



Waikato Botanical Society Inc.
Newsletter No. 20, July 2005

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WEB SITE

The Society has finally joined the electronic age!

We now have a basic webpage up and running which is hosted by the University of Waikato Centre for Biodiversity and Ecology Research and can be found at:

<http://cber.bio.waikato.ac.nz/Waibotsoc/WaikatoBotSoc.html>

We also have an email contact for general enquiries:
bot_soc@waikato.ac.nz

DACTYLANTHUS SEARCH – MT MAUNGATAUTARI
19TH FEBRUARY 2005

Keen searchers ascended the summit track behind the northern fenced area and searched 50-100m either side of the track on the ridge around the trig. It was a very slow task so only a small area could be covered, but it was searched very thoroughly. No *Dactylanthus* was found in this area. Another search has been conducted since then (not by the Botanical Society), which we believe was also unsuccessful.

DAVID GIVEN
CONSERVING PLANTS: WHAT WE NEED TO DO TO SAVE THE
WORLD
10TH MARCH 2005

During the Festival for the Environment we were proud to present our key event for the year – a lecture at the Waikato Museum of Art and History by David Given, curator of Botanical Services, Christchurch City Council. A highly respected botanist and conservationist, David is a winner of New Zealand's premier conservation award the Loder Cup and recently was a recipient of the Peter Scott Award for Conservation Merit, the highest award given by the Species Survival Commission of the IUCN (the World Conservation Union).

A fantastic crowd over 100 turned out for drinks and nibbles before filling the lecture theatre to the brim for David's fascinating talk, a large part of which focused on the Global Strategy for Plant Conservation, which was adopted by the IUCN in 2002. The ultimate goal of the strategy is to "halt the current and continuing loss of plant diversity". Sixteen global targets provide a framework for nations and regions to set targets according to their own priorities, capabilities and plant diversity. These targets are based around documenting and conserving plant diversity, sustainable use of plant diversity, promoting education and awareness, and building conservation capability.

New Zealand is considered to be one of a number of global "hotspots" and is the only country to be considered so in its entirety. Therefore, not only is the conservation of our plant diversity important for our own benefit, but our role in global plant conservation is significant. There are huge challenges for those dedicated to the conservation of plants and plant diversity and many people came out of David's talk fired up to get to work! It was also sobering, however, to hear the account of the passenger pigeon. This species once numbered in the billions across North America, was perhaps considered limitless, but became extinct in a matter of decades through hunting and loss of habitat.

Following the lecture there was a private viewing of the Nancy Adams botanical paintings and drawings exhibition. Nancy Adams is one of New Zealand's foremost botanical artists and has illustrated several major works of New Zealand botany. A fitting ending to a great evening!

We would like to thank the Museum and its staff for assisting us in hosting this event.

Shirley Nichols

Global Strategy for Plant Conservation: <http://www.iucn.org/themes/ssc/plants/gspc.htm>

The objectives and targets are also listed at:
<http://www.bgci.org.uk/conservation/strategy.html>

The strategy sets 16 outcome-oriented targets to be met by 2010. It is a part of the Convention of Biological Diversity to which the NZ government is a signatory.

For the UK's response to the Global Strategy see:
<http://www.jncc.gov.uk/pdf/PlantDiversityChallenge.pdf>

Note: this is a 2.6MB file and takes some time to download over a dial up internet connection

The UK decided that a national strategy was required to assess what is currently being done and what additional work is required in order to meet the targets. As of yet we do not have a national strategy for plant conservation in New Zealand.

**NORTH RAGLAN HARBOUR
12TH MARCH 2005**

We organised a special field trip around David Given's visit to Hamilton as guest speaker during Festival for the Environment week. Twelve botanical society members participated, including John Smith-Dodsworth, who had a very early morning start from Coromandel. The aim of the trip was to explore coastal forest and limestone outcrops in Motukokako Scenic Reserve and on adjacent property owned by Robert Simpson, on the northern shores of Raglan Harbour. The reserve comprises a small headland with steep slopes down to the shoreline. It has a pa site on top of the main ridge, with well-preserved ditches and other earthworks under a cover of rank pasture. Most of the reserve is second growth forest dominated by kanuka. Several large trees are also present, including puriri, kahikatea, mangeao, kowhai, rewarewa, karaka and tawa. The understorey vegetation showed moderate browse damage, mainly from goats, three of which were disturbed when our party first entered the reserve. Several species occurred in the understorey, including hangehange, *Coprosma rhamnoides*, lancewood, *Olearia albida*, *Gahnia lacera*, *Carex* spp., and numerous seedlings of kowhai, lancewood, etc. On the bush margin we spotted *Metrosideros carminea*, which is relatively uncommon in the region and was once listed as a threatened species.

