



Waikato Botanical Society Inc.

NEWSLETTER

No. 37, November 2013

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Editors note

I have just taken on the role of newsletter editor and there is a lot that has happened since the last newsletter in March. I have recently been helping out at the National Wetland Centre at Rotopiko/ Lake Serpentine near Ohaupo, where there is a lot of exciting things happening right now, and there are lots of ways to be involved with this project for those that are interested, so this newsletter has a section on volunteer opportunities as it seems people with botanical skills are always needed. If other members know of projects that botanical society members might want to get involved with, they are welcome to advertise in the next newsletter. Next years' trip programme is in this newsletter, however details will be added closer to the time for some trips. Hopefully we will also be able to have a number of talks in 2014 like we did this year, thanks to Cynthia for organising these!! I hope you all have a happy and safe Christmas and New Year!! Happy botanising!

Susan

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AGM minutes – 22nd April 2013

Minute Taker : Kerry Jones.

Meeting started at started 5:35 PM

In Attendance :

Paula Reeves, Kerry Jones, Mike Clearwater, Bruce Postill, Lucy Roberts, Cynthia Roberts, Marie Brown, Catherine Kirby, Andrew Alston, Chris Lusk, Rebecca Bylisma, Jackson Efford, Betty Seddon, Bev Woolley, Moira Cursey, Danielle Melton, C M Parr, Rosemary Neave, Carisse de Beer, Sue Bennett, Wayne Bennett, Sandra Barns, Anne Fraser, Bruce Willoughby, Wyne Johns, Thomas, Susan and Oscar Emmitt, Kay and Paul Etherdge, Liz Overdyck, Jan Butcher, Yanbin Deng.

Apologies: Elaine Iddon, Warwick Silvester, Kerry Bodmin.

Previous Minutes.

The previous minutes were circulated. Cynthia moved that these be accepted. Seconded by Paula.

Presidents Report.

Paula delivered her president's report mentioning the field trips and work on the threatened plant garden and thanking all those that had kept the Botanical Society rolling along. This year's programme was mapped out.

Treasures Report.

Jan delivered her treasurer's report and moved that it be accepted. Seconded by Kerry.

Threatened plant garden.

Liz gave a report of the threatened plant garden. The highlight being the flowering of *Dactylanthus* last year. There had been some minor casualties from the drought. Liz and Thomas had been down to collect some *Dactylanthus* pollen and seeds in March.

Website.

Mike gave a report on the website. The website allows people to join the botanical society, view newsletters and the year's program. The constitution is also on the web site.

Future projects.

Thomas talked about potential projects. At Pikiariki in Pureora Forest Park there is potential for a project involving weeding and restoration planting. There is another potential project restoring *Myosotis pansa* on the West Coast at Nukuhakiri Station. There was general support for these projects. Thomas to arrange some dates for field trips.

Catherine mentioned that there was potential to get involved at Lake Serpentine also. The main focus at the early stage would be to do a species list.

Election of Officers.

President : Paula Reeves. Nominated by Cynthia Roberts, seconded by Liz Overdyck.

Elected unopposed.

Secretary : Kerry Jones. Nominated by Mike Clearwater. Seconded by Jackson Efford.

Elected unopposed.

Treasurer : Mike Clearwater. Nominated by Paula Reeves. Seconded by Bev Woolley.
Elected unopposed.

Committee : Cynthia Roberts, Jackson Efford, Chris Lusk, Catherine Beard, Lucy Roberts, Thomas Emmitt, Liz Overdyck, Bruce Clarkson.

Moved by Paula Reeves. Seconded Betty Seddon.

Other Business.

Auckland Botanical Society staying at Pirongia Lodge for Queens Birthday Weekend.
Kerry Jones leading some trips. Waikato Botanical Society welcome to join in.

Wellington Botanical Society staying at Te Kauri Lodge in October / November. They have asked via Wyne Johns if anyone would like to lead a trip. We need to know a firm date.

Meeting Closed at 6:14 PM

Talk by Catherine Beard on her recent trip to Rangitira Island followed.

Plant profile- Pomaderris kumeraho

By Lucy Roberts

Choosing the plant species to profile in this newsletter was not a difficult decision. Those of you who travel regularly along Wairere Drive, Hamilton will currently have your commute brightened up by *Pomaderris kumeraho*. This shrub grows up to 3 metres tall flowering prolifically, bringing a splash of creamy yellow to the roadside plantings.



Pomaderris kumeraho Wairere Drive, Hamilton. (Photo L. Roberts)

Pomaderris kumeraho is part of the Rhamnaceae Buckthorn family. Common names for the shrub include gum-diggers soap, golden tainui and poverty weed. The shrubs Maori names are Kumarahou and pāpapa. The name gum diggers soap comes from the fact that when fresh leaves and flowers of *Pomaderris Kumeraho* are crushed and stirred in water lather is produced.

