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NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK

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

Postal address: P.O. Box 16-102, Wellington, New Zealand

E-NEWSLETTER: NO 105. AUGUST 2012 Deadline for next issue: Friday 14 September 2012

Council member guest editorial

In the last 12 months, there has been considerable progress and change in the world of plant conservation in New Zealand. The Department of Conservation, despite the challenge of a major restructure, has led a review of the threat status of vascular plants and, significantly, lichens now have their own conservation status assessment (de Lange et al., 2012). Important and on-going research continues to shed light on our flora (see, for example, Heidi Meudt's article about her review of *Plantago* taxonomy). Many new threatened plant discoveries are also being made (see Astrid van Meeuwen-Dijkgraaf's article). And, on a sad note, one of the countries strongest advocates for native plants – Muriel Fisher – has died at the age of 96 (see article in this newsletter).

Having just spent two weeks glued to the television watching athletes perform at the Olympics, I have wondered how we would fare if an environmental Olympics existed? It would be nice to think that New Zealand would make a clean sweep and bag 100 medals, for all the right reasons, and eclipse Australia, China and Britain. "Clean and green, 100% Pure", New Zealand should be topping the table, shouldn't it? Taking a closer look at our environmental achievements reveals some disturbing trends about the on-going biodiversity crisis, the lack of action on climate change and our inability to protect natural capital despite its critical importance to our economy, our culture and our sense of place.

As well as winning gold for pest control on islands we would probably do best in community and landowner involvement in the protection of the environment. With approximately 1000 Enviroschools, at least 3500 community restoration groups and over 4000 private covenants established by landowners to protect biodiversity, we would almost certainly deserve a medal. The existence of so many non-governmental groups protecting our environment makes clear that New Zealanders are determined to reverse the environmental declines that have been occurring for a generation. For that reason, Nature Space (www.naturespace.org.nz) is an important initiative launched to support community and private landowners with their ecological restoration efforts and has doubled in size in three months (see article in this newsletter).

But, while the gold medals are being handed out, there are a few that we would receive for the wrong reasons. The downsizing by government departments of our capacity to achieve plant conservation outcomes is something we should all be concerned about. The number of extinct and threatened species places us firmly on the medal podium. We live in one of the world's 30 global biodiversity hotspots and, with close to 3000 species of plant, animal and fungi on the verge of extinction, we are Olympic champions in destroying our unique natural heritage. In an international review in 2010 evaluating the relative environmental impact of different countries, Corey Bradshaw and his team found that New Zealand came 18th from the bottom of a list of 179 countries, just below China (Bradshaw et al., 2010).

We have the knowledge and the technology to fix practically all our environmental problems, and we also have the human capacity and energy since most New Zealanders truly care about their land and want to do the right thing. The concept of a "stadium of four million people", which worked during the Rugby World Cup, must be harnessed to act positively for the benefit of our natural heritage.

PLANT OF THE MONTH – *CARDIOMANES RENIFORME*

Cardiomanes reniforme. Photo: Jeremy Rolfe.

Plant of the Month for August is *Cardiomanes reniforme* (kidney fern, konehu, kopakopa, raurenga). *Cardiomanes reniforme* is a creeping fern with rhizomes that form spreading interwoven patches. Its distinctive reniform (kidney shaped) fronds are bright yellow-green to dark green, glossy and often have a rather attractive, almost translucent quality. The sori (structures producing and containing spores) are prominently crowded along margins of the fronds.

Cardiomanes reniforme is a New Zealand endemic, found throughout the country from the coast to the mountains, usually in dense forest but also on boulders, rock falls and cliff faces. It is difficult in cultivation, not appreciating disturbances or extreme variations in seasonal temperatures and moisture levels; it can be seen to almost completely disappear when drier only to reappear during wetter periods.

Cardioman reniforme is not threatened, but because it is difficult to cultivate should not be removed from the wild. The Network fact sheet for *C. reniforme* may be found at: www.nzpcn.org.nz/flora_details.asp?ID=1322

Just as we evaluated our waistlines during the Olympics, if you evaluated your personal "plant conservation impact factor" over the last 6 months how would you fare? Have you planted a native tree, shrub, herb or fern? Have you nominated someone for a Plant Network Award (see the call for nominations in this newsletter)? Have you attended a committee meeting for your neighbourhood's community restoration group? Have you killed a stoat, possum, rat, deer or goat in a reserve, or in your back garden? Have you recorded a plant observation or answered a forum article on the Network website or sent in images to be added to the online database? Have you written an article for the Network newsletter about what you have discovered, what you have restored, what you want to see happen? Have you given a talk to inspire a group of people to get involved in plant conservation? Have you recruited someone to join the Network? Have you written to your local MP seeking greater protection for native plants? I hope you would all win a medal for your environmental achievements as it is too easy to be an armchair critic of New Zealand's environmental record.

The Network has some exciting initiatives underway this spring including a programme of seed collection into the national threatened plant seed bank, the addition of lichens and macroalgae (seaweeds) to the Network website, the on-going promotion of the Network's online flora mapping system (fabulous posters are still available on request). Planning is now underway for the Network's 10th anniversary conference to be held in Auckland in May 2013. The Network's new website strategy has led to a new design to be launched shortly that will improve interaction with plant information.

