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Waikato Botanical Society Inc.

NEWSLETTER

No. 31, May 2010

President
Position currently shared amongst committee members

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From the President…

Firstly, I would like to thank all the field trip and event organisers over the last year. I haven't been out as much as I would usually like and have missed some excellent trips, thank you to all who have written up reports for the newsletter. Fieldtrip attendance continues to fluctuate and as usual the weather caused the postponement of one or two trips. The committee has discussed how we can encourage greater participation on field trips, but attendance seems rather unpredictable and any feedback on preferences from members would be appreciated. Combined trips with other Societies and groups have been well attended.

Liz reading some interpretative signage prepared by Richard Benton at Te Mara Reo (see trip report in this newsletter)

Our second film night with Robin Kewell 'An Evening of Islands' in December was again popular with about 80 people attending. Thanks to Bev Collison at the Continuing Education Centre, Waikato University for covering the venue costs and providing tea and coffee. We increased tickets to a flat rate of $5 and held a raffle this year which helped to very nearly break even for the finances. The committee felt that as the event helped raise the society profile it was worth the small expense, and a similar event could be continued although Robin has used his most botanically relevant films and the format may now need to change. We had a half page article in the Waikato Times prior to the film evening which was great publicity for the Society.

We sponsored our regular botanically related prize at the 2009 NIWA school science fair. The society continues to subscribe to the Hamilton Environment Centre and NZPCN (NZ Plant Conservation Network) and also keeps well connected with other botanical societies. The society is now registered with the new

Charities Commission allowing us to continue our tax exempt status. Membership for 2009 has dropped slightly to 45; reminders for subscriptions can be time consuming but are often needed for renewals, electronic payment does seem make this easier for some people now.
Planting in the threatened plant garden has slowed this year reflecting a lull in seed collecting. Many species are doing well and weeding remains a constant job, thank you very much to the working bee attendees. Signs for garden species are being professionally produced with further funding from DOC's community conservation fund. Botany of the Waikato books are still being sold in small but steady numbers mainly to students. We held another workshop gathering information for a new Society publication on Waikato's wetland plants. Thank you to Monica particularly for her organising and enthusiasm on this project and to others involved so far.

I would like to thank all committee members for your efforts throughout the year. Particularly Monica as secretary and newsletter editor and Jan who has continued to do a very good job as treasurer. This year I am stepping down as President due to my own research and family commitments. I have enjoyed contributing to the running of the society over the last 5 years as president and 2 years prior to that as treasurer and hope to continue to be involved with the committee. The society needs to have a president with the time and energy to provide fresh ideas and initiatives as well as keeping regular activities ticking over. I have found it exciting working with enthusiastic committee members from varied backgrounds over this time and the society is in good hands with the current members.

Looking back particular highlights for me have been establishing some annual botanical student prizes, getting the threatened plant garden started on the University grounds including innovative sowing of Dactylanthus seed, Robin Kewell's film events, the initiation of the Waikato Wetland plants fieldguide and of course many great field trips and speakers. The society continues to be relevant by contributing to botanical knowledge and conservation in the region, while providing both a formal and informal forum for sharing this knowledge. Some exciting and important opportunities are ahead for the society including reinvigorating the website, completing the wetland plant fieldguide, further developing the threatened plant garden and much more! I wish the incoming committee all the best. - *Liz Overdyck*

INTRODUCING…..

New WBS committee members

Kieran Miller

I grew up in Te Aroha attending the local primary school and college before moving to Hamilton to enrol at the University of Waikato in 2006. I completed a Bachelor of Science degree majoring in ecology. A third year field trip to the Waiwhakareke Natural Heritage Park encouraged me to get involved with restoration ecology and influenced my current Masters research topic.

Kieran securing a data-logger to a tree in the Maungatautari Ecological Island enclosure.

My research investigates the variation in understory vegetation between different aged urban forests within Hamilton City and forests outside the city. Environmental data such as temperature, relative humidity, soil moisture and light penetration is also being explored to assess differences between the locations. Urban forests generally have reduced understory diversity and in order to improve such diversity, I am conducting planting trials with three understory species, *Hedycarya arborea*, *Coprosma arborea* and *Melicytus micranthus*. These results will determine their potential of becoming a significant component in Hamilton City forests.

Kerry Jones

Liz said that I had been a target for the being drafted onto Waikato Botanical Society committee for a while now and my appearance at the AGM recently sealed my fate! I grew up in Te Aroha and have been keen on getting out in the bush since my teenage years. I suppose it was during this time that started to take some interest in the plants in the bush. I got to know most of the trees by their common names. It was when I started working at DOC that my interest in botany intensified and in 2005 I went on my first botanical society trip down to Bexley Station. Since then I have benefitted from the wealth of knowledge that exists in our local botanical societies. I try to get out on as many trips as I can.
I am currently working for DOC in the Hamilton Conservancy Office creating maps and managing the data the goes into making the maps. They occasionally let me out of the office. My increasing botanical knowledge means that I get invited out to help with vegetation monitoring and by the time you get this I will have just come back from a weeks weeding trip on Cuvier Island. I have had other jobs in DOC including a weed and threatened plant ranger for a short stint 2 years ago at Rotorua.

I have been studying part time on and off for the past 5 years including Bruce Clarkson's *Plant Ecology and Restoration* masters level paper at Waikato University last year. My other interest is photography and you will usually see me out on trips taking heaps of pictures of plants.

Jackson Efford

I have a passion for the outdoors. My hobbies include surfing, fishing, tramping, hunting and most importantly, botanising! I grew up in Papamoa in the Bay of Plenty, where I attended Mt Maunganui College and was the deputy head boy. I came to Waikato University to pursue my love of nature, and recently completed a Bachelor of Science majoring in Biology and Earth Science. I have thoroughly enjoyed taking papers on plant ecology and soil science, and have helped out on university field trips, including the recent Flora of New Zealand course. Every spare chance I get you will find me heading out to explore our beautiful wilderness.

