NEW ZEALAND PLANT CONSERVATION NETWORK

TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

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Deadline for next issue: Friday 15 April 2016

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

Postal address:
P.O. Box 16102,
Wellington 6242,
NEW ZEALAND

PLANT OF THE MONTH, p. 2

Traversia baccharoides. Photo: John Barkla.

Epilobium hirtigerum

Auckland Council

A plant so threatened that it's been referred to as 'the Hobsonville kakapo' has carved out a home at several sites in Hobsonville, West Auckland, and has a dedicated team working to protect it, including recently collecting thousands of seeds. *Epilobium hirtigerum*, a hairy willow herb, has tiny white flowers, seed pods packed with 100 fluffy seeds ready for dispersal and takes a liking to roadsides. It is 'Critically Threatened' (de Lange et al., 2013)—one step below 'Extinction'. Many sightings of the plant are in wasteland areas, so the threat from development is high and it is also threatened by environmental weeds, making the work being done to understand more about the plant and protect it for the future, vital.

Flowers of *Epilobium hirtigerum*.

Recently, a seed-collecting team, including Emma Bodley from Auckland Botanic Gardens and Mary Stewart, an Auckland Council biosecurity advisor, visited one of the sites, next to a nursery, and collected seed from nearly 100 plants. This collection was then sent to the New Zealand Indigenous Flora Seed Bank, Palmerston North, which will keep the seed safe in case it's needed in the future. The tiny, fine seed is incredibly hard to count, let alone test for ripeness, but the timing was ideal for collection with seed spotted all over the site next to the nursery and the plant at its natural dispersal stage.

Emma Bodley, Botanical Records and Conservation Specialist at Auckland Botanic Gardens, collecting seed from opened capsules of *Epilobium hirtigerum*.

Council biodiversity advisor, Chris Ferkins, is one of the leads on the project to protect the precious plant. The biodiversity team has been protecting a patch found at the Scott Point housing development area a few years ago and, on his lunch break in 2015, Chris even found a patch at the council's own Henderson office.

The known population comprises a core at Scott Point, Hobsonville, with small satellite clusters in the surrounding Hobsonville landscape, some in people's back yards. The

PLANT OF THE MONTH – *TRAVERSIA BACCHAROIDES*

Traversia baccharoides. Photo: John Barkla.

Plant of the month for March is *Traversia baccharoides*. This endemic daisy forms a bushy spreading shrub, growing to around 1 m tall with flaky bark and grooved twigs bearing sticky thick leathery toothed leaves 50–80 mm long. It is found in upland areas of the northern South Island (Nelson, Marlborough to northern Canterbury).

It usually inhabits montane forest margins to subalpine shrublands (700–1400 m above sea level), on cliff faces, steep rocky slopes, at the bottom of talus slopes in and amongst other low shrubs. Small white flowers appear in summer through to autumn. You can find out more about *T. baccharoides* in the Network website factsheet at: http://www.nzpcn.org.nz/flora_details.aspx?ID=331.

satellite sites are key to the survival of the population. "Imagine finding something as rare as a kakapo in your backyard", Chris commented. "It was great to see the amount of interest from Hobsonville locals at a Hobsonville open day in December."

Hobsonville Point Secondary School pupils and teachers have, for the last two years, been part of the project team, using it as a study tool for communication, landscape design and science. They have contributed to the survival of *E. hirtigerum* by communicating with the local community, cleaning up some of the plastic pollution on site and making design proposals for a park based around the *Epilobium* population.

There is also now a team on board from Unitec Institute of Technology, in the form of a research assistant and two summer students from the Natural Sciences Department. Research assistant, Andrew Marshall, is a Bachelor of Applied Science graduate and he will complete a baseline biodiversity study of the reserve. Summer students, Sinead Spedding and Kelly Hayhurst, are both in their third year of a Bachelor of Applied Science and will visit the site over several months to assess environmental factors such as water table depth, shade tolerance, plant community composition/competition and soil characteristics, in relation to the growth and abundance of *E. hirtigerum*.

Epilobium hirtigerum growing in compacted scoria in a nursery.

