



Waikato Botanical Society Inc.

Newsletter No. 24, December 2006

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**Merry Christmas everyone!
We hope you have a happy
and relaxing holiday period,
and look forward to seeing
you all at events during
2007.**

**A special thank you to all
those who have contributed
this year at working bees,
organising and leading
trips, on the committee, and
allowing us to visit your
restoration projects.**

UPCOMING BOTANICAL SOCIETY EVENTS 2007

See the end of the Newsletter for details. The first trip is in January.

STUDENT AWARDS 2006

The Waikato Botanical Society supports two Waikato University undergraduate and graduate student prizes each year. Congratulations to our winners in 2006: Amy MacDonald for the Plant Ecology paper at Masters level, and Shelley Heiss-Dunlop for the Flora of Aotearoa/NZ summer course. Each prize includes \$250 and a years complimentary subscription to the society. The prizes are awarded to the top student in each of the courses and were established in 2005 to encourage and foster interest in botanical studies in the Waikato region.

UPCOMING EVENTS AND CONFERENCES IN 2007

The International Association of Vegetation Science conference is being held in Palmerston North from 12-16 February 2007. Go to <http://iavs2007.massey.ac.nz/>. There are sessions on invasive plants, island forests, global change and diversity as well as many other topics, and there is a vast array of field trips both before and after the conference.

Conserve-vision is happening from 4-7 July 2007, and is jointly hosted by the Department of conservation and the University of Waikato. The purpose of the conference is to celebrate 20 years of integrated conservation management by the New Zealand Department of Conservation and to chart options for the future. <http://www.waikato.ac.nz/wfass/Conserv-Vision/index.shtml>.

FIELD GUIDES FOR SALE

Graeme Jane has some useful guides for sale:

Field Guide to Rushes, Sedges and Allied plants

All species are included except those not seen for a long while or only present on offshore islands. Each species is illustrated with grey tone (digital photo) silhouettes and a brief text description emphasising any distinguishing field features on the opposing page. Quick keys to species are also included. Intended for field use with A5 format and wire ring binding. Cost is \$15.

I also have a **field guide to ferns and fern allies** in a similar format for \$10. Please send reply only to Graeme Jane at GTJane@clear.net.nz

PETER MORRIS GULLY TRIP 1 OCTOBER 2006

It is hard to comprehend the amount of work that Peter and his family have put in over 20+ years to restore a typical Waikato weed-ridden gully to regenerating native

forest species. Their gully and ridge network also includes a wet swamp area where we saw some very large original *Carex* specimens and some healthy swamp maire (*Syzygium maire*) that have been planted. Many species are now regenerating naturally and introducing themselves, such as the tree ferns, and the restoration really has a feel of secondary native forest, with the odd hint of human intervention where epiphytes can be seen to have been strapped onto canopy trees! Peter has an impressive collection of native plants being propagated in his garage/nursery and it was interesting to hear of techniques for successful germination of many species.

**FERNS ON MT. TE AROHA
5 NOVEMBER 2006**

On a pleasant but overcast day, sixteen keen botanists gathered at the thermal pools at the base of Mt. Te Aroha. With Catherine Beard as our leader for the day, we made off at a good pace, looking forward to the more intact and shrouded forest nearer the summit.

As we climbed steadily on the well maintained track, we discussed and sorted out quick identifying features of ferns along the track edge. *Blechnum chambersii* was in abundance lower down the mountain, with its hanging nature and sickle-shaped lamina, as opposed to *B. discolor*'s symmetry and paler underside. The *Asplenium* genus was well represented at this altitude with a predominance of *A. lamprophyllum* with its glossy pinnae and strong smell of wintergreen on crushing the base of the stipe. Moving up the mountain, *Lastreopsis glabella* was compared to *L. hispida*; the latter's hairy stipe affectionately known as "hairy legs" gave us the differentiating feature. We also needed to separate *Adiantum viridescens* and *A. fulvum*, as they have similar long pinnae but the absence of hairs on the pinnae meant the two species we saw on the mountain were *A. cunninghamii* and *A. viridescens*. Also at the lower and mid-section of the track we looked at *Polystichum neo-zelandicum* and *Leptopteris hymenophylloides*.