Rebecca Bylsma

I grew up in Whakatane where I attended Trident High School. I inherited a love for the outdoors and native bush from my Dad who is a keen hunter and bushman, consequently many of our family trips involved following animal tracks through the forests and reserves out the back of Whakatane. In 2006, I moved to Hamilton and began a bachelor's degree in Earth Science and Biology, my inability to dissect animals meant I was predestined to take ecology and plant biology papers. As well being passionate about plants, I also have a huge love for animals. I have been fortunate enough to own a horse for most of my life, being able to get out and trek through forest and farmland is one of my greatest pleasures.

Jackson and I have worked together on several botany projects, including an independent research paper involving a vegetation survey of a QEII covenant block of native forest near Maratoto. Over summer, we worked together at the university for Bruce Clarkson on summer research scholarships. This involved quantitative vegetation surveys of 60 key ecological sites within Hamilton City, and several sites in New Plymouth. We were also fortunate enough to spend some time on Mayor Island, re-measuring some older veg plots. This year, we are beginning the first year of our Masters degrees with Bruce Clarkson supervising (we are yet to decide on thesis topics). We look forward to becoming involved with the botanical society, learning the flora, and getting to know the other members.

FIELD TRIPS

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 BOTANCIAL 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.

UPCOMING EVENTS

Threatened Plant Collection Working Bee

Saturday 15th May

A working bee in the threatened plant garden. Please bring gloves, old clothes and boots for weeding, planting and propagating activities.
Meet: 11am Waikato University Gate 9, Hillcrest Rd, or down the hill at the glasshouses compound.
Contact: Liz Overdyck ph 846 0965 eg3@waikato.ac.nz

Waikato Wetland Plants Field Guide Workshop and Peat Lake Fieldtrip

Saturday 12th June

After a trip to a peat lake, details to be advised, we will run an afternoon workshop at Waikato University to progress compiling species information for the society's Waikato Wetland Plant Field Guide. Following previous successful workshops we will work in pairs or small groups to fill in species information onto a spreadsheet. This is the backbone of the book! Lots of resources will be provided including reference books and computers. We will be working adjacent to the Waikato Herbarium which will be available for use (Herbarium tours are offered for those interested). PLEASE REMEMBER you don't need to be a plant ID expert to help we have a lot of resources at our finger tips we just need to gather the appropriate information.
Meet: Fieldtrip departs 9am Landcare Research carpark, Gate 10 Silverdale Rd, Hillcrest. Returning to University (via Landcare) for field guide workshop by 1pm. Workshop 1pm Waikato University Gate 9, Hillcrest Rd (we will be in D1.16, swipe card access required at the CD link stairwell at Gate 9 entrance, please call 07 838 4466 x 7824 or mobile if you are late.
Contact: Monica Peters monica.peters@landcare.org.nz ph 07 859 3725 (wk)
mob 021 049 2036 or Liz Overdyck eg3@waikato.ac.nz mob 021 155 3622

Changes to the 2010 Calendar

Note that there are several changes to this year's calendar. We'll be letting you know about any new trips as they come up. Still in the planning stages are trips to the Port Waikato area and an evening talk hosted by Peter de Lange. Committee member Norm Mason has also offered to do a talk on his recent Vegetation Science Society trip to the Sonoran Desert.

POSTPONED: Kauaeranga Valley, Southern Coromandel Saturday October 9th as this event unfortunately clashes with this year's NZPCN conference

FIELD TRIP & OTHER REPORTS

Pahiko - Waiorongomai Valley Trip

Saturday 5th December 2009

As it was a joint trip with Waikato Bot Soc, we met at the road end. Among the possible highlights discussed was *Pittosporum kirkii* for which a trophy of a chocolate fish was offered. As it was to be a long day, we decided to make a fast trip to the Pylon Track junction. The level Piako tramway through relatively recent forest regeneration was followed by a steep climb through older forest with patches of kohekohe, kauri, toatoa and *Mida salicifolia*.

At the kauri grove the track became a "route" along an old pack track. Initially it passed through a fern rich, pukatea gully where the locally common, shiny-leaved *Aspenium lamprophyllum* was common. Further along it sidled steeply through a wet gully of parataniwha with *Trichomanes elongatum* on the steeper shaded banks. By lunchtime we were in more open low scrubland and selected a rocky lookout surrounded by kanuka, snowberry, *Gonocarpus incanus* and *Schoenus tendo* and the odd emergent hard beech. From there the rather open ridge track continued through low scrub including gorse and Spanish heath to the main ridge where we turned southwards toward Pahiko trig through silver beech, tawari, *Dracophyllum latifolium* and *Alseuosmia macrophylla*. The scrubby climb to the lookout near the trig, through *Gahnia pauciflora*, *Dracophyllum sinclairii* and *Pseudopanax laetum*, provided grand views of the upper Waitawheta valley tors. On the descent we spotted the expected *H. armstrongii* as a mat on a treefern.

Pittosporum kirkii – Kerry Jones

A short cut return, via a more northern ridge took us through cedar then tawari and kamahi where the chocolate fish was won simultaneously by two people spotting *P. kirikii* at different places. One had gorgeous, large fruit. Nearby was *Microsorum novae-zelandiae*, starting as usual well up the tree. The route soon descended steeply back on to the Kauri loop track near its upper end where we arrived at the old hut site amongst a mass of *Gladiolus undulatus*. After crossing the creek and climbing through kanuka scrub we regained the Piako tramway for a hasty and easy return.
– Graham Jane

Koropupu Scenic Reserve

Saturday 6th February, 2010

To celebrate Waitangi Day this year the botanical society visited Koropupu Scenic Reserve, situated about 10km out of Te Kuiti. The main purpose of this trip was to help the Department of Conservation with a biannual census of the threatened shrub *Teucridium parvifolium* and at the same time having a general botanise around the reserve looking for other plants such as *Asplenium cimmeriorum, A. lyalli and A. trichomanes*.

Teucridium parvifolium is a member of the Verbenaceae family and is one of two native representatives of this family in New Zealand, the other being Puriri (*Vitex lucens*). *T. parvifoilium* is currently ranked as declining in the current revision of the New Zealand Threatened and Uncommon plant list.
Koropupu Scenic Reserve is a small reserve through which the Mangawhitikau stream flows. In the past the reserve has had extensive damage from stock but since the installation of a floodgate impact from stock has been minimal.

