



# TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 203

October 2020

Deadline for next issue:  
Friday 20 November 2020

## SUBMIT AN ARTICLE TO THE NEWSLETTER

Contributions are welcome to the newsletter at any time. The closing date for articles for each issue is approximately the 15th of each month.

Articles may be edited and used in the newsletter and/or on the website news page.

The Network will publish almost any article about plants and plant conservation with a particular focus on the plant life of New Zealand and Oceania.

Please send news items or event information to [events@nzpcn.org.nz](mailto:events@nzpcn.org.nz)

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NEW ZEALAND

## PLANT OF THE MONTH, p. 3



*Acrothamnus colensoi*. Photo: Rowan Hindmarsh-Walls.

## Another name for kanono is now necessary

*Peter J. de Lange* ([pdelange@unitec.ac.nz](mailto:pdelange@unitec.ac.nz)), School of Environmental & Animal Sciences, Unitec Institute of Technology, Auckland.

New Zealand is the centre of diversity for *Coprosma* (Rubiaceae). There are c.50–55 taxa, of which all but one subspecies (*C. perpusilla* subsp. *subantarctica*) are endemic, and at least seven unnamed ones currently accepted for the country (Oliver 1935, Eagle 2006; de Lange et al. 2019). *Coprosma* are common components of the vegetation associations of New Zealand, where they occur from sea level to the alpine zone, showing a diversity of growth form from trees up to 15 m tall (*Coprosma chathamica*) to procumbent shrubs (*C. depressa*) and almost herbaceous plants (*C. talbrockiei*—a singular species that is almost certainly misplaced in *Coprosma*).

One common *Coprosma* found throughout the North Island and northern half of the South Island is widely known to North Island iwi as kanono or raurēkau (though there are at least another 12 Māori names accorded this species). Kanono is an important rongoā; the bark and leaf extracts are used by iwi to treat a range of conditions from rashes and eczema through to staunching blood flow and mending broken bones (Riley 1994). Extracts from the bark and branchlet cortex were also used to dye fabrics (Aston 1918).



*Coprosma autumnnalis*: (left) female flowers, (centre) male flowers, (right) fruit and foliage.

While iwi clearly knew this plant, botanists have taken much longer to sort out what scientific name to use for it.

For a long time kanono was known by the name *Coprosma australis* (A.Rich.) B.L.Rob. This name is a combination based on *Ronabea australis* A.Rich which was described by Richard (1832) using specimens collected by the French on the voyage of the *Astrolabe*. On critical examination of the type, however, it was discovered that Richard's species was referable to shining karamū (*Coprosma lucida* J.R.Forst. et G.Forst.). Thus, *Coprosma australis* (based on the name *Ronabea australis*) is a later heterotypic synonym of the earlier named *Coprosma lucida* (Forster & Forster 1776). So, as that name could not be used for kanono (Druce in Connor & Edgar 1987) *Coprosma grandifolia* Hook.f. described by Hooker (1852) as the next available name in the assumed synonymy of kanono was used) for the species.

Recently, Large et al. (2020) note that *Coprosma grandifolia* cannot be used for kanono either. This is because *Ronabea australis* was included by Joseph Hooker in the synonymy of his *C. grandifolia*. That action means that the name *Coprosma grandifolia* is in fact a superfluous name for *Coprosma australis* because both these *Coprosma* names are based on the same basionym *Ronabea australis*. Therefore, Large et al. (2020) have reinstated yet another name proposed for kanono, this one published by William Colenso, *Coprosma autumnalis* (Colenso 1887).

*Coprosma autumnalis* Colenso was described by Colenso using a range of characters, most notably the fact that, unusually for New Zealand *Coprosma*, it flowers in autumn not spring.

Flowering in kanono does indeed occur during the autumn months, which is perhaps one reason why it has never been known to form hybrids with other *Coprosma* in the wild. However, very occasionally I have seen specimens flowering in late winter / early spring.



*Coprosma autumnalis*, male flowers 2 April 2015, Tararua Range. Photo: Jeremy Rolfe.