Continuing up we were distracted by a fantastic display of *Libertia grandiflora* in full bloom and some flowering *Clematis cunninghamii* before reaching the moist top third of Mt. Te Aroha. Here we had a chance to sort out some of the *Hymenophyllum* species which were well represented in that area. We had looked at some of the larger species en route, the ground dwelling *H. demissum*, its 3/D form and paired sori in comparison to similar sized 2/D *H. dilatatum*. A fallen tawa tree gave us access to the smaller, often curled *H. sanguinolentum* with much discussion on the origin of its name! On some of the damp trackside boulders we looked at *H. revolutum* with its toothed pinnae and toothed sori as distinguishing features. *H. flabellatum* (with furry orange underpants!) and *H. multifidum* were also discussed.

It was the smaller species of *Hymenophyllum* which were also fascinating and very easily overlooked. The simple form of *H. armstrongii* with its large terminal sori was discovered near the summit and close by, a colony of the fascinating fan shaped *H. lyallii*, was a delight to see. On a dead trunk of a mountain cedar we found the rare *H. malingii*. For me it was one of the larger *Hymenophyllum*, *H. pulcherrimum* with its large tufted three dimensional form plus the distinctive winged stipe that was the highlight of the day. I had been looking forward to this trip and it certainly lived up to expectations. This was one of the best field trips for this year.

Doug Ashby

List of ferns seen on Mt. Te Aroha 5.11.06 (E. Grove and C. Beard)

<i>Adiantum cunninghamii</i>	<i>Hymenophyllum pulcherrimum</i>
<i>Adiantum viridescens</i>	<i>Hymenophyllum revolutum</i>
<i>Anarthropteris lanceolata</i>	<i>Hymenophyllum sanguinolentum</i>
<i>Asplenium bulbiferum</i>	<i>Hymenophyllum villosum</i>
<i>Asplenium flaccidum</i>	<i>Hypolepis rufobarbata</i>
<i>Asplenium lamprophyllum</i>	<i>Lastreopsis glabella</i>
<i>Asplenium oblongifolium</i>	<i>Lastreopsis hispida</i>
<i>Asplenium polyodon</i>	<i>Leptopteris hymenophylloides</i>
<i>Blechnum chambersii</i>	<i>Lindsaea trichomanoides</i>
<i>Blechnum discolor</i>	<i>Lycopodium deuterodensum</i>
<i>Blechnum filiforme</i>	<i>Lygodium articulatum</i>
<i>Blechnum fluviatile</i>	<i>Microsorium (Phymatosorus)</i>
<i>Blechnum membranaceum</i>	<i>pustulatum</i>
<i>Blechnum nigrum</i>	<i>Microsorium (Phymatosorus) scandens</i>
<i>Blechnum novae-zelandiae</i>	<i>Paesia scaberula</i>
<i>Blechnum procerum</i>	<i>Pneumatopteris pennigera</i>
<i>Cyathea dealbata</i>	<i>Polystichum neo-zelandicum (P.</i>
<i>Cyathea medullaris</i>	<i>richardii)</i>
<i>Cyathea smithii</i>	<i>Pteridium esculentum</i>
<i>Dicksonia squarrosa</i>	<i>Pteris macilenta</i>
<i>Doodia australis</i>	<i>Pteris tremula</i>
<i>Grammitis spp.</i>	<i>Pyrrhosia eleagnifolia</i>
<i>Histopteris incisa</i>	<i>Rumohra adiantiformis</i>
<i>Huperzia varia (Lycopodium varium)</i>	<i>Sticherus cunninghamii</i>
<i>Hymenophyllum armstrongii</i>	<i>Tmesipteris elongata</i>
<i>Hymenophyllum demissum</i>	<i>Tmesipteris lanceolata</i>
<i>Hymenophyllum dilatatum</i>	<i>Tmesipteris tannensis</i>
<i>Hymenophyllum ferrugineum</i>	<i>Trichomanes endlicherianum</i>
<i>Hymenophyllum flabellatum</i>	<i>Trichomanes elongatum</i>
<i>Hymenophyllum lyallii</i>	<i>Trichomanes venosum</i>
<i>Hymenophyllum malingii</i>	
<i>Hymenophyllum multifidum</i>	