The census has been conducted 3 times in the past, the first in 2002 in which 282 plants were recorded. The other two results were 189 and 135 plants, well down from the numbers recorded in 2002.
After rounding up the botsoccers and getting there attention we started the 2010 census. At first there was a bit of confusion as to what the plant looked like but after a few had been found and people got their eye in we were away and in no time at all had searched the marked area and it was time for lunch.
After a quick tally the results were in and we had found 212 plants, better than the last two census' but not quite the number found 8 years previous.

During the search we were quite excited to find some catepillars on one of the *T. parvifolium* plants having recently been informed that there is an endemic moth specific to that species and a couple of cocoons were taken for further identification. After several weeks the cocoons finally hatched and were sent away to be formally identified. John Dugdale eventually came back to us with the following identification. '*The Teucridium larva /pharate adult from Koropuku is definitely Epalxiphora axenana. Epalxiphora feeds on a wide range of understorey shrubs and small trees including Macropiper and was thought to be restricted to the North Island, but has been found in northern Westland and Golden Bay since 1990, possibly introduced with growth in horticulture in Golden bay and Karamea. It was not found by earlier entomologists from the 1920s to 1970s, nor in the 1880s.*' Although not the species we were after it is a new record for this species feeding on *T. parvifolium.*

After lunch we went for a walk downstream to Koropupu cave to check out the glow worms, botanising along the way of course. Originally the reserve was created to rival the private Waitomo Glow Worm Caves and at the end of the cave there is an impressive glow worm display. At the cave entrance we had a brief look for *Asplenium cimmeriorum*. It was difficult to scale the slippery cave walls but a few specimens were collected. None of which turned out to be *A. cimmeriorum*.

Overall it was a great day with most if not all of the participants leaving impressed by the reserve and what it had to offer. Thank you to all who joined us on this trip and helped with the survey. Since the trip D.o.C have been back and pulled out the African Clubmoss on the stream bank and have cut down many more Chinese Privet and Sycamore in the reserve. Next trip will hopefully be to plant some more *T. parvifolium* once some seeds have been grown on by the botanical society.
If anyone wishes to revisit the reserve a quick phone call to the farm owner John Wildman on 07 878 7733 is all that is required.

Koropupu SR

Map: R16 Grid Ref: 26890 63178

Author: G Jane & Waik BS **Visit Date:** 06.02.09 **Re Visits:**

	Acaena anserinifolia	Bidibid
*	*Acer pseudoplatanus*	Sycamore
	Adiantum cunninghamii	Maiden hair fern
*	*Agrostis capillaris*	Browntop
	Alectryon excelsus ssp. excelsus	Titoki
*	*Apium nodiflorum*	Water celery
*	*Arctium minus ssp. minus*	Burdock
	Aristotelia serrata	Wineberry; makomako
	Arthropteris tenella	Jointed fern
	Asplenium bulbiferum	Hen and chickens fern; moku
	Asplenium flaccidum	Hanging spleenwort; makawe
	Asplenium gracillimum	
	Asplenium lyallii	
	Asplenium polyodon	Sickle spleenwort; petako
	Astelia fragrans	Bushflax; kakaha
	Astelia solandri	Kowharawhara
	Beilschmiedia tawa	Tawa
	Blechnum chambersii	Nini; lance fern
	Blechnum colensoi	Peretao; paretao
	Blechnum fluviatile	Kiwakiwa; kiwikiwi

	Blechnum novae-zelandiae	Kiokio
	Botrychium biforme	Fine-leaved parsley fern
	Brachyglottis repanda	Rangiora; bushmans friend
	Calystegia tuguriorum	NZ bidweed; powhiwhi
	Cardamine "Long Style"	
	Cardiomanes reniforme	Kidney fern; raurenga
*	*Carex divulsa*	
	Carex geminata	
	Carex subdola	
	Carpodetus serratus	Putaputaweta; marbleleaf
*	*Cerastium fontanum ssp. vulgare*	Mouse-eared chickweed
*	*Cichorium intybus*	Chicory
*	*Cirsium arvense*	Californian thistle
*	*Cirsium vulgare*	Scotch thistle
	Clematis foetida	Scented clematis
	Clematis paniculata	Clematis; puawhananga
	Clematis quadribracteolata	
	Collospermum hastatum	Kahakaha
*	*Conyza sumatrensis*	Broad-leaved fleabane
	Coprosma rigida	
	Coprosma robusta	Karamu
	Coprosma rotundifolia	Round-leaved coprosma
	Coprosma spathulata ssp. spathulata	
	Coprosma tenuicaulis	
	Cordyline australis	Cabbage tree; ti-kouka
*	*Crepis capillaris*	Hawkesbeard
	Cyathea dealbata	Ponga; silver fern
	Cyathea medullaris	Mamaku; korau; black tree fern
	Cyathea smithii	Soft-leaved tree fern; katote
*	*Cynodon dactylon*	Indian doab
*	*Cyperus eragrostis*	
	Dacrycarpus dacrydioides	Kahikatea, white pine
*	*Dactylis glomerata*	Cocksfoot
	Deparia petersenii ssp. congrua	
	Dicksonia fibrosa	Wheki-ponga; kuripaka
	Dicksonia squarrosa	Wheki; harsh tree fern
*	*Digitalis purpurea*	Foxglove
	Diplazium australe	
	Earina mucronata	Spring orchid; peka-a-waka
	Echinopogon ovatus	Hedgehog grass
	Elaeocarpus dentatus	Hinau
	Elatostema rugosum	Parataniwha
	Epilobium rotundifolium	Round-leaved willowherb
	Freycinetia banksii	Kiekie
	Fuchsia colensoi X	
	Fuchsia excorticata	Fuchsia; kotukutuku
	Fuchsia perscandens	
*	*Galium aparine*	Cleavers
	Geniostoma ligustrifolium var. ligustrifolium	Hangehange; privet
*	*Geranium robertianum*	Herb Robert
*	*Glyceria declinata*	Glaucous sweet grass
	Griselinia lucida	Puka
	Haloragis erecta ssp. erecta	Toatoa
	Hebe stricta var. stricta	Koromiko
	Hedycarya arborea	Pigeonwood; porokaiwhiri
	Histiopteris incisa	Water fern
	Hoheria sexstylosa	Houhere
*	*Holcus lanatus*	Yorkshire fog
	Hydrocotyle dissecta	
	Hydrocotyle elongata	
	Hydrocotyle novae-zeelandiae var. novae-zeelandiae	Common pennywort
	Hymenophyllum dilatatum	Lop-sided filmy fern
	Hymenophyllum flabellatum	Fan fern
	Hymenophyllum sanguinolentum	Blood-scented filmy fern