The synonymy of these names is summarised here:

***Coprosma lucida* J.R.Forst. et G.Forst. Char. Gen. Pl., ed. 2., 138, t.69, (1776)**

= *Ronabea lucida* A.Rich., *Voy. Astrol. Bot. I.* 265, (1832)

= *Coprosma australis* (A.Rich.) B.L.Rob. *Proc. Amer. Acad. Arts* xlv. 408 (1910)

= *Coprosma grandifolia* Hook.f., *Bot. Antarct. Voy. II. (Fl. Nov.-Zel.) 1*: 104 (1852) *nom. superfl.*

## References

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- Riley, M. 1994: *Māori healing and herbal*. Viking Sevenses N.Z. Ltd, Paraparaumu.

## PLANT OF THE MONTH – *ACROTHAMNUS COLENSOI*

Rowan Hindmarsh-Walls ([rowan.hindwalls@gmail.com](mailto:rowan.hindwalls@gmail.com))

The plant of the month for October is *Acrothamnus colensoi*, the only New Zealand species representing the genus. The species is found in both North and South Islands from about Kaingaroa plain south to Southland. It inhabits open, exposed and often dry sites in tussock grassland or rocky areas, mainly in the sub-alpine and alpine zones. It is a small sprawling shrub, generally forming dense circular clumps less than 40cm tall. The plants are generally bronze green in colour with a glaucous sheen, and the tiny leaves have distinctive white stripes on their underside. The small white tubular flowers are slightly hairy on the inside of the petals, and have a faint pleasant scent. The small round fruit ripen from November to June and are bright red or white in colour.



*Acrothamnus solandri*, Chisholm Peak, Molesworth Station, 6 October 2020. **Photos:** Rowan Hindmarsh-Walls.

The species is not easily confused with other related species. It is most similar in leaf form to both *Pentachondra pumila* and *Montitega dealbata*, but differs from both these species by being much larger (not a ground hugging mat), with much woodier, twiggier stems. It is most similar in stature to the related *Androstoma empetrifolia*, but that species has much narrower leaves with no stripes on the underside, and is generally confined to damp alpine and wetland areas.

The genus *Acrothamnus* is small with the few species scattered through Australia, Papua New Guinea, and the Pacific. *A. colensoi* is endemic to New Zealand and has a current threat ranking of 'not threatened' as the species is widespread and abundant in many areas, especially depleted tussock grassland. In some areas its habitat is threatened due to the increasing intensification of high country grazing regimes, where natural grassland vegetation is increasingly being cleared and replanted with exotic pasture species.

The genus *Acrothamnus* is derived from the Greek 'akros', apex, and 'thamnos', shrub, but it is unclear as to the exact meaning of the name. The species was named in honour of William Colenso, an early New Zealand missionary, botanist and politician.

You can view the NZPCN website factsheet for *Acrothamnus colensoi* at: <https://www.nzpcn.org.nz/flora/species/acrothamnus-colensoi/>

## Hairy willow herb, *Epilobium hirtigerum* once threatened with extinction, is recovering on Rotoroa Island

Andrew Maloy ([ra.maloy@xtra.co.nz](mailto:ra.maloy@xtra.co.nz))

In February 2020 I was relieving ranger on Rotoroa Island, meeting the ferry from Auckland and welcoming visitors to the island. Among those who came ashore was Chris Ferkins, biodiversity advisor with Auckland Council who, while visiting the island with friends from overseas, was also on a mission to check up on some plants he has a particular interest in. These were two species of *Epilobium*, *E. hirtigerum* and *E. cinereum*, both indigenous to New Zealand. On a previous visit in 2016 he had discovered some of these plants on the island.

Owned by the Salvation Army, Rotoroa Island, east of Waiheke Island in the Hauraki Gulf, was an alcohol and drug rehabilitation centre for more than 100 years. In 2008 the Rotoroa Island Trust purchased a 99-year lease of the island and set to work creating a conservation park, a sanctuary where visitors can experience New Zealand's wildlife, and to show leadership in conservation management and education, while at the same time respecting the island's heritage and history as a place of recovery and renewal. Now, after extensive predator control and revegetation planting, the island has been transformed into a unique wildlife sanctuary where native plants and animals exist in a safe environment, for everyone to come and enjoy and be inspired. It is now a safe haven for kiwi, takahē, pāteke, skinks and other endangered native species.