THREATENED PLANT GARDEN UPDATE

The Waikato threatened plant collection garden has made a great start this year. Thank you to all the helpers at the three working bees we have held and to the University grounds staff who have assisted, and particularly Lynne in the glasshouses. We have successfully germinated and planted out *Sicyos australis*, *Calystegia marginata*, *Hebe speciosa*, *Picris burbigei*, *Rorippa divaricata*, *Teuclidium parvifolium* and *Lepidium oleraceum*. These plants are looking very healthy having had a good mulching recently and we expect to have some irrigation set up for the summer months. Still awaiting germination from seeds are *Myosotis spathulata*, *Myosotis petiolata* var. *pansa*, *Pimelea tomentosa* and *Streblus banksii*. Andrea Brandon has been supplying seed through the Department of Conservation and we hope to have more species coming on over the next year. We will be profiling these

threatened plants several at a time in upcoming newsletters, so you can learn about them and see them in the garden.

We are pleased to have received a DOC Community Conservation Fund grant for \$350 for some landscaping and irrigation supplies for 2007 for the garden. This will help the limestone and rock garden area to take shape. We hope to apply for further monies in following years as the garden expands.

THREATENED PLANT PROFILE: *HEBE SPECIOSA*



Hebe speciosa

napuka, titirangi

Nationally Endangered (Qualifiers: conservation dependent, human induced, regeneration failure)

Description: Spreading shrub up to 2 x 3 m. Branches stout, becoming woody at base, spreading to sprawling, rarely erect, often layering on contact with ground. Branchlets stout, pliant, glabrous, yellow-green to green, internodes variable in length, though much longer than stem diameter. Leaf-bud with distinct sinus, glabrescent. Petiole stout, fleshy 5-20 mm. Leaves numerous, coriaceous, fleshy to almost succulent, glabrescent except of lamina margin, 50-200 x 25-80 mm, dark green, green to yellow-green and glossy above, much paler beneath, broadly elliptic to obovate-oblong or oblong, apex obtuse, often retuse, base obtuse; lamina margin distinctly enlarged, red-pigmented, finely pubescent. Inflorescence a simple, lateral, erect raceme 30-80 x 30-40 mm. Peduncle robust, fleshy, glabrous, 30-50 mm long. Flowers rather fleshy, rather crowded on raceme. Pedicels 2-8 mm, exceeding the bracts. Bracts narrowly subulate, ciliolate. Calyx-lobes 2-3 mm long, greenish-yellow to dark green, subacute, ciliolate. Corolla-tube and lobes dark magenta or red, 4-5 x 3-5 mm, exceeding calyx, lobes 5-6 mm long, obtuse, ciliolate. Capsules stout, robust, 6 x 4 mm, brown to dark brown, broadly ovate, apex acute, coriaceous.

Distribution: *Hebe speciosa* is endemic to NZ. It is found in the North and South Islands. In the North Island it is known only from the west coast. In the South Island it was known from several sites in the Marlborough Sounds. Now it is only known from the outer South Head (Hokianga Harbour), Maunganui Bluff, near Muriwai Beach, at two sites on cliffs west of Aotea Harbour, Mokau and at Titirangi Bay (Marlborough sounds). Recently it has been suggested that only the outer South Head, Maunganui Bluff and Muriwai populations are natural, the others resulting from past deliberate cultivation by Maori.

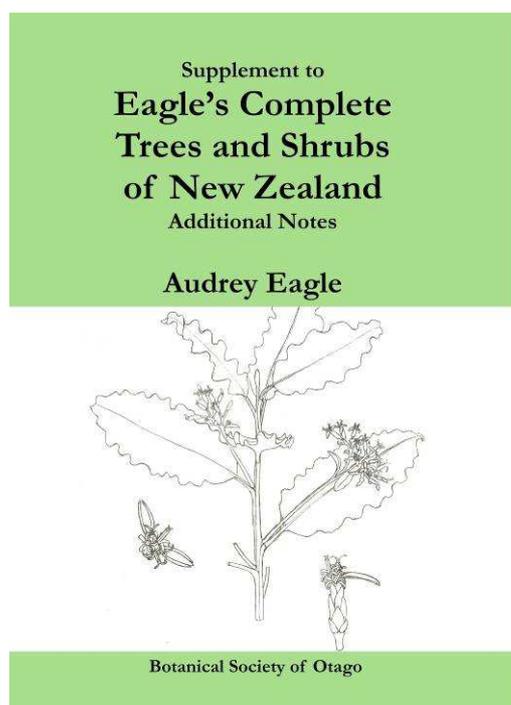
Habitat: Coastal cliffs and headlands, in low windswept scrub and flaxland. Rarely under taller trees.