Now the Olympics are over, it is time for us all to get back out there, especially me. With sports, you know at the end of the race whether you won or lost but our environmental race is one we cannot lose. And it certainly feels as though we never win, or at least every generation must learn to win the same race over and over. As an ecologist, I look at the environmental scoreboard and know that we are failing, not only ourselves but future generations. This is a wounded planet and many indicators point to problems ahead. Our young people need to stay fit and healthy so they must be encouraged to keep at sports, win Olympic medals and make us all proud. But, in the long term, we must encourage their active and sustained involvement in activities to protect their environment. This must be the ultimate gold medal pursuit for any country ahead of any sporting endeavour.

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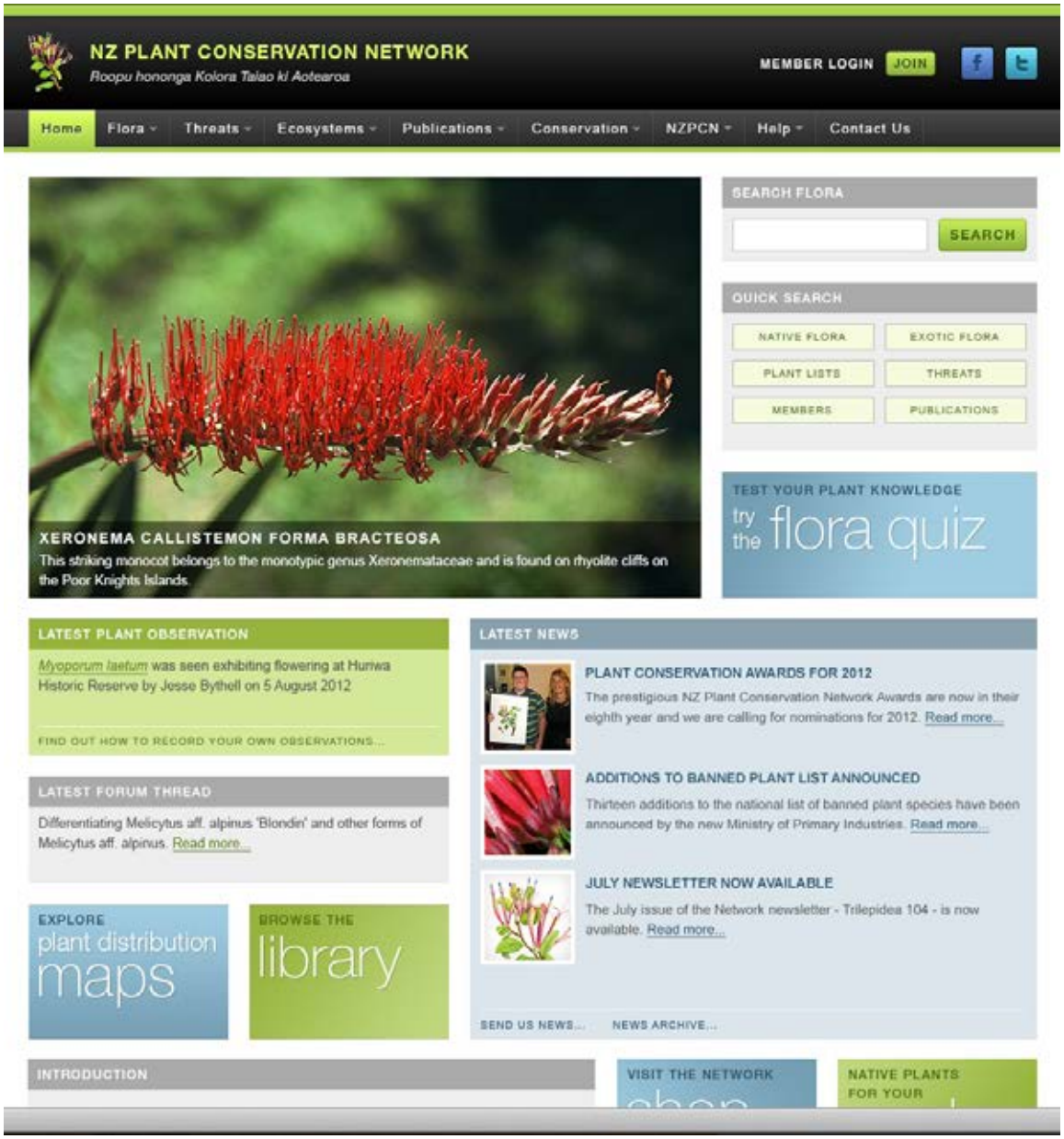
John Sawyer,
Network Committee Member



A preview of the new-look homepage soon to be launched at www.nzpcn.org.nz

New Zealand native *Plantago* taxonomy revised

Heidi Meudt, Museum of New Zealand Te Papa Tongarewa (heidim@tepapa.govt.nz)

Plantago is a large genus with over 200 wind-pollinated species found throughout the world, including about 20 species in New Zealand, eight of which are not native but are now naturalised weeds (Sykes 1988b). In a recent article revising the taxonomy of the native New Zealand species of *Plantago*, I recognise 11 native species (Meudt 2012): *P. aucklandica, P. lanigera, P. novae-zelandiae, P. obconica, P. picta, P. raoulii, P. spathulata, P. triandra, P. triantha, P. udicola* sp. nov. and *P. unibracteata*. This new revision is the culmination of several years' research by myself and collaborators and was based on the analysis of novel morphological data combined with other data from cytology (Murray et al. 2010 and references therein), AFLP DNA fingerprinting (Meudt 2011), molecular phylogenetic data (Tay et al. 2010a, b), and molecular cytogenetics (Wong 2011).