Providing a healthy environment for native flora and fauna is a priority on the island. Herbicide use is kept to a minimum and consists mainly of herbicide gel to control woody weeds, some spraying of road edges and drains, and spot treatment with specific products for particular weed species.

Despite almost 50 years working in horticulture, my knowledge of the genus *Epilobium* was limited, with fringed willow herb, *E. ciliatum*, being the species with which I was most familiar. Native to North and South America and East Asia, *E. ciliatum* is widespread throughout NZ and has become a common weed in plant nurseries, in part because it has some natural resistance to glyphosate herbicide, and it also sheds masses of wind-spread seeds on maturity. *E. ciliatum* is present on Rotoroa Island, possibly arriving as wind borne seeds many years ago, but also likely to have been present among some of the 400,000 native seedlings raised in nurseries on the mainland and barged to the island for the major revegetation planting over 2–3 years from 2008.

I have recently learned there are some 52 species of *Epilobium* in NZ, 47 of which are native. Of the two indigenous species identified on Rotoroa Island, *E. hirtigerum*, hairy willow herb, was classified as Threatened – Nationally Critical in 2012. For the public less familiar with herbaceous plants than 'rock-star' birds that's the same status as the kakapo, one step up from being extinct. Thus, in 2015 *E. hirtigerum* was nicknamed the 'Hobsonville kakapo' when a healthy population of it was discovered on a property in Hobsonville, west Auckland, and adopted by many in the local community as a special element in their landscape. In 2018 it was reclassified as At Risk – Recovering. In addition to being indigenous to NZ, *E. hirtigerum* is also native to Australia, Indonesia and South America. The other indigenous species on the island, *E. cinereum*, is not threatened. Some botanists treat it as a subspecies of *E. billardierianum*.

The story of *E. hirtigerum*, hairy willow herb's change of classification from in danger of extinction to At Risk – Recovering is interesting. Chris Ferkins says the local recovery is due in part to the efforts of people who discovered new wild patches and also propagated and planted *E. hirtigerum* in their gardens. This creates satellite colonies which act as insurance should anything happen to the original colony. He says the aim is to get hairy willow herb to the point where it is no longer threatened and the 'value' of the species needs to be more than just due to it being threatened; that by engaging in 'saving' the species the relationship formed with the plant, and nature, helps build a sense of place and activities of care for nature in that place, which persist post threat.

On Rotoroa Island we now know there are at least three species of *Epilobium*, two indigenous, one

of which is At Risk, and one a common exotic weed. Given their different statuses it is important to distinguish between them and treat them accordingly.

### Points to consider for management of hairy willow herb, *E. hirtigerum*, on Rotoroa Island

#### *Plant characteristics*

- The leaf is variable depending on time of year and stage of growth but is always large compared to other *Epilobium* species.
- Adult plants are hairy in spring and summer with all parts except petals covered in greyish hairs.
- Height ranges from 20–30 cm when juvenile, up to 1+ metre tall at maturity; compared with *E. cinereum* height of 20–30 cm at maturity.
- Flowers are white and look like they never fully open (Fig. 1); compared with *E. cinereum* flowers that are usually pink and open fully (Fig. 2).



Fig.1 (left). *Epilobium hirtigerum* has a white flower that does not appear to fully open. Photo: Andrew Maloy.

Fig. 2 (right). *E. cinereum* on Rotoroa Island, February 2020. Photo: Andrew Maloy.

#### *Life cycle stages*

- Early/mid-winter, lush juvenile, often with reddish stems (Fig. 3).
- Spring, grey-leaved adult plant often with a lot of red (Fig. 4).
- Late summer, fruiting, seeding and senescence (Fig. 5).