*	*Hypericum androsaemum*	Tutsan
*	*Hypochoeris radicata*	Catsear
	Isolepis reticularis	
*	*Jacobaea vulgaris*	Ragwort
*	*Juncus effusus var. effusus*	Soft rush
	Knightia excelsa	Rewarewa; NZ honeysuckle
	Lastreopsis glabella	Felted fern
	Laurelia novae-zelandiae	Pukatea
	Leptopteris hymenophylloides	Single crepe fern; heruheru
	Leptospermum scoparium var. scoparium	Manuka; red teatree
*	*Ligustrum sinense*	Chinese privet
	Litsea calicaris	Mangeo
	Lobelia angulata	Panakenake
*	*Lolium perenne*	Perennial ryegrass
	Lophomyrtus bullata	Ramarama
*	*Lotus pedunculatus*	Lotus major
	Loxogramme dictyopteris	Sexy fern
*	*Lycopus europaeus*	Gipsywort
	Macropiper excelsum ssp. excelsum	Kawakawa; pepper tree
	Melicytus micranthus	Manakura; swamp mahoe
	Melicytus ramiflorus	Mahoe
	Metrosideros perforata	Aka; small white rata; torotoro
	Microlaena avenacea	Bush rice grass; oat grass
	Microlaena stipoides	Forest rice grass
	Microsorum pustulatum ssp. pustulatum	Hounds tongue; kowaowao
*	*Mycelis muralis*	Wall lettuce
*	*Myosotis sylvatica ssp. sylvatica*	Garden forget-me-not
	Myrsine australis	Red matipo; mapou
*	*Nasturtium officinale*	Watercress
	Nematoceras macranthum	
	Nematoceras trilobum	Spider orchid
	Neomyrtus pedunculata	Rohutu
	Olearia furfuracea	Akepiro
	Olearia virgata	
*	*Orobanche minor*	Broomrape
	Oxalis exilis	Yellow oxalis; creeping oxalis
	Paesia scaberula	Scented fern; matata; ring fern
	Parsonsia heterophylla	Maori jasmine; kaihu; kaiwhiria
	Passiflora tetrandra	Passionfruit; kohia
	Pellaea rotundifolia	Tarawera; button fern
	Pennantia corymbosa	Kaikomako
*	*Persicaria hydropiper*	Water pepper
	Pittosporum eugenioides	Lemonwood; tarata
*	*Plantago lanceolata*	Ribwort; narrow-leaved plantain
*	*Plantago major*	Broad-leaved plantain
	Pneumatopteris pennigera	Gully fern; pakau; pakauroharoha
	Poa anceps ssp. anceps	Coastal poa
	Podocarpus totara var. totara	Totara
	Polystichum silvaticum	
	Polystichum wawranum	Common shield fern; pikopiko
	Prumnopitys taxifolia	Matai; black pine
*	*Prunella vulgaris*	Selfheal
	Pseudopanax crassifolius	Lancewood; horoeka
	Pseudopanax laetus	
	Pteridium esculentum	Bracken; rauaruhe
	Pteris macilenta	Sweet fern
	Pteris saxatilis	
	Pyrrosia eleagnifolia	Leather-leaf fern
	Ranunculus reflexus	Maruru; hairy buttercup
*	*Ranunculus repens*	Creeping buttercup
	Raukaua anomalus	Whauwhaupaku
	Rhabdothamnus solandri	Taurepo; waiutua; kaikai aruhe
	Rhopalostylis sapida	Nikau
	Ripogonum scandens	Supplejack; kareao

	Rubus cissoides	Bush lawyer; tataramoa
*	*Rubus fruticosus*	Blackberry
	Rubus schmidelioides var. schmidelioides	Bush lawyer; tataramoa
*	*Rumex crispus*	Curled dock
	Schefflera digitata	Pate; patae; kotete
*	*Selaginella kraussiana*	
*	*Senecio vulgaris*	Groundsel
*	*Stellaria media ssp. media*	Chickweed
	Stellaria parviflora	
	Streblus heterophyllus	Turepo; milk tree
	Teucridium parvifolium	
*	*Torilis arvensis*	Spreading hedge-parsley
	Trichomanes venosum	Veined bristle fern
*	*Trifolium pratense*	Red clover
	Uncinia uncinata	Watu
	Urtica incisa	Stinging nettle
*	*Veronica arvensis*	Field speedwell
	Weinmannia racemosa	Kamahi; Towai; tawhero

Te Mara Reo – The Language Garden

Saturday 27th February 2010

A voyage through the Pacific via the plant names used by maori and their ancestors

The Waikato Botanical Society recently had the privilege of visiting Te Mara Reo (The Language Garden) on the banks of the Waikato River, to the north of Hamilton. Professor Richard Benton guided us through the voyages undertaken by Polynesians and their ancestors in the process of colonising every scrap of habitable land in the South Pacific. All colonisers carry to their new homelands plants and animals, genetic information, and a language that encapsulates a system for understanding the world around them. Each of these strands of evidence has been combined to retrace the unfurling of Polynesian migration across the Pacific. Te Mara Reo presents native New Zealand plants whose names exemplify each step of the migration, since they trace their origins to specific stages in the development of Te Reo Maori.
A walk through Te Mara Reo is almost as convoluted as the path Polynesians followed in discovering Aotearoa. Te Mara is at once a sprawling orchard, and informal arboretum, with paths that twine their way between pecan, fig, kauri and *Abutilon.* Luckily for visitors, Prof. Benton has prepared a map so that the plants for each stage in the migration can be found without excessive searching. We also had the benefit of a guide who knows the migratory paths well. Prof. Benton studied for his Doctoral thesis in Hawai'i, focussing on commonalities between Austronesian languages. Despite primarily dealing with political linguistics during his research career, he has maintained contacts in Hawai'i and travelled extensively throughout the Pacific. Now in his retirement, he is concentrating on developing Te Mara Reo as a resource for the local public, visitors to the Waikato region and school groups.

