



TRILEPIDEA

NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK

Please send news items or events to events@nzpcn.org.nz

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President's Report for 2009–2010

Introduction

This is my first President's report and I am proud to be able to list this year's highlights for the New Zealand Plant Conservation Network (NZPCN). The Network has grown substantially in membership and achievements since its inception in 2003 and continues to play a very important role in the protection of New Zealand's native plants. It seeks to do this through providing and disseminating information about our indigenous plant species, plant conservation activities and creating resources that focus on plant conservation.

The Network published *Threatened Plants of New Zealand* in March 2010. This book highlighted the fact that our threatened plant species are in serious decline and the fact that we all need to support the goals of the Network Strategy 2010–2015. It is important to continue to advocate for resources to halt this decline whether it is through sponsorship, grants or other forms of support. Funding for biodiversity management is decreasing at a time when there is clearly a great need for resources to help these species survive. As New Zealanders, we have a responsibility to care for our national treasures.

On a more positive note, it does seem that there is a growing depth of feeling nationally for New Zealand's indigenous flora. An increasing number of care-groups all over the country are planting indigenous plants, caring for local plant habitat and seeking information about our threatened plants. The Network continues to play an important role in providing this information, as well as promoting the benefits of caring for our flora. I am heartened by this year's increase in membership of NZPCN and by the interest shown in our flora by users of the website. The enthusiasm of our members gives us hope for the future.

Council meetings

Two council meetings have been held during the year; the first in Auckland on 12 November 2009 and the second in Wellington on 25 March 2010.

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VOTE FOR YOUR FAVOURITE PLANT FOR 2010

Voting has started for this year's favourite native plant. See the voting system on the left hand side of the home page. Start voting and encourage your friends, family and colleagues to vote also. Each voter has 5 votes to be used on one or more species.

Voting closes Sunday 5 December.

Would you like to be a "Plant Ambassador" to advocate for a particular species?

Please email us the name of your chosen species and your name and email address.

PLANT OF THE MONTH – *Libertia edgariae*



Libertia edgariae. Photo: Jeremy Rolfe.

Plant of the Month for October is *Libertia edgariae* (Edgars Iris, Edgars Mikoikoi). This small, endemic iris is found in the North Island, in the Rimutaka Ranges, Eastbourne Hills to the south Wellington Coast, and also in western Wairarapa. It is found growing with coastal scrub, on hillsides and old marine terraces in manuka scrub.

Small white flowers appear from September to November. This species could be confused with *Libertia grandiflora* and *Libertia mooreae* but differs mainly by its smaller size. It also has falcate leaves (hooked, or curved like a sickle), elongated rhizomes. It differs from *L. peregrinans* in its taller inflorescences and petal shape. *Libertia edgariae*, classified as naturally uncommon, is a usually sparsely distributed species under no obvious threat. The majority of this species' range occurs within protected land. The Network fact sheet for *L. edgariae* may be found at: www.nzpcn.org.nz/flora_details.asp?ID=928

Officers

The officers of Council for the last year were as follows:

Philippa Crisp (President)

John Sawyer (Secretary)

Mike Oates (Treasurer)

Sarah Beadel

Shannel Courtney

Rewi Elliot

Danielle Hancock

Mike Thorsen

Susan Wisser

Erik van Eyndhoven (co-opted)

Membership Secretary and Administrator: Eric Scott

Patrons: Peri Drysdale (Untouched World) and Rob Fenwick (The Living Earth Co.)

Finances

The NZPCN finances are in reasonable condition. Our core income and outgoings are approximately equal and some concern has been expressed about the Network being able to meet longer term running costs. It has been recommended that the subscription rate be increased to help this situation, as our rates have remained the same for the past 5 years.

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Sponsors

We are grateful to Treescape Ltd and Phytomed Medicinal Herbs Ltd for their continued sponsorship of the Network. Their generosity is greatly appreciated. Ian Spellerberg and Michelle Frey have also generously donated royalties from their book *Living with Natives: New Zealanders talk about their love of native plants*. We are very grateful to them for their contribution. Royalties from the book *Threatened Plants of New Zealand* published by Canterbury University Press are also being received by the Network. Thanks to MWH for their sponsorship of that publication.

Network Membership (as of October 2010)

Eric Scott has continued to run the administrative aspects of the Network in a very competent and enthusiastic manner. We are pleased to see a good increase in membership and hope that this trend continues.

	Nov 1 2009	Oct 1 2010
Individual	290	339
Unwaged/Student	105	119
NGO	16	16
Corporate	30	31
Honorary	4	4
Total	445	509

With the corporate and NGO members covering multiple individuals, the total number of individuals is currently 766.

Highlights from the past year

1. *Website management, development and use*

A new website was launched in December 2009. It has a great new look and many features have been added since then. These include a mapping interface for plant lists, an online shop (from which publications and other items can be sold), an online forum and, soon to be launched, an online quiz. There is now a credit card system, which is working well and saving time. This has enabled the conference and “make a donation” systems to be set up. One of the highlights of this year’s additions has been the phenology section, where people can record their observations of fruiting and flowering from around the country. Even though the phenology system was only recently launched (June 2010) there are now nearly 2000 records for more than 350 plant species. We do, however, need to increase the number of recorders using the system (25 at present). We are also wanting to build a larger team of people to help with website management so let me know if you are willing to assist with jobs on the website.