Fig. 3 (left). *Epilobium hirtigerum* juvenile growth with reddish stems. Photo: Chris Ferkins.

Fig. 4 (centre). *E. hirtigerum* adult growth covered in grey hairs with some leaves turning reddish. Photo: Chris Ferkins.

Fig. 5 (right). *E. hirtigerum* seeding, Waiheke Island, February 2020. Photo: Andrew Maloy.

## Habitat

- Needs good light, prefers little or no competition; grows well in any soil, including clay; needs good moisture, hence its presence in roadside drains on Rotoroa Island.
- Thrives in areas where the soil has been disturbed. Hairy willow herb plants Chris found in 2016 (Fig. 6) were no longer there in February 2020, as growth of nearby regeneration plantings had apparently shaded them out, but others had arisen elsewhere in more suitable spots. He suggested the disturbance created by the current maintenance practice of using herbicide to control weeds on road edges helped create patches of bare soil, suitable habitats for hairy willow herb to populate, by preventing grass, clover and other weeds from dominating (Fig. 7).



Fig. 6 (left). *Epilobium hirtigerum* growing among revegetation plants on a Rotoroa Island roadside, 2016. Photo credit: Chris Ferkins.

Fig. 7 (right). Juvenile growth of a dense and self-sustaining population of *E. hirtigerum* in Henderson, Auckland, August 2015. This densely clustered population held off weed invasion for the period observed, over seven years. However, the disturbed sites *E. hirtigerum* often occupies mean it is vulnerable. This site was developed in 2019 and the population is now gone, which further highlights the important role local communities play in valuing special features of their local landscape, both urban (e.g. Hobsonville) and remote (e.g. Rotoroa Island). Photo: Chris Ferkins.

## Population

- Hairy willow herb on Rotoroa Island is present mostly as individual plants which are likely to have low resilience and little capacity to recover from adverse events.
- The ideal is to encourage development of clustered colonies to build resilience to the point where they can resist weed invasion and require little or no maintenance.

## Protection

- Ensure maintenance staff and rangers are aware of the plants and their current location so management activities are adapted according to the site and management outcome needs.
- Collecting seed for sowing in suitable locations or in a nursery situation could be a useful way to increase plant numbers and establish dense new communities.
- Consider informative signs placed close to hairy willow herb populations.

## Acknowledgement

Thanks to Chris Ferkins for bringing the presence of *E. hirtigerum* on Rotoroa Island to the attention of the ranger staff and for his contribution to the text and photos and to Murray Dawson for his editing comments.

## References

Popay, I.; Champion, P.; James, T. 2010: An Illustrated Guide to Common Weeds of New Zealand Third Edition. New Zealand Plant Protection Society.

## Websites accessed (August 2020)

Auckland Botanic Gardens: <http://www.aucklandbotanicgardens.co.nz/whats-on/news/the-hobsonville-kakapo/>

NZPCN: *Epilobium cinereum*: <https://www.nzpcn.org.nz/flora/species/epilobium-cinereum/>

NZPCN: *Epilobium hirtigerum*: <https://www.nzpcn.org.nz/flora/species/epilobium-hirtigerum/>

TRILEPIDEA. Newsletter of the NZPCN, March 2016: <https://www.nzpcn.org.nz/publications/documents/trilepidea-e-newsletter-no-148-march-2016/>

Rotoroa Island: <https://www.rotoroa.org.nz/>

## **NZPCN AGM 2020 Notice**

*Matt Ward – NZPCN Secretary ([mattward@gmail.com](mailto:mattward@gmail.com))*

Hi Folks, this year for the first time in our history we are having a virtual AGM due to the Covid-19 pandemic. There is an advantage of course, as every member in any part of the country, or in fact the world, can attend.

AGM Thursday November 26<sup>th</sup>, 2020 (via Zoom). The time will be confirmed via the NZPCN website, but is likely to be early evening.

To attend, just contact me at the email address above and I will add your email address to the list for the AGM. More details will be available soon in the 'News' section of our website homepage regarding a guest speaker. We will be changing some details of our constitution to account for the changes we are facing with future meeting. To make these changes at least 20 members need to be present.

