



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 22. SEPTEMBER 2005

Deadline for next issue: Friday 14 October 2005

Message from the Vice President: Plant taxonomy – a coming of age

New Zealanders pride themselves on their “number eight wire” ingenuity, and so it is with taxonomy. Often we hear that taxonomy is a dying art, and well so it was, and well so it may be. But it’s well to remember that “number eight wire” ingenuity can get you through the bad times, and perhaps, if you do it well score a few political brownie points on the way.



Coprosma tayloriae, Huiarau Range.
Photo: John Smith-Dodsworth.



Olearia quinquevulnera, Mt Manuoha.
Photo: John Smith-Dodsworth.

Let’s consider the September issue of the *New Zealand Journal of Botany*. Therein three papers dealing with the formal description of new species of *Coprosma*, *Olearia* and *Rytidosperma*. The first by a keen amateur with a good eye finally formalises with a legitimate name one of the most common *Coprosma* species in New Zealand, the infamous *Coprosma* sp. (t) of Eagle (1982), or “Cop. T” of field workers, Thanks to Dr Graeme Jane of Tauranga it now has a proper, validly published name, *Coprosma tayloriae* A. Druce ex G.T. Jane. A nice conclusion to a story which has been slowly unravelling since the 1920s. The second paper tidies up a funny little quirk of botany, wherein, a widespread but uncommon shrub, it turns out, has masqueraded under the wrong name for some 134 years. It wasn’t *Olearia capillaris* Buchanan after all, but a distinctive, undescribed species, now known as *Olearia quinquevulnera* Heenan, and, as it would turn out, one of the putative parents involved in the hybrid *Olearia* × *capillaris* Buchanan. Dr Peter Heenan of Landcare one of this countries very few FoRST funded biosystematics shows what patient research and attention to detail can do. The last paper describes two new endemic bristle grasses

Rytidosperma horrens Connor et Molloy and *R. telmaticum* Connor et Molloy. That paper continues a long line of well researched, scholarly papers written by Dr Henry Connor and Dr Brian Molloy, both retired former DSIR Botany Division staff. Notably the senior author is now pushing 83, hearty and hale he is still plugging the gaps on a little grass project he had inherited in the early 1970s with Dr Elizabeth Edgar when, through an unfortunate mishap, the then Grass Flora author Vic Zotov died.

These three papers prove several points. Firstly, once a “taxonomist” always a taxonomist. Even with minimal or no financial support New Zealand people are “just getting on with it”. There’s no fanfare, as is seen all too frequently when large animal finds are bought to world attention. Indeed these people often actively shun the limelight, they care, and so they do what they can, when the can, in the best way they know. Secondly, of the four authors only one is funded to do taxonomic work, and that person only partially so. Lastly, effective taxonomy does influence other natural

sciences and conservation management. Of the three papers two, the *Olearia* and *Rytidosperma* deal with new and potentially threatened taxa, legitimise them with scientific names, offer insights into their ecology, conservation status and possible threat management.

In New Zealand we need to get real with funding taxonomic work. While we pride ourselves on our ingenuity and resourcefulness our biota can't. It is estimated that 20% of our vascular flora has yet to be formally described, and that figure includes not only miniscule herbs but also large trees, as recent papers have shown. Many of these unnamed entities are seriously threatened, and without formalisation of a legitimate scientific name they are even more at risk of extinction than other well known species. Of greater concern then is the fact that in this country under the age of 40 there are virtually no active and upcoming vascular plant taxonomists. Most "active" taxonomists are over the age of 60! The situation is of course worse for our mosses, liverworts, lichens, seaweeds and so forth.

As a nation that prides itself in "getting stuck in", "getting on with it" and being "resourceful" perhaps we need to stop resting on the laurels of our ancestors and lobbying hard to prevent the real catastrophe - extinction of local biosystematic expertise.

Peter J. de Lange, Network Vice President

Plant of the month: *Hibiscus trionum*



Hibiscus trionum. Photo: Colin Ogle.

Plant of the month for September is the Nationally Critical *Hibiscus trionum*. This perennial herb is found only in North Island, from Te Pahi eastward to Hicks Bay, including Great Barrier and Mayor (Tuhua) Islands. It is the only race of *Hibiscus trionum* represented by the earliest New Zealand collections made by Rev. Matthews, Taylor and Colenso, and is found in the most remote and least modified indigenous habitats. It grows up to 1m tall and is strictly a coastal plant, growing in recently disturbed habitats, such as around slip scars, within petrel colonies, on talus slopes, and under open coastal scrub

and forest. *H. trionum* is very palatable to stock, and it is prone to being out competed by faster growing and taller weeds. The Network fact sheet may be found at: http://www.nzpcn.org.nz/vascular_plants/detail.asp?PlantID=2378

Vote for your favourite plant

The third national Vote for your favourite Plant competition is now underway. This project is being done in conjunction with the Isaac Centre for Nature Conservation. You can vote via the Network website (see www.nzpcn.org.nz). Previous years has seen Pohutukawa win the national title of our most loved native plant. Which species will win this year? Log on to the website and start voting using the on-line voting system and encourage your friends and colleagues to vote also. Each person can vote up to 5 times. Voting closes on 30 November 2005. Results of this voting will be published in the Network newsletter shortly after.