Pomaderris kumeraho is endemic to the North Island of New Zealand found from Te Paki to just south of the Kawhia Harbour and Te Kuiti in the west and the northern Bay of Plenty in the east. *Pomaderris*

kumeraho is found in coastal to lowland, in open, early to mid- successional habitats. This shrub was often found on roadside banks, in poor, clay soils hence the name poverty weed. Also found in gumland vegetation and occasionally seen in forested situations. Traditionally it is said that when *kūmarahou* is in flower, it is near time to plant *kūmara*.

For more information about *Pomaderris kumeraho* and what Maori used this plant for visit: http://www.nzpcn.org.nz/flora_details.aspx?ID=1185.

Threatened plant garden update

By Liz Overdyck

The society's threatened plant collection has been looking great at the new site on Hillcrest Road, Waikato University, Gate 8. We have had flowering on many plants including *Carmichaelia williamsii*, *Lepidium oleraceum*, *Myosotis petiolata* var. *pansa* and *Pimelea villosa*. In May we had a big working bee to weed and mulch the site and we sowed *dactylanthus* (*D. taylorii*) seed beneath some existing large *Pseudopanax* trees. We also took this opportunity to tidy up the old garden site due to some pending building works in the glasshouses compound. This meant we had to excavate one of the earlier sites where *dactylanthus* was sown in 2007 under *mapou* (*Myrsine australis*), but we did not find any sign of tuber attachment here. Fortunately, the established *dactylanthus* clump in the glasshouses compound will be able to remain at the site and we have now put a cage over it to protect it from possums or rats destroying any future flowers. We also relocated some more *Sporadanthus ferrugineus* from the old site to the new garden to replace a plant lost in the summer drought.

Mulching the garden was very successful and minimal weeding effort was needed at the next working bee. Thank you to all who have helped with the gardening to date. Hopefully we will have some opportunities to collect, cultivate and plant out a few more threatened species to fill the garden space over the next year.



Some of our youngest members sowing the tiny *Dactylanthus taylorii* seed mixed with sand, before replacing the leaf litter and caging the site. From left Hana Overdyck, Beth Clearwater, Kiri Cutting and Liz Overdyck (photos M. Clearwater).

New email list service

By Mike Clearwater

The society recently launched a new centralised email list, hosted through our website, which will be used for regular society announcements (upcoming events, newsletters etc). It can also be used by members if they wish to start an email discussion. Existing members have already been added to the list, and new members will be added when they join. If you have not been receiving recent society emails with the subject preceded by [WaikatoBotSoc], please check your spam filter. It may help to add members@waikatobotsoc.org.nz to your trusted senders list. If this doesn't work, please contact Mike Clearwater (treasurer@waikatobotsoc.org.nz). To send a message to all members, address your email to: members@waikatobotsoc.org.nz.

Members are encouraged to use this service to start a discussion (preferably botanical!), post a question, advertise an event etc. If someone chooses to reply to a message from the list, the default reply-to address will be the poster of the original message, not the whole list. If you wish to respond to the entire list, you will need to change the recipient address back to the list address.

Note that to prevent spam, only members of the list can post to the list - if you wish to send a message, you will need to send it from the email address we hold for you in our membership records. Be careful, because these messages will not be moderated. Messages to the list from non-members will be moderated (screened and either rejected or allowed). Non-members cannot join the email list without contacting the treasurer, and only the list administrator can see the email addresses of recipients for messages to the list.

If you wish to change the email address you would like society announcements sent to, please contact the treasurer in the usual way (treasurer@waikatobotsoc.org.nz or visit the website waikatobotsoc.org.nz).

Monthly Seminars

By Cynthia Roberts

The Monday seminars held at the Environment Centre have again covered a wide range of topics, with excellent presentations stimulating much thought and discussion.

Topics covered so far this year were:

- Catherine Beard (Senior Scientist WRC) – AGM guest speaker on Rangatira Island, Chatham Islands recounting her experiences on a magical wildlife sanctuary when she joined Cynthia Roberts to resurvey Cynthia's forest plots she set up in 2002.
- Nick Waipara (Principal Advisor Biosecurity, Auckland Council) - Kauri dieback: An emerging biosecurity threat to kauri and the kauri ecosystem (Progress on the knowledge, understanding and management for kauri protection).
- John Leathwick (Principal Scientist DOC) - The NZ Biodiversity Strategy - moving towards delivery.