If you are keen to get involved in the NZPCN please make contact and arrange to attend.

See you soon!!!

## **Call for applications for the Lucy Cranwell Student Grant for Botanical Research for 2021**

Applications are invited for the Lucy Cranwell Grant of \$2,500 from the Auckland Botanical Society to assist a student studying for the degree of PhD, MSc, BSc (Hons) or B. Appl. Sci. in any tertiary institution in New Zealand whose thesis project deals with some aspect of New Zealand's flora and vegetation. Priority will be given to projects relevant to the northern half of the North Island.

The research project to be supported will be chosen on the basis of appropriateness to the objects of the Society, namely to encourage the study of botany, and to stimulate public interest in the plant life of New Zealand and its preservation, conservation and cultivation.

The grant will be administered by the student's supervisor as a contribution to expenses associated with the project.

**Closing date for applications: 5pm Friday 04 December 2020**

A copy of the Application Form and the Rules of the award may be downloaded from the Auckland Botanical Society website under: Lucy Cranwell Fund <https://sites.google.com/site/aucklandbotanicalsociety/>

Contact for enquiries: ABS Secretary, email: [aucklandbotanicalsociety@gmail.com](mailto:aucklandbotanicalsociety@gmail.com)

**University of Canterbury**

## **SUMMER COURSE—PRACTICAL FIELD BOTANY**

**Venue:** Mountain Biological Field Station at Cass, Canterbury

**Dates:** 19–27 January 2021

Practical Field Botany (BIOL305) is an intensive, short summer course designed to meet the need for training in the collection, preparation, and identification of botanical specimens. It is a flipped-classroom course in which traditional lectures are replaced by field-based projects and associated workshops and discussions.

This course will be valuable for students who intend to seek employment in areas such as field ecology, conservation, biodiversity, and taxonomy or biosystematics. It will also be of interest to members of the workforce who need to acquire or upgrade taxonomic skills, e.g., from Crown Research Institutes, Department of Conservation, Local and Regional Councils, Botanic Gardens, horticulture, and teaching.

The course is targeted at participants with various entry levels from students with limited plant knowledge to experienced career professionals.

### **Goals of the course**

To enable participants to

- become familiar with the plants of the central Canterbury mountains,
- identify and name plants correctly and accurately using online and hard-copy identification keys,
- take and edit scientific-quality plant photos,
- maximise usefulness and minimise environmental impact when collecting specimens,
- prepare high quality voucher specimens of plants,
- use scientific names to access detailed information about New Zealand plants,
- understand the patterns of variation within populations,
- appreciate unique and unusual aspects of the New Zealand flora.

Please see the [Course Outline](#) for more detailed information.

### **Enrolment from early October 2020**

You can enrol online at [What is myUC](#) or by contacting the Contact Centre at 0800 VARSITY (827 748) or [enrol@canterbury.ac.nz](mailto:enrol@canterbury.ac.nz)

**For further enquiries and help with enrolling, please contact us:**

**Pieter Pelsier** ([pieter.pelsier@canterbury.ac.nz](mailto:pieter.pelsier@canterbury.ac.nz) 03-369-5228)

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## UPCOMING EVENTS

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

### Australasian Society of Phycology and Aquatic Botany

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**34th Annual conference:** online – 23–24 November.  
Registrations & abstract submissions close 31 October.

**Contact:** Angela Brandt ([brandta@landcareresearch.co.nz](mailto:brandta@landcareresearch.co.nz)) for further details and/or a registration form.

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### Auckland Botanical Society

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**Meeting:** Wednesday 4 November at 7.30pm at Auckland Museum – Speaker Peter de Lange. **Topic:** Te Reo and Ta Re in Taxonomy.

**Field Trip:** Saturday 21 November to two Mahurangi River reserves, Warkworth. **Meet:** End of Hamilton Road at 10.00am. Paddock parking.

**Leaders:** Maureen Young and Lyn Wade, email: [youngmaureen@xtra.co.nz](mailto:youngmaureen@xtra.co.nz), ph. 09 425 7162.