The limestone outcrops rising from the shoreline west of the reserve supported a variety of species, including trees, shrubs, climbers and herbs. However, because the remnant is not fenced, animals have ready access and considerable browse damage was noted on accessible sites. A feature of the outcrops was the abundance of *M. carminea* clinging to the rock faces. Other notable finds included a huge sprawling grapevine, several large clumps of *Peperomia urvilleana*, and one individual of another formerly threatened species, *Parietaria dabilis*.

An ecological assessment of the area, which covers several other vegetation types, e.g., freshwater and estuarine wetlands, and tawa forest, has been produced by Kessels & Riddell (2003).

We thank Mr Robert Simpson for permission for access and providing four wheel drive transport to the sites.

Reference:

Kessels, G., Riddell, D. 2003: Ecological assessment, Kimbell Farm, Raglan. Kessels & Associates Ltd. Hamilton.

Bev Clarkson

**OLEARIA PACHYPHYLLA SURVEY
LONELY BAY/SHAKESPEARE CLIFF
2ND APRIL 2005**

On a perfect April day, a small but dedicated team of bot socers met at the Shakespeare Cliff car park above Lonely Bay to search for the Nationally Endangered *Olearia pachyphylla*. We were joined by John Longden, a local ecologist involved with pest management in the reserve, who was able to provide a historic perspective to the place. Armed with a Hamilton garden-grown, flowering sample of *O. pachyphylla* and Peter de Lange's instructions on where he'd found the single plant in 1992, we began the search.

The track down to Lonely Bay was relatively short and although the area was well searched, unfortunately, the *Olearia pachyphylla* of Lonely Bay could not be found.

A large number of *Olearia townsonii* plants were distributed along the track edge, many of which were flowering and so could be certainly identified. While some potential vegetative characteristics that might be able to distinguish the two species were investigated, nothing could be used with certainty. An associate species of the original *O. pachyphylla* plant was *Pimelea longifolia*. However, just one plant was seen in the area, on the track close to the car park. It is possible that during the years since the *O. pachyphylla* find that regeneration and vegetation succession have closed in on the *O. pachyphylla* individual to the point where it could no longer survive. This succession has certainly reduced the available habitat for species like *O. pachyphylla* and *P. longifolia* at the reserve. Some potential habitat for this species remains on the cliffs and John Longden (also an abseiler) will be keeping an eye out for *O. pachyphylla* in the future.

After a cliff edged lunch stop with awesome views across Mercury Bay, we completed a circuit of the headland.

Andrea Brandon

AGM 27TH APRIL 2005

The AGM was held at the McMeekan Centre, Ruakura Research Centre. Last years President, Jo McQueen, was unable to attend and in her absence Liz Grove read out the Presidents report, which follows later in the newsletter. Jo is not standing again for President of the Society, and we would like to thank her for all her hard work and wish her well in her endeavours.

The new committee was elected as follows:

President:	Liz Grove
Vice President:	Shirley Nichols
Secretary:	Andrea Brandon
Treasurer:	Janica Amooore (vacant following the AGM but Janica agreed to fill this position at our first committee meeting)
Committee members:	Paula Blackett Jane Hart Cilla McAllum David Burnett Wade Tozer Bruce Clarkson

Other business arising from the meeting included the student prizes. The question of an award for high school students also arose - the Society already sponsors a prize for botanical entry in the NIWA Science Fair. The extent of the Societies commitment to the proposed threatened plants garden was also discussed.

PRESIDENT'S REPORT

In 2004 we decided to focus on a field trip only programme, due to the talks being poorly attended. This has worked reasonably well, although at times only very small groups have made it out. Thanks very much to our 'core' group of members who make it to all the trips, regardless of the distance to travel or the weather!

We continue to try to make a varied programme of interesting places to visit, and would appreciate any help with field trip ideas and offers to lead them.

Highlights for me have included the Te Toto Gorge and climbing Mt Pirongia to see *Dactylanthus*. And then of course spending a day on hands and knees up Mt. Maungatautari to try and find it there.

The major highlight would have to be the talk by David Given held at the Waikato Museum. The committee all put in a huge effort to organise this talk and we were really pleased by the excellent turn out and the positive comments received by many of those who attended. You will see from the accounts that such large events are not break even (even with free venue hire), so it will be unlikely that we could run something of this magnitude each year (also the effort involved is possibly a bit much for each year!). However, we feel that it was a good way to use some of the Societies funds while we are so buoyant. We generated a lot of interest in plant conservation and botany in general and picked up some new members and book sales.

