



Waikato Botanical Society Inc. Newsletter No. 15, June 2003

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AGM – MARCH 25TH 2003

A very select group of members turned out for the AGM, despite the lure of cake! For those not present, Bruce Clarksons Presidents report follows later in the newsletter, as do the financial records. The latter are again in a healthy condition thanks to sales of the Botany of Waikato book. However, it was recommended by the Treasurer and the outgoing committee that while we are selling the books an audit should be carried out and costs of this may be significant.

Other business discussed included subscription fees which were noted for review at last years AGM. Members voted to retain the current subscriptions. The need to encourage new members was also discussed as were sales of the Botany of the Waikato. The new committee was asked to develop strategies for both these matters.

Bruce did not wish to stand again as President and Joanna McQueen was subsequently elected as the new President of the Society. The past Treasurer (Paula Blackett) and Secretary (Karen Denyer) also decided to stand down from their positions, and Jenny Hurst was elected Secretary, and Liz Grove as Treasurer. Eight other committee members were then elected – Mark Watton, Paula Blackett, Don McLean, Shirley Nichols, Bruce Clarkson and Wade Tozer continue from the outgoing committee, with new committee members in David Burnett and Estee Farrar.

NEW MEMBERS

Welcome to new members Jane Hart and Chi-Sheng Yang

PRESIDENTS REPORT

Welcome

Thank you for attending our Annual General Meeting for 2002/2003. It is my pleasure to report on the year's activities.

Programme

We held 9 events since last years Presidents report and all were successful. There was good variety from field trips to hands on workshops and informative lectures and these were on the whole very well attended. Write up for all the activities have appeared in our society newsletter. Thanks again to all who led field trips or gave lectures and without this support we would not be able to function as a society.

Botany of Waikato

A focus of this year's activity was promoting and selling our book Botany of the Waikato. This has involved a lot of the committee's time in approaching booksellers or attending venues where the book can be sold. To date we have sold some 422 books out of 2200 and I suggest we now need to seriously consider reducing the price to the point where we shift as many of those remaining as possible within a year. Books like this have a notoriously short window of opportunity for sale and we have already covered all our costs. It would be sensible then to shift them as soon as possible and think about a new revised version being produced in say another five years?

Committee Activities

This year the committee was notable for average age i.e. this is a young committee compared to previous years and it augurs well for the future of the society. It was great to see the level of commitment from the committee from selling and marketing books to planning and organizing the year's programme. Thank you to all the committee members for your support and hard work during the year. The future of the society will be assured if we can ensure the continuing involvement of this a younger generation of botanists.

The Newsletter

This year the newsletter has been produced by Shirley Nichols and what a magnificent job she has done. Those of us who produced newsletters like this know how difficult it is to get material in on time from busy people and then the amount of work required massaging it into a newsletter. Many thanks for your efforts Shirley.

The Future

As alluded to above I think the society is at a crossroads. It is now time for the society to be owned and organized by a younger generation of botanists. As part of my contribution to the process I will not be standing for president this year. As many of you will know it is not feasible for me to have a major contribution at the moment because of my new work commitments. But I am willing to lead at this one event a year a halving of previous years contributions. I hope that tonight we will see the new crop of botanists take over the activities of the society noting of course that the older botanists are always willing to give advice when called upon. I also hope they will address the issue of the book mountain and set a price which will see the book as widely distributed throughout the Waikato as possible especially into the local schools to ensure our society does not suffer from a serious regeneration gap.

FINANCIAL REPORT

Bank Balances as @ 28th Feb 2002		
Cheque	\$253.15	
Savings	\$89.75	
Total funds 28th Feb 2002		\$342.90

Income	
Subs	\$773.00
Interest	\$21.20
Donations	\$5.00
Book sales (422)	\$12,832.00
Postage&handling	\$751.13
	<u>\$14,382.33</u>

Expenses	
Advertising	\$62.89
General	\$3,955.93
<i>Loan repayment (\$3000)</i>	
<i>Launch venue hire (217.50)</i>	
<i>Audit cost (590.15)</i>	
Stationary&stamps	\$307.17
printing costs	\$20.00
Postage & Handling	\$579.13
Catering costs	\$1,043.79
<i>Book launch (675.00)</i>	
<i>End of year rally (319-28)</i>	
<i>meetings (49-51)</i>	
Bank fees	\$25.50
Expenses	\$5,994.41
Profit	<u>\$8,387.92</u>