The findings from this work will help to inform future management of the site to preserve and promote the species. Funding for the research assistant and summer students is thanks to Gecko Trust NZ, with support from Auckland Council, and the Natural Sciences Department at Unitec who have partnered in a Metro ITP Research Voucher Scheme. The students are supervised at Unitec by Dr Glenn Aguilar, Dr Diane Fraser and Assoc. Prof. Nigel Adams.

Reference

de Lange, PJ; Rolfe, JR; Champion, PD; Courtney, SP; Heenan, PB; Barkla, JW; Cameron, EK; Norton, DA; Hitchmough, RA, 2013: Conservation status of New Zealand indigenous vascular plants 2012. New Zealand Threat Classification Series 3. 70 p. Wellington, Department of Conservation.

Good news for indigenous plant recovery in the Mackenzie Basin

A recent paper, Walker et al. (2016), reports on some long term vegetation recovery in a reserve in the Mackenzie Basin. The Abstract is as follows:

> Factors controlling vegetation restoration of depleted short-tussock grasslands are poorly understood. We investigated effects of mouse-ear hawkweed ('hawkweed', *Pilosella officinarum*) cover and environmental stress associated with landform and soil type on the rate and pattern of indigenous vegetation recovery from grazing in the highly modified 1000-ha Lake Tekapo Scientific Reserve in the north of the Upper Waitaki ('Mackenzie') Basin. The reserve has been destocked of sheep and under effective rabbit control since 1992. At that time, mouse-ear hawkweed dominated vegetation on three of its five major landforms (up to 42% cover), and 44–89% of soil was exposed. In 2011 we resampled 12 original vegetation monitoring plots that were established in 1993. Indigenous vegetation recovered in the 18 years following removal from grazing despite high levels of initial modification and exotic cover dominance. Exposed soil and rock decreased, and indigenous plant cover and litter increased across all landforms, while vascular and nonvascular indigenous plant cover increased at different ends of a landform-driven productivity gradient. Hawkweed invasion did not retard recovery; to the contrary, the extent and rate of recovery was higher on more productive landforms with higher initial hawkweed cover. The pattern of change across the reserve was consistent with grazing having exerted a powerful constraint on the growth and biomass of both indigenous and exotic palatable species prior to reservation. Soil moisture stress appeared to delay the timing of hawkweed invasion, and to constrain productivity and hence the rate of indigenous vegetation recovery following release from grazing. We propose a testable model of interacting influences of grazing and environment on indigenous vegetation and the niche of mouse-ear hawkweed, in which recovery outcomes depend on environmental productivity. We suggest that removal of feral grazing as well as stock, size of recovery area, limited monitoring-disturbance, and timing of grazing-release relative to hawkweed invasion may explain why our results and conclusions contrast with those from other studies of release of fescue-tussock grasslands from pastoral grazing.

Reference

Walker, S; Comrie, J; Head, N; Ladley, KJ; Clarke, D, 2016: Hawkweed invasion does not prevent indigenous non-forest vegetation recovery following grazing removal. *New Zealand Journal of Ecology* 40: 137–149.

Good botanical news from the Wairarapa

Trevor Thompson, QEII Representative for Wairarapa and Wellington (t.m.thompson@xtra.co.nz)

In November 2013, while I was checking out a potential QEII covenant, a significant botanical discovery was made. I had been contacted by the land owner, Jane McKay, to see if their small, approximately 5 ha forest remnant at the back of the farm met the standard to be covenanted. Her son, young Tom Stivens, was keen to see this area protected and was the driving force behind the idea.

Flowers and foliage of *Olearia gardneri*.

As I approached the area, which was predominantly secondary forest, much of it on steep faces, my first thought was that

the area might not meet the standard. However, shortly after entering the forest proper, I saw first one then another and another specimen of *Olearia gardneri*. I knew I was in the area of the Wairarapa known for small scattered populations of this rare plant, but I thought my plant identification skills were playing tricks on me—I was looking at a grove of large healthy *O. gardneri* all around young Tom and me. I took photos that I circulated to my colleagues at QEII and took cuttings that I showed to my local native plant nursery owner. All confirmed my identification. A short while later, I arranged for Network member, Aalbert Rebergen to visit the site for his input; Aalbert has worked extensively with this plant and was blown away by its abundance at the site. Albert advised that I contact Colin Ogle and Graeme La Cock for further site visits and further botanical surveys for possible rare plant associations found elsewhere with *O. gardneri*. This was done.