2. *Botanical Journal digitising*

This TFBIS funded project has recently been completed. All of the journals of the botanical societies of Wellington, Auckland, Canterbury and Rotorua can now be accessed through the NZPCN website. This project has involved the digitising of hundreds of articles from the journals of the Wellington, Auckland and Canterbury Botanical Societies. Copies of all of the NZPCN newsletters are also available.

3. *Revision of the New Zealand Indigenous Vascular Plant Checklist*

The last revision of *The New Zealand Indigenous Vascular Plant Checklist* occurred in 2006. Copies of this publication sold out last year and, rather than completing a reprint, Peter de Lange and Jeremy Rolfe offered to prepare a completely revised update. This new version will be launched at the conference and is available for sale.

4. Launch of the Threatened Plant Book

The outstanding book *Threatened Plants of New Zealand*, written by Peter de Lange, Peter Heenan, David Norton, Jeremy Rolfe and John Sawyer, was launched in March 2010. The launch event was held at the Department of Conservation headquarters in Wellington. The occasion was well-attended and speeches were given by the Minister of Conservation, Hon. Kate Wilkinson, the Vice-Chancellor of Canterbury University, Dr Rod Carr and Andrew Caseley, the CEO of MWH (who sponsored the book). Representatives from the Department of Conservation and Peter de Lange (the lead author of the book) also spoke at the event. Copies of the book are available for sale from Canterbury University Press at this conference or from our online shop. Remember, royalties come back to the Network.

5. Marae-based training courses

Four plant training modules have been produced for use as marae-based courses. The first module; *Introduction to Plant Life in New Zealand*, has been printed and most of the 300 copies have been sold. Module 2 which covers covenant management, will be launched at this conference and is available for sale; the other two will be ready for dissemination next year. Module 3 is about plant propagation and nursery management and Module 4 covers streamside and wetland restoration.

6. Awards

The NZPCN awards recognise the remarkable efforts of individuals and groups taking a lead role as guardians of our country's native plants. Last year's awards recognized a Nelson school (Richmond's Salisbury School), plant nursery (Titoki Nursery) and community group (Friends of Mapua), as well as a North Island city council (Waitakere City Council) and a legendary Department of Conservation plant conservation ranger (Graeme Atkins). This year's awards will be made at the NZPCN conference dinner.

7. The 2010 conference

A fantastic programme has been put together for the biennial NZPCN conference. The title of the conference is "Plants in a human landscape – conservation outside nature reserves". There are 38 talks and 3 field trips covering topics relating to plants and the human landscape. This theme is particularly pertinent since 60% of our threatened plant populations occur on private land. Thank you to Biosecurity New Zealand, Biofunds (of the Department of Conservation), Environment Canterbury, Christchurch City Council and Black Cat Cruises who have sponsored this conference; we look forward to it being a great event.

8. Eco-sourcing Workshop

There has been a great deal of discussion about eco-sourcing within the NZPCN community this past year. An eco-sourcing workshop was held at the Stardome Observatory in Auckland in November 2009 where guest speakers discussed "What relevance does ecosourcing have for plant conservation?"

9. Vote for New Zealand's favourite plant

This popular competition is a great way to raise the profile of New Zealand's plant species. Pingao won this time (the seventh year of the poll), but tree nettle, Bartlett's rata, Chatham Island speargrass and kakabeak were top contenders.

10. The Newsletter

Great plant conservation stories continue to be provided to the monthly NZPCN newsletter. We are now up to edition number 82, which is testament to the number of newsworthy stories about plants and conservation and to the efforts of those involved in putting the newsletter together (Eric Scott, Jeremy Rolfe and Rewi Elliot).

Acknowledgements

I would like to acknowledge the excellent work and ongoing commitment of our Secretary, John Sawyer and Treasurer, Mike Oates. Thanks also to our Council and Erik van Eyndhoven for their efforts and the roles they have played for the Network this year, as part of the NZPCN Council.

Philippa Crisp
October 2010

Network awards for 2010 recognise national plant conservation champions

A diverse group of plant conservation champions received awards from the Network at its annual conference in Christchurch. “The awards recognise special people and projects that have captured the interest of local communities,” said NZPCN President Dr Philippa Crisp. “These individuals and groups are the leading guardians of our country’s native plants and ecosystems, and deserve recognition for their tireless and dedicated work,” she said.

Nominations described the considerable achievements and commitment of each award recipient. The awards were as follows:

Individual: Robyn Smith, Greater Wellington Regional Council

Community: Orokonui Ecosanctuary, Dunedin

School: Moturoa School, New Plymouth

Local authority: Kapiti Coast District Council

Plant nursery: Native trees, Ngataki, Northland

Lifetime achievement: Colin Ogle of Wanganui and Professor Sir Alan Mark of Dunedin were both given Lifetime Achievement awards for their work protecting native plant life.