The David Given talk was not the only thing we have been busy organising. We have also organised 'prizes' of \$250 to the top students of botany courses at The University of Waikato and Wintec. So far, only the Waikato prizes are up and running – we hope to have the Wintec prizes sorted out soon also. We also offered these prizes to the Whanga, but they have yet to take up our offer.

We have also been quietly working on establishing a threatened plants garden at Waikato University in conjunction with the biology department and DOC. We hope to germinate threatened Waikato plants and create a labelled garden for them where they will be protected, and where they can be used for education purposes. We will let you know more details of this as it becomes finalised.

The society is still really healthy, with plenty of money and a good membership base. It is once again up to our members to continue to support the society and let the committee know what they want to see and how we can help them learn more about botany.

On a personal note, I will not be standing for President again this year, as I am moving to Rotorua to begin a new job with Wildland Consultants. I'm sure I will still see you all on joint Rotorua/Waikato events! I know that I leave the Society in capable hands. I would like to thank the outgoing committee for their efforts in running the society over the last couple of years, and wish the new committee all the best for the future.

Joanna McQueen

<p style="text-align: center;">HARAKEKE ECOLOGY AND HISTORICAL RESOURCE MANAGEMENT CILLA McALLUM 27th APRIL 2005</p>
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Cilla is a PhD student at the University of Waikato within the School of M ori and Pacific Development and the Department of Biological Sciences. M ori identified 60 varieties of harakeke that were valued for their fibre, however the specific uses of many of these are now unknown. Cilla spoke to us about her work uncovering information on the cultivation and dispersal of harakeke, and has provided the following text from a poster presentation.

Harakeke has been used by M ori for centuries to create clothing, mats, baskets, and nets. It was essential for daily life, yet no complete explanation of how M ori managed harakeke historically has been elucidated. Nor do we know how the historical landscape has been modified to allow for the growth or management of this remarkable plant. This study investigates the methods and extent of M ori harake ke management prior to the 20th century, and the changes to the New Zealand landscape which have resulted.

I interviewed M ori elders about harakeke. Key themes emerged on the use of natural swamps, cultivations, harvesting and pest management. But as I delved further back through time, the voices became quieter. Other methods provide another pathway back.

I systematically located historical documents and records to visualise M ori resource management of harakeke. Authenticity of sources and the accuracy of the data are important. Evidence is evaluated and synthesised to provide new knowledge of resource management practices.

Modification of a landscape requires changes in the distribution, prevalence, or ecological niche of a plant. I have collected information from herbarium samples of harakeke to analyse in conjunction with geographical location data and environmental factors, such as soil condition and rainfall.

Creating spatial models by exploring these factors, suggests where harakeke is most likely to occur, and which factors limit distribution. I can predict the environmental range where harakeke can survive or establish, and this also highlights where harakeke may have been planted by Maori.

The historical evidence clearly identifies human-directed selection and dispersal of harakeke. Harakeke cultivations have been recorded from Northland to Bluff, from Aotea harbour in the West to Gisborne in the East, dating back to the earliest written records. Varieties have also been dispersed around the country from at least the mid 1700s to the present day. Past techniques for cultivating harakeke are also recorded, including planting, irrigation, and pest control measures. Recent literature suggests that M ori were not able to grow harakeke from seed, instead splitting off 'fans' or root stock from an adult plant. However one early record describes how M ori propagated harakeke from seed, and used fire to aid germination. This would have encouraged genetic diversity and the creation of new varieties.

SEDGES AND RUSHES WORKSHOP **2ND JULY 2005**

Chris Ecroyd and Graeme Jane put on an informative workshop with a good turn out of people from Rotorua, Waikato and Auckland Botanical Societies. We started with a brief introduction to distinguishing the sedges (Cyperaceae), rushes (Juncaceae), grasses (Poaceae) and restiads (Restionaceae), the handy quote of the day was - 'Sedges have edges; rushes are round; grasses are hollow right up from the ground'.

Then of course we went on to learn about all the exceptions to this rule! However, in general sedges have triangular stems in cross-section giving them edges with leaves coming out in threes compared to grass and rush leaves which grow in two rows. We had some example herbarium specimens laid out to look over during the day and a good selection of live specimens to key out. In small groups and pairs we used a variety of keys to work down to family, genus and, if you were really keen, species, while brushing up on terminology such as spikelets, bracts, glumes and bristles. A hand lens and microscope was often essential, especially at species level when looking at tiny, reduced flower structures.