(Left to right) Aalbert Rebergen, Trevor Thompson, Graeme La Cock and Colin Ogle at the site of the newly discovered *Olearia gardneri* population.

I have now walked this area extensively and, with help from volunteers, have carried out a census count to arrive at a figure of 379 plants of all sizes from new seedlings to perhaps very old trees with trunks >400 mm just above ground level. Before this discovery, there were approximately 160 known plants in small scattered populations in the Wairarapa and Rangitikei; it was formerly also known from Hawke's Bay.

Some interesting, salient facts around this discovery are as follows. The lower contours had been aerially sprayed for gorse control some four or more years ago and some of the large trees were definitely affected but not killed; in most cases they were recovering strongly although other native species were killed outright. The area was frequently grazed with cattle by the owner but there was no obvious grazing damage noted on any of the plants. It was seriously considered as a part of the covenant agreement to allow controlled grazing but was eventually discounted on the wishes of the owner.

Though *O. gardneri* is known as a coloniser of disturbed ground, slips, slumps, etc., and there were plenty areas of disturbed ground at this site. However, small juvenile plants were noted in well healed and vegetated areas in most cases and *O. gardneri* appeared to be present as just another of the understorey species. Not surprisingly, no juvenile plants were noted in disturbed areas with abundant light and rank grass.

This population appears to be self-sustaining and stops at the boundary with a predominantly black beech part of the same gorge/valley complex and the same geology/soil types. It should be noted that the vast majority of plants are contained in approximately one-third of the 5-ha area, with reasonably similar vegetation, contours etc., over the remainder, which is largely free of *O. gardneri* despite such an abundant seed source nearby. To the east, is an approximately 0.75 ha remnant approximately 450 m away with younger emergent matai, totara forest; one healthy *O. gardneri* was found there.

Though the species is known to be deciduous, that has not been the observation at this site. Seed was gathered in December 2014 and again in 2015. This seed was given to our local native plant nursery but none germinated. At the same time seed was gathered, areas around abundant seeding trees was grubbed and disturbed in the hope some seed may settle there and germinate; nothing has been noted.

Olearia gardneri fruit.

As insurance against seed not being viable in 2014, cuttings from a number of trees were taken and approximately 160 well developed plants were grown from approximately 1000 cuttings. One hundred of these will be returned to the site, in an area with only four plants growing in a predominantly manuka regenerating area on an old slip site. These plants will be individually marked, the planting locations mapped and boundaries marked on the ground. Thirty plants will supplement an original population of one mature plant in a QEII covenant, this area had a few *O. gardneri* planted by the Department of Conservation nearby before covenanting. However, these plantings were probably genetically inbred, having been sourced from other, very small likely inbred populations. No seedlings have ever been noted in this covenant. A further 30 plants will go to another QEII covenant having what appears to be similar geology and soil types but no *O. gardneri* previously recorded here; watch this space for results!! Planting to be done this coming winter.

I have written a pragmatic management plan for *O. gardneri* at this site. Though there has been one other larger scale planting of *O. gardneri* carried out in the past in the Wairarapa by other organisations, these specimens failed to establish a new population for a number of obvious reasons. The planting of a further 100 *O. gardneri* at this site will strengthen the population and increase its extent within the covenant .

My philosophy when it comes to rare plants is that the plants should be somehow better off for being discovered with positive action taken for the benefit of the original population and new populations should be set up to give security to the species. This newly discovered population will likely play a major role in the long term recovery of this species with its abundance of plants and ability to be self-sustaining and with genetic diversity.

My thanks to the Wairarapa Forest and Bird Branch and other volunteers who have helped with old man's beard control, census counts and for carrying out planting at this site and the additional one this winter, and the Greater Wellington Regional Council for additional fencing cost support for the landowner and for funding the old man's beard control within the block.

News of this discovery was purposely held until the area was fully protected under a QEII covenant.