Treasure trove of botanical research goes online

Botanical enthusiasts now have a ‘treasure trove’ of information on New Zealand plant life at their fingertips, with the journals of the Auckland, Wellington and Christchurch Botanical Societies now digitised and freely available online. The results of thousands of hours of botanical survey and field observations by New Zealand’s amateur and professional botanists are now accessible to anyone on the New Zealand Plant Conservation Network’s (NZPCN) website.

The regional botanical societies were founded to provide a forum for botanists to meet and learn about New Zealand’s unique and globally important plant life. The Auckland and Wellington societies were the first established, in 1937 and 1938 respectively. Since then botanists have been meeting regularly all over New Zealand to undertake field trips and to talk about plants.

“These digitised journals are a remarkable resource for anyone interested in our native flora,” said Network President Philippa Crisp. “People will be able to make use of the knowledge gained over years of field work by some of our most experienced botanical experts.”

The online, searchable resource includes papers by W.R.B. Oliver (former Director of the Dominion Museum) and the legendary field botanist A.P. (Tony) Druce. Entries range from the academic to the quaint, such as the observation by Mrs W.W. Samson of Wellington in 1941 about *Lagenophora*, a small native daisy, that, “Indeed they seem to be the friendliest of flowers”.

The digitisation project was funded by the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme, which is supported by government to help achieve the goals of the New Zealand Biodiversity Strategy. It is administered by the Department of Conservation.

For more information:

- See [Botanical Society Journal website](#) under Publications

New name for sand tussock

Peter J. de Lange, Department of Conservation (pdelange@doc.govt.nz)

Late last year Soreng et al. (2009) reinstated the name *Poa billardierei* for the plant we have finally all got used to calling *Austrofestuca littoralis*. Their paper, one of many that they have published as



Sand tussock, *Poa billardierei*.
Photo: Jeremy Rolfe.

part of a worldwide review of the Poaceae being conducted by the Department of Botany, National Museum of Natural History, Smithsonian Institution, Washington, reveals what many of us have long suspected, that *Austrofestuca* is really a *Poa*. As a result of their work, *Austrofestuca* has been reduced to a Section within *Poa* (*Poa* Sect. *Austrofestuca* Tzvelev). The section comprises two species *Poa billardierei* (Spreng.) St.-Yves (= *Austrofestuca littoralis* (Labill.) E.B.Alexev.) shared with Australia and the Australian endemic *P. pubinervis* Vickery (= *Austrofestuca pubinervis* (Vickery) B.K.Simmon). The other two Australian endemic species of *Austrofestuca* (*A. eriopoda* (Vickery) S.W.L.Jacobs and *A. hookeriana* (F.Muell. ex Hook.f.) S.W.L.Jacobs) were placed in the reinstated *Hookerochloa* by Jacobs et al. (2008).

References

- Jacobs S.W.L., Gillespie L.J., Soreng R.J. (2008) New combinations in *Hookerochloa* and *Poa* (Gramineae). *Telopea* 12: 273–278.
- Soreng, R.J.; Gillespie, L.J.; Jacobs, S.W.L. 2009: *Saxipoa* and *Sylvipoa* – two new genera and a new classification for Australian *Poa* (Poaceae: Poinae). *Australian Systematic Botany* 22: 401–412.

Cultivation for preservation – the target of the National Botanic Conservatory of France since 1975

At Brest, in Brittany, the National Botanic Conservatory of France (NBC) gives priority to cultivating threatened plants from Europe and islands the world over, including New Zealand. The plants collected are reproduced to be disseminated to other research and conservation organisations and, in some cases, reintroduced back to the wild. The seeds from these species are held in cold storage. The NBC cultivates approximately 1700 endangered species from all over the world making it one of the largest collections in the world of endangered species. Another mission of the NBC is to educate and raise public awareness using its botanical garden, a unique collection of endangered plants. In this way, the Botanical Conservatory of Brest would like to establish a partnership with New Zealand and share seeds and knowledge about kiwi's native species.

Included below is a list of threatened plant seeds that are stored in Brest's collection and could be returned to New Zealand for cultivation and reintroduction to the wild. The Conservatory is keen to improve its seed bank with New Zealand's endangered species. Furthermore, in order to promote New Zealand and its landscapes, the NBC has dedicated part of the botanic garden to New Zealand's plants. Also listed in the reference below is a list of plants that the NBC would like to have.

As a way to build this partnership further, a project was established by Matthias Arbion and Violaine Rondet called ECOLOBICY. This French couple is biking throughout New Zealand during 2010 to meet people who work in nature conservation and to learn more about New Zealand. They write articles, take photos and videos which are all available on their website : www.ecolobicy.fr (this website is in French but you can use Google to translate). If you are interested in being part of this project, please, contact Matthias and Violaine by e-mail, matthias.arbion@gmail.com, or look at their website.