Plantago lanigera (top) and *Plantago triantha*. Photos: John Barkla.

I will now outline some of the main taxonomic changes in the recent revision relative to previous treatments. First, I recognise *Plantago picta* and *P. novae-zelandiae* at the species level, instead of as a subspecies of *P. spathulata* and a synonym of *P. lanigera*, respectively. There is ample morphological and genetic evidence separating *P. picta* from *P. spathulata* and *P. novae-zelandiae* from *P. lanigera*, which justifies specific rank in both cases. *Plantago picta* is restricted to coastal mudstone or sandstone habitats between Gisborne and East Cape, and its conservation status is 'At Risk/ Naturally Uncommon'. Two other species, *P. aucklandica* and *P. obconica*, have the same conservation status.

Second, I treat *P. masoniae* as a synonym of *P. triandra*. This treatment follows several previous authors (Moore 1961; Wilson 1994; Webb & Simpson 2001) but contrasts with others who recognised it as a subspecies of *P. triandra* (Sykes 1988a, b) or as a species (Cheeseman 1921). Nearly all the morphological characters previously used to separate the two entities were shown to be variable and overlapping. Furthermore, the two entities were not distinguishable using DNA sequence or AFLP data. *Plantago triandra s.l.* (including *P. masoniae*) is considered to be a widespread, non-threatened species found from coastal to alpine habitats from 0-1500 metres above sea level.

Finally, I formally describe a new native species, *Plantago udicola* Meudt & Garn.-Jones. Lucy Moore (1961) first hypothesised this entity might be distinct, and the discovery that it is a 16-ploid (2n = 96) reinforced this idea (Groves & Hair 1971). Druce (1993) gave it the tag name *P.* sp. "Sylvester". *Plantago udicola* is found in boggy habitats up to 1600 m elevation mainly in the South Island and is not threatened. A recent blog post contains photos, a drawing of this new species and more information about the new species, including the etymology of its name: http://blog.tepapa.govt.nz/2012/06/18/a-new-native-plantain-plantago-udicola/.

In the conclusions of the revision (Meudt 2012), additional future studies are recommended and outlined to address some outstanding questions regarding the evolutionary history, polyploid origins and species limits of some of the species. In the meantime, it is hoped that this new revision, which is comprehensive and based on a synthesis of multiple types of data, will prove to be a useful taxonomic resource for colleagues in botany, ecology and conservation, and indeed anyone who is interested in New Zealand native plants.

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Stalking the nationally critical adder's tongue

Astrid van Meeuwen-Dijkgraaf, Wildland Consultants (astrid@wildlands.co.nz)

Wildlands was asked by the Department of Conservation to undertake a survey of a remote kahikatea river flat in the upper Tangarakau. This area was highlighted as being of possible interest through the Natural Heritage Management System run by the Department. The location was found to be unusually rich in divaricating shrubs for the Matemateaonga Ecological District.

More importantly, we found a population of the Nationally Critical stalked adder's tongue fern (*Ophioglossum petiolatum*) alongside fine-leaved parsley fern (*Botrychium biforme*); probably at least 30 plants of each, although we didn't undertake a proper census. It is unclear whether the African club moss (*Selaginella kraussiana*) could be having an adverse effect on this population (some of the plants were found growing amongst the African club moss). I've recommended to Department that a more intensive vegetation survey is undertaken of the area and a census of the stalked adder's tongue populations. Volunteers anyone?

During the summer, I also located a small population of woollyhead (*Craspedia uniflora* var. *maritima*—a Naturally Uncommon coastal species) on a rock stack near Titahi Bay, Wellington.

New Zealand *Euphrasia*—a call for photographic evidence of floral coloration and locations

W.R. (Bill) Barker, State Herbarium of South Australia (bill.barker@sa.gov.au)

I am an Australian botanist undertaking in retirement a revised account of the taxonomy of the plant genus *Euphrasia* (eyebrights) in New Zealand, and am in the final stages of bringing the account of the annual species to publication. The revised taxonomy will largely follow the *Flora of New Zealand* (Ashwin, 1961; de Lange et al., 2010; Williams & Courtney, 1998), but additional species and subspecies will be named and described and existing species redefined.

Though identification is commonly difficult without a flowering and/or fruiting collection and a microscope, I can identify some taxa from photographs, particularly if a location is provided. Access to such photographs is potentially valuable in finalising the coming published accounts of the many species and subspecies since they can be used to refine existing information on flower coloration and shape, the habit (arrangement of branches) and perhaps the distribution. Dates (month and year) of photographs should be provided to aid in confirming flowering times and even whether a taxon still exists in a region.

Fig. 1. *Euphrasia dyeri*, top, in sphagnum on Old Man Range on 14 February 1989 (note mass display, colour variation in top plants) and *E. repens*, in coastal gravel at Three Sisters south-west of Omaui on 27 March 2012 (back of flower in bud, colours in corolla tube). Ph. Bill Barker .