Botanical gems of Little Hellfire Beach, Stewart Island/Rakiura

John Barkla, Department of Conservation, Dunedin (jbarkla@doc.govt.nz)

In February, my wife, Marilyn, and I walked the Stewart Island/Rakiura northwest circuit from Mason Bay clockwise back to Oban. It took eight days and the weather remained mostly fine throughout. Along the way, we camped at Little Hellfire Beach, just a few hours walking north of Mason Bay on the north side of Mason Head. This beach, like several others on the wild western side of the island, has a mainly native vegetation cover on its dunes. This merges into a band of coastal "muttonbird" scrub, which itself gives way to taller forest that includes southern rata (*Metrosideros umbellata*), pink pine (*Halocarpus biformis*) and rimu (*Dacrydium cupressinum*).

While pitching the tent in the back dunes, I noticed a few plants of the pygmy forget-me-not (*Myosotis pygmaea*) in a sandy hollow. Alongside, was the short-flowered cranesbill (*Geranium sessiliflorum* var. *arenarium*) with both flowers and fruits, and a patch of New Zealand iris (*Libertia peregrinans*). In between, was a large mat of the bidibid, *Acaena microphylla* var. *pauciglochidiata*.

The dunes nearby were covered in pingao (*Ficinia spiralis*) along with abundant sand tussock (*Poa billardierei*). Sand plains had mounds of southern sand daphne (*Pimelea lyallii*) and sand coprosma (*Coprosma acerosa*) whereas stable herbfields had creeping sand musk (*Mazus arenarius*) and New Zealand mint (*Mentha cunninghamii*). Rocky outcrops above a small stream opposite the camp site had clumps of the large Stewart Island forget-me-not (*Myosotis rakiura*) and Lyall's carrot (*Anisotome lyallii*).

These 12 plants are ranked as 'Threatened' or 'At Risk' in the most recent list of the conservation status of New Zealand indigenous vascular plants (de Lange et al. 2013) and are listed in Table 1. Their occurrence at one small site within 20 m of our campsite is remarkable and testament to the intactness and naturalness of the Stewart Island western coast plant communities.

Table 1: Threatened and At Risk plants observed at Little Hellfire Beach, Stewart Island/Rakiura

Scientific name	Conservation Status
Acaena microphylla var. *pauciglochidiata*	At Risk—Naturally Uncommon
Anisotome lyallii	At Risk—Naturally Uncommon
Coprosma acerosa	At Risk—Declining
Ficinia spiralis	At Risk—Declining
Geranium sessiliflorum var. *arenarium*	At Risk—Declining
Libertia peregrinans	Threatened—Nationally Vulnerable
Mazus arenarius	At Risk—Naturally Uncommon
Mentha cunninghamii	At Risk—Declining
Myosotis pygmaea	At Risk—Declining
Myosotis rakiura	At Risk—Naturally Uncommon
Pimelea lyallii	At Risk—Naturally Uncommon
Poa billardierei	At Risk—Declining

As well as an impressive array of 'Threatened' and 'At Risk' plants, there are extensive coastal turf communities in the dune swales. Some were dominated by the shore gentian (*Gentianella saxosa*) and others were a blaze of orange from the abundant fruits of *Nertera balfouriana.* Places like Little Hellfire Beach are fascinating and inspirational but also poignant reminders of what we've lost from the mainland coast.

Reference

de Lange, PJ; Rolfe, JR; Champion, PD; Courtney, SP; Heenan, PB; Barkla, JW; Cameron, EK; Norton, DA; Hitchmough, RA 2013: Conservation status of New Zealand indigenous vascular plants, 2012. New Zealand Threat Classification Series 3. 70 p. Department of Conservation, Wellington.

New Zealand Indigenous Flora Seed Bank (NZIFSB) monthly report

Jessica Schnell (J.L.Schnell@massey.ac.nz) and Craig McGill (C.R.McGill@massey.ac.nz)

Visit by Ruth Bone, International Projects Officer (Pacific), Millennium Seed Bank Partnership, Royal Botanic Gardens, Kew