- Carolyn Lundquist (Marine Ecologist NIWA) - Can we turn back the clock? Managing mangrove expansion in northern New Zealand.
- Avi Holzapfel (Terrestrial Ecosystems Manager DOC) - *Dactyloctenium aegyptium* - Biology, Conservation and Research.
- Brian Cutting (Research Associate at Plant & Food Research Ltd) - Gardening for wildlife – gardens as a restoration tool.
- Paul Champion (Principal Scientist NIWA -Freshwater and Estuaries) - Northern Lakes and the dune lakes of national significance.
- Melissa Jager (MSc student). Plant traits and their role in determining forest community structure along a soil fertility gradient.
- Matt Brown (MSc student). Selective Foraging and the Nutritional Ecology of the Tree Weta *Hemideina thoracica*

New Landcare Research website

By Cynthia Roberts

Landcare Research has recently launched a new website called NZ flora (www.nzflora.info). This, when fully operational will be an interactive website for the New Zealand flora. Diagnostic photos will be added as time permits. One of the key features of this website is that it will provide the most accurate and up-to-date botanical names. Each name is linked to an actual specimen in a herbarium. As well as the detailed information that's found in the NZ Flora series, this new electronic version provides an easily accessible PDF version for the non-botanist. It's very user-friendly so give it a go!

Volunteering opportunities

National Wetland Centre, Rotopiko (Lake Serpentine)

Just fifteen minutes from Hamilton a very exciting project is unfolding. The National Wetland Trust has completed a pest fence around an array of wetland and terrestrial habitats at Rotopiko (Lake Serpentine) and is planning extensive restoration of natural areas along with the creation of a series of 'wetland gardens' as part of the planned National Wetland Centre. The Trust would welcome help from botanists and plant enthusiasts to advise on restoration, undertake botanical surveys, collect local seed for growing on, and help design and create the wetland gardens. The gardens will form an entrance walkway to the centre, taking visitors on a virtual journey of wetlands around New Zealand from sea to mountains. Planned gardens include an estuary, braided river, alpine tarn, red tussock fen, and geothermal wetland. If you wish to be part of this exciting project contact Karen at Karen.denyer@wetlandtrust.org.nz. You can find out more on the National Wetland Trust website www.wetlandtrust.org.nz.

Te Kauri Park

Fancy a great day out in the bush, seeing some great country, working to protect an important forest and its birdlife! Join the Te Kauri Volunteers, a group of enthusiastic and dedicated people who are striving to restore an ecologically rich forest at Te Kauri Park near Kawhia. We conduct vegetation surveys (Formak, rata and kauri monitoring), do bird counts and monitor tacking tunnels. You can be

involved in any or all of these whenever you can. They are all weekend events to fit in with our work lives. Overnight stays at our lodge are possible too. We would love you to join us for one day a year, or more. Transport out there can be provided. Interested? Please contact Chris Eames on 07 856 7334 or email at c.eames@waikato.ac.nz.

Field trip reports

Awaroa Swamp Management Reserve field trip 25 November 2012

By Paula Reeves

Over 20 people gathered out at Glen Massey, north of Huntly for the most popular botanical trip of the year. A very rare chance to view some of the best seasonally flooded kahikatea forest remaining in the Waikato Region with Paul Champion who had done some research at the site back in the 1980's.

The trip was graded as 'easy' however we didn't take into account the trail bike race that roared down the access track on Oliver Saxton's farm. To limit our time on the access track we bush crashed through a steep gully hoping we'd come out close to our target, which thankfully we did without any collisions.

The Awaroa Swamp Wildlife Management Reserve (1700 ha) is a large area of swamp, marsh, and indigenous forest located on the western side of Lake Whangape. It is located within a floodplain that flanks c.6 km of the Awaroa Stream and is managed by the Department of Conservation. The reserve can be quite difficult to access so we were grateful to Oliver Saxton for allowing us to cross his land to get as close as we could to one of the best remaining stands of kahikatea forest remaining in the reserve.

The area of kahikatea forest we botanised appears to flood regularly, with flood markings on kahikatea trunks reaching 1.1 m above ground. The canopy was dominated by dense kahikatea (average height 25 m) with individuals of kowhai, totara, matai, and pukatea also reaching the canopy. The sub-canopy was sparse and dominated by ti kouka and kowhai. The shrub layer was much denser and contained a diverse mix of species included *Coprosma arborea*, *C. × cheesemaniae*, *C. propinqua* var. *propinqua*, swamp coprosma, *Melicactus micranthus*, mahoe, turepo, ramarama, rohutu, kanono, *Carmichaelia australis*, and saplings of kahikatea, totara, kowhai, matai, and titoki.

Supplejack formed dense tangles and was large enough to provide a swing for some of the younger members. Several other lianes (e.g. *Rubus australis*, *Rubus cissoides*, *Parsonsia heterophylla*) were locally common and we also observed the native bindweed (*Calystegia tuguriorum*) in flower. Ground cover was mostly sparse and included *Viola lyalii*, *Hydrocotyle pterocarpa*, Indian strawberry, *Oplismenus hirtellus* subsp. *imbecillis*, *Carex ochrosaccus*, *Isolepis reticularis*, and the ferns *Asplenium polyodon*, *B. chambersii*, *Diplazium australe*, and swamp kiokio. The invasive royal fern (*Osmunda regalis*) was present but fortunately only a few individuals were observed. There was also a diverse mix of seedlings dominated by kahikatea and *Coprosma* sp.