Total funds available 28th Feb 2003 \$8,730.82

Bank Balances as @ 31th Mar 2002		
Cheque	\$8,665.87	
Savings	\$64.95	
Total funds 28th Feb 2003		\$8,730.82

Waikato Botanical Society Records Feb 28th 2002 - Feb 28th 2003

End of year reconciliation

Expenses owing	
Overpaid -	<u>\$8.00</u>
	\$8.00
Expected income (invoices)	
Environment Waikato (4 books)	\$128.00
Bennetts (5 books)	\$175.00
Unspecified debtors (3 books)	<u>\$99.00</u>
	\$402.00
Difference	\$394.00
Bank Balance	<u>\$8,730.82</u>
Adjust Balance as @ 28th Feb 2003	<u>\$9,124.82</u>

Assets

		Value (based on cost)
Books in Stock	1409	\$22,459.46

And

Waikato Botanical Society net worth Feb	\$31,584.28
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*** chances of getting paid - not good

MANGROVES – 17TH MARCH 2003

Catherine got the society underway for 2003 by giving us a really interesting talk on her PhD research into New Zealand mangroves. In NZ, we have only one out of the approximately 65 mangrove species that exist worldwide. Mangroves are pretty cool plants that have a number of adaptations that allow them to grow in the intertidal zones along sheltered coastlines, estuaries and tidal rivers. Some of these include adaptations to prevent water loss, such as a thick waxy cuticle on the leaves (even though mangroves grow in water, being salty, this water isn't very available to the plant), adaptations to deal with salt, such as filters in the roots, and aerial roots to provide air to water logged roots. They also produce the plant equivalent of live young – the seeds germinate and grow into small seedlings while they are still attached to the parent plant, an adaptation that allows them to establish relatively quickly once they detach from the parent and find a suitable substrate. The flowers also apparently smell really nice!

Catherine's research involved trying to understand why mangroves don't grow past a southern limit at Latitude 38°S. There are a number of theories on why they don't grow any further south – is it too cold? Are they unable to get any further south? Are there no suitable establishment sites further south? There are some, but not many, suitable sites further south, and the propagules are readily transported by ocean currents, so dispersal is unlikely to be the only problem. What about frost? All the plants tested were adequately frost tolerant. So why don't they grow any further south?

A possible answer lies in the physiology of these mangroves. Their photosynthetic processes are negatively affected by cold temperatures. After cold or frosty nights, photosynthetic rates are much reduced over the following days. This means that southern mangroves operate at a severe physiological disadvantage – overall, they make less energy to put into growth and reproduction. Additional stresses, such as having to find extra reserves to recover from frost

damage following the winter, also make survival difficult. These negative effects become more pronounced with colder temperatures, and it may be that the environment further south of the mangroves present range is too cold for their long-term survival.

Mark Watton & Jo McQueen

TOREHAPE FIELDTRIP – 18TH MAY 2003

After a brief stop at the top of Torehape East Road, we made our way down to the Torehape Reserve (restiad peat bog). We only had to venture in a short way to find the plants that made up this remnant of a once extensive peat bog.

Our leader for the day was Shannon Fergie and she pointed out the principle plants from which the restiad peat formed i.e. the large cane rush *Sporadanthus ferrugineus*, and the small jointed rush *Empodisma minus*. Within that area were other typical wetland plants such as *Nertera scapanoides*, *Baumea teretifolia*, *Gleichenia dicarpa* and *Blechnum minus*. We were also made aware of the ever encroaching and introduced Royal Fern, *Osmunda regalis*. The catch phrase for the day was “Rushes are round, sedges have edges”.

After viewing the natural state of a peat bog we then drove about a half kilometre to the peat mine. I really had no idea how peat was harvested and a mine brought images of pit head and shafts! As the Torehape peat is unusual in that it has a layer of *Sphagnum* peat on top, the mining process consisted of scraping off this top metre, leaving long strips of exposed base peat. It was how to restore this loose peat which was the major issue for Gamman Mining. This was the reason for Shannon’s involvement and the basis of her thesis. We learnt that where small raised islands of processed peat were seeded with manuka slash, re-vegetation with manuka occurred quickly and brought in the greatest richness of species, re-establishing the main bog plants within two years. This rapid recovery was in strong contrast to areas where peat has been harvested and left, as the bare mine surface recovers very slowly.

We left around midday and drove to a picnic area for lunch, after which the group headed back towards Hamilton to see the results of a lake restoration.