Links: www.cbnbrest.fr/site/html/pays/anglais.html ; www.ecolobicy.fr

List of plants held in France and can be exchanged

Naturally Uncommon

Celmisia major
Fuchsia procumbens
Hebe gibbsii
Hebe townsonii
Hebe urvilleana
Leonohebe annulata
Myosotis arnoldii
Olearia cheesemanii
Olearia coriacea
Pachystegia insignis var. *minor*
Pittosporum michiei
Pittosporum pimeleoides subsp. *pimeleoides*
Pseudopanax ferox
Solanum aviculare var. *latifolium*
Xeronema callistemon
Hebe macrocarpa var. *brevifolia*
Senecio compactus
Nationally Vulnerable
Hebe speciosa

Libertia peregrinans
Pittosporum dallii
Pittosporum obcordatum subsp. *obcordatum*

Nationally Endangered

Chordospartium muritai
Chordospartium stevensonii
Chordospartium stevensonii subsp. nov.
"kiwi"

Nationally Critical

Clianthus puniceus
Gunnera hamiltonii
Hebe breviracemosa
Leptinella rotundata
Myosotis colensoi
Pennantia baylisiana
Senecio huntii
Tecomanthe speciosa

Declining

Teucrium parvifolium
Hymenanthera crassifolia

List of plants sought for the French collection

Extinct

Lepidium obtusatum
Myosotis laingii
Myosotis traversii var. *cinerascens*
Logania depressa

Nationally critical

Acaena rorida
Anzybas carsei s. str.
Botrychium aff. *lunaria*
Brachyscome pinnata
Carex dolomitica
Carmichaelia hollowayi
Ceratocephala pungens
Clianthus maximus
Clianthus puniceus
Chenopodium detestans
Crassula multicaulis
Davallia tasmanii ssp. *cristata*
Deyeuxia lacustris
Dichelachne lautumea
Gentianella calcis subsp. *calcis*
Gentianella calcis subsp. *manahuna*
Gentianella calcis subsp. *taiko*
Gentianella scopulorum
Gunnera hamiltonii
Hebe adamsii
Hebe breviracemosa

Hebe societatis
Hebe saxicola
Hypericum minutiflorum
Lepidium banksii
Leptinella filiformis
Leptinella rotundata
Libertia cranwelliae
Linguella puberula (orch.)
Lobelia fugax
Mazus novae-zelandiae ssp. *impolitus*
f. *hirtus*
Metrosideros bartlettii
Montia drucei
Myosotis albosericea
Myosotis angustata
Myosotis australis var. *lyttletonensis*
Myosotis laeta
Myosotis petiolata var. *petiolata*
Myosotis petiolata var. *pottsiana*
Myosurus minimus subsp. *novae-zelandiae*
Myrsine umbricola
Olearia adenocarpa
Olearia gardneri
Ourisia modesta
Pachycladon excile
Pachycladon fasciarum
Pachycladon stellatum

Pennantia baylusiana
Pimelea actea
Poa aucklandica subsp. *rakiura*
Poa spania
Pseudowintera insperata
Pterostylis micromega
Puccinellia raroflorens
Ranunculus paucifolius
Ranunculus viridis
Senecio kermadecensis
Senecio lautus subsp. *esperensis*
Simplicia buchananii
Simplicia laxa

Tecomanthe speciosa
Thelymitra sansscilia
Uncinia perplexa
Nationally endangered
Carmichaelia muritai
Myosotis cheesemanii
Nationally vulnerable
Hebe speciosa
Naturally uncommon
Celmisia macmahoni var *macmahoni*
Coprosma spathulata subsp. *kikuruana*
Other
Carmichaelia sp.

New revised checklist of New Zealand's indigenous vascular flora

A new indigenous vascular plant checklist for the New Zealand Botanical Region is now available from the New Zealand Plant Conservation Network. The checklist builds considerably on that published by the Network in 2006, providing a comprehensive summary of the New Zealand indigenous vascular flora. As before, it documents the levels of endemism, chromosome counts, threat status, and provides a full listing of families, genera, species and lower ranks (a total of 2414 taxa), but it also includes significant improvements on the 2006 listing. A comprehensive introduction details the nature of the New Zealand flora and the New Zealand Botanical Region, discusses phylogenetic relationships in the flora and the arrangement of taxa listed, and provides summary statistics on several aspects of the flora. The checklist of the vascular flora is rearranged to accord with current understanding of plant phylogeny, as documented by the Angiosperm Phylogeny Group. To aid finding species in the re-arranged phylogenetic list, a cross-referenced alphabetical list is provided. Both versions of the list are also cross-referenced to a detailed and fully referenced concordance documenting and explaining names that have changed since the 2006 listing. The concordance also provides a detailed assessment of 192 species aggregates and information on newly recorded or accepted species, providing an up-to-date assessment on the progress being made by plant biosystematists to describe our flora. Additional sections provide comments on some other taxa whose names have not changed and names that have been rejected.

The revised checklist is a 'must have' for any person with an interest in the New Zealand flora or its biogeography. Designed to be used as a quick off-the-shelf reference, the checklist has been prepared for the Network in cooperation with the Department of Conservation by Peter J. de Lange and Jeremy Rolfe, who have published a number of books dealing with the New Zealand indigenous flora, and who co-authored, with John Sawyer, the 2006 checklist.