Ruth Bone (International Projects Officer for the Pacific, Millennium Seed Bank Partnership, Royal Botanic Gardens, Kew) visited the New Zealand Indigenous Flora Seed Bank in March. Ruth is the new MSBP coordinator for the Pacific region, taking over from Peter Giovannini who has changed positions in Kew. While here, Ruth's expertise in the Botanical Research And Herbarium Management System (BRAHMS) was put to good use in a training session with Jess and seed bank volunteer, Anthea McClelland. The training was much appreciated and revealed a number of features within BRAHMS that will enable it to be used much more efficiently. Ruth also joined Jessica on the first part of the South Island collecting expedition. This part was to Aoraki/Mount Cook where Ruth's general botanical knowledge and training as a taxonomist were useful in seed collecting of an *Anisotome*, *Luzula*, *Muehlenbeckia axillaris*, a *Gentianella*, *Halocarpus bidwillii*, *Corokia cotoneaster*, *Coprosma propinqua*, *Leucopogon fraseri* and *Celmisia semicordata* (subspecies to be verified in the Dame Ella Campbell Herbarium).

Ruth and Jess at Mount Cook National Park.

Ruth collecting *Celmisia semicordata* in Mount Cook National Park. Photos: Jess Schnell.

2016 Cromwell Seed Collector workshop

As part of the South Island collecting trip, the third seed collecting workshop for 2016 was held from 14 to 17 March at Otago Polytechnic, Cromwell. The workshop was attended by 12 people from a range of backgrounds including local nurseries, a teacher participating in the Royal Society Science Teacher Leadership Programme, three people from Te Kākano Aotearoa Trust (a Wanaka community-based native plant nursery that specialises in propagating plants of local origin such as the Upper Clutha region and uses these plants for localised native habitat restoration), an organic horticulture student at the Southland Institute of Technology and staff from Otago Polytechnic. The formal lectures of the first day generated discussion and questions on the seed bank and seed bank practices, including the importance of collecting seed of the same species from multiple locations. The second, third and fourth days of the workshop involved practical training that allowed participants to put into practice the theory learnt the first day as well as collecting seed for banking. Collecting took place at Flat Top

Hill and Old Man Range and resulted in 11 more species being collected for the seed bank. The species collected were: *Melicytus alpinus, Coprosma propinqua* var. *propinqua, Aciphylla aurea, Gentianella bellidifolia*, *Celmisia viscosa, Luzula rufa* var. *albicomans*, *Acaena saccaticupula, Craspedia lanata* var. *elongata, Kunzea serotina,* and the 'At Risk—Naturally Uncommon' *Carmichaelia compacta* and *Raoulia hectorii* var. *hectorii.*

Cromwell seedbank workshop participants (front row from left to right): Win Van't Hul, Helen Hillis, Dhana Pillai, John Douglas, Helen Clarke, Jo Wakelin; (back row left to right): Andrew Penniket, Kathryn Sutherland, Jodi Yelland, Mary Hunt, Emma Longmore. Photo: Jess Schnell.

The seed collecting on Aoraki/Mount Cook in combination with the seed collector training has resulted in 31 more accessions for the seed bank including 20 new species. This adds to the 20 accessions already collected in 2016.

Cut test exercise using kowhai, flax and corokia on the first day of the workshop. Photo: Jess Schnell.

Never been to D'Urville Island?

If you are in that position, an opportunity is coming available in May. A company called Driftwood Retreat and Eco-Tours is leading a four-day trip to D'Urville Island departing 5 May. The price of $1,475 per person includes: accommodation on the beach front; a knowledgeable guide who has connections to the area; all food (alcoholic beverages are at your own cost); and a day tour in a charter boat with a local skipper with blue cod fishing. For more details, contact: Will, ph: 0274 483 133; email info@driftwoodecotours.co.nz or see website: www.driftwoodecotours.co.nz.