Carex secta growing in light gaps amongst the kahikatea forest at Awaroa.

A vehicle track links traverses the site linking the Saxton farm to the Awaroa Stream. This track was dominated mainly by introduced grasses and herbs including rice cutgrass (*Leersia oryzoides*) which is rarely found anywhere except riverine wetlands along the Waikato River.

Paul commented on how little the kahikatea forest had changed since his research back in the 1980's – good news for this Waikato forest type!



Viola lyalli (left) was a common ground cover beneath the kahikatea forest. Native bindweed (right) was in flower.

Species list (by Catherine Beard)

INDIGENOUS SPECIES

Gymnosperms

<i>Dacrycarpus dacrydioides</i>	kahikatea
<i>Phyllocladus trichomanoides</i>	tānekaha
<i>Podocarpus totara</i> var. <i>totara</i>	totara
<i>Prumnopitys ferruginea</i>	miro
<i>Prumnopitys taxifolia</i>	mataī

Monocot. trees and shrubs

<i>Cordyline australis</i>	tī kōuka, cabbage tree
<i>Rhopalostylis sapida</i>	nīkau

Dicot. trees and shrubs

<i>Alectryon excelsus</i> subsp. <i>excelsus</i>	tītoki
<i>Alseuosmia macrophylla</i>	toropapa
<i>Beilschmiedia tawa</i>	tawa
<i>Brachyglottis repanda</i>	rangiora
<i>Carmichaelia australis</i>	maukoro
<i>Carpodetus serratus</i>	putaputawētā
<i>Coprosma arborea</i>	tree coprosma, māmāngi
<i>Coprosma areolata</i>	
<i>Coprosma grandifolia</i>	kanono
<i>Coprosma ×cunninghamii</i>	
<i>Coprosma propinqua</i> var. <i>propinqua</i>	mingimingi
<i>Coprosma rigida</i>	
<i>Coprosma rotundifolia</i>	
<i>Coprosma tenuicaulis</i>	hukihuki, swamp coprosma
<i>Corynocarpus laevigatus</i>	karaka
<i>Fuchsia excorticata</i>	kōtukutuku
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange
<i>Hebe stricta</i> var. <i>stricta</i>	koromiko
<i>Hedycarya arborea</i>	porokaiwhiri; pigeonwood
<i>Knightia excelsa</i>	rewarewa
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Leucopogon fasciculatus</i>	mingimingi
<i>Litsea calicaris</i>	mangeao
<i>Lophomyrtus bullata</i>	ramarama
<i>Macropiper excelsum</i> subsp. <i>excelsum</i>	kawakawa
<i>Melicope simplex</i>	poataniwha
<i>Melicytus micranthus</i>	māhoe wao
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	māhoe
<i>Myrsine australis</i> māpou	
<i>Neomyrtus pedunculata</i>	rōhutu
<i>Nestegis lanceolata</i>	white maire, maire rauriki
<i>Olearia rani</i> var. <i>colorata</i>	heketara
<i>Pennantia corymbosa</i>	kaikōmako
<i>Plagianthus regius</i> subsp. <i>regius</i>	ribbonwood, mānatu
<i>Pseudopanax crassifolius</i>	horoeaka, lancewood
<i>Rhabdothamnus solandri</i>	taurepo
<i>Schefflera digitata</i>	patē
<i>Sophora microphylla</i>	kōwhai
<i>Streblus heterophyllus</i>	tūrepo

Monocot. lianes

<i>Freyinetia banksii</i>	kiekie
<i>Ripogonum scandens</i>	supplejack, kareao

Dicot. Lianes

<i>Calystegia sepium</i> subsp. <i>roseata</i>	pōhue
<i>Calystegia tuguriorum</i>	native bindweed
<i>Fuchsia perscandens</i>	
<i>Metrosideros fulgens</i>	rātā
<i>Metrosideros perforata</i>	aka
<i>Muehlenbeckia australis</i>	puka
<i>Parsonsia heterophylla</i>	akakaikiore
<i>Passiflora tetrandra</i>	kohia; native passionfruit
<i>Rubus australis</i>	tātārāmoa
<i>Rubus cissoides</i> agg.	tātārāmoa, tātaraheke , bush lawyer