The checklist may be found at: www.nzpcn.org.nz/shop_products.asp the cost for Network members is \$18 (including post and packaging); non-members \$25.



Errors in *New Zealand indigenous vascular plant checklist 2010*

Peter de Lange & Jeremy Rolfe

Errors have been found relating to three taxa in the recently published New Zealand indigenous vascular plant checklist (de Lange & Rolfe 2010).

Anisotome procumbens was listed in error (p. 10, 61). It does not occur in the New Zealand Botanical Region.

Lepidium flexicaule was listed as Endemic (p. 75) but it is also known from Tasmania.

Veronica ciliolata subsp. *fiordensis* was treated as a variety in several places (p. 6, 31, 94, 122).

Although a name for that plant exists at the rank of variety, we intended to follow Meudt (2008) who made a combination for it using subspecies rank.

Because of these corrections, changes are necessary in the summary statistics (p. 7). The number of species should be 2,413, the number of subspecies should be 188, and the number of varieties should be 176. The number of endemic species, subspecies, varieties and forms should be 1,982.

In addition, discussion about *Prumnopitys ferrugineus* (p. 104) is ambiguous, implying that the name *Prumnopitys ferruginea*, rather than *Stachypitys ferrugineus*, is illegitimate. A clearer statement is:

“The genus, *Stachypitys*, erected by Melikian & Bobrov (2000), is now regarded as illegitimate because it is a parahomonym of *Stachyopitys* Schenk. (a plant fossil) (see Brummitt 2004).”

Typographical errors were made on p. 5: ‘epither’ should be ‘epithet’; p. 120, under *Pouzolzia australis*: *B. alophleba* should be *B. calophleba*; and p. 126, under Courtney 2010: ‘Coonservancy’ should be ‘Conservancy’.

Finally, a reference is missing:

Courtney, S.P. 1999: A checklist of indigenous vascular plants of New Zealand. 1st Revision. Updated and expanded from A.P. Druce’s 9th Revision, September 1993. Unpublished Checklist, Nelson/Marlborough Conservancy, Department of Conservation.

References

- de Lange, P.J.; Rolfe, J.R. 2010: *New Zealand indigenous vascular plant checklist 2010*. N.Z. Plant Conservation Network. Wellington.
- Meudt, H.M. 2008: Taxonomic revision of Australasian snow hebes (*Veronica*, Plantaginaceae). *Australian Systematic Botany* 21(6): 387–421.

Progress report on a revision of Cook’s scurvy grass (nau) (*Lepidium oleraceum* s.l.)

Peter de Lange, Department of Conservation (pdelange@doc.govt.nz)

In 1996, my partner Gillian Crowcroft and I were at Kaiangaroa Point, Rekohu (Chatham Island) with Amanda Baird. Amanda had told us that ‘somewhere here David Given found *Lepidium oleraceum*’, at that point I noticed that I was standing on it!

That plant started a more serious investigation into the taxonomic status of the myriad forms of Cook’s scurvy grass (nau) (*Lepidium oleraceum* s.l.). Before that defining moment I had been well aware that *L. oleraceum* plants from the Chathams were “atypical” having worked my way through specimens collected by Graeme Taylor (now Banding Officer, Department of Conservation) from various remote places on Rekohu, and from Rangitira and Tarakoikoia. Some of my preliminary observations on these plants were noted in Garnock-Jones & Norton (1995).

Anyway, that Kaiangaroa plant had me baffled; for a start, it was completely prostrate, the branches radiating out from a turnip-like rootstock. Not, I thought, typical of the *L. oleraceum* we have in New Zealand proper. Sadly, most of the leaves had been browsed off by caterpillars of *Epyaxa rosearia* and the flowers and silicles were in poor order. Still I thought it sufficiently different to take an interest in it.

Over the next 10 years or so, my ideas on *L. oleraceum* have steadily grown, as I have collected it widely, cultivated it to see if the different forms were stable and tried (mostly unsuccessfully), to count the chromosomes of the various accessions (see de Lange & Murray 2002). Some of my initial ideas on the variation of the group over that period were published in three books about the Chatham Islands (Crisp et al. 2000; Walls et al. 2003; Miskelly 2008) and in the New Zealand Threatened Vascular Plant Listings of 1999, 2004 and 2009 (de Lange et al. 1999; de Lange et al. 2004; de Lange et al. 2009). In 2001, the opportunity to get these variants sequenced arose at the University of Auckland, so I started to build up a data set of multiple sequences of all the New Zealand (and some key Australian and Lord Howe species such as *L. foliosum* and *L. nesophilum*) except for the *L. sisymbrioides* group, which was being independently treated by Peter Heenan (see Heenan et al. 2007). Early results from that work (which was based initially, at least, on coarse markers from cpDNA (*trnL*) and nrDNA (ITS) confirmed the distinctiveness of the Chatham-Antipodes and Snares segregates (*L. aff. oleraceum* (a), (b), (c), (d)) but it also revealed a northern and southern New Zealand *L. oleraceum* clade (see Amey et al. 2007). Northern New Zealand (from the Kermadec Islands to Marlborough Sounds plants (with one exception *L. aff. oleraceum* (g)—see de Lange et al. 2010) matched *L. oleraceum* s.s.; plants from Banks Peninsula south to Stewart Island did not but I could not easily tease them out from each other—they had me baffled!