Network newsletter is 2 years old

The first issue of what is now known as *Trilepidea* – the Network newsletter – was launched in September 2003. It is now read by over 800 people every month. If you have plant conservation stories or events or issues to be discussed please email them to the Network at info@nzpcn.org.nz. Perhaps you have just secured protection for a threatened species, or published a paper about a native plant or translocated a species to a new site or have undertaken monitoring that is showing interesting results. Whatever the story send it through to the Network so that more people can hear about what is happening in plant conservation in New Zealand.

Puccinellia wanted for cytogenetic research



Puccinellia walkeri subsp. *chathamica*.
Photo: Geoff Walls.

Puccinellia (Poaceae) is a genus of salt grasses which in New Zealand comprises seven species and two subspecies. Three species *P. distans* (L.) Parl., *P. fasciculata* (Torr.) E.P. Bicknell and *P. rupestris* (With.) Fernald et Weath., are naturalised, *P. macquariensis* (Cheeseman) Allen et Jansen is endemic to Macquarie Island (botanically part of New Zealand but an Australian territory), *P. stricta* (Hook.f.) Blom, is indigenous, while *P. raroflorens* Edgar and *P. walkeri* (Kirk) Allan (including subsp. *walkeri*, subsp. *antipoda* (Petrie) Edgar, and subsp. *chathamica* (Cheeseman) Edgar) are endemic.

Chromosome numbers are now known for all these taxa, except *P. walkeri* subsp. *antipoda*. Recently it has been revealed that one sample of *P. walkeri* subsp. *walkeri* from Tiwai Point, Southland is pentaploid and sterile. Dr Brian Murray (University of Auckland) and a Masters of Science student are keen to establish, using modern chromosome painting techniques, the chromosome evolution of the New Zealand species, and the status of *P. walkeri* subsp. *walkeri*. To do this they require live plant material of both indigenous and naturalised (exotic) *Puccinellia*. If you are able to help please send small plugs of these grasses with roots and leaves from known named localities, wrapped in wet tissue. These should be placed in a plastic bag and posted to: Dr Brian Murray, School of Biological Sciences, The University of Auckland, Private Bag 92019, Auckland. B.murray@auckland.ac.nz. Multiple samples are wanted from as wide a range of localities as possible. The student is due to start their research early next year, so Dr Murray would need samples as soon as possible. All assistance will be fully acknowledged. Thank you for your help.

A new revision for ladder ferns (*Nephrolepis*: Nephrolepidaceae) affects two New Zealand species

A recently published paper (Hovenkamp & Miyamoto 2005: A conspectus of the native and naturalized species of *Nephrolepis* (Nephrolepidaceae) in the world, *Blumea* 50(2): 279-322) refers all Kermadec Island gatherings of the fern previously known here as *N. hirsutula* (G.Forst.) C.Presl and *N. exaltata* (L.) Schott to another species *N. brownii* (Desv.) Hovenkamp et Miyam. That treatment also refers the newly reinstated *N. flexuosa* Colenso to *N. cordifolia* (L.) C.Presl. var. *cordifolia*.

The referral of Kermadec Island plants to *N. brownii* is backed by sound morphological characters which include the nearly entire acumen and hyaline or light brown (rarely rufous) rachis scales, submedial sori, and presence of costal hairs along the upper surface of pinnules. In their paper they

imply that the species is native only to Malesia and naturalised elsewhere but no clear evidence is provided to support that view. So we continue to regard it as indigenous. *N. hirsutula* they point out is a widely misapplied name. That species they distinguish from *N. brownii* by the absence of costal hairs on the upper pinnule surfaces, rufous rachis scales whose acumen is conspicuously dentate, and by the submarginal sori.



Nephrolepis flexuosa, Craters of the Moon.
Photo: John Smith-Dodsworth.

