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Waikato Botanical Society

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Waikato Botanical Society Inc.

NEWSLETTER

No. 34, November 2011

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This is my first newsletter. The production of this has been a bit delayed due to me being called up to go and help in Tauranga with the Rena Grounding. I had 2 days in the field on the 11th and 12th of October as oil was washing up on Papamoa Beach. It was quite upsetting to see dead birds covered in oil. Most disturbing was a finding a dead albatross and dead baby seal.

We haven't had many trips this year. One that I was leading on the Te Tuhi track had to be called off at the last minute due to a predicted bad weather – which unfortunately turned out to be nice day.

I did manage to get out last month with the Rotorua Botanical Society on their annual weekend trip to the East Cape. As always a great trip, we explored a tepid bubbling mud lake and botanised along the Mangaroa Access Road. We were accompanied by the new Herbarium keeper at Scion – Matt Buys from South Africa.

What we haven't had in field trips we have made up for in evening meetings with guest speakers and a meal out afterwards. I have really enjoyed these. Cynthia has done a great job behind the scenes keeping these ticking along.

The threatened plant garden has been transplanted from the glasshouse area to the prominent entrance of the School of Science and Engineering.

We are starting to plan some trips for the coming months. As I write this I am planning on going on both Thomas Emmitts trip to Waitomo this Saturday and the Rotorua Botanical Society trip to the Rotomas on Sunday. If you would like to lead a trip or if you would like to suggest a trip some then do get in touch.

Thanks Jan for your reports from field trips earlier in the year.

Lastly I have just received my copy of New Zealand's Trees by Dawson and Lucas. This is a fantastic reference book 570 pages. Lots of really good pictures. A bit big and heavy to be lugging around in the field though.

Kerry.

Threatened plant garden update

In May a new threatened plant garden was established on the Waikato University grounds in a raised bed at the Science and Engineering main entrance, Gate 9 Hillcrest Road. There was a last minute (almost literally) change of location due to future potential building developments, but this has resulted in an even better location for the garden. We would like to thank University Grounds Manager Mark Thompson for working with the Society to achieve the great result that we now have. Some new species were planted at the new site, thank you to Jackson Efford for generously donating some specimens, and some plants were relocated from the old garden in the glasshouses compound. We will retain the glasshouse area at present for some plants we were not able to move, such as *Dactyloctenium aegyptium* the root parasite (which we hope has established and will be keeping an eye out for flowers this summer now that it has been there for over four years).

The new garden has a good collection of mainly trees and shrubs, with some herbaceous ground plants, and of course the giant cane rush *Sporodanthus ferrugineus*, all listed below. We have also installed durable, colourful signs for six of the species which include drawings and information on habitat, distribution and threats. The signs were produced by Sonia Frimmel and funded by the Department of Conservation Community Conservation Fund. We hope to produce more signage in the future as funding allows. Thank you to all who have helped to date to produce this showcase garden for Waikato's threatened native plants, and if you haven't seen it yet- see you at the next working bee!

Species

Carmichaelia williamsii
Hebe speciosa
Lepidium oleraceum
Meliccytus flexuosus
Myosotis petiolata var. *pansa*
Olearia pachyphylla
Pimelea arenaria
Pittosporum cornifolium
Pittosporum ellipticum
Pittosporum kirkii
Pomaderris apetala subsp. *maritima*
Sporodanthus ferrugineus
Teucrium parvifolium

Threat Status

Nationally Endangered
Nationally Endangered
Nationally Endangered
Gradual Decline
Nationally Endangered
Nationally Endangered
Gradual Decline
Locally Uncommon
Sparse
Serious Decline
Nationally Critical
Range Restricted
Gradual Decline



Liz Overdyck

Monthly Meetings

Our venue for these has been at The Environment Centre in Ward Street. The meetings have been a huge success. Thanks to Cynthia for organising these. The meals afterwards have been a great chance to check out the restaurants in town with some good company. This was the programme.

June

Talk by Lucy Roberts formerly DOC Tūrangi now on secondment as Programme Manager for the Whangamarino/ Waikato River Accord
Taupo Flora: Friends and Foes.

July

Talk by Catherine Bryan and Fiona Clarkson
Recent Masters research on the conservation and restoration of New Zealand's vascular epiphytes.