Some of the plant names in Te Mara are very revealing of the ways in which people have grouped or categorised plants in the past. The most ancient name in the garden is whara, which originated when people left Taiwan to colonise the Phillipines. It refers to plants with sheathing leaves of the genera *Astelia, Collospermum* and *Phormium*. The name is derived from the Proto-Polynesian fara, which in turn is believed to derive from a Proto Austronesian word which refers to Pandanus species that occur naturally in the Philippines and throughout the tropical Pacific. Piupiu, which originated in the islands of South East Asia, is another name that describes a growth form, referring to fan palms in Sulawesi and mainly to ferns in Aotearoa, including the several *Blechnum* species found in Te Mara. Ti, also from insular South East Asia, has throughout its history has been associated with species of *Cordyline*. In the garden it refers to the cabbage tree (ti kouka).
Another distinctive name is kahikatoa (the name for manuka North of Auckland), deriving from the word kapika, which itself originated in the Bismark Archipelago. This name denotes a tall, graceful tree. The name

manuka, belongs to a later period, when the voyagers had settled the islands of Eastern Fiji and Western Polynesia. In the language of this period, the word nuka refers to plants with medicinal properties, and in Te Reo Maori relates to the antiseptic action of manuka leaves. The two names, kahikatoa and manuka, embody the dual wounding and healing purposes for which maori used *Leptospermum scoparium* (since toa is the word for warrior in Te Reo). One unexpected link was provided by totara, which in Tahiti refers to the puffer fish. It seems, more than anything, that totara's prickliness impressed maori when they first arrived in Aotearoa. The insights gained from linking plant names on a casual summer's afternoon were surprising. With the explanations provided by Prof Benton, we were immersed in a way of thinking that differs markedly from the Linnaean system of classification through which most botanists view the world of pants. Our visit also provided occasion for the mind to wander over the thousands of kilometres those ancient voyagers travelled. That this was possible simply by following the threads which link the names of a few dozen plant species reminds us how much language embodies our humanity.

Committee member Norm Mason with an intricately embroidered shirt made from pineapple fibre – precious item purchased by Prof Benton from the Philippines on his numerous travels.

Waikawau Bay, Coromandel Peninsula

Saturday 13th and Sunday 14th March 2010

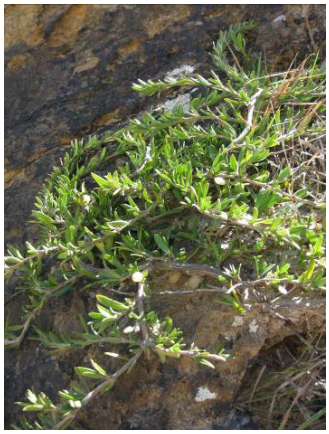
A small number of us enjoyed our weekend based at the DOC house which has fabulous views out to the Bay and Islands beyond. Sand dunes run along the beach from a small estuary to the far end. From the roadside edge there is a strip of mainly kikuyu covered paddock which the *muelenbeckia* on the dune side is appearing to win the battle of supremacy. The property was purchased from the Auckland University which had the land gifted to them by a wealthy American who wished them to sell the property to give the Business Management School much needed capital. The purchase by DOC was to save the land from development.

Saturday 13th March:
Our walk took us to the headland covered in coastal forest. Wayne wished us to help him do another transect and on the way to that location *Toronia toru* and *Pittosporum umbellatum* were seen. It was dismaying to see a few plants of *Ageratina adenophora* (Mexican devil) in this bush which is relatively pest plant free. *Pennisetum clandestinum* (kikuyu) was the dominant grass we saw while walking in. A number of seed heads of *Othoceras novae-zelandiae* were spotted on the trackside.

The start was marked by a "bashing" of a shrub Corokia cotoneaster so Peter could inspect what insects were in it. The lack of rain had made the undergrowth very dry but we were able to add to the fern list with *Lastreopsis glabella*, *L. microsora* and *L. velutina*. Also some nice specimens of *Pteris comans*. A number of coastal *Coprosma macrocarpa* were present along with good sized trees of *Elaeocarpus dentatus* (hinau), *Vitex lucens* (puriri), *Dysoxylum spectabile* (kohekohe) and *Corynocarpus laevigatus* (karaka). A few *Sophora chathamica* (kowhai) and a good number of lianes – *Parsonsia* sp and *Clematis* sp.

Peter showed us the technique of stroking a stick insect to make it lay quietly on his hand and then a few moments later he was heard to be "bashing" another rotten log to see what it yielded. This time, we were

rewarded by the sight of a 10cm blue centipede. As we dropped down the gully, we passed by more *Rhopalostylis sapida* (nikau) and *Entelea arborescens* (whau). We ended up at the sand dunes, with a good number of *Desmoschoeus spiralis* (pingao), *Spinifex hirstus* and *Carex pumila* present with a few plants of the exotic *Cakile edentula* (sea rocket) for extra interest. We walked along the beach edge north to a rocky outcrop where a good number of *Pimelea arenaria* along with a few specimens of *Disphyma australe* and *Coprosma repens* (taupata). Of much interest here was a specimen on a *Coprosma acerosa* hybrid (possibly *acerosa x repens*). After lunch we walked up the bank and under some old *Metersideros excelsa* (pohutukawa). One of the pohutukawa trees yielded a good number of interesting species - *Ichthyostomon pygmaeum* (previously *Bulbophyllum*), *Huperzia australiana* and *Peperomia urvilleana*. There was also a good glade of nikau present. We then went back down to the sand dunes and had a pleasant walk back to the estuary with good sightings of brown teal.