Threats: Threatened by weed invasion of its coastal habitat, browsing animals, and genetic pollution through planting of other hebe species and cultivars in the vicinity of wild populations. DNA based research has discovered that populations south of W. Auckland probably stem from deliberate past Maori plantings of this attractive red-flowered species. These plantings resulted from the movement of a limited amount of material from South Head, Hokianga, and as such these southerly populations lack sufficient genetic variability to sexually maintain themselves.

Source: www.nzpcn.org.nz

EAGLE'S COMPLETE TREES AND SHRUBS

Supplement to Eagles Complete Trees and Shrubs of New Zealand - Additional Notes



The Botanical Society of Otago has published a Supplement to Audrey Eagles superb revision of her two previous books containing her paintings and information on nearly all the trees and shrubs found in New Zealand.

This Supplement contains additional information on c. 630 of the plants illustrated in Audrey's books. Additional information is given on distribution, habitat, ecology, morphometrics, taxonomic history and relationships, plant uses, discoverer(s), and bibliographic notes, amongst other subjects. This information has been collated from Audrey's notes as well as

those provided by many of New Zealand's leading botanists such as Colin Ogle, Brian Molloy, Peter de Lange, Shannel Courtney, and others. The quality and amount of information

is stunning, and as such, is a valuable addition to accompany Audrey's books.

Price is \$20 (discounted to \$18 for Botanical Society and Forest and Bird members), plus post and packaging and is available at the University Book Shop, Dunedin, or order online at www.unibooks.co.nz. Page extracts from the Supplement are on the

Botanical Society of Otago's website: www.botany.otago.ac.nz/bs/.

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**EAGLE'S COMPLETE TREES AND SHRUBS OF NEW ZEALAND
BOTANICAL PAINTINGS AND DESCRIPTIONS BY AUDREY EAGLE
Published by Te Papa Press, 3 November 2006, RRP \$200**

An outstanding contribution to the study of botany in New Zealand and an essential addition to any library.

The first volumes of *Eagle's Trees and Shrubs of NZ* were published in New Zealand in 1975 to universal acclaim, and quickly became classic references for New Zealand botanists and plant-lovers. This long-awaited new edition brings Audrey Eagle's botanical artworks together for the first time in over 40 years, depicting every native tree and shrub. The books are full of new paintings, including 173 new species and subspecies, and bringing the total number of plants illustrated to 806. All plants are all depicted at life-size and include many detailed enlargements, showing all aspects of the twigs, flowers, fruit, nuts and flowers of each plant in technically superb detail. Comprehensive notes, drafted in consultation with expert botanists from around New Zealand, provide up-to-date botanical and identification information on every plant, including descriptions and notes on habitat, distribution, synonymy and nomenclature.

NZ RRP (incl. GST): \$200.00 Extent: Volume I 544 pp, Volume II 592 pp, in a slipcase.

ISBN: 0909010080 **Illustration:** 500 full-colour plates Format: 280 x 230 mm portrait

**For further information, please contact Publicist
Angela Radford, ph 09 5797351 or 021 401104 email: angelaradford@xtra.co.nz**

SPECIAL DISCOUNT:

A brochure offering Botanical Society members a 10% discount is being inserted in the December issue of the National Botanical Society's newsletter but I gather this does not go to every member. Please contact the National committee if you would like the discount. The offer closes 31 December.

Bennetts Bookstore on the Waikato University campus is also offering this 2 volume publication (as advertised in September newsletter) with a 10% discount (RRP \$200) to botanical society members. A good deal at only \$180 until December 31st 2006.