August

Talk by Waikato University Emeritus Professor Warwick Silvester
What is going wrong with our lakes and what can we do about it?

September

Talk by Dr Carol West - DOC Threats Manager Head Office Wellington
Understanding vegetation changes in a dynamic landscape—Raoul Island and the Kermadecs'

October

Talk by Dr Nod Kay - Senior Research Scientist SCION
How insects have influenced the way New Zealand plants have evolved

FIELD TRIPS & EVENTS

In the event of bad weather, please contact the trip leader on the morning of field trips if you are unsure if they will go ahead and don't want a wasted trip to the meeting point. It is always helpful to notify the trip leader of your intention to attend a trip in case you are late to the meeting point, to arrange carpooling or for any last minute change of plan. Please be prepared on all trips with your own lunch, drink, sturdy footwear, and clothes for all seasons.

NOTE THAT THE WAIKATO BOTANICAL SOCIETY TAKES ALL REASONABLE STEPS TO ENSURE THE SAFETY OF PEOPLE ATTENDING OUR FIELD TRIPS AND ACCEPTS NO RESPONSIBILITY FOR LOSS OR INJURIES INCURRED BY FIELD TRIP ATTENDEES.

Threatened Plant Collection Working Bee

Saturday 12th November 2011

A working bee at the new garden site. Please bring gloves, old clothes and boots for weeding, planting and propagating activities.

Meet: 11am at Waikato University Gate 9, Hillcrest Rd, or down the hill at the glasshouses compound.

Contact: Liz Overdyck ph 07 825 9743 eg3@waikato.ac.nz

Kayaking trip on Raglan Harbour.

Sunday 13 November

Leader: Fiona Clarkson, e-mail: fmc3@waikato.ac.nz ph: 021 252 9187.

A talk by Jenie Isles

Monday 14 November : 5:30 p.m.

A talk by Jenie Isles titled 'Is Maungatautari restoring pollination and dispersal services to native plants?'

Venue: Environment Centre, Level One, 25 Ward St, Hamilton.

Jenie has been investigating whether the eradication of mammalian predators from Maungatautari is restoring bird services to native plants. She examined the pollination and dispersal of tree fuchsia (*Fuchsia excorticata*), and the seed dispersal of tawa (*Beilschmiedia tawa*) and miro (*Prumnopitys ferruginea*) at both Maungatautari and Pirongia. Jenie is a MSc student at Canterbury University.

Paeroa Water Reserve (Combined with Rotorua Botanical Society)

3rd December 2011.

Walk up to waterfall and perhaps beyond to a bluff system along an old benched track. Initially through scrub but later into quite varied mature lowland forest. Many species typical of kauri forest.

Leader: Graeme Jane ph 07 570-3123 gtjane@clear.net.nz

Meet: The carpark Rotorua at 8:15 am at the Bottle in Paeroa at 10:00.

Grade: easy

Final meeting for 2011

Monday 12th December at 5.30 p.m

Final meeting for year - Christmas breakup. Bring a plate and/or something to drink
Venue: Environment Centre, Level One, 25 Ward St, Hamilton.

Show and tell your botanical highlights of the last year. Ten slides/5 minutes.

Teucrium Survey, Koropupu Scenic Reserve, Waitomo.

Saturday 11th February 2012 (backup day Sunday 12th February if wet)

Leader Lyneke Onderwater. londerwater@doc.govt.nz / 07 878 1055

Meet : Corner of State Highway 3 and Oparure Road (Just North of Te Kuiti) at 9:00 AM.

Grade : Medium

Tongatongarerewa Wetland, Pureora.

Saturday 25th February 2012

Leader Thomas Emmitt, temmitt@doc.govt.nz / 07 878 1080 (work) / 07 878 4737 (home)

Meeting place and time to be confirmed

Threatened Plant collection working bee

Saturday 3rd March 2012

A working bee in the new threatened plant garden. Please bring gloves, old clothes and boots for weeding, planting and propagating activities.

Meet: 11am at Waikato University Gate 8, Hillcrest Rd, outside Science and Engineering main entrance (E-F link stairway).

Contact: Liz Overdyck ph 07 825 9743 eg3@waikato.ac.nz

Te Tuhi Track, Kaimais (Combined with Rotorua Botanical Society)

Saturday 12th May 2012

Leader Kerry Jones km8j1s@gmail.com / 07 855 9700 (home) 027 747 0733.