Coprosma acerosa hybrid (possibly acerosa x repens)

Sunday 14th March

We cut across the paddocks to the Estuary observing a patch of *Lilaeopsis novae-zelandiae* ("tape measure" plant on account of the distinctive horizontal banding on the leaf parts) in one of the dry ditches. We then had a very interesting time. Wayne and Kathi showed us the trials that they are doing on the *Paspalum vaginatum* (saltwater paspalum) to discover what will be the best way to control this as it is spreading across the flats. Where the two channels meet, a very low bank has built up from wind action on the sand and with the cover of the paspalum, has altered the flow of the main channel showing what can happen in a relatively short space of time. Two weeks prior to our visit, the Spartina had been sprayed again. This has been an ongoing program for about seven years from Environment Waikato to control this pest weed. One plant we pulled up still had good signs of life but possibly too early yet for the plant to have had full exposure to the spray. There were also a number of plants in amongst the *Juncus krausii var australiensis* that was in the upper reaches of the estuary. A low number of mature mangroves were present, though a good supply of youngsters were appearing threatening the habitat for the waders and associated species.

After lunch we walked along to edge of the estuary. A small patch of Zostera sp has come in within the last 6 years. On our way to check the gecko boxes (alas, there were none) that they placed in a couple of the trees, we observed the bund that had been put in place c50 years ago when the estuary had been filled in and was farmed. One of the original concrete flood control pipes is still in remarkable good condition. This bund has become an opportunist place for pest weeds to develop into an otherwise good native vegetation. A few natives such as *Cordyline australis, Leptospermum scoparium, Olearia solandri* and a *Pseudopanax arboreus* have taken advantage too.

Wayne Todd and one of the Paspalum vaginatum treatments. Plots have been set up to determine the most effective method of controlling this noxious estuarine weed.

Our thanks must go to Wayne and Kathi for all the local information and our guides for the weekend. They are putting many hours into the pest control, both weeds and animals to help this nearly pristine environment. – *Jan Butcher*

WAIKAWAU BAY	**North track (2008)**	**South Track (2008)**	**Species found on Knox Farm and coastal headland area (2010)**
North track was in the swamp			
South track south of the swamp along the hillside			
FERN ALLIES			
Lycopodiella cernua		√	
Lycopodium deuterodensum		√	
Lycopodium volubile		√	
FERNS			
Asplenium flaccidum	√	√	√
Blechnum filiforme		√	√
Blechnum novaezelandiae	√	√	
Cyathea dealbata	√	√	√
Cyathea medullaris		√	
Deparia petersenii	√		
Dicksonia squarrosa	√		
Doodia australis		√	
Gleichenia dicarpa	√	√	
Microsorum pustulatum	√	√	√
Microsorum scandens		√	√
Paesia scaberula		√	
Pneumatopteris pennigera	√		√
Pteridium esculentum		√	√
Pyrrosia eleagnifolia		√	√
			Adiantum cunninghamii
			Asplenium polyodon
			A. oblongifolium
			Blechnum chambersii
			Lastreopsis glabella
			Lastreopsis microsora subsp. pentangularis
			L. velutina
			Pteris comans
			P. macilenta
GYMNOSPERMS			
Agathis australis		√	
Dacrycarpus dacrydioides		√	
Dacrydium cupressinum		√	
Phyllocladus trichomanoides		√	√
Pinus radiata		√	
Podocarpus totara		√	
DICOT TREES AND SHRUBS			
Acacia melanoxylon		√	
Avicennia marina subsp. australasica	√		
Beilschmiedia tarairi		√	√
Beilschmiedia tawa		√	
Brachyglottis repanda		√	√
Carmichaelia australis	√		√
Coprosma lucida		√	
Coprosma rhamnoides		√	√
Coprosma robusta	√	√	
Coriaria arborea		√	

Corynocarpus laevigatus		√	√
Cotoneaster glaucophyllus		√	
Cyathodes fraseri		√	
Cyathodes juniperina		√	
Dysoxylum spectabile		√	√
Eucalyptus sp.		√	
Gaultheria antipoda		√	
Geniostoma ligustrifolium var. ligustrifolium	√	√	
Hakea sericea		√	
Hebe stricta var. ?		√	
Knightia excelsa		√	
Kunzea ericoides		√	
Leptecophylla fasciculata		√	
Leptospermum scoparium	√	√	
Macropiper excelsum		√	
Melicytus ramiflorus		√	
Metrosideros excelsum		√	
Myrsine australis		√	
Olearia furfuracea		√	
Olearia solandri	√		
Plagianthus divaricatus	√		
Pomaderris kumeraho		√	
Pseudopanax arborea		√	
Pseudopanax colensoi		√	
Salix cinerea	√		
Schefflera digitata		√	
Solanum mauritianum	√	√	
Toronia toru		√	
Ulex europaeus		√	
			Carpodetus serratus
			Coprosma macropcarpa subsp. minor
			Corokia cotoneaster
			Elaeocarpus dentatus
			Entelea arborescens
			Hedycarya arborea
			Melicope ternata
			Metrosideros fulgens
			M. robusta
			Nestegis lanceolata
			N. cunninghamii
			Pseudopanax crassifolius
			P. hybrid
			Sophora chathamica
			Vitex lucens
DICOT LIANES			
Calystegia sepium	√	√	
Calystegia tuguriorum	√		
			Parsonsia heterophylla
			Clematis paniculata
DICOT HERBS			
**Ageratina adenophora*	√	√	
**Aster subulatus*	√		

Centella uniflora		√	
**Cirsium vulgaris*		√	
**Conyza albida*	√	√	
**Daucus carota*		√	
Euchiton sp.	√		
**Lotus pedunculatus*	√	√	
**Plantago lanceolata*		√	
**Prunella vulgaris*		√	
**Solanum americanum*		√	
**Sonchus asper*		√	
MONOCOT TREES AND LIANES			
Cordyline australis	√	√	
Cordyline banksii		√	
Freycinetia banksii		√	
Rhopalostylis sapida		√	
Ripogonum scandens		√	
ORCHIDS			
Orthoceras novae-zeelandiae		√	
Thelymitra sp.		√	
			Drymoanthus flavus
			Ichthyostomon pygmaeum
GRASSES			
*Axonopus fissifolius		√	
*Cortaderia selloana	√	√	√
*Dactylis glomeratus		√	√
*Holcus lanatus	√		
Isachne globosa	√		
Oplismenus hirsutum subsp. imbecillis		√	√
*Paspalum dilatatum		√	√
*Pennisetum clandestinum	√		√
*Pseudosasa japonica		√	
			Paspalum urvillei
SEDGES			
Baumea juncea	√		
Baumea rubiginosa	√	√	
Carex lessoniana	√		
Carex secta	√		
Cyperus ustulatus		√	√
Gahnia lacera		√	√
Morelotia affinis		√	
Schoenus tendo		√	
Uncinia uncinata		√	√
			Uncinia banksii
RUSHES			
Apodasmia similis	√		√
*Juncus effusus		√	
Juncus pallidus	√		
			Ficinia nodosa
OTHER MONOCOT HERBS			
Astelia solandri		√	√
Collospermum sp.		√	
Dianella nigra		√	

