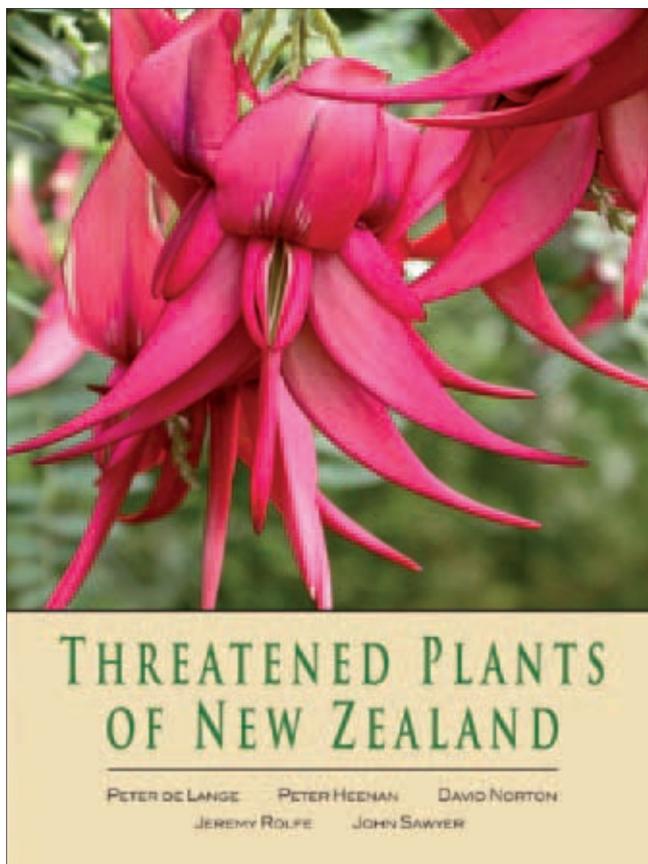
Threatened Plants of New Zealand

Peter de Lange, Peter Heenan, David Norton, Jeremy Rolfe & John Sawyer

One in 13 of New Zealand's native plants is now threatened with extinction. Six species are already extinct — like the moa and the huia, they are gone forever. Even the popular kakabeak (*Clianthus puniceus*) is in a serious plight, with just one plant left in the wild. Another 24 species are known in the wild from fewer than 200 plants.

This beautifully illustrated book combines precise botanical descriptions with lavish illustrations in describing the 189 species defined by conservation scientists as Extinct or Threatened, using the New Zealand Threat Classification System. Each description contains information on how to identify the plant in question, the specific threats it faces, and its current distribution.

Threatened Plants of New Zealand is designed to be an essential tool in the fight against extinction, as well as a stunning showcase of the spectacular flora of a country in which new plant species are still being routinely recognised, 240 years after the first specimens were brought to the attention of the world's scientific community.



Order form: Threatened Plants of New Zealand

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Books will be posted in late March / early April 2010.