A 45 minute walk across farmland is followed by a steep walk up on to the tops of the Kaimais. Once on the plateau we will have time to botanise through the tawa dominated forest in the area with abundant fern populations.

Meet at the end of Te Tuhi Road (East of Matamata) at 9:00AM

Grade : Medium / Hard

Report of joint field trip Auckland/Waikato Botanical Societies.

Awhitu Dune Lakes, Waiuku led by Trish Aspin

Saturday 19th March 2011

The dune lakes of the Awhitu Peninsula number around 14, created with ancient drifting sand dunes. Some have reserve status and vary in depth. They have no obvious outlets to the coast. We met at the farm owned by the Muirs, in the vicinity of Karioitahi, to visit Lakes Puketi, Rotoiti and another small unnamed one. These were all on private land. They are all open to grazing but with mercer grass *Paspalum distichum* and kikuyu *Pennisetum clandestinum* as the pasture grasses, this has the advantage of keeping the native lakeside vegetation in control. Both of the named lakes are equal botanical value. Lake Puketi contained the regionally critical status of *Gratiola sexdentata*, *Ranunculus macropus* and a new species for me was the *Myriophyllum votschii*, a tiny plant, in this instance growing on an old piece of log in the shallow water. *Sparganium subglobosum* was another listed regionally critical plant which we did not see this day. On the lakesides the tiny plants of *Glossostigma elatinoides*, flowering *Limosella lineata* and *Lilaeopsis novae-zelandiae* were spotted. Lake Rotoiti is fringed by the taller wetland species and no turf areas. They are free of willows with the exception of grey willow *Salix cinerea* which was in one of them. The most exciting find was in the unnamed lake was the floating liverwort *Riccocarpus natens*, the first time that most of us had seen it (See photo on right) This lake also contained the regionally risk/range restricted plant of *Potamogeton ochreatus*.



After the field trip, 5 of us went to Pukekohe to the local scout camp at Schlaepfer Park where we stayed overnight. We had a walk around the bush which is a broadleaf forest type. There is some fine examples of puriri *Vitex lucens*, taraire *Beilschmiedia tarairi* pukatea *Laurelia novae-zelandiae* and miro *Prumnopitys ferruginea* Pest control has been practiced for some years now, so nikau is very prominent on the flatter parts. In the middle of the 5ha bush a stream runs through with a waterfall with a drop of approx 10m.

Jan Butcher

Sunday 20 March; Karioitahi Beach, Awhitu Peninsula

Five Auckland and Waikato Bot Soc members walked along the beach south from the Surf Club with the intention of collecting a specimen of gypsywort *Lycopus europaeus* for the Auckland Museum herbarium. A band of sand dunes and wetlands runs along the back of the Beach supporting a range of vegetation and is itself backed by flax *Phormium tenax* which covered slopes of older dunes. However it was the plants on the wind and water-eroded slopes and cliffs which drew our attention. On these exposed areas free of smothering vegetation (exotic grasses kikuyu) were interesting coastal swards. Jan pointed out a mat *Gunnera dentata* intertwined with flowering remuremu *Selliera radicans* and *Lilaeopsis novae-zelandiae*. Sand coprosma *Coprosma acerosa* formed tight springy mounds. Low sprawling patches of *Pimelea prostrata* were in flower. Sea primrose *Samalus repens* sprouted from seepages on the cliffs and arrowgrass *Triglochin striata* was fruiting nearby. The highlight was the tiny rare endemic *Leptinella dispersa* ssp. *rupestris*. Jan showed us two discrete patches clinging to a dam cliff face. The pinnatifid leaves are much smaller than *Leptinella squalida* with small broad pinnae roundly lobed. Three ferns were noted on more vegetated banks: *Adiantum cunninghamii*, bracken *Pteridium esculentum* and *Blechnum triangularifolium*. Also a few plants of rengarenga *Arthropodium cirratum* that is uncommon in this area.

Botanising coastal vegetation with a 4.5metre tide has its dangers. Great surges were periodically sweeping up the beach. A particularly big surge about 2 hours after full tide had us running for high ground. Three horse riders were not as fortunate. We watched in horror as two of the horses were bowled over and over in the surf and one of the girls was swept out into the breakers by the powerful undertow. Only the quick action of two bystanders prevented a tragedy. We collected the gypsywort, had lunch on the highest dune we could find before returning to the cars.