***Lepidium aff. oleraceum* (a)**

Lepidium aff. oleraceum (a) is endemic to the Chatham Islands. It is the largest entity in the *L. oleraceum* complex, differing from *L. oleraceum* s.s. by its prostrate branches (which in ideal conditions can extend for up to 2 m from the rootstock), flowers with two stamens and orbicular silicles



***Lepidium aff. oleraceum* (b)**

Lepidium aff. oleraceum (b) is endemic to the Antipodes and Chatham Islands groups. It is unusual in the complex because of its stamens which can vary within and between plants from two to the more usual four and sometimes up to six. In this variant the leaves may be entire or sparingly toothed in the upper third of the leaf, the orbicular silicles are typically turgid when fresh.



***Lepidium aff. oleraceum* (c)**

Lepidium aff. oleraceum (c) was formerly known from the south-western Titi Islands (off Stewart Island) and Auckland Islands as well as the Snares. However the only recent records of it come from the Snares Islands, where it is a very uncommon plant. It differs from *L. oleraceum* s.s. by its prostrate growth habit, linear-lanceolate finely serrated leaves, and flowers with two rather than four stamens.



***Lepidium aff. oleraceum* (d)**

Lepidium aff. oleraceum (d) is so far only known from Mangere and Little Mangere Islands in the Chatham Islands group. It is a semi-erect shrubby plant with deeply toothed or lacerate leaves, flowers with 2–4 stamens and small orbicular silicles. DNA sequence data places it outside the main *Lepidium oleraceum* clade as sister to the now extinct *L. obtusatum*.

About this time, Gary Houlston and Peter Heenan, Landcare Research, got involved. Peter has had a long standing interest in the New Zealand Brassicaceae (for example, he is actively revising *Cardamine*). Gary was working from a research project that Tristan Armstrong and I had started in 2005 investigating genetic variation in *L. oleraceum*. The Department of Conservation wanted to know where the key areas of genetic variation in this species remained so that its management was more effective and, as a further spin off, I had hoped that the work he did would independently test my ideas about splitting *L. oleraceum*. It did (Houlston 2008; G. Houlston, P.B. Heenan and P. J. de Lange unpubl. data) and, in the last few years, Peter Heenan has taken on the tricky job of looking at the southern New Zealand *L. oleraceum* clade to see if this clade could be morphologically distinguished from *L. oleraceum* s.s. (which was described, it now seems, from a plant that was grown from seed that came originally from Queen Charlotte Sound). He found they could, so *L. aff. oleraceum* (e), (f), (h) and (i) came into being. Our research is now being turned into a full blown revision of what we have come to call the *Lepidium oleraceum* complex (a “complex” which, on the basis of DNA data, includes not only *L. oleraceum* and our other informally recognised segregates (entities a-i) but also *L. banksii*, *L. flexicaule*, and the extinct *L. obtusatum* and a new, sadly extinct, segregate from it). Some insight into the variation and the units we see as deserving of some level of taxonomic rank can be gleaned from de Lange et al. (2010) where we provided illustrations and short descriptions of segregates a-g (segregates (h) and (i) are absent because they were “discovered” after the proofs of that book had been finalised).

At this stage, we have a manuscript in an advanced stage of preparation that we hope to submit sometime next year to an appropriate taxonomic journal. It’s been a long but fascinating journey since I first stood on that *Lepidium* at Kaiangaroa Point, Rekohu, in February 1996.

Acknowledgements

I’d like to thank my colleagues in the Department of Conservation (current and past), Amanda Baird, John Barkla, Andrea Brandon, Bridget Gibb, Shannel Courtney, Terry Greene, Cathy Jones, Phil Knightbridge, Graeme La Cock, Nick Head, Brian Rance, John Sawyer, Bec Stanley, Mike Thorsen and Simon Walls for contributing specimens to our DNA research, for pushing for a revision through the recovery plan for Coastal *Lepidium*, and for ongoing critiques of the manuscript in preparation. I thank Jeanette Keeling and Richard Gardner (University of Auckland) for undertaking sequences of *Lepidium*, Gary Houlston for continuing that work and significantly adding to it with different DNA markers and samples. Neville Scarlett (MEL) for his advice and keen interest in the work. To Peter Heenan, I owe (yet again) a debt of gratitude for his tackling the southern *Lepidium oleraceum* clade and his ongoing partnership in the formal process of writing these new species up. David Norton, Rhys Gardner, and Matt Renner, I thank for being keen sounding boards and testing the *Lepidium* key that is in development. To the herbarium curators of New Zealand, and most especially Ewen Cameron, I extend my gratitude for their willingness to accommodate loan requests and in helping hunt out obscure types. Lastly, I thank my partner Gillian, for coming to Rekohu with me in 1996, her initial interest in *Lepidium*, skilled photography and her critical text proofing.