Phormium tenax	√	√	√
Typha orientalis	√	√	
			Collospermum hastii
			HEADLAND & COAST AREA
			Annisotome sp
			*Cakile edentula
			Calystegia soldanella
			Carex pumila
			Coprosma repens
			Coprosma acerosa hybrid
			Desmoschoenus spiralis
			Disphyma australe
			*Lagurus ovatus
			Pimelea villosa ssp arenaria
			Spinifex hirstus
			# to be confirmed

Are burrowing seabirds a threat to the forests of Rangatira Island, Chatham Islands?

WBS AGM – Wednesday April 14, 2010

At this year's AGM, we travelled (virtually) with Cynthia Roberts, the guest speaker, to examine the impact of burrowing seabirds on the forests of Rangatira Island (218 ha), a globally significant bird sanctuary in the Chatham Islands. The island had been a food source for Mäoriori, a station for sealers and whalers and till the mid 1950s farmed. Large areas had been cleared and stock had damaged the understory but no rats had established on the island and thus forest and seabirds had survived these activities.

Rapid forest regeneration has taken place since farming ceased, largely by the tall deciduous *Plagianthus chathamicus* (c. 15 m), an unusual forest cover for a seabird island. However, there are large areas on the south east coast that have not regenerated with forest trees. These once cleared areas were initially colonised by bracken but now an impenetrable cover of *Muehlenbeckia australis* overtops many hectares of bracken impeding further regeneration.

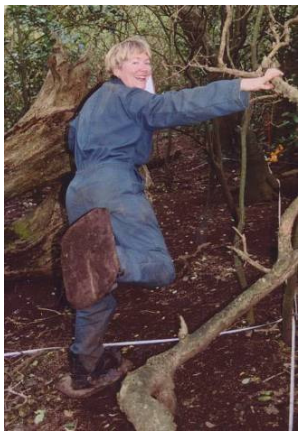
The *Plagianthus* forest on the lower slopes has now matured. Walking through this forest and the upper forest, which contains more of the original tree species (eg *Coprosma chathamica*, *Myoporum laetum* and *Olearia traversii*), reveals a startlingly bare forest floor cover. The burrowing seabird population is estimated to be around three million and so the affect on the understory is quite dramatic. Any litter that does fall is often drawn in to line burrows and walking anywhere other than the compacted walking track requires fitting 'petrel boards' onto your boots to stop you crashing through a burrow.

Rangatira gained fame for providing the habitat and surrogate parents (Chatham island tomtit) to save the black robin when the entire population of black robin on nearby Mangere Island had dropped to five birds. At this time it was felt that the size and quality of forest habitat was partly responsible for the decline. The forests on Mangere and Little Mangere were heavily burrowed by seabirds and what was left was in danger

of collapse (burrowing loosens soil around roots of the trees leaving them vulnerable to blowdown). The success of the breeding programme was such that the intensive management of the robin was scaled back and an additional colony in a predator proof fence on adjoining Pitt Island was established. However, this has not proved successful. In addition the numbers on Rangatira have declined as have those returned to Mangere. The focus is now back on the forest habitat of Rangatira. In the early stages of regeneration there would have been a dense understory providing both shelter and food source for robins. However, as this newly regenerating forest has matured the understory has once again opened up reducing shelter and food sources.

Cynthia was concerned that regeneration was no longer taking place on the island. In addition the now 40-50 years old *Plagianthus* is a relatively even aged stand. Its roots now becoming exposed and unstable through intense burrowing. There is thus the possibility of the forests becoming prone to a catastrophic blow down in a major storm event. When wire netting cages to exclude burrowing seabirds were placed within the forest Cynthia found that seedling regeneration was successful but the amount of light reaching the forest floor was also an important factor. Cynthia was keen to find out if regeneration was taking place anywhere on the island and as light was a factor perhaps canopy gaps may give regeneration a chance. This proved to be the case as a survey of canopy gaps showed that when a tree fell burrowing intensity reduced and this allowed woody seedlings to get established. However, the survey revealed that these canopy gaps were scarce so these alone couldn't be relied on to rejuvenate the forest. At the meeting Cynthia suggested a few different scenarios for increasing forest regeneration and thus improving forest bird habitat and invited the audience to contribute their ideas also. A number of Bot Soc members had been to the Chathams and some had also been involved in the black robin recovery work so a lively discussion followed on the future of the forests of the island.

Introducing Cynthia



Education was the main focus of the first part of Cynthia's career. Primary and polytechnic teaching was followed by ten years in education management. Seeking new adventures mid-life she left 'the system' and with her partner built a lodge on the West Coast, South Island and ran for 10 years an outdoor adventure company (Bushwise Women). Spending so much time in the outdoors and interpreting the natural landscape for her clients got her thinking about a new career in ecology. She embarked on a Masters in 2002 at Lincoln University and the excitement of the research project out in the Chathams got her hooked on research. On completion Cynthia won a scholarship to the University of Tasmania to do a PhD on 'Marsupial lawns' – this continued her interest in animal plant interactions and how they shape the landscape. Cynthia has recently taken up a position as the Plant Ecologist in the Department of Conservation, Waikato Conservancy.

"Where did you get those shoes?" Cynthia wearing petrel boards, to protect the fragile burrows in Rangatira Forest.