Ferns

<i>Adiantum cunninghamii</i>	huruhuru tapairu, maidenhair fern
<i>Arthropteris tenella</i>	
<i>Asplenium bulbiferum</i>	mouku, hen and chicken fern
<i>Asplenium flaccidum</i>	makawe
<i>Asplenium oblongifolium</i>	huruhuru whenua
<i>Asplenium polyodon</i>	petako
<i>Blechnum chambersii</i>	rereti, nini
<i>Blechnum filiforme</i>	pānako
<i>Blechnum fluviatile</i>	kiwikiwi, kiwakiwa
<i>Blechnum minus</i>	swamp kiokio
<i>Blechnum novae-zelandiae</i>	kiokio
<i>Cyathea dealbata</i>	ponga, silver fern
<i>Cyathea medullaris</i>	mamaku
<i>Deparia petersenii</i> subsp. <i>congrua</i>	
<i>Diplazium australe</i>	
<i>Doodia australis</i>	pukupuku
<i>Hymenophyllum demissum</i>	irirangi, piripiri, filmy fern
<i>Lastreopsis glabella</i>	
<i>Lastreopsis hispida</i>	tuakura
<i>Leptopteris hymenophylloides</i>	heruheru
<i>Lygodium articulatum</i>	mangemange
<i>Microsorium pustulatum</i>	kōwaowao, pāharaha, hound's tongue fern
<i>Microsorium scandens</i>	mokimoki
<i>Pneumatopteris pennigera</i>	pākau
<i>Polystichum neozelandicum</i> subsp. <i>neozelandicum</i>	pikopiko, shield fern
<i>Pteridium esculentum</i>	rārahu, bracken
<i>Pteris macilenta</i>	titipo, sweet fern
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern
<i>Trichomanes venosum</i>	

Grasses

<i>Microlaena avenacea</i>	bush rice grass
<i>Microlaena stipoides</i>	pātīti, meadow rice grass
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	

Sedges

<i>Bolboschoenus fluviatilis</i>	pūrua grass, kukuraho
<i>Carex dipsacea</i>	
<i>Carex dissita</i>	
<i>Carex fascicularis</i>	

<i>Carex gaudichaudiana</i>	
<i>Carex geminata</i> agg.	rautahi
<i>Carex lambertiana</i>	
<i>Carex lessoniana</i>	toetoe-rautahi
<i>Carex maorica</i>	
<i>Carex secta</i>	pūrei
<i>Carex virgata</i>	pūrei
<i>Gahnia lacera</i>	
<i>Gahnia xanthocarpa</i>	tupari-maunga
<i>Isolepis reticularis</i>	
<i>Machaerina tenax</i>	
<i>Schoenus maschalinus</i>	
<i>Uncinia banksii</i>	matau
<i>Uncinia uncinata</i>	

Rushes

Juncus prismatocarpus

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

<i>Collospermum hastatum</i>	kahakaha
<i>Phormium tenax</i>	harakeke, flax
<i>Typha orientalis</i>	raupō

Dicot. herbs (other than composites)

	<i>Acaena anserinifolia</i>	piripiri, hutiwai
<i>Callitriche petriei</i> subsp. <i>petriei</i>		
<i>Callitriche stagnalis</i>	starwort	
<i>Elatostema rugosum</i>	parataniwha	
<i>Haloragis erecta</i> subsp. <i>erecta</i>	toatoa	
<i>Hydrocotyle novae-zeelandiae</i> var. <i>novae-zeelandiae</i>		
<i>Hydrocotyle pterocarpa</i>		
<i>Lobelia angulata</i> (<i>Pratia angulata</i>)	pānakenake	
<i>Myriophyllum propinquum</i>		
<i>Oxalis magellanica</i>	tūtāe-kāhu	
<i>Urtica incisa</i>	ongaonga, tree nettle	
<i>Viola lyallii</i>	haka	

NATURALISED AND EXOTIC SPECIES

Gymnosperms

<i>Cupressus</i> sp.	cypress
<i>Pinus radiata</i>	radiata pine

Dicot. trees and shrubs

<i>Acacia melanoxylon</i>	Tasmanian blackwood
<i>Berberis glaucocarpa</i>	barberry
<i>Crataegus monogyna</i>	hawthorn
<i>Eucalyptus</i> sp.	eucalyptus
<i>Rubus</i> sp. (<i>R. fruticosus</i> agg.)	blackberry
<i>Salix fragilis</i>	crack willow
<i>Ulex europaeus</i>	gorse

Dicot. lianes

<i>Actinidia deliciosa</i>	kiwifruit
<i>Lonicera japonica</i>	Japanese honeysuckle

Ferns

<i>Osmunda regalis</i>	royal fern
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Grasses

<i>Agrostis stolonifera</i>	creeping bent
<i>Anthoxanthum odoratum</i>	sweet vernal
<i>Dactylis glomerata</i>	cocksfoot
<i>Holcus lanatus</i>	Yorkshire fog
<i>Leersia oryzoides</i>	rice cutgrass

Sedges

<i>Carex ovalis</i>	oval sedge
<i>Carex tenuiculmis</i>	
<i>Carex vulpinoidea</i>	fox sedge
<i>Cyperus eragrostis</i>	umbrella sedge