There are three clear examples where dated photographs would be helpful. The first is in Southland and Otago where the closely related small procumbent species *E. repens* and *E. dyeri* occur (Fig. 1). New taxa are being described across this complex and flower coloration and possibly flower shape are factors in defining taxa. Justification for the resurrection of a third species, *E. umbellata*, will be presented in the revision. *Euphrasia umbellata* is so poorly known that it was sunk into synonymy with *E. repens* shortly after its description by the *Euphrasia* specialist Donald Petrie. Though closely allied, it is strikingly distinct. It is known only from specimens collected a century ago in 1911 from one or more locations reflected in "Otatara", "near the Oreti River" and "mouth of the Oreti River", where its habitat of unknown ecology appears to have been lost to Invercargill's suburban spread. Perhaps there is a photograph or anecdotal evidence that may indicate an occurrence elsewhere in the Southland. From herbarium specimens and the ecology of its two allied species, it is/was apparently erect but sprawling, possibly supported by banks of narrow hollows or tallish grass or sedge tussocks, and highly branched, with branches up to 7 cm long.

The second example is a new species related to *E. cheesemanii* of the mountains of the north-west Nelson region. The new species occurs well to the south, known only from two locations in the alpine bogs of the Umbrella and Garvie Mountains. Its flower coloration is unclear, but appears different, from herbarium material. Efforts to visit one site last summer were thwarted, and any photograph could be very helpful.

Finally, further flower coloration data are required for the two closely related species, often occupying pakihi, whose flowers have conspicuous slender corolla tubes up to 7 cm long (Fig. 2). They form an alliance that has been long known for its complexity. *Euphrasia disperma* occurs in wetlands in the centre of the North Island and in coastal and near-coastal parts of the west coast of the South Island (Karamea to Cascade). Three taxa will be recognised in *E. wettsteiniana* : one on the Denniston and Stockton plateaus and Westport lowlands, extending to the northern end of Paparoa Range; one on the southern Paparoa Range; and one at several lowland wetlands in the Lake Brunner region. The taxonomic affinities of a collection from Karamea to the north of this range, made in around 1880, are obscure; it has never been relocated. The flowers of *E. wettsteiniana* are separated from *E. disperma* by a yellow blotch across the cleft on the upper lobes, additional to

the yellow patch at the base of the lower lip; this feature is unique in this genus, which occurs on all continents. Photographs across both species would aid in confirming the diagnostic value of this and other features. There is little doubt that these taxa are rare and highly localised, though their populations tend to be relatively abundant. The bog species are conspicuous when flowering (?January to into April), which, from the presence of well-developed fruits, occurs over periods of some weeks. At other times of the year, the plants are difficult to find because the fine branches are generally hidden in sphagnum.

The northern race of *E. wettsteiniana*, perhaps most accessible to the botanist on the Denniston Plateau, is remarkable biologically for its long floral tube and its single ovulate ovary (not otherwise recorded in the genus or its family Orobanchaceae), limiting it to one seed for each flower. There are no herbarium collections of this species from lowland sites since collections were made 30–50 years ago, which may reflect draining or development of habitat.

New Zealand holds a unique place in the *Euphrasia* world. Its species are unusual in having syrphid flies as principal pollinator where the rest of the world's species are bee pollinated. The flowers of the annuals *E. dyeri*, *E. repens*, *E. disperma* and *E. wettsteiniana* show microscopic modifications that apparently relate to this shift. They have also developed other features, unique in the genus, that apparently relate to their wetland habitat.

For those interested in my looking at their photographs, I do so on the basis that most identifications may simply confirm the generic identity *Euphrasia* or otherwise. I suspect no more than 10% of pictures will be identifiable to species level. This level of identification would reduce if the location is not provided or uncertain. Please precede a request for identification with an e-mail to the address above and I will provide you with a website to which you can upload your images.

Fig. 2. *Euphrasia wettsteiniana*, top, from Denniston Plateau on 23 January 1989 (mass display, yellow blotch across upper lobes, style position), and *E. disperma* in sphagnum at Okarito on 21 Feb 1989 (yellow blotch in mouth only). Photos: Bill Barker.

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Long-time native plant supporter dies

The *New Zealand Herald* reported on July 25 that long-time native plant supporter Muriel Fisher QSM, formerly of Fernglen, Birkenhead, Auckland, died on 23 July on the eve of her 97th birthday.

Muriel Fisher was a North Shore local and one of the country's most well-known and respected experts on New Zealand native plants who showed no signs of slowing down—even at age 95. Muriel, who called Patrick Ferry House her home for over a year, was invited by the management team to provide her gardening expertise to a new landscaping project to provide residents with a completely new outlook on life. It is part of Patrick Ferry House's drive to encourage residents to stay active and involved in both its own community and the wider community.

The new landscaped area covers an area of 700 m^2. The garden features over 600 native New Zealand plants, with over 200 donated by the Kaipatiki Trust, with others being donated by Doug Shaw at the Native Fern Nursery and Fern Glen. The long term plan is to create a sustainable feeding ground for native birds that will provide endless enjoyment for the hospital's residents.