FLORA OF NEW ZEALAND COURSE

This University course runs from 2-16 February 2007 and covers topics such as the origin of the flora, the basics of taxonomy, an introduction to harakeke weaving and field identification of plants. It begins with a weekend field trip to Te Kauri Lodge near Kawhia. Contact Dr Chrissen Gemmill for more information at c.gemmill@waikato.ac.nz or ph. 07 838 4237.

WAIKATO BOTANICAL SOCIETY PROGRAM 2007



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 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. We encourage carpooling for longer distances and suggest a contribution is made toward petrol costs for the driver. Please note the new venue for our two evening talks.

Saturday 20th - Sunday 21st January North Taranaki

Saturday: Mt Messenger / Whitecliffs Walkway

Ascend Mt Messenger to the trig at 310m asl from the tunnel on SH3 through typical North Taranaki coastal forest, *Myosotis petiolata* var. *pansa* and *Rorippa divaricata* have been recorded in this area. We follow the hard beech ridgeline to the Waipingau trig (245m), then connect with the Whitecliffs Walkway near Parininihi. Heading south, we drop down to the Waipingau Stream, checking on the pingao (*Desmoschoenus spiralis*) stand at the stream mouth. The walk is finished off along the Pukearuhe beach from where we can study this section of the Whitecliffs and their formation.

This is a full day excursion and is timed with the late afternoon low tide to access the beach back to parked vehicles. If time available, we can check out the most southerly naturally occurring pohutukawa on the Paparoa Reef en route to rejoining SH3. This pohutukawa has more lanceolate leaves and a paler flower than the usual *Metrosideros excelsa*.

Please note that a reasonable standard of fitness is required as this is a long day (approx 10km), finishing with a 2km walk along a black sand beach.

Sunday: Tauwhare Scenic Reserve on the Mokau River

See if we can score more than 272 vascular species in this reserve. It is a geographically and botanically interesting area with historical significance. Botanise the ridges or down into the wetlands and the tidal margins of the Mokau River. This area has been well studied by Barry Hartley, New Plymouth naturalist, and he will be available to join us again this year.

Accommodation: Lovells farm cottage in the Hutuwai valley about 2.5kms from the Tongapurutu Bridge on SH3. The cottage sleeps 8 and can pitch tents as well. Approx \$10/pp depending on numbers. Cooking facilities, cutlery and crockery, fridge etc all supplied. Bring own sleeping bag, pillow. There is only one toilet and shower. Cottage available from Friday 19th.

Maps: Q18 and R18 are the two Topo maps for the areas.

Contact: RSVP Jane Hart ph 06 752 3688 or jane.hart@xtra.co.nz

**Saturday 17- Sunday 18th February
Pureora Forest Park**

(combined trip with Rotorua Botanical Society)

Saturday: **Waipa Mire.** This is a chance to visit one of the largest mires in the Waipapa Ecological Area. The Waipa Mire is mostly surrounded by podocarp forest with exotic forestry bordering one edge. The mire contains some threatened species including stout water milfoil (*Myriophyllum robustum*), the swamp leek orchid (*Prasophyllum hectorii*) and the threatened native daphne *Pimelea tomentosa* in the adjacent shrubland. As well as the mire, the mire/podocarp ecotone vegetation also provides interesting habitat to explore and botanise.

Sunday: A number of interesting sites can be visited from the Pureora village base, including the **Bog Pine Reserve** where there are *Pittosporum turneri* and *Dactylanthus taylorii* records, and nearby a population of *Meliccytus flexuosus* can be seen. There are *Ileostylus micranthus* mistletoes on the roadside in the close by Waimanoa block. *Dactylanthus taylorii* and *Pimelea tomentosa* may also be found lurking around in the village scrub, not to mention the fantastic birdlife and podocarp forest here.

Accommodation: We have a six bunk cabin booked at Pureora village Friday and Saturday nights, \$4-\$8 per night depending on numbers. Cooking facilities, cutlery and crockery, fridge etc provided, shared toilet/shower block. Bring own sleeping bag, pillow. Further cabins will be available if RSVPs received early, otherwise tents can be pitched at nearby campsite.