NOTICES – WAIKATO REGION

University of Waikato Bio -Seminars

The Waikato University Biology Department invites members of the public to attend a weekly department seminar series. Seminars are usually held on Fridays at 1 pm in room A.G.30 (Gate 8). For upcoming seminar titles and further information, please check on http://bio.waikato.ac.nz/. Each week, a staff member or special guest speaker presents for 50 minutes on an exciting aspect of their research, and often this relates to botany or ecology. Recently, there was an interesting presentation from a visiting American professor on the decline of mistletoe-infected spruce forest, and another from a Landcare Research staff

member on carbon dioxide exchange from a forest in Westland. Keep an eye on the website to see what's coming up next (usually three upcoming seminar titles are available).

Waikato Botanical Society Student Prizes

The recipients for the 2008 top botany students were Jack Mace in the undergraduate Flora of NZ summer course and Graeme Weavers in the graduate level Plant Ecology Masters course.
The 2009 recipients are Melanie Embling for Flora of NZ and Cleo Hogne-Beattie for Masters Plant Ecology. Their prize includes a one year subscription to the botanical society and $200 and $250 cash respectively for the undergraduate and graduate courses.

NOTICES – OTHER REGIONS

NZPCN conference

Theme: Plants in a human landscape – conservation outside nature reserves
Where: Canterbury Horticultural Society Rooms, 57 Riccarton Avenue, Addington, Christchurch
When: 8-10 October 2010
Check out the website for further details: www.nzpcn.co.nz

WAIKATO BOTANICAL SOCIETY AGM MINUTES

Wednesday April 14, 2010

Present (Members): Liz Grove, Monica Peters, Roz Heinz, Cynthia Roberts, Betty Seddon, Dave Lee, Stella Rowe, John Rowe, Wyne Johns, Yanbin Deng, Jan Butcher, Kerry Jones, Laurie Hoverd, Jan Hoverd, Richard Benton
Present (Visitors): Rebecca Bylsma, Jackson Efford, Kieran Miller, Frances Germain, Delphine Rapp
Apologies: Catherine Beard, Kay and John Etheridge
Location: Landcare Research, Gate 10 Silverdale Rd, Hamilton
Start time: 6:30pm

Presidents Report – included in newsletter
Prepared by Liz Overdyck

Previous minutes:
Minutes from the last AGM were circulated. Liz Overdyck moved that they be accepted as a true and accurate record, seconded by Wyne Johns. Motion carried.

Matters arising:
Wyne suggested contacting Jan Simmons at the Tamahere Community Nursery to use the nursery as a backup to University glasshouses for growing threatened plants. WBS to return favour e.g. by assisting with maintenance of nursery.
Action: WBS to send letter to Jan S regarding this possibility if Uni space is becoming limited

Cynthia Roberts now employed by DOC fills a vital role for region after an extended period with the DOC botanist position being vacant. Cynthia is a valuable asset to the WBS as DOC representative and new member.

Action: WBS to send letter to Waikato Conservator Greg Martin thanking Cynthia for her talk at WBS and highlighting the importance of having a DOC botanist in the region.

Financial Report – included in newsletter

Jan Butcher, current Treasurer spoke to the report and noted that the term deposit that was due to be lodged last year did not happen as miscommunication with bank staff. It will be placed this current year. It is recommended that the subs remain the same figure i.e. $15 for full and $5 for students. The Waikato University graduate prizes were not paid out for the 2008 and 2009 years. It has since been followed up and will be paid out this current year. The $500 received from DOC for signs for the Threatened Plant Garden is still being held, the signs are still work in progress and hopefully we should see some results this year. Jan Butcher moved that the financial report be accepted, seconded by Betty Seddon.

Election of Officers:

President	-
Secretary & Newsletter Editor	Monica Peters
Treasurer	Jan Butcher
Committee	Liz Overdyck, Bruce Clarkson, Catherine Beard, Norman Mason, Rebecca Bylsma, Jackson Efford, Kieran Miller, Kerry Jones

The election of officers and appointment of the new committee members above was agreed by a unanimous show of hands from those present at the AGM. The President position remains vacant and it will be discussed at the first meeting of the new committee how to fill this role.

General business:

- Personal liability insurance for the Society was discussed and following earlier consultation with the Hamilton Environment Centre liz suggested that the expense was an unnecessary cost to a small group such as the WBS. It would be more appropriate and adequate to provide a disclaimer highlighting personal responsibility in the programme of events and trip reminders and hazards should be outlined at the beginning of each trip.

- James Barnett (NZ Landcare Trust) has offered to reinvigorate the WBS website.

- Vote of thanks from Cynthia to Liz for strong leadership of the WBS as Liz is now stepping down from this role to complete her PhD and juggle motherhood.

Meeting closed at 7.40

WAIKATO BOTANICAL SOCIETY INC

Treasurers report Jan Butcher, April 6, 2010

Income and expenditure for year ended 28.2.2010

General funds	28.2.2010	28.2.09
Income		
Donations	20.00	5.00
Subscriptions	770.00	785.00
Interest-cheque account	9.85	14.54
-term deposits	912.05	1,067.84
book sales (44)	660.00	345.00
postage and handling	17.00	5.00
Dept Conservation – funds for	500.00	0.00
Threatened garden project	429.00	389.00
Kewell film evening-sales		
	3,317.90	2,611.38
Expenditure		
Term deposit lodgement	0.00	0.00
Advertising	0.00	5,000.00
Kewell film hire	500.00	500.00
Stamps and Stationery	0.00	38.80
Catering	20.00	261.21
Scholarships/memberships	100.00	606.25
	620.00	6,406.26

Balance

Opening balance as at 1 March 2009	3,188.40
Income	3,317.90
	6,506.30
Expenditure	620.00
Balance as at 28.2.2010	5,886.30

STATEMENT OF FINANCIAL POSITION as at 28.2.2010

Represented by:	General funds	5,886.30
	Term deposit (mature 19.7.2010)	5,000.00
	Term deposit (mature 30.1.2011)	10,000.00
		20,886.30

ASSETS represented by Botany of Waikato books

820 books based on cost $15.94 13,070.80

notes from above:

scholarships and memberships

NIWA science prize	50.00	
NZPCN subs	50.00	100.00

NB: no funds to Waikato University.