References:

Wetland Plants in NZ by Peter Johnson and Pat Brooke

Maioro to Manukau Heads by Trish Aspin (recommended for further reading)

Stella Rowe



Stella and Helen looking at the *Leptinella dispersa* ssp. *rupestris*.

Easter Camp at Ngamuwahine Outdoor Education Lodge

22nd –25th April 2011 Kaimai-Mamaku Forest Park

The Kaimai-Mamaku Forest Park covers large parts of the Kaimai Ranges and northern Mamaku Plateau forming a narrow, natural barrier between the Waikato and Bay of Plenty regions. The Park is 70km long from the Karangahake Gorge in the north, south to SH5 on the Mamaku Plateau. The Range is dominated by Mt Te Aroha (952m). The steep western slope of the range continues south to the Kaimai summit (507m) where SH29 traverses it and this is where our Lodge was situated.

Our group consisted of 18 members of Waikato and Auckland Botanical Societies with Graeme Jane and Gael Donaghy as our day trip leaders.

Friday: afternoon walk to McLaren Falls: Rimu and Totara Walks.

This Park borders Lake McLaren formed behind a dam built for hydro-electricity generation. The Parkland has been extensively planted with exotic trees and areas made for camping. We navigated the network of roads to the start of the track into a bush with a good range of native plants and a patch of *Pinus radiata*. The fruiting specimen of *Collespermum hastatum* at eye level was much admired and photographed. A lesson followed on the distinction of *Pittosporum colensoi* with almost a yellow midrib and a larger leaf and no wavy margins. We came across a number of fungi including good examples of earth stars.

Saturday: Rapurapu Kauri Tree Walk

This track passed through some lovely bush. It started off through exotics, (pines, grasses) but we soon were into good examples of lowland bush. There were some very good examples of the shining spleenwort *Asplenium oblongifolium*. It showed that the old name of *Asplenium lucida* was very descriptive. Pukatea *Laurelia novae-zelandiae*, tawa *Beilschmieda tawa*, Pate *Schefflera digitata* was also common along the track. Much discussion was held as to whether we were looking at *Cyathea cunninghamii* or *C. smithii*. Young plants of *C.cunninghamii* have little pinnae near the base away from the main frond and *C. smithii* has double row of golden scales on the stipe. In the adults *C.cunninghamii* the

fronds are held in a horizontal position and *C. smithii* always has skirts of dead fronds. A wee damp boggy patch had a nice surprise of the fern *Hylelepis lactea*. Further along the track a shaded rock had a good patch of *Trichomanes endlicherianum*. A fern that we seldom see, *Hymenophyllum atrovirens* was growing on the rocks in one of the stream crossings. A number of blue toadstools, *Entoloma hochstetteri*, coral fungi and a number of other types were seen. The destination of the 3 kauris was reached after 8 stream crossings (with one person experiencing the chill water and another with a shin wound). A boardwalk up to the kauris *Agathis australis* has been built to protect the roots. These kauris were indeed magnificent specimens considering that they are growing near the limit and are the most accessible trees in a southerly location.



Sunday: Mangatotara/Bobs Loop Track.

This track started from the Lodge and is part of the Ngamuwahine Track. It rises gradually along a ridgeline through a canopy of tawa *Beilschmiedia tawa* and tawari *Ixerba brexioides*. We noted the flower buds on the tawari which form early, appeared to numerous and large considering that the species does not normally flower until September. In a short while, the cover changed to tanekaha *Phyllocladus trichomanoides* and kamahi *Weimannia racemosa*. Tree ferns mainly silver fern *Cyathea dealbata* dominated with little understory present. Again the cover changes to *Pinus pinaster* on areas that would have been clearfelled 60 –70years ago. That *Pterostylis agathicola* was growing suggests that kauri would have been common here. Under these thick layer of pine needles there was little else of interest- toru *Toronia toru* and the *Mida salicifolia* saplings once again created the opportunity of debate. Graemes tip of the day was that the last 3 nodes of the Mida branch, the bark is light brown whereas in *Nestegis* it is white.