With respect to *N. flexuosa*, they refer this species to *N. cordifolia* var. *cordifolia* with minimal comment. However, their revision, which includes chromosome data and spore sizes as critical characters does not cite literature showing that *N. flexuosa* has larger spores than *N. cordifolia*, and is 4x rather than 2x ($x = 41$, $2n = 82$ in *N. cordifolia*, $2n = 164$ in *N. flexuosa*). With respect to root tubers, considered in New Zealand at least, to be a useful field character distinguishing *N. cordifolia* from *N. flexuosa*, they suggest that tubers are not consistently produced, and imply that plants which produce tubers spread vegetatively and so one assumes

are sterile. In New Zealand this is incorrect, tuberous *N. cordifolia* is sexually reproductive as well. The New Zealand Plant Conservation Network suggests that as there are two distinctive, morphological, and validly named entities in New Zealand there seems to be no good reason to refer them to the one species, which in this country is a serious weed.

Website sails through 4 million hits

The Network website has just sailed through 4 million hits with over 12,000 visitors to the site every month. If you find a mistake on the site or if you can provide a better photo of any of the species of native or exotic plant email us at info@nzpcn.org.nz. Please let us know if you have difficulty accessing the website for any reason and we will do what we can to help solve the problem.

Call for articles for Australasian Plant Conservation

The Australian Network for Plant Conservation is now inviting articles (less than 1200 words) for the next two issues (Sept–Nov & Dec–Feb). The September–November issue will be on the theme of “The Challenges of Change” and will include articles on some key papers from the upcoming ANPC conference. Would you like to contribute an article or short note on the challenges of change? Articles not on this theme also welcome. Deadline for submissions for the Sept–Nov Issue is **Monday 10 October 2005**

The theme for the December–February issue is Threatened Ecological Communities: their conservation, management and restoration. Deadline for the Dec–Feb issue is Mon 28 November.

They also welcome book reviews, titles of interesting recent publications or resources and where they can be found, conference, workshop, courses and fieldwork announcements, details of relevant publications, information resources and websites. Please send submissions to the ANPC National Office by fax, mail, email or on a diskette (The Australian Network for Plant Conservation Inc (ANPC), GPO Box 1777, Canberra ACT 2601, email: anpc@deh.gov.au). If sending articles electronically, please send as a Microsoft Word or rich text format. Electronic images need to be at least 300 dpi resolution, submitted in at least the size that they are to be published, in tif, jpg or gif format.

Upcoming events

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

Wellington Botanical Society Evening meeting – Teaching an old conservationist new tricks. Monday 19 September. Speaker: Dr David Given, Botanical Services Curator for Christchurch City Council, and Associate Professor at the Isaac Centre for Nature Conservation at Lincoln University. This talk will look at new developments as well as some of the key issues of conservation that we are facing while taking us on a ride through some of the lesser known treasures of landscape, ecosystems and species. Dr Given is especially passionate about the role of people, and in particular the unsung heroes and heroines that make things work ‘on the ground’, as well as the challenge of making New Zealand’s global commitments take on reality at the local level.

Waikato Botanical Society Field trip - Karangahake Gorge, Coromandel.

Sunday 25 September. A re-run due to cancellation last year. This trip will follow the Dubbo track in the Karangahake Gorge and explore old mineshaft entrances, a long rock railway tunnel and other restored mining relics. We will follow a loop track back along the Waitawheta River to the starting point, about 4 hours at an easy pace, plus botanising time. Bring torches for tunnel and mine entrances. Contact: Doug Ashby 07 862 4706 or dj.ashby@xtra.co.nz Meet: At the L&P bottle by the Ohinemuri River at Paeroa by 9.30am.

National Conference of the Australian Network for Plant Conservation – Plant Conservation: the challenges of change

26 September – 1 October 2005. Adelaide Convention Centre, South Australia. The Australian Network for Plant Conservation and the South Australian Department of Environment and Heritage invite you to Adelaide to exchange ideas and to participate in discussions on the challenges that currently face us all in plant conservation. Whether these challenges be of changing climates, environmental conditions, government and policy focus, or confronting scientific information, this conference will stimulate consideration and participation. The conference will appeal to all those involved in plant conservation from on-ground practitioners to researchers and policy makers. Further information will be posted on the conference website (address below) regarding the conference, associated workshops and a call for workshop topics. For further information contact:

PLEVIN AND ASSOCIATES PTY LTD, PO Box 54, BURNSIDE SA 5066, Ph: +61 8 8379 8222
Fax: +61 8 8379 8177, Email: events@plevin.com.au, Website: www.plevin.com.au/ANPC2005

Wanganui Museum Botanical Group – Evening meeting. A visit to Chatham and Mangere Islands

4 October 2005. Talk by Professor Vince Neall. Dr Neall is a soil scientist at Massey University and is excited about the results of this trip that he did last summer. He has some interesting news regarding the plants of some special areas on the islands after discussions with Dr David Given.