Muriel said she was incredibly touched by the offer to be involved. "It came as quite a surprise but a welcome one at that, I haven't been able to get out to the garden since I suffered my stroke so I'm very much looking forward to providing assistance where I can and sharing my passion for New Zealand plants," she said. "I will look out at the garden from my room balcony so it will be wonderful to see it take shape. At the moment there are a lot of quite bland plants so it will be wonderful to have some natives down there to enjoy."

Khim Ferry, Managing Director at Patrick Ferry House was equally as thrilled to have Mrs Fisher on board saying that the team was very lucky to have her on the planning team. "Muriel is so well respected in the gardening community; even our landscapist at Evolution Garden Design was very excited to learn she would be working with Muriel. We love to involve our residents in our projects because we know they have years of experience we can learn from, we've already learnt so much from Muriel and can't wait to see how the garden evolves under her watchful eye," she said.

Khim said Patrick Ferry House is very aware of the positive impact both interior and exterior environments can have on the wellbeing of the elderly. "We recognise the importance for our residents of being in an environment that is happy and uplifting; we feel that this has an important impact on their wellbeing. The garden will provide a sanctuary for residents where they can look out and see the beautiful New Zealand natives and hear the tui and other native birds singing away," she said.

Muriel said that there is nothing more important than ensuring our native plants are preserved, cared for and protected. "The garden will provide enjoyment for us but it will also provide enjoyment for the next residents that come through Patrick Ferry House," she said.

During the 1950s and 1960s, Muriel and Bill Fisher established a fine collection of over 700 native plants in their garden on the North Shore of Auckland Harbour, now known as Fernglen Native Plant Gardens. Concerned for the future of some rare plants, Muriel Fisher co-wrote *Gardening with New Zealand plants, shrubs and trees* (Fisher et al. 19770) to encourage New Zealanders to grow native plants in their gardens. Her book marked a turning point in New Zealanders' attitudes to using natives.

From: www.voxy.co.nz/lifestyle/new-zealand-gardeners-labour-love/5/93406

Reference

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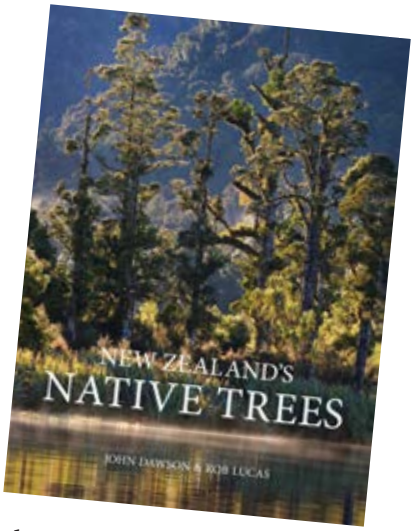
Landmark work wins New Zealand Post Book of the Year



A landmark book—*New Zealand's native trees* by John Dawson and Rob Lucas—has won the country's supreme publishing accolade, The New Zealand Post Book of the Year. The book – which took seven years, more than 100,000 four-wheel-drive kilometres and countless hours' walking in dense forest to complete – was presented with the honour by the Hon. Christopher Finlayson, Minister for Arts, Culture & Heritage, at a gala dinner ceremony in Auckland on 1 August.

New Zealand Post Book Awards judges convenor, Chris Bourke, said on behalf of the judging panel that *New Zealand's native trees* is a masterly example of publishing of the kind that is seen only once in a generation. "From the detailed and authoritative research, accessible and comprehensive writing, detailed yet expansive photography, near flawless editing, design and layout this is a quality book from start to finish. Its impact on the community and on generations to come is self-evident."

The book contains over 2,300 photographs, many of which took photographer Rob Lucas several visits to some of the country's most inaccessible areas to capture. The book also won the Illustrated Non-Fiction Category.

The Network is very pleased to add its congratulations to those of many other groups and individuals; the authors and publisher, Craig Potton Publishing, have made a valuable contribution to the literature on New Zealand's native plants.

Following on from the success of *New Zealand's native trees*, Craig Potton Publishing has two other books coming out in December (see flyer attached to this newsletter). The books are:

- *The Field Guide to New Zealand's native trees* by John Dawson and Rob Lucas, RRP $49.99
- *Above the treeline* by Sir Alan Mark, RRP $49.99

As a special offer to the Network, members can get a 20% discount and free delivery within New Zealand on these two and the standard edition of *New Zealand's native trees* by going to the publisher's website (www.craigpotton.co.nz) and placing your order for one, two or all three books and quoting PCN123. See flyers at the end of this newsletter.

Plant conservation awards 2012

The prestigious New Zealand Plant Conservation Network Awards are now in their eighth year and we are now calling for nominations for the 2012 awards (see attached nomination form). The purpose of these awards is to acknowledge outstanding contributions to native plant conservation. The award categories are:

- Individual involved in plant conservation
- Plant nursery involved in plant conservation
- School plant conservation project
- Community plant conservation project
- Local authority protecting native plant life
- Young Plant Conservationist of the Year (under 18 years at 30 June 2012)

More information about the awards scheme and nomination forms is available on the Network website—www.nzpcn.org.nz. We look forward to your nominations; you may make multiple nominations under different categories. Anyone is eligible to make nominations, not just Network members. The awards will be presented at the Network Annual General Meeting to be held on Thursday 28 November 2012 in Christchurch. Nominations close on Tuesday 9 October 2012. See the Network website for more information.