Rushes

<i>Juncus articulatus</i>	jointed rush
<i>Juncus effusus</i> var. <i>effusus</i>	soft rush, leafless rush

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

<i>Alisma plantago-aquatica</i>	water plantain
<i>Tradescantia fluminensis</i>	tradescantia

Composite herbs

<i>Bidens frondosa</i>	beggars' ticks
<i>Cirsium arvense</i>	California thistle
<i>Cirsium vulgare</i>	Scotch thistle
<i>Jacobaea vulgaris</i>	ragwort
<i>Mycelis muralis</i>	wall lettuce
<i>Taraxacum officinale</i>	dandelion

Dicot. herbs (other than composites)

<i>Apium nodiflorum</i>	water celery
<i>Daucus carota</i>	wild carrot
<i>Galium palustre</i>	marsh bedstraw
<i>Lotus pedunculatus</i>	lotus
<i>Ludwigia palustris</i>	water purslane
<i>Lycopus europaeus</i>	gypsy wort
<i>Mentha pulegium</i>	penny royal
<i>Mentha suaveolens</i>	apple mint round-leaved mint
<i>Oxalis corniculata</i>	horned oxalis
<i>Persicaria hydropiper</i>	water pepper
<i>Persicaria lapathifolia</i>	pale willow weed
<i>Prunella vulgaris</i>	selfheal
<i>Ranunculus flammula</i>	spearwort
<i>Ranunculus repens</i>	creeping buttercup
<i>Rorippa amphibia</i>	
<i>Rumex conglomeratus</i>	clustered dock
<i>Solanum nodiflorum</i>	

Pureora Dactylanthus taylorii field trip 9 March 2013

By Liz Overdyck

A keen group turned out on a fine morning to search for the rare root parasite *Dactylanthus taylorii* near Pureora village. This trip was timed to coincide with flowering to allow us to collect pollen for pollinating the cultivated dactylanthus in the society's threatened plant garden. We started early in the morning with a pre-field trip excursion, a bit of a treat for those who had stayed overnight, as Thomas Emmitt from the Department of Conservation (DOC) was meeting photographer David Mudge to visit some sites where he had time lapse photography equipment set up (see photo). David is recording dactylanthus flower bud emergence and pollination through to seed set with cameras at several population sites here (you can search for dactylanthus on YouTube for a glimpse of David's work). After checking David's cameras we all met up in Pureora village and proceeded to a site near the buried forest, where there is a large population of dactylanthus on the forest edge in regenerating secondary vegetation (all well concealed by a thick wall of fruiting blackberry which was ripe, so we did our best to remove some seed!).

DOC had surveyed this site just weeks before, counting over 680 clumps of dactylanthus. A survey of the whole population was completed after this trip and 1400 clumps were found at various sites around Pureora Village. It did not take long to start spotting many emergent inflorescences on the forest floor, an uncanny situation for such a rare and inconspicuous plant, although visibility had been improved for us by the survey teams prior foraging in the leaf litter around plants. Dactylanthus host trees seemed to be *Pseudopanax*, *Coprosma* and *Pittosporum* species, and totara may also host dactylanthus here. We had some discussion over how difficult it can be to ascertain which trees roots have been parasitised, we were lucky to have Waikato University student Cass Parker with us who is currently using genetic techniques to study dactylanthus and elucidate its host species.

We wanted to collect male dactylanthus inflorescences with pollen present from several different plants and it was quite easy to spot those with the cream-coloured pollen within their partially-opened flower bracts (see photo), especially once assuming botanists' stance on the forest floor with bottoms in the air. We found many insects visiting the inflorescences, including wasps, so some care was needed while collecting pollen. We had easily collected enough pollen-laden inflorescences by lunchtime and decided this would also be a good opportunity to gather some dactylanthus seed to sow in the new threatened plant garden.

We set off back to Hamilton after lunch with our pollen, but unfortunately on return to Waikato University we were disappointed to find that the dactylanthus flower inflorescences observed emerging several weeks earlier had not opened any further, rendering pollination impossible. We believe they had succumbed to the severe drought conditions in the prior weeks. The dactylanthus and host trees were watered over the following weeks of continued drought, but the inflorescences did not emerge any further. It remains to be seen next summer whether it was just flowering which was aborted, or if the dactylanthus has died which would be very unfortunate. We hope to attempt pollination again next summer and are pleased that we made the decision to gather more seed, to hopefully ensure a continued dactylanthus population in cultivation.