Doug Ashby

Following on from the mine, we visited a farm where the farmer, Andrew Hayes, and his family, have restored a lake on his property (Lake B or Lake Kaituna) with help from DoC. In the 1980’s, willows completely surrounded the lake and stock were allowed to graze right up to the waters edge. During this time, ducks swam in the water troughs to get clean water and ate the grass in the paddocks (probably due to the lack of insect life under the willows and the willows encroachment into the water). Six years ago, Andrew decided he’d had enough of the willows and started clearing them, initially just at the windward end. From there, the lake margin was fenced and the willows steadily removed in blocks so that today, the entire margin has been cleared. The result is a healthy lake with plenty of regenerating natives on the margins and plenty of bird life that no longer encroaches on the paddocks. Cabbage trees have regenerated from seeds on a discarded branch. Natives such as kahikatea, totara and flax are appearing and are given a helping hand by being transplanted and nurtured at the house until big enough to be replanted in exactly the same spot. Kowhai has also been planted (from a local seed source).

This huge transformation of the lake and the obvious enjoyment Andrew and his family get from it should be a lesson to all landowners with a water body on their land. Restoring the lake to its natural state has meant an increase in bird life which does not impact the farm. In fact, fencing the margin, although reducing the land area, has not reduced the number of cows able to graze the land as birds are no longer disturbing the grass and fouling the troughs.

Jo McQueen

**Due to unforeseen circumstances the talk on other uses of plants will be held
later in the year – date to be advised
Instead we have for you:**

**ANTARCTIC MOSSES AND LICHENS
ALLAN GREEN – UNIVERSITY OF WAIKATO**

**Monday June 16th
7:30pm
McMeekan Centre
Ruakura Research Centre, Hamilton
(entry off Ruakura Rd)**

NEW ZEALAND NATIVE PLANT CONSERVATION NETWORK

The New Zealand Plant Conservation Network has now been incorporated and a committee appointed, chaired by Mike Oates. The vision of the network is that: 'no indigenous species of plant will become extinct nor be placed at risk of extinction as a result of human action or indifference, and that the rich, diverse and unique plant life of New Zealand will be recognised, cherished and restored'.

Members of the Network will collaborate to protect and restore New Zealand's indigenous plant life and their natural habitats and associated species. This will be achieved in various ways such as through:

- * dissemination of information about indigenous plant species and communities
- * coordination of ex-situ management of threatened plants

- * plant conservation training programmes

- * undertaking conservation activities to protect threatened plants and communities

It is to be established in part as a contribution towards implementing the New Zealand Biodiversity Strategy and the Global Plant Conservation Strategy. Membership will comprise a range of people, community groups and organisations throughout New Zealand. Reasons for establishing such a network are that:

- * Plant conservation practice will be improved.
- * There will be increased efficiencies in achieving plant conservation outcomes and overlaps in work will be minimised.
- * Increased resources will be generated to focus on plant conservation priorities.
- * More information will be freely available to those involved in plant conservation.

An inaugural meeting of the Network is to be held at Te Papa Tongarewa in Wellington on Saturday 2nd August 2003. More information about this meeting, and how to register, will be sent out in the near future. Please forward this to others who may be interested in the Network. For further information about the network, membership or the forthcoming inaugural meeting please contact:

Mike Oates (Michael.oates@wcc.govt.nz)
John Sawyer (jsawyer@doc.govt.nz)
Tim Park (tpark@qe2natrust.org.nz)

WE WANT TO HEAR FROM YOU!

Please remember, all contributions for the newsletter will be gratefully received! If it interests you, it's bound to interest other members. I'd particularly love to hear about events/sites etc in your local area – the Waikato is a big place to cover! Finally, please consider volunteering to write up Bot Soc events for the newsletter – it's not so bad, really! It doesn't matter if you're not an expert, we'd love to get your perspective on our activities – after all, they're aimed at you!

Shirley

HARAKEKE EXHIBITION

The Te Awamutu Museum is currently running an exhibition of items made from flax. This includes kete and korowai from the museums collection, and a photo essay showing how the fibres are prepared for weaving.

This exhibition has been very popular, particularly with school groups. Originally running until the end of June, it has now been extended for a further month.

The museum has an education programme for primary and intermediate schools that includes a weaving demonstration, but a demonstration can be organised for adult groups if there is interest.

Where?

Te Awamutu Museum

When?

Until 30th July

How much?

No entry fee but a koha is appreciated

ON THE INTERNET

<http://www.kaimaibush.co.nz/index.html>

Web page of Katikati local which features photos of native orchids, bryophytes, fungi, lichen and ferns from the Kaimais. Also has descriptions of a few easy walks in the area.