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):

Botanical painting: *Mediterranean plants from the hills and shores of South Pelion*

13–20 May 2016, 9–16 Sep 2016: Residential teaching course for beginners and intermediates. All drawing and painting materials will be supplied unless participants wish to bring their own. The Pelion region is one of the most verdant places on earth. The vegetation is luxuriant, dense, occasionally impenetrable, and totally captivating in its variety and richness in native trees, plants, herbs and flowers. Only now are some of the rare orchids being discovered and their DNA analysed. Pelion has inspired our course tutor, Maggie Niagassas DipAD DipSBA, who lived in Greece for 35 years before settling back in London, UK, where she practises as a botanical artist. Maggie is a member of the Mediterranean Garden Society based in Athens and has branches throughout the world.	**Further information:** http://www.lagouraxi.com/LRCH_BotanicalPainting_EN_2016_01.pdf

11th Australasian Plant Conservation Conference

Location: Melbourne. **Date:** 15–18 November 2016 in collaboration with La Trobe University and Royal Botanic Gardens Victoria.	**Details:** www.anpc.asn.au/conferences/2016

2016 Epipyhyte Workshop

Workshop: Auckland Botanic Gardens. **Date:** Thursday 28 to Saturday 30 April. All welcome: researchers, nurseries, gardeners, landscapers, restoration practitioners, architects.	**Register at:** www.nzepiphytenetwork.org

Auckland Botanical Society

Meeting: Wednesday 6 April at 7.30 p.m. for a talk by Robyn Simcock titled 'Green roofs using native plants'. **Venue:** Unitec Room 115-2017.	**Contact:** Maureen Young, email: youngmaureen@xtra.co.nz.
Field trip: Saturday 16 April to south east coast, Hunua.	**Leader:** Jenni Shanks. **Contact:** Maureen Young, email: youngmaureen@xtra.co.nz.

Rotorua Botanical Society

Field trip: Sunday 3 April to McLaren Falls, off SH 29, Tauranga. **Meet:** the car park Rotorua at 8.30 a.m. or McLaren Falls car park by the bridge below the Falls at 9.30 a.m. **Grade**: easy to moderate.	**Leaders:** Graeme Jane & Gael Donaghy, ph: 07 570 3123, email: gtjane@kinect.co.nz.
Field trip: Saturday 9 April for a Okareka Mistletoe Restoration Project Weed Control Work Day. **Meet:** corner Summit and Loop Rds (lake end) at 8:45 a.m. **Grade:** medium–hard; activities for all ages and abilities will be provided including releasing our plantings and weed control elsewhere in the reserve.	**Leader:** Paul Cashmore, ph: 07 349 7432 (w) or 027 650 7264, email: pcashmore@doc.govt.nz.

Whanganui Museum Botanical Group

Field trip: Sunday 2 April to Mangawhero R near Aberfeldy. **Depart:** Police Station 8.00 a.m.; bring lunch, drink, stout footwear (boots recommended).	**Contact:** Robyn Ogle (robcol.ogle@xtra.co.nz).
Meeting: Tuesday 5 April at 7.30 p.m. for a talk by Diane Harries titled 'Wildflowers of Spain'.	**Venue:** Museum's Davis Lecture Theatre.

Wellington Botanical Society

Meeting: Monday 18 April at 7.30 p.m. fro a talk by Leon Perrie titled 'Camping in Guadalcanal's jungle, and other tales of Pacific fern exploration'.	**Venue:** Victoria University Lecture Theatre M101, 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: Friday 1 April to Sunday 3 April for the April Camp at Cape Campbell.	**Registrations:** to David Grinsted, ph: 03 542 4384. **Leader:** Cathy Jones.
Field trip: Sunday 17 April to Dun Mountain Rush Pools. **Meet:** at the Church steps at 9.00 a.m. We ask ALL participants to register with the leader before the trip in case of cancellation and for our PLB protocols.	**Leader:** Sue Hallas, ph: 545 0294, email: seahallas@gmail.com.

Canterbury Botanical Society

Meeting and Field trip: on Sunday 10 April here will be a combined meeting and field trip in conjunction with the West Melton Enviro Group looking at bugs and plants on our dryland plains. There will be speakers and a walk.	**Contact:** Gillian Giller, email: ggillerma1@actrix.gen.nz.

Otago Botanical Society

Meeting: Wednesday 13 April at 5.20 p.m. for the AGM and Photographic Competition**.**	**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.
Field trip: Saturday 23 to Sunday 24 April for the Harbour Cone Bioblitz. Using the Pukehiki hall as a base, the BSO will run a Bioblitz as part of the 'Wild Dunedin' event (a three day nature festival with various groups and organisations coming together to host events celebrating Dunedin's natural environment and wildlife).	**Details:** the Botanical Society's website and Facebook page.