We turned off the main track into Bob's Loop and the change of elevation meant we saw more tawa. One of the horopitos *Psuedowintera axillaris* had a sufficient look of the northern *Psuedowintera insperata* to cause some discussion. The track dropped down a couple of times to beautiful tributaries of the Ngamuwahine Steam with substantial boulders and sightings of *Libertia micrantha*, *Lindsea viridis* and *Hymenophyllum atrovirens*. On the homeward bound section, part of the track became very dry and the

cover changed to pole tanekaha, *Phyllocladus trichomanoides* and the flora becomes reminiscent of the Waitakeres. The track then steeply drops back to another slippery stream crossing with *Metersideros fulgens* hanging low enough along the stream to be able to eyeball any flowers that would be present earlier in the season. Shortly after the track joins up where we had left it earlier and we were back amongst the pine trees.

Monday: Wairere Falls

On the western face of the Kaimai Range, the falls are seen as a white ribbon in the green bush as one drives along south of Mt Te Aroha. The Wairere Stream descends rapidly for a total of 365m in the Reserve having two spectacular falls with drops of 91m and 60m. With a reduced party due to other commitments the remaining hardy souls donned the wet weather gear and we started up this popular well formed track. Initially the track starts with some exotic flora- blackberry, pines and grasses. We followed the main track, crossing over the stream on well constructed bridges unlike our previous days with wet feet crossings. The streambed is full of large boulders making very dramatic scenery. The bush had a variety of species with the most interesting one being the *Melicope simplex* x *Melicope ternata*. It also had a very good fern habitat with a good range of species. On one of the damp rock faces, the leaves of *Nematoceras* were recognized with Graeme telling us that this would be the "Kaimai" one. We made the steep ascent to the first lookout, having an early lunch. With the continuing falling of rain, and some of drivers wanting to head back to Auckland to avoid the traffic, the decision was made to call it a day. Graeme had provided us with a 6 page species list, so it was disappointing that we had not made it to the top and had a chance to have a good look around.

Conclusion

We kept our travel to the local area and reinforced the identification of the similar type of flora that we were seeing. That the walk into the southern kauris, was a delightful and easy going (apart from the stream crossings that could be a problem for a few) a track to be recommended. The timing of the trip and being following a wet summer meant that a good range of fungi were seen and lots of the blue toadstools.

Acknowledgments:

Our thanks to Graeme Jane and Gael Donaghy for their local knowledge, leading the field trips and providing the species lists.

Species lists :

Rapurapu Kauris –P. Broekhuizen, J. Nichols, MC Smale;

Wairere Falls, McLaren Falls Rimu and Totara walks, Bobs Loop- G. Jane

Ngamuwahine Outdoor Education Lodge for the accomodation

References:

Botany of the Waikato: Waikato Botanical Society

Dept of Conservation: Kaimai-Mamaku Forest Park map

Eagle A. 2006: Eagle's Complete Trees and Shrubs of New Zealand .Vols 1 &2

Scenic Reserves of South Auckland: Dept. Lands and Survey 1979

Jan Butcher

Translocation of Carmichaelia williamsii (Giant Flowered Broom) to Mahurangi Island

By Rebecca Bylsma

In early August this year Jackson and I were able to help out DOC staff Jennifer Ricketts and Tansy Bliss with the second translocation of *Carmichaelia williamsii* (threat status Nationally Endangered/Relict) to Mahurangi Island. Mahurangi, commonly known to locals as Goat Island, is a small island just offshore of Cathedral Cove, Hahei. The island has received very little attention in the scientific literature; however Atkinson (1972) described the vegetation on the island as being mostly grassland; a result of continuous burning to create and maintain sheep pastures. Few records of the vegetation prior to this exist, however the former presence of kauri on the island is known due to the discovery of gum deposits at the southern end of the island.



Figure 1: View From Mahurangi Island looking back towards Motueka Island and the mainland.

Currently the island is covered in a mosaic of regenerating coastal forest (pohutukawa, manuka, karo, flax, five finger), scrub and grass lands. The island is free from goats, rats, mice and possums making it an ideal location for threatened plant translocations and a nationally important island for species conservation.

Tansy and Jennifer have a vision for the island to become a “showcase island” which would allow the public to view endangered and rare species; Mahurangi is a recreational reserve so the public are free to visit/camp on the island as they please.

C. williamsii is endemic to the North Island; where it is mainly known from the northern offshore islands. The species is only represented on the mainland by two small remnant populations near East Cape.