Additions to banned plant list announced

Under an agreement between government, regional councils and the nursery industry, 13 plants have been confirmed as pests and added to a list of species that are illegal to propagate, distribute or sell. The National Pest Plant Accord (NPPA) was created in 2001 to help prevent the spread of invasive plant species through the nursery trade or casual trading. Government agencies with biosecurity responsibilities and the Nursery and Garden Industry Association (NGIA) are parties to the Accord.

Plants are identified by the parties, the public and a technical advisory group. Following consideration by a group of specialists, discussion by a group of Accord members and public consultation, agreed species are added to the register. All plants on the NPPA register are unwanted organisms under the Biosecurity Act 1993 and cannot be sold, distributed or actively propagated. Existing plants are allowed on private properties. All listed plants are considered invasive and threaten New Zealand's existing plant life. The plants added to the register are:

Asparagus plumosus – asparagus fern
Carex pendula – drooping sedge, Otahuna sedge
Cestrum aurantiacum – orange cestrum
Cestrum elegans – red cestrum
Cestrum fasciculatum – red cestrum, early jessamine
Cestrum nocturnum – queen of the night
Clerodendrum trichotomum – clerodendrum
Juglans ailantifolia – Japanese walnut
Kennedia rubicunda – dusky coral pea, coral pea, running postman
Maytenus boaria – Chilean mayten, mayten, maiten
Passiflora apetala – bat-wing passion flower
Pithecoctenium crucigerum – monkey's comb, monkey's hairbrush
Polypodium vulgare – polypody, common polypody

Cestrum elegans.
Photo: Jeremy Rolfe.

All species in the NPPA species list are in the 2012 NPPA manual that can be accessed online and will be available in hard copy from regional councils nationwide in August 2012. The public can make a submission to have plants considered for inclusion/exclusion on the Accord.

For further information, contact: Lesley Patston, ph: 04 - 894-163 or 029 8940163.

Nature Space doubles in size in three months

Just three months after its official launch, Nature Space has 100 registered community groups from around New Zealand. Nature Space, a New Zealand based website, is a useful tool for people working on and interested in ecological restoration. It provides access to restoration resources, details of community projects, and data storage.

Since the website launch in April, new groups have been steadily joining and the multi-agency Nature Space team have been adding feature stories and restoration information. "We're delighted at the way Nature Space is growing and now there's a good spread of groups from around the country," says spokesperson, Matt Barnett.

Sought by conservation volunteers who are increasingly seeking online support, the website allows groups and individuals to promote their efforts and connect with others who are interested in restoration. Groups and individuals add and edit their own information and it's their participation that keeps Nature Space fresh with current conservation news and events.

"For new members interested in conservation work, it is a fantastic resource for seeing what impact groups across the region are having," says Karl Yager of Makara Peak Mountain Bike Park Supporters.

Graeme Lyon, of Friends of Petone Beach, encourages other groups to join Nature Space, saying "It's easy to use and I feel that it's a useful storage and advertising place."

To find out more about the website and how community groups in your region could get involved please visit www.naturespace.org.nz or contact info@naturespace.org.nz.

Nature Space is an independent website supported by the Department of Conservation, World Wildlife Fund, Queen Elizabeth II National Trust and local government agencies of the lower North Island. Nature Space was officially launched on April 26, 2012.

The 100 Nature Space groups have cumulatively:

- gathered 13,778 group members,
- put 596,800 plants in the ground,
- killed 6,871 possums, and
- killed 2,221 stoats.

For more information contact: Matt Barnett, e-mail: mbarnett@doc.govt.nz, ph: 04 470 8433 or 021 1206012

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):

9th National Conference of the Australian Network for Plant Conservation (ANPC)

Conference: Canberra 29 October to 2 November. Early bird registration closes 24 August. For full details, including list of plenary speakers, registration details, and abstract submission form, please see the conference website at www.anpc.asn.au.	**Contact:** ANPC office: ph: 0061 2 6250 9509, e-mail anpc@anpc.asn.au.

Auckland Botanical Society

Meeting: Wednesday 5 September at 7.30 p.m. the Lucy Cranwell Lecture by John Dawson titled 'Tropical similarities of New Zealand's conifer broadleaf forest, and some strange plants of New Caledonia'.	**Contact:** Mike Wilcox, e-mail: mike.wilcox@xtra.co.nz
Field trip: Saturday 15 September to Waitakere Ranges. **Leader:** Sandra Jones.	**Contact:** Ewen Cameron, e-mail: ecameron@aucklandmuseum.com

Kaipatiki Project

Community Planting Day: Saturday 1 September at 9.30 a.m. **Venue:** Eskdale Reserve, off Eskdale Road, Glenfield, Auckland. Free BBQ for all planters, bring a spade if you have one.	**More info:** www.kaipatiki.org.nz/volunteer
Nursery Bites: Tuesdays 18 September – 6 November, FREE native plant propagation workshops. **Venue:** Kaipatiki Project Environment Centre, 17 Lauderdale Road, Birkdale, Auckland, 9.00 a.m. – 12 noon.	**Bookings, dates and topics:** www.kaipatiki.org.nz/courses