Some books recommended for helping with identification were: 'Wetland Plants in New Zealand' by P.N. Johnson and P. Brooke, 'Flora of New Zealand' Vol. 2 and 3, 'Identification of weeds and clovers' by A.J. Healy, and 'Field Guide - Stewart Island Plants' by H. Wilson.

Liz Grove

THREATENED PLANT GARDEN

The committee has started work on exciting new project- a threatened native plant garden. It is envisaged that the garden will serve as both a conservation resource and an educational tool. We are currently working on a proposal in conjunction with the Department of Conservation and Waikato University with the likely site being in the glasshouses compound

on the University grounds. The focus of the garden will be plants from the Waikato region and all specimens will be thoroughly documented on their provenance so that they can be used appropriately for restoration and research purposes. We look forward to inviting you all to participate in landscaping, weeding and planting workshops in the near future!

NATIVE PLANT STORIES WANTED

Professor Ian Spellerberg at Lincoln University is seeking individuals who would be prepared to write a personal narrative about their native plant projects:

Following on from 'Going native: making use of New Zealand native plants', Canterbury University Press has agreed to publish a compilation of personal narratives about native plants or native plant projects. I am looking for a diverse range of stories, diverse range of locations and diverse range of scales. All I need at the moment is an expression of interest. I can provide a template for the narrative and I may visit the people and their narrative. The ultimate aim is to provide a way of sharing information - practical information about native plants - and inspire more people to use native plants. This will be one small contribution to Target 14 of the Global Strategy for Plant Conservation - the importance of plant diversity and the need for its conservation incorporated into communication, educational and public-awareness programmes.

You can email Ian at Spelleri@lincoln.ac.nz

CONSERVATION WEEK

1-7TH AUGUST

This years theme is “Everything is connected”

There are no Botanical Society trips this year but a number of community groups in the Waikato have organised events.

These include walks on/up Kakepuku, Karioi, and Pirongia (including speakers), as well as walks in Te Toto Gorge, Bryant Reserve Bush (Raglan), and the Hakarimatas. There are also tree plantings in Te Kauri Park Scenic Reserve (including bush walk) and Kaniwhaniwha Recreation Reserve.

The programme can be found at

<http://www.wetlandtrust.org.nz/documents/Conservationweekbrochure.pdf>

For further information contact Jack de Thierry

jdethierry@doc.govt.nz

**WAIKATO BOTANICAL SOCIETY
PROGRAM 2005**



In the event of bad weather, please contact the trip leader on the morning of field trips if you are unsure they will go ahead and don't want a wasted trip to the meeting point. Please be prepared on all trips with your own lunch, drink, sturdy footwear, and clothes for all seasons.

Sunday 25th September

Karangahake Gorge, Coromandel

A re-run due to cancellation last year.

This trip will follow the Dubbo track in the Karangahake Gorge and explore old mineshaft entrances, a long rock railway tunnel and other restored mining relics. We will follow a loop track back along the Waitawheta River to the starting point, about 4 hours at an easy pace, plus botanising time. Bring torches for tunnel and mine entrances.

Contact: Doug Ashby 07 862 4706 or dj.ashby@xtra.co.nz

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

Sunday 20th November

Whangamarino (Shannon Fergie).

A re-run due to cancellation last year.

Visit the peatbogs of Whangamarino wetland and learn about conservation issues at the site including water level regulation, pest fish, native fish, invasive weeds, and threatened plant management.

Numbers are limited on this trip to minimise damage at the site, please register your intention to attend with Andrea Brandon abrandon@doc.govt.nz or ph 858 1018. Bring gumboots!

Contact: Shannon Fergie sfergie@doc.govt.nz or ph 07 850 8348 (wk) and Andrea Brandon abrandon@doc.govt.nz or ph 858 1018.

Meet: to be advised

Sunday 4th December

End of year picnic and games

Joint event with Rotorua Botanical Society. Seeing as we didn't find any mistletoe in 2004, we'll head back to the Gudex Memorial Reserve for a spot of botanising and a picnic in the sun.

We will meet again at the Gudex Memorial Reserve on Sanatorium Hill (Pukemako). Our mission will include a search for the elusive mistletoe *Trilepidia adamsii* and you may be offered a botanical quiz...(with prizes of course!). This will be a potluck picnic so bring something yummy to share, a picnic rug and the family if you wish.

Contact: Liz Grove ph 07 846 0965 or eg3@waikato.ac.nz

Meet: at the Landcare carpark, Gate 10 Silverdale Rd, Hamilton at 10.30am or at the Gudex Memorial obelisk at the reserve at 11am.