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**Christmas Walk and Picnic at Whatipu:** Saturday 5 December at 10.00am.

**More details:** November ABS Newsheet.

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### Rotorua Botanical Society

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**Field Trips/Camp:** Friday 30 October to Sunday 1 November – Based in Whitianga. **Meet:** (Saturday) 9.15am at Whitianga i-Site (corner of Albert and Blacksmith Streets) or 10.00am at the 309 Road Kauri Walk entrance. (Sunday) 9.00am at Whitianga i-Site (corner of Albert and Blacksmith Streets) or 9.30am at the Coroglen Pub. **Grade:** Medium.

**Leader:** Kerry Jones, email: [km8j1s@gmail.com](mailto:km8j1s@gmail.com), ph. 07 855 9700 or 027 747 0733.

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**Field Trip:** Sunday 6 December to McLaren Falls Park (combined with Waikato Botanical Society). **Meet:** Fenton Street carpark, Rotorua at 8.30am or McLaren Falls at 9.30am. **Grade:** Easy to moderate.

**Leaders:** Graeme Jane and Gael Donaghy, email: [gtjane@kinect.co.nz](mailto:gtjane@kinect.co.nz), ph. 07 570 3123.

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### Wellington Botanical Society

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**Field Trip:** Saturday/Sunday 7–8 November to Kourarau Valley bush remnants, Wairarapa. **Meet:** Saturday – 9.30am at the layby on Te Whiti Road on the left just south of Gladstone at the junction of and opposite Admiral Road. **Accommodation:** Greytown Campground, ph. 06 304 9387 or 027 449 4980.

**Leader:** Owen Spearpoint, email [owen.spearpoint@gw.govt.nz](mailto:owen.spearpoint@gw.govt.nz), ph. 04 562 8780 or 027 285 8083.

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**Meeting:** Monday 16 November – Speaker Melissa Hutchison. **Topic:** Almost an island – the remarkable flora and habitats of Banks Peninsula.

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### Nelson Botanical Society

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**Field Trip:** Sunday 15 November to Wakamarina, Mt Richmond Forest Park. **Meet:** Cathedral steps at 8.30am.

**Leader:** Andy MacDonald, email [andy@nzandy.com](mailto:andy@nzandy.com), ph. 021 105 5905. Please contact Andy if you intend to participate.

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## Canterbury Botanical Society

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**Meeting:** Monday 2 November at 7.30pm – Speaker Dr. Ines Schoenberger (Allan Herbarium, Manaaki Whenua/Landcare Research). **Topic:** Did the authors of the Flora of New Zealand Vol IV get it wrong? Changes in the adventive flora of New Zealand documented by herbarium collections.

**Venue:** Upper Riccarton Library community meeting room, 71 Main South Road, Riccarton.

**Field Trip:** Saturday 7 November to Cranky Tom Reserve, Motunau, North Canterbury. **Meet:** 9.00am to carpool at the Peg Tavern (Belfast Hotel) carpark, 895 Main North Road, Belfast. **Grade:** Moderate to difficult.

**Leaders:** Miles and Gillian Giller, email: [ggillerma1@actrix.gen.nz](mailto:ggillerma1@actrix.gen.nz), ph. 03 313 5315. Please contact the leaders if you intend to participate.

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## Botanical Society of Otago

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**Field Trip:** Friday to Sunday 6–8 November to Hokonui Hills, Southland.

**Leader:** David Lyttle, email: [djl1yttle@gmail.com](mailto:djl1yttle@gmail.com), ph. 03 454 5470. Please contact David if you wish to participate in this weekend trip.

**Meeting:** Wednesday 11 November at 5.20pm – Speaker Dr. Angela Brandt (Ecologist, Manaaki Whenua/Landcare Research). **Topic:** The ‘other half’ of New Zealand’s flora: how distinct are the non-native plants from the native?

**Venue:** Benham Seminar Room, Room 215, Second Floor, Zoology Benham Building, 346 Great King Street, Dunedin.

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