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Second edition of the New Zealand grass flora just released

Ten years after Edgar & Connor's *New Zealand Grass Flora* (Edgar and Connor 2000) was published, the authors have released a second edition of this popular book. The New Zealand grass flora now comprises 464 taxa of which the authors accept 190 as indigenous and/or endemic. To the flora are added six species, three endemic (*Chionochloa niviferae*, *Rytidosperma horrens* and *R. telmaticum*) and three naturalised (*Aristida longespica* var. *longispica*, *Cynodon transvaalensis* and *Eragrostis amabilis*); a further four exotic tropical species are noted as pot contaminants (*Axonopus compressus*, *Dactyloctenium aegypticum*, *Echinochloa glabrescens* and *Perotis indica*). These species have arisen from imported coconut fibre that had been widely used by the nursery trade as a sustainable alternative to peat in their potting mixes. *Austrofestuca littoralis* is reduced to a subgenus of *Poa* and the name *P. billardierei* revived, *Elymus enysii* is placed in *Australopyrum* (*A. enysii*), and *Sieglingia* (*S. decumbens*) is merged with *Danthonia* as *D. decumbens*. Grass distributions and cytology are updated significantly.

The new edition can be purchased online from Manaaki Whenua Press (mwpress@landcareresearch.co.nz). For Network members, the price is \$78.99 including post and packaging; see flyer attached to the newsletter.

CURRENT FORUM THREAD

- Have the *Coriaria lurida* complex and *Lachnagrostis semiglabra* had name changes?

New home for Arnold Dench native plant garden

Rewi Elliot, Otari Native Botanic Garden and Wilton's Bush Reserve, Wellington City Council
rewi.elliott@wcc.govt.nz

Last month, the newsletter reported the death on 29 August of Arnold Dench. Otari Native Botanic Garden has gratefully received plants from Arnold Dench's garden in Wellington. He was a founder member of the New Zealand Plant Conservation Network and recipient of the 2008 Network individual award for plant conservation. He was a long time member of the Wellington Botanical Society and a superb propagator of native plants. He and his late wife Ruth established and cared for one of the largest private *ex-situ* collections of native species at his garden in Wellington.

In early October, Otari staff were notified that Arnold's will specified that plants in his garden were to be donated to Otari after his death. Staff have made several trips to collect plants, recovering many specimens that are not widely cultivated, including numerous orchids and alpine plants. Many of the plants had been gifted to Arnold by renowned New Zealand botanists from across New Zealand. Several plants will also be transferred to Percy Scenic Reserve in Lower Hutt.

Otari staff would like to thank the wider Dench family for their help and support with the transplanting of plants to Otari.

Annual Subscriptions

The AGM passed the proposal to raise the subscriptions. The new rates are Individual, \$40; Student/Unwaged, \$15; NGO, \$60; Corporate (6 members), \$250; Corporate, (25 members) \$500 (no change). Invoices will be sent to NGO and corporate members in early November; Individual and Student/Unwaged members will get reminders later that month (but they are welcome to pay at any time).

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):

Environment Institute of Australia and New Zealand

Annual Conference: Tuesday 26 October to Friday 29 October at Te Papa, Wellington. The title of the conference is "From Discovery to Delivery: Science, Policy, Leadership and Action". These are the four elements that, together, are essential for sound environmental management.

Information: www.confer.co.nz/eianz2010.

2010 Australian Systematic Botany Society Conference

Conference: Monday 29 November to Friday 3 December at Lincoln University. **Theme:** "Systematic botany across the ditch: links between Australia and New Zealand". Subject areas include palaeobotany, biogeography, phylogeny, algae, hybridisation, and biosecurity/weeds.

Information: www.landcareresearch.co.nz/news/conferences/asbs2010/index.asp or e-mail: ASBS2010@landcareresearch.co.nz.

Auckland Botanical Society

Meeting: Wednesday 3 November at 7.30 p.m. a talk by Peter de Lange & Dave Havell titled 'The Kermadecs'. Venue: Unitec School of Health Sciences, Gate 4, Building 115. Room 2005.

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

Field trip: Saturday 20 November to Maranui, Mangawhai Heads.

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

Waikato Botanical Society

Field trip: Saturday 6 November a Threatened Plant Collection working bee. Please bring gloves, old clothes and boots for weeding, planting and propagating activities. **Meet:** 11.00 a.m. at Waikato University Gate 9, Hillcrest Rd, or down the hill at glasshouses compound.

Contact: Liz Overdyck, ph: 846 0965, e-mail: eg3@waikato.ac.nz

Rotorua Botanical Society

Field trip: Saturday 6 November to Whakaipo Bay, Taupo. **Meet:** The car park at 8:30 a.m. or intersection of SH1 and Norman Smith St, Taupo 9:30 a.m. **Grade:** easy-medium.

Leader: Grant Milligan, ph: 07 349 4928 or 021 0279 2706, e-mail: gr.milligan@xtra.co.nz

Field trip: Saturday 20 November to the Okareka Mistletoe Restoration Project for a weed control/plant releasing work day.
Meet: corner Summit and Loop Rds at 8.45 a.m. **Grade:** medium-hard – activities suitable for all ages and abilities will be provided.