<http://www.bush.org.nz/>

The New Zealand Ecological Restoration Network. Has regional information, including the Waikato, with lists of restoration organisations and sites, local groups, native nurseries etc. Of particular interest may be the Planter Guide (click on the Resources link) which covers 340 plants found throughout the country. By entering your region and soil type you can obtain a list of appropriate natives to plant on your property. For each species there is a fact sheet, information about growth form and height, successional status, special uses, ecological regions, tolerance to drought/waterlogging/wind etc. Also under the Resources link is PlantGrow – practical tips for growing and propagating native plants.

<http://www.doc.govt.nz/Regional-Info/010~Canterbury/005~Publications/Protecting-and-Restoring-Our-Natural-Heritage/index.asp>

A publication by the Canterbury Conservancy of DoC on restoration of native ecosystems. Also available from DoC for \$12.

WAIKATO BOTANICAL SOCIETY PROGRAM 2003

- 16 June** **Uses of plants other than just eating them!** Presented by Judy Saunders (HortResearch) **NB Change in topic for this talk!**
7:30pm, McMeekan Centre, Ruakura Research Centre.
- Antarctic mosses and lichens.** Allan Green, the University of Waikato.
7:30pm, McMeekan Centre, Ruakura Research Centre.
- 14 July** **Grass-endophyte relationships – Chris Miles (AgResearch)**
Neotyphodium species (*Clavicipitaceae*) are endophytic fungi found in grasses – a highly species specific relationship. The best studied of these relationships involve agricultural grasses. Endophytes often produce toxins that can cause poisoning of livestock, but also protect the host grass from insect herbivory.
- Recently, a new Neotyphodium endophyte in the native grass *Echinopogon ovatus* (hedgehog grass) was identified. Chris will present the results of studies into the endophytes occurrence in NZ populations, its role in the ecology of *E. ovatus*, its evolutionary origins, and comparisons to similar endophytes in Australia, as well as discussing the implications for conservation raised by the presence of endophytes in our native grasses.
- 7:30pm, McMeekan Centre, Ruakura Research Centre.
- 17 August** Are you new to botany and don't really know how to identify plants? If so, this workshop is for you! During this workshop some time will be spent learning **how to use keys**, followed by a herbarium tour. Experienced botanisers are also welcome to come along and see the new herbarium facilities at Waikato University and may get a chance to help catalogue some specimens.
10:30 – 12:30, Waikato University Herbarium
- 15 September** **Uses of native plants.** Ever wondered what native plants have medical properties? What ones are edible? Come and hear Rob McGowan (University of Waikato) talk about the uses of native plants and also the protocols involved in collecting and using natives.
7:30pm, McMeekan Centre, Ruakura Research Centre.
- 5 October** **Joint Rotorua / Waikato Botanical Societies trip to Maungatautari** led by the infamous Bruce Clarkson (University of Waikato). Botanise mountain forests and rocky outcrops.
Meet at Landcare carpark at 8:45am, or later at the end of Luck at Last Road.
- 7/8 November** **Weekend trip to Great Barrier Island, Hauraki Gulf.**
Visit the spectacular bluffs of Windy Canyon, see island endemics (*Kunzea sinclairii* and *Oleria allomii*), explore the Kaitoke Swamp and soak in the hot pools. Optional hike to Mt Hiramata (Hobson). Cost to be finalised but likely to be around \$250 for ferry, accomodation, on-island transport. Food and transport to Auckland extra. Bookings essential.
Contact Karen Denyer (Environment Waikato) (07) 856 0555 xt 9989, (07) 823 0405 evenings. Trip subject to numbers and weather.
- 22 November** You asked for it! **A field trip to a geothermal area.** Bruce Burns (Landcare Research) will lead a trip to Te Kopia where the orchid *Calochilus robertsonii* should be flowering. For safety purposes, this trip will be limited to 10-15 people.
Meet Landcare carpark, 9 am.

7 December The famous Waikato Botanical Society end of year rally. The food was really good last year so we think everyone should come along. No botanical knowledge necessary (the vice-president was beaten by a 10 yr old kid last year, so don't let a lack of knowledge put you off). We might even have a prize for the lowest score this year! Anyway its heaps of fun and not too physical. Venue and time to be advised.

For enquiries about events

Please direct enquiries about trips to trip leaders
For general enquiries about talks contact publicity officer Don McLean
on (07) 838 4466 ext. 7824 (daytime)