*The elaborate caged camera set-up used by David Mudge in Pureora forest over a clump of *Dactylanthus taylorii* (photo E. Overdyck).*



*A clump of male *Dactylanthus taylorii* inflorescences emerging from leaf litter laden with pollen, Pureora (photo O. Overdyck).*

Raglan Trip to Peter Caves Nursery and Restoration Project 4th May 2013

By Kerry Jones

There was a good turnout for our May field trip to Peter Caves' place at Raglan. The jug was boiled and bikkies were bought out. Peter has a part time job running a nursery to provide plants for a private restoration project that he is managing. After cups of tea Peter took us on a tour of his nursery where he has many native plants growing in their small and larger pots under several large shade cloth enclosures. Some of the pioneer trees that Peter is growing are karamu, kanuka, manuka, makamako, mahoe and harakeke, along with larger longer-term trees including puriri, kohekohe, miro, kahikatea, kauri, tawa and taraire. Most are grown from seed that Peter has collected locally. Peter's garden had plants and trees that looked both familiar and unusual at the same time. There was kauri from New Caledonia and a rather exotic looking tree fern. Other species included Agathis and Araucaria species, many palms, vireya, rhododendrons and a selection of exotic fruits including sapote, cherimoya, loquats, ugni, guava, figs and bananas.

After the garden tour we Peter took us up to the restoration project. The site is 25 hectares in total. From the top of the hill there was a great view of the upper Raglan Harbour. Peter led us down the hill side to a recent planting site. It was here several weeks earlier that Peter and his family and the land owners had planted 1000 trees in 1 day – all grown in the nursery. Further down the hill there was a small gully with several small lakes surrounded by damp pasture with scattered manuka and the odd tree fern (*Dicksonia fibrosa*), and some clumps of pampas.





Peter led us across to a small gully of native bush that was mainly tall manuka with scattered kahikatea, totara, coprosma and tree ferns (Photo K. Jones).



We had a good look around in this patch of bush (above) and I did a quick species list (see below) (Photo K. Jones).

We noticed the clouds rolling in as we headed back up the hill. We had to pull out the rain coats as we emerged from the bush to head back to the cars. Thanks Peter for showing us around your pet project. It would be good to head back in 2 – 3 years to see the difference.

Species List. Small patch of native bush on private property near Raglan.
 Grid Reference : NZTM 1766180 E 5811720 N. Raglan Ecological District.

Gymnosperms

<i>Phyllocladus trichomanoides</i>	tanekaha
<i>Podocarpus totara</i>	totara
<i>Dacrycarpus dacrydioides</i>	kahikatea (some planted)
<i>Prumnopitys ferruginea</i>	miro

Dicot trees and shrubs

<i>Dysoxylum spectabile</i>	kohekohe
<i>Meliccytus ramiflorus</i>	mahoe
<i>Coprosma arborea</i>	tree coprosma, mamangi
<i>Coprosma rhamnoides</i>	
<i>Coprosma robusta</i>	karamu
<i>Mysine australis</i>	mapau
<i>Pseudopanax crassifolius</i>	lancewood
<i>Vitex lucens</i>	puriri
<i>Beilschmedia tawa</i>	tawa
<i>Melicope ternata</i>	wharangi

Ferns

<i>Asplenium flaccidum</i>	hanging spleenwort
<i>Cyathea dealbata</i>	mamaku
<i>Dicksonia fibrosa</i>	wheki-ponga
<i>Microsorium pustulatum</i>	hounds tooth
<i>Pyrrosia elaeagnifolia</i>	leather leaf fern

Lianes

<i>Clematis sp.</i>	
<i>Muehlenbeckia australis</i>	pohuehue

Grasses

<i>Cortaderia sp (selloana or jubata)</i>	pampas
<i>Oplismenus hirtellus subsp. imbecillus</i>	

Monocot herbs

<i>Collosperrum hastatum</i>	kahakaha
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Moeatoa Planting Day 6th July 2013

By Thomas Emmitt

Several dedicated volunteers from the Waikato Botanical Society and the Taranaki Botanical Group headed off to Moeatoa Scenic Reserve to plant 500 trees. The aim of the planting was to establish a barrier to protect the Nationally Endangered forget-me-not (*Myosotis pansa* subsp. *praeceps*) from the coastal winds that are pushing its habitat further inland. The biggest threat to this population is the retreat of the coastal forest caused by cow damage and the harsh coastal winds opening up the damaged forest, letting rank grass take over potential habitat. Moeatoa holds the largest single population of this threatened species and is managing to hold on in the only remaining bit of coastal forest in the area that runs close to the coastline.

We set off at 9am from Te Kuiti ready for a big driving mission. The drive from Te Kuiti took two and a half hours, involving some 4x4 driving across pugged up farm tracks. (The DOC truck ended up meeting a fencepost on the drive out with the truck coming off second best). It wasn't the best weather to go venturing out to the west coast, but we managed to get all of the plants in the ground just before it turned nasty. Afterwards we scrambled up the steep faces to get a look at what we were trying to protect. Several healthy plants were seen on the forest edge under the canopy of Kohekohe (*Dysoxylum spectabile*) and Kamahi (*Weimannia racemosa*). Unfortunately about a week after planting cows got into the reserve and ate around half of the trees.