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

Wanganui Museum Botanical Group

Meeting: Tuesday 2 November at 7.30 a talk by Laurel Stowell and Richard Thompson titled 'Three weeks in Central Australia'. **Venue:** Museum's Davis Lecture.

Contacts: Robyn and Colin Ogle,
ph: 06 347 8547, e-mail:
robcol.ogle@xtra.co.nz.

Field trip: Saturday 6 November to 'Paloma', Fordell. A tour of the gardens from 1.00 p.m. (option: go about noon with your lunch and using the barbecue and table facilities). Meet: at 'Paloma', Denlair Rd, Fordell.

Contacts: Robyn and Colin Ogle,
ph: 06 347 8547, e-mail:
robcol.ogle@xtra.co.nz.

Wellington Botanical Society

Field Camp: Wednesday 29 December – Friday 7 January 2011 the summer camp in Northern Fiordland jointly with Botanical Society of Otago. Accommodation: indoors and camping at Boyds Creek Lodge, c. 40 km NE along SH94 from Te Anau.

Contact: Mick Parsons,
ph: 04 972 1142, e-mail:
mtparsons@paradise.net.nz.

Nelson Botanical Society

Field trip: 22-25 October, the Labour Weekend camp to Endeavour Inlet on Queen Charlotte Sound.

Information: Shannel Courtney,
ph: 03 546 9922.

Field trip: Sunday 21 November to Mt Starveall, Richmond Ranges. **Meet:** between Church steps and the large gum tree, Selwyn St.

Leader: David Grinstead
ph: 03-542-3484 for information
about meeting time.

Canterbury Botanical Society

Meeting: Friday 5 November at 7.30 a talk by Philip Simpson titled 'The Totara'. **Venue:** room A5, Canterbury University.

Contacts: Miles and Gillian Giller,
ph. 03 313 5315.

Field trip: Thursday 11 to Sunday 14 November (Canterbury Show Weekend), the spring camp to Hanmer Springs. **Venue:** Hanmer Springs Forest Camp.

Non-refundable deposit: \$20 to Trevor Blogg, Canterbury Botanical Society, PO Box 8212, Riccarton, Christchurch 8440.

University of Canterbury summer course: Practical Taxonomy for Field Biologists BIOL 305

Summer course: This is an intensive, short course designed to meet the need for training in the collection, preparation, and identification of botanical specimens. **Venue:** Mountain Biological Field Station at Cass, Canterbury. **Dates:** Thursday 27 January to Friday 4 February 2011.

Information: www.biol.canterbury.ac.nz/biol305 or contact Dr Pieter Pelsler,
ph: 03 364 2987 ext 45605, e-mail:
pieter.pelsler@canterbury.ac.nz.

Botanical Society of Otago

Field trip: Sunday 14 November to Mt Cargill. **Meet:** Botany Department car park at 9.00 a.m.

Contact: [David Lyttle](#),
ph: 03 454 5470.

Meeting: Wednesday 17 November at 5:30 p.m. a talk by Prof. Katharine Dickinson, Department of Botany, University of Otago. 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: [Allison Knight](#),
ph: 03 479 7577.

**FLORA OF NEW ZEALAND
VOLUME V GRASSES
SECOND EDITION**

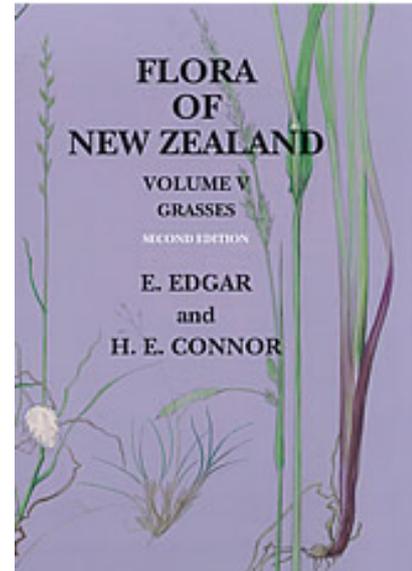
There are 190 native species and 230 naturalised grasses in New Zealand, and this *Flora* is about them. The *Flora of New Zealand Volume V Grasses* was first published in 2000 and it has been revised and updated in this new second edition a decade later.

Included are formal nomenclature, descriptions, distribution records, ecological information, and keys to genera. Appropriate revisions, DNA phylogenies, or taxonomic opinions published up to 30 June 2009 are included in this second edition. The structure is that of the main text of the 2000 edition with the addition of simple corrections of errors, and changes that could easily be made within the text. Issues relating to modern nomenclature and generic placement are treated in the Addenda.

The *Flora* features excellent line drawings by Sabrina Malcolm and colour illustrations by Keith West, with photographs by Peter Johnson.

This is an identification manual intended for all who are involved with grasses - ecologists, farmers, commercial managers, weed controllers, conservationists, horticulturists, land-use specialists and soil conservators.

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