Meet: Friday evening or 9am Sat and Sun, at Cabin 1, Pureora Village or contact abrandon@doc.govt.nz to carpool from Hamilton.

Contact: RSVP essential for accommodation, Andrea Brandon abrandon@doc.govt.nz ph 07 858 1018 (wk)

Wednesday 21st February
Dactylanthus evening talk, BBQ and seed sowing with Dr Avi
Holzapfel

Avi will share some of his knowledge of this rare and unusual root parasite which he has been researching for many years. This will include results from recent *Dactylanthus taylorii* seed sowing trials undertaken in Pureora. The talk will be followed by sowing some *Dactylanthus* seed collected by Department of Conservation staff from Mt Pirongia in the society threatened plant collection garden, a simple BBQ dinner will be provided also.

Venue: Biology Department, University of Waikato, Gate 9 Hillcrest Rd. Parking at Gate 9 entrance, follow entrance over speed bumps around right-hand bend and down hill, R-block building entrance on right as sharp left-hand turn approached. Access at ground floor of stairwell, follow signs to 2nd floor to room R2.06. Afterwards we will go down to the garden in the glasshouses compound for seed sowing and BBQ.

Time: 6pm talk, 7-8pm seed sowing and BBQ

Contact: RSVP for catering purposes: Liz Grove eg3@waikato.ac.nz ph 07 846 0965 (hm)

Sunday 11th March
Te Hunga, Kaimai Range
(combined trip with Rotorua Botanical Society)

Weather and logging permitting we will attempt the climb to the Te Hunga Plateau. On the ascent the track wanders through tawa forest before ascending steeply into tawari fog forest and crossing several old slips to a saddle on the main ridge. From there the vegetation is a mix of kamahi scrub, scattered silver beech and open areas with live young and dead old cedar. Near the hut continuous areas of tawari forest contain silver pine and mature cedar. Bluff areas (if we can locate one) contain yellow silver pine. Special plants *Pittosporum kirkii* and gentians. If logging prevents this option, a route from near Gordon may be attempted (still needs to be explored - last visited 5 years ago and track unmaintained for 20 years).

Meet: 8am Landcare Research carpark Gate 10 Silverdale Rd, Hillcrest or Gordon (Corner of Old Te Aroha and Armadale Road) at 9.00 am. 4-wheel Drive may be able to give access to the summit of Thompsons Track.

Grade: Hard! Track recently cleared to hut. Some steep sections and lots of *Gahnia* on the slips

Contact: Graeme Jane ph 07 570 3123.

Tuesday 27th March
Bruce Mackay Talk: Restored Urban Forest Patches
and AGM

Bruce has many years experience working for City and District Councils and has recently completed a Masters thesis at Waikato University. His research looked at factors in the success of restored urban forest patches in the Hamilton Ecological District by comparing vegetation composition over time under different planting and maintenance regimes.

Venue: R2.06 Biology Department, University of Waikato. Parking at Gate 9 entrance Hillcrest Rd, follow entrance over speed bumps around right-hand bend and down hill, R-block building entrance on right as sharp left-hand turn approached. Access at ground floor of stairwell, follow signs to 2nd floor to room R2.06.

Time: 7pm for brief AGM followed by talk.

Contact: Liz Grove eg3@waikato.ac.nz ph 07 846 0965 (hm)

Sunday 29th April

Taitua Arboretum & Botanical Society Threatened Plant Collection Working Bee #5

See the autumn colours turning at this impressive collection of over 1500 mature tree and shrub species of indigenous and exotic origin. The arboretum was gifted to Hamilton City Council by John and Bunny Mortimer who over several decades planted many rare and unusual trees. The arboretum covers 20ha and has a network of paths and gardens with labelled plants (makes identification easier!). After our self-guided wander through Taitua and a picnic lunch we will return to the University for a working bee in the threatened plant garden. Please bring gloves, old clothes and boots for weeding, planting and propagating activities.

Meet: 9.45 am at Waikato University Gate 9, Hillcrest Rd to carpool to Taitua. The arboretum is on Taitua Rd, off Howden Rd signposted off SH23 between Hamilton and Whatawhata.