The group having lunch together and enjoying the views after a long drive to the site (Photo B. Hammonds).



The nationally endangered Myosotis pansa subsp. praeceps growing at the site (Photo T. Emmitt).

Pureora Forest Field Trip 20th October 2013

By Susan Emmitt

A small group met on a fine Sunday morning, and since there was a small number of us, including a 14 month old and two young girls we decided to take a relaxing walk in the Northern Waipapa Ecological Area, with the idea of searching for a previously seen tawari (*Ixerba brexioides*) along one of the pest control lines in the forest. Tawari is not known from Pureora, so this is an interesting find, and it would be good to confirm its location. Along our way we botanised and shared our knowledge, and also stumbled across a small wetland, but unfortunately we never found the tawari, as we either were on the wrong line or didn't quite make it far enough along. Another trip for the future!



An enthusiastic young botanist exhausted at lunchtime after a big morning. (Photo S, Emmitt).

Trip programme 2014

Saturday 18th January – Lake Koroha (Hauturu Forest)

This walk will take us through a mixture of forest types from Rimu/Tawa, Regenerating Manuka and Pukatea forest to the lake which is surrounded by Kamahi/Rewarewa forest. The lake itself is ringed by sphagnum bog with patches of *Eleocharis spaceolata*. The walk to the lake will take 2-3 hours.

- Contact:** Thomas Emmitt temmitt@doc.govt.nz ph. 07 878 1055 (work) or 021 152 3030.
Meet: 9am at the Hauturu Hall, corner of Harbour Road and Hauturu Road, South Kawhia.
Grade: Medium-Hard
Bring: Good footwear, lunch, togs if you are brave enough

Saturday 22nd February 2014 - Mt Karioi *Pittosporum kirkii* hunt

Craig Purvis reported *Pittosporum kirkii* growing epiphytically on the Southern Side of Mt Karioi a few years ago with a team of track cutters. Unfortunately one of the track cutters cut it off. This was the only record of *Pittosporum kirkii* on Mt Karioi. I'd like to go and take a bit more of a look in the area to see if we can find any more. Bring binoculars if you have them. We will be doing quite a bit of looking up into the canopy.

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

Meet : 8:00 AM Countdown Super Market, Whatawhata Road, Dinsdale
8:30 AM Te Mata School.

Grade: Medium / Hard

Saturday 8th March – Rotopiko (Serpentine Lakes), Ohaupo

We will be circumnavigating the Rotopiko (Serpentine) peat lakes and collecting seed for revegetation. These are some of the best peat lakes left in New Zealand and considerable restoration by Department of Conservation has been completed at these lakes with more planned by both DOC and NWT. The walk around the lakes will take 3-4 hours.

Contact: Paula Reeves pnreeves42@gmail.com ph. 07 8547259 or 021 267 5802

Meet: 9am at the Glenview New World carpark, Cnr Ohaupo Rd and Lambert Crescent in Hamilton or meet us at the Lake Serpentine reserve at 9.30am.

Grade: Easy - Medium

Bring: Good footwear that you don't mind getting wet, lunch, paper bags to collect seeds.

Saturday 12th April – Trip to Port Waikato – further details to come closer to the date.

Saturday 3rd May – Threatened plant collection working bee

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

Meet: 10am 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

Saturday 10th May– Rock Peak (*Hebe scopulorum*) Visit

Come and see *Hebe scopulorum*, a Naturally Uncommon species restricted to several limestone outcrops in the Awaroa Valley. Since the initiation of goat control the area around Rock Peak has gone through a major transition from open grassland to thick Phormium and Macherina. We will have a good explore around rock peak and the surrounding forest to see what else we might find now the goats are under control.

Contact: Thomas Emmitt temmitt@doc.govt.nz ph. 07 878 1055 (work) or 021 152 3030.
Meet: 9am at the Waitomo I-site
Grade: Medium-Hard
Bring: Good footwear, lunch

Saturday 14th June – Wairere Falls (Combined with Rotorua Botanical Society)

A climb to the top of Wairere Falls rewarded with great views of the Waikato.
We will be concentrating on fern species.

Contact: Kerry Jones (07 855 9700 / 027 747 0733 / km8j1s@gmail.com)
Meet : 8:00 at Landcare Car Park Gate 10 Waikato University or 9:00 at Matamata at the Roundabout at the south east end of the main street (corner of Broadway and Tower Road).
Grade: Medium. (There is 100 step staircase to go up at the base of the falls followed by a steepish climb to the top of the falls.)
Bring: Your togs for a swim afterwards at Okauia Hot Pools.

Saturday 20th September – Threatened plant collection working bee

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

Meet: 10am 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

November 1st and 2nd –Taupo – further details to come closer to the date