Waikato Botanical Society

Field Trip: Sunday 9 September an orchid trip to Bridal Veil/ Waireinga Falls. **Meet:** 9.00 a.m. at Countdown Super Market, Whatawhata Road, Dinsdale or 9.40 a.m. at Te Mata School. **Grade:** easy/medium.	**Leader:** Cynthia Roberts, ph: 07 858 1034 (work), mobile: 021 123 1060, e-mail: croberts@doc.govt.nz
Meeting: Monday 17 September at 5.30 p.m. a talk by Rachel Thomson titled 'Pollination of *Ixerba brexioides*'. **Venue:** Environment Centre, 25 Ward Street, Hamilton.	**Contact:** Cynthia Roberts, ph: 07 858 1034 (work), mobile: 021 123 1060, e-mail: croberts@doc.govt.nz

Rotorua Botanical Society

Field trip: Sunday 9 September to Lathams Track, Awakeri. **Meet:** the car park Rotorua 8.00 a.m. or 9.00 a.m. at Awakeri Hot Pools, State Highway 30. **Grade:** medium.	**Leader:** Jo Bonner, ph: 07 308 0411, e-mail: spinifex@naturallynative.co.nz .
Field trip: Saturday 29 September – Sunday 30 September (optional) to East Cape, revisit #6. **Meet:** the car park Rotorua at 7.30 a.m. or Opotiki DOC Office (cnr Elliot & St John Street) at 9.15 a.m. **Grade:** medium. **Cost:** $20 donation for accommodation for those staying Saturday night (maximum 6), evening meal on Saturday provided, please bring lunches/breakfasts.	**Leader:** Tim Senior, ph: 0800 368 288 ext 6010 or 07 315 7371, e-mail: tim.senior@envbop.govt.nz.

Wanganui Museum Botanical Group

Field trip: Saturday 1 September to Marangai Bush. **Meet**: Police Station at 9.00 a.m. **Leader:** Clare Ridler.	**Contacts:** Robyn and Colin Ogle, ph: 06 347 8547, e-mail: robcol.ogle@xtra.co.nz.
Field trip: Sunday 30 September to Gordon Park Scenic Reserve. This is not a weeding trip, but a chance for us to explore and see some of the reserve's special features; gumboots might be advisable. **Meet:** the reserve's car park, 1.00 p.m.	**Leader:** Colin Ogle, ph: 06 347 8547, e-mail: robcol.ogle@xtra.co.nz.

Wellington Botanical Society

Field trip: Saturday 1 September to Horoeka Street Scenic Reserve (formerly Te Oranga Whenua), Stokes Valley. **Meet:** 9.30 a.m. at 17 Horoeka Street, Stokes Valley.	**Leader:** Pam Cromarty, ph: 04 563 6636.
Meeting: Monday 17 September at 7.30 p.m. for a talk by Fevin Hackwell, Forest & Bird Advocacy Manager titled 'Why the Denniston Plateau is worth fighting for'.	**Venue:** lecture theatre MYLT101, ground floor Murphy Building, west side of Kelburn Parade. Enter building off Kelburn Parade about 20 m below pedestrian overbridge.

Nelson Botanical Society

Field trip: Sunday 16 September to the Brown River Scenic Reserve in the Rai Valley.	**Contact:** Uta Purcell, ph:03 545 0280.
Meeting: Monday 17 September at 7.30 p.m. for a talk by Craig Potton titled 'Forests of Poland'.	**Venue:** Jaycee Room, Founders' Park, Nelson.

Canterbury Botanical Society

Meeting: Friday 7 September for a talk by Melissa Hutchison titled 'Hawaiian flora'. Venue: Room A5, University of Canterbury.	**Contact:** Gillian Giller, ph: 03 313 5315, e-mail: ggillerma1@actrix.gen.nz.

Otago Botanical Society

Meeting: Wednesday 29 August at 12.00 noon for a talk by Jacqui Nelson titled 'Thyme travels across Central Otago: Above- and below-ground ecological studies of a space invader'. **Venue:** Union St Lecture Theatre, corner Union St West & Great King St.	**Contact:** Trish Fleming, ph: 03 479 7577.
Field Trip: Sunday 16 September to Alexandra's Springvale and Chapman Road Reserves. **Meet:** Department of Botany car park 8.00 a.m. **Leaders:** David Lyttle and John Barkla.	**Contact:** David Lyttle, ph: 03 454 5470.
Visit: Tuesday 25 September at 5.30 p.m. to the Banks' Florilegium at the Hocken Library. **Meet:** foyer of the Hocken Library at 5:30 p.m.	**Contact:** Robyn Bridges, ph: 03 472 7330.

Field Guide to New Zealand's Native Trees

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AUTHOR INFORMATION

DR JOHN DAWSON was Associate Professor of Botany at Victoria University until his retirement in 1988.