Contact: Liz Grove eg3@waikato.ac.nz ph 07 846 0965 (hm)

Sunday 3rd June

Kakepuku Mountain Historical Reserve

Since 1995 a community voluntary group, Kakepuku Mountain Conservation Society, has maintained annual pest management. Goats have been eradicated and possum numbers remain below 2%. Low rat numbers allowed the introduction of Toutouwai (North Island Robin) in 1999. We will be following a pest management line to view flowering *Dysoxylum spectabile* (kohekohe). There is an impressive group of these trees approx. half way to summit. From here we will climb to summit of 450metres. Lunch, then descend via another valley which has *Urtica ferox*, the native tree nettle.

Meet: Carpool from Landcare Research, Gate 10 Silverdale Rd, Hillcrest at 9.30am or 10.15am at the Kakepuku mountain carpark on Kakepuku Road (formerly Mountain Rd). Proceed from Te Awamutu via Bank Road, which merges into Puniu Road, left towards Te Mawhai. Kakepuku Road branches from here on the south side of the mountain. Proceed further down Kakepuku Road to farm property. Access Historical Reserve via paddock, we will be climbing over boundary fence to enter and leave Reserve.

Contact: Jan Hoverd ph 07 871 8071, email jlhoverd@xtra.co.nz

Sunday 26th August

Botanical Society Threatened Plant Collection Working Bee #6

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

Meet: 9.45 am at Waikato University Gate 9, Hillcrest Rd

Contact: Liz Grove eg3@waikato.ac.nz ph 07 846 0965 (hm).

Sunday 2nd September
Dickies Flat, Karangahake

As we have now completed two walks up the Waitawheta River from Karangahake, the higher level 7 track and the Dubbo as well as the river level track, we will continue up the river heading more into the northern Kaimais. It will be a chance to compare previous notes and plant lists, to see if there is a shift from Coromandel to Kaimai in the vegetation type.

Meet: At the L&P bottle by the Ohinemuri River at Paeroa by 9.30am.

Contact: Doug Ashby dj.ashby@xtra.co.nz ph 07 862 4706 to carpool from Hamilton
Liz Grove eg3@waikato.ac.nz ph 07 846 0965 (hm).

Saturday 13th October
Tawarau Forest, northern King Country

A trip into Tawarau forest along the Gorge Track. Leaving from Were Road - the track crosses farmland then follows the Tawarau River through a spectacular limestone gorge. The track is mostly level and takes 3 hours return (without any botanising).

Meet: Waitomo Cave Museum at 9am

Contact: Kerry Jones 07 855 9700 (home) 086 500 595 (pager)

Saturday 10th November
Opuatia wetland

Concentrating on the northern segment of the wetland, which is owned by the regional council, we will botanise the fen vegetation and mineralised edges that border the wetland. Several threatened species are known to occur at the south end of the wetland but the northern end has received less attention so this trip will aim to fill some gaps in our knowledge.

Meet: Rangiriri Tavern car park at 9 am. To carpool from Hamilton contact Andrea Brandon as below.

Contact: Andrea Brandon abrandon@doc.govt.nz ph 07 858 1018 (wk)

Sunday 25th November
Botanical Society Threatened Plant Collection Working Bee #7

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

Meet: 9.45 am at Waikato University Gate 9, Hillcrest Rd

Contact: Liz Grove eg3@waikato.ac.nz ph 07 846 0965 (hm).

Sunday 2nd December
Kakahu Stream Kauris, Kaimai-Mamaku Forest Park
(combined trip with Rotorua Botanical Society)

This field trip will cross private farmland to access the rarely visited southern most naturally occurring kauri trees growing in forest on the margins of the Kakahu Stream on the south-western edge of the Kaimai-Mamaku Forest Park. If time permits we

may also explore other forest remnants in the vicinity including kahikatea stands and some tawa dominated forest areas with emergent rimu present.

Contact: Paul Cashmore 07 348 4421 (hm), 349 7432 (wk)

Meet: 8am Landcare Research carpark Gate 10 Silverdale Rd, Hillcrest to carpool or 8:45 am at Okoroire Hall on cnr SH 28 and Okoroire Rd

Grade: Medium

SUBSCRIPTIONS

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