Botanical Society of Otago. Trees on campus

Saturday 15 October 2005. Start time: 9.00 a.m. A guided walk by University of Otago Grounds Officer, Robert Scott, to see the University of Otago Commemorative and Memorial trees. In 1980 the University established a Register as a permanent record of commemorative and memorial features within the campus grounds. The Register was updated in 2001 with an improved page layout, better photographs and more flexibility in adding or altering existing pages. Currently 41 items are listed throughout the campus commemorating staff, students and benefactors of the University. Meet at the Botany Dept car park at 9.00 a.m.

Contact [Robyn Bridges](mailto:Robyn.Bridges@otago.ac.nz), phone: (03) 479 8244.

International conference on the implementation of the CBD Global Strategy for Plant Conservation

22–25 October 2005. To be held at the National Botanical Gardens of Ireland at Glasnevin (near Dublin, Ireland). To find out more please click the on the link: <http://www.plants2010.org>. (and follow ‘registration’).

Botanical Society of Otago. Ghosts of Indian Princes – 4th Annual Geoff Baylis Lecture.

Wednesday 26 October 2005. Start time: 5.10 p.m. [Assoc. Prof. Kevin S. Gould](#) will present the 4th Annual Geoff Baylis Lecture with a talk entitled Ghosts of Indian Princes - The Remarkable Properties of Red Pigmented Plants. The eastern states of North America play host each year to one of nature’s most spectacular phenomena. From Maine to North Carolina a rich mural of reds, carmines, crimsons, scarlets, and purples accompanies the leaves of deciduous trees as they embark on the processes leading to winter dormancy. New Zealand, too, has its share of vermilion spread across all orders of plants from the liverworts to the angiosperms. Such displays have long been considered an “extravagancy without a vital function” but recent research suggests that the red pigments – anthocyanins – can in some instances be critical for plant survival.

Plus: Audrey Eagle Botanical Drawing Competition – Display and Prize Giving. NOTE SPECIAL VENUE: Castle 1 lecture theatre, Otago University. Keep this date free. Contact [Robyn Bridges](#), phone: (03) 479 8244.

Wanganui Museum Botanical Group – Evening meeting. How to look at Grasses: a practical evening on Family Poaceae.

1 November. Starting at 7 p.m. in Museum Classroom. Our practical evenings based around a plant family have proved popular in the past. As a family, grasses are familiar to all of us as useful plants (pasture, lawns, ornamental plants, and sources of materials like bamboo, sugar, cereals). Identifying them can be a problem, even with the Flora of NZ Vol. 5, devoted to grasses. The workshop will show you what features to look for, in order to identify grasses for yourselves. Please bring pen/pencil, hand lens if you have one, and any grasses in flower or fruit. Guide: Colin Ogle.

ENVIRONMENTAL SCIENCE Job opportunity with Kingett Mitchell

Position: *Ecology Technician (Auckland office)*

Kingett Mitchell: Kingett Mitchell Limited was founded in 1982 as an industry focused environmental practice based in Auckland, New Zealand.

Candidate: This position would suit a recent BSc graduate, or similar, with an interest in terrestrial ecology (mainly botanically oriented), ecological restoration and management and assessment of effects. Knowledge of NZ botany would be a big plus. We are looking for someone who is enthusiastic and has a strong willingness to learn and gain practical experience in a progressive environmental consultancy.

Duties: Assist consultants (particularly terrestrial ecologists) in completing ecological surveys, including sampling, data recording, data entry, data checking and management and writing of field notes and reports.

Specific skills required:

1. Field work
 - a. Map reading, compass and GPS use
 - b. Physical fitness and stamina
 - c. First aid, familiarity with health and safety issues
 - d. Ability to cope with unexpected and difficult circumstances
 - e. Ability to make sound weather judgements

2. Data management

- a. Legible and accurate recording
- b. Meticulousness with regard to data entry and checking
- c. Strong numeracy skills
- d. Basic knowledge of statistics
- e. Knowledge of MS Excel and MS Word

3. Technical skills

- a. Ability and interest in identification of species, especially plants
- b. Ability to read technical publications (e.g. articles, floras, ID books) to collate and interpret information

4. Report writing

- a. Ability to report relevant information
- b. Ability to translate observation and analysis into writing
- c. Ability and commitment to completing tasks in a reasonable time

Contact: Sandra Cornwell on (09) 486 8068, Email: scornwell@kma.co.nz

Closing date: Apply by 30 September, 2005. BSc students graduating in November are welcome to apply.