ROB LUCAS lectured in horticulture at The Open Polytechnic of New Zealand until his retirement in 2006. He has been photographing plants for several decades, and his photographs have been widely published. He is the author of *Managing Pests and Diseases: A handbook for New Zealand gardeners* and co-author (with Isobel Gabites) of *The Native Garden: Design themes from wild New Zealand.* John Dawson and Rob Lucas are co-authors of the award-winning *Nature Guide to the New Zealand Forest, Lifestyles of New Zealand Forest Plants, Lifestyles of New Zealand Coast and Mountain Plants* and *The Nature of Plants.*

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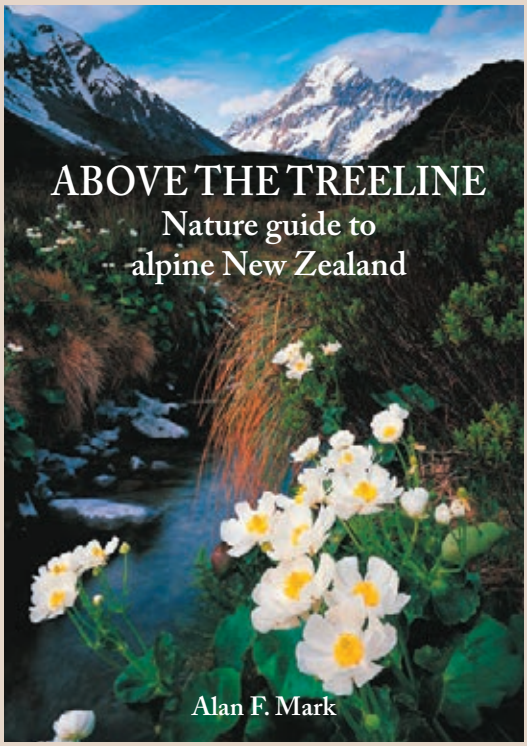

Above the Treeline

Nature guide to alpine New Zealand

ALAN F. MARK

New Zealand's alpine environment is challenging, not only for the humans who explore it but for the plants and animals that inhabit it. The extremes of temperature, short summers and high rates of erosion make for an uncertain environment, and the flora and fauna have evolved and adapted to it in interesting ways.

Above the Treeline: A nature guide to the New Zealand mountains is a guide to the natural history of these fascinating ecosystems. It is the first book to be published that brings together the range of flora and fauna that inhabit the alpine environment. As well as our unique alpine plants, which constitute the majority of the book, this guide includes birds; frogs and lizards; butterflies, moths, grasshoppers, beetles and other invertebrates; and mosses and lichens.

An informative introduction is followed by descriptions of more than 850 species, illustrated by approximately 1000 colour photographs. Written by eminent botanist and conservationist Sir Alan Mark, with contributions by Brian Patrick, Rod Morris, Mandy Tocher and David Galloway, this book is an important reference and field guide, and a celebration of the richness of New Zealand's alpine environment.

December 2012 **$49.99**
210 x 148 mm; 464 pp, flexibind
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AUTHOR INFORMATION

ALAN MARK is one of New Zealand's leading plant ecologists, specialising, among other things, in the ecology of alpine areas. He is also a long-time conservationist who has played a key role in linking science with conservation. He has been a president of Forest & Bird (1987-1990); is a fellow of the Royal Society of New Zealand; and was made a knight for his conservation work in 2010. Now retired, he is still actively involved in conservation.

DROSERACEAE
The sundew family

DROSERA

'Dewy', referring to the secretions from the leaves.

A genus characterised by glandular hairs on the leaves, an insectivorous habit and a bog habitat. Widespread, with c. 100 species, many of them Australian. Of the 6 native sundews, 3 are alpine.

Drosera arcturi Hook. f.
'Of Arcturus' or Arthur; Mt Arthur, Tasmania, is the type locality.

A small summer-green herb with distinctive strap-shaped leaves, without stipules. One to few flower stalks usually exceed the leaves and their single flowers have prominent dark-green sepals alternating with the white petals. The black capsule is c. 1 cm long.

NORTH, SOUTH & STEWART ISLANDS: widespread from the central North Island southwards. MONTANE TO LOW ALPINE: 300–1500 m. Often common in sphagnum and cushion peat bogs.

1. *Drosera arcturi*, **location**, **altitude**, **month**, DL. 2. *D. arcturi*, Temple Basin, **altitude**, Jan, KI. 3. *D. arcturi*, Countess Range, 1200 m, Jan, JB. 4. *D. stenopetala*, Gertrude Valley, 1200 m, Dec, JB. 5. *D. stenopetala*, **location**, **altitude**, **month**, DL. 6. *D. spathulata*, **location**, **altitude**, Dec, MT. 7. *D. spathulata*, **location**, **altitude**, **month**, DL.

Drosera stenopetala Hook. f.
'With narrow petals'

Differs from *D. arcturi* in its spathulate (spoon-shaped) leaves (also lacking stipules) and somewhat shorter (7 mm) capsules.

NORTH, SOUTH AND STEWART ISLANDS: distribution similar to *D. arcturi* and often occurring with it.

Drosera spathulata Labill.
'Spathulate', referring to the spoon-shaped leaves.

Usually smaller than the other two alpine sundews but best distinguished from them by the pair of very small brown papery stipules up to 7 mm long at the leaf base. The capsules are quite small, only 1–2 mm long.

NORTH, SOUTH & STEWART ISLANDS: widespread but more local than the other alpine sundews. Similar in altitudinal range and habitat, and often occurring with the other alpine sundews.

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