C. williamsii seed from the Alderman Islands was collected by DOC staff, and grown on by Waikato Botanical Society members at the Waikato University shade house facilities. In August 2010, twelve individuals were translocated onto the island and Tansy and Jennifer have been monitoring the plants since. Gorse shading the plants and the odd browse by insects has been the only minor setbacks to the plants growth, and ultimately plants have thrived in their new setting; all but two individuals increasing in size by approximately one third (Figure 2). This positive result prompted the second translocation of a further 11 plants which we were able to be involved in.

We travelled to the island by DOC boat from the Whitianga Wharf, arriving on the western side of the island where a rocky platform provided a landing zone. We carried with us water, sterilized natural soil and slug pellets to give the plants a fighting chance (before the plants could be transported to the island they had to be un-potted and all soil washed away to prevent the spread of rainbow skink and argentine ants). Once planted, newspaper was laid around the base of the plants to provide mulch and suppress weeds.

At the time of translocation the largest of the specimens planted was in flower (Figure 3); it is hoped in time the plants will produce viable seed and form a regenerating population on the island. At Waikato University, specimens in cultivation have flowered but do not appear to have produced seed. New Zealand honey eating birds are the likely pollinator; perhaps they have not found our threatened plant garden yet.

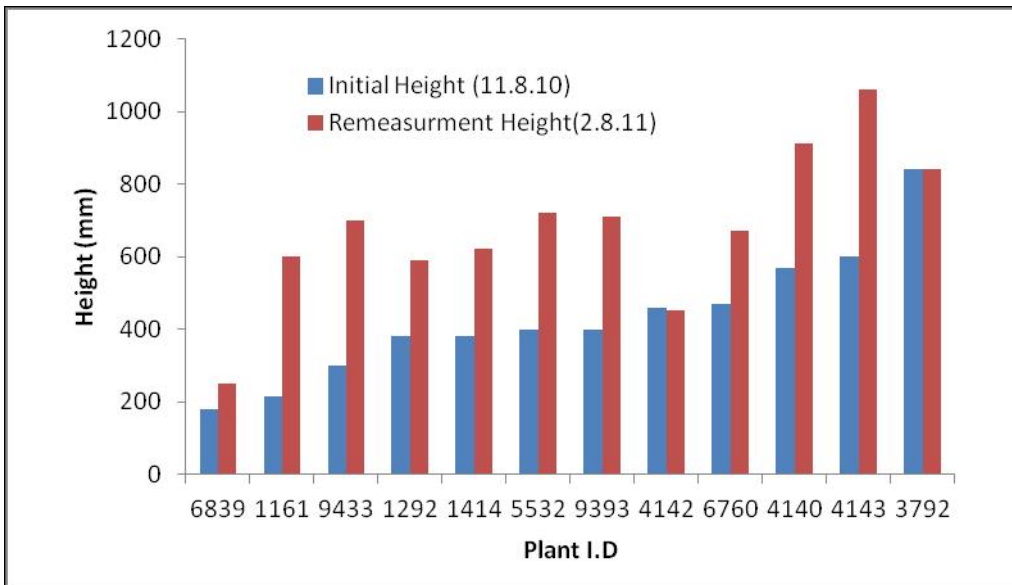


Figure 2: Bar graph showing the height growth of *C. williamsii* individuals August 2010 and August 2011.



Figure 3: *C. Williamsii* flowering in the University shade house before translocation onto the island.

University of Canterbury summer course: Practical Field Botany

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.

Venue: Mountain Biological Field Station at Cass, Canterbury

Dates: 17 January – 25 January 2012

This course will be of interest to amateur botanists, members of the workforce (e.g. Crown Research Institutes, Department of Conservation, Local and Regional Councils, Botanic Gardens, horticulturists and teachers) and biology students who need to acquire or upgrade taxonomic skills and are interested in field ecology, conservation, biodiversity and biosystematics. The course is targeted at participants with various entry levels: from students with a limited plant knowledge to experienced career professionals.

Goals of the course

To enable participants to

- become familiar with the common plants of the Cass and surrounding areas quickly,
- identify and name plants correctly and accurately,
- 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, and
- appreciate unique and unusual aspects of the New Zealand flora.

More information

Visit www.biol.canterbury.ac.nz/biol305 or contact Dr. Pieter Pelsers (pieter.pelsers@canterbury.ac.nz; 3-364-2987 ext 45605).