



New Zealand Branch | October 2018 | Newsletter #21

| Auckland Botanic Gardens

OVERVIEW

Several capital works projects providing better access to the Gardens are currently underway. A new carpark doubles the capacity for car parking by converting a grassy slope (used for overflow car parking in summer only) to a year-round surface that now also holds more cars. A new pathway system the 'Pacific Pathway', a path first described in the Master Plan ten years ago, will ensure visitors connect with the collections by entering gardens off a series of nodes. To date visitors use the 'loop road' (a service way) and can miss the chance to enter some collections. Stage one covers about a third of the gardens. This entails changes to maps, signs and decommissioning garden beds – so we have lots of work to do as well as juggling contractors through our busiest time of year. However, we are all looking forward to the pathway and the new ways visitors can engage with the collections. The Pacific Pathway will be completed in stages over several years.

We've also been busy collating plant recommendations to present them in several brand-new ways including a plant selection database for the public and a range of new leaflets. Our recommendations include lists of star performers, the highest level of our endorsement, which are plants that show proven excellence in appropriate conditions evaluated by our trials.

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Upcoming events

We've stepped up our contribution to Predator Free 2050 by reviewing and modifying our pest control program. For a number of years, we have carried out control of rats, possums, rabbits and mustelids (weasels, stoats and ferrets). Changes include starting to pulse control as research has shown it to be far more effective to carry out baiting and trapping periodically when the pest are most active, i.e. breeding and the warmer months. This reduced the chances of pests becoming wary of the traps and bait shy. We've also changed the types of traps and baits we use and mapped them all, so we can assess where pest 'hotspots' are.



TUIA - ENCOUNTERS 250

Our next BGANZ meeting, in Autumn 2019, will be in Gisborne (Eastwoodhill) intended to coincide with national commemorations (Tuia - Encounters 250) of the arrival of Captain Cook to NZ. The spotlight for us will be the work of Banks & Solander as ships botanists who gave NZ plants Latin names and fitted them into a global context, but also the observations made of Maori gardens (including of exotic plants already in NZ) and local names and uses of plants on that trip. The collections they made have also enabled us to have a window back in time to plants that were once much more common in NZ than they are today. Dunedin BG already has a well-established "Solander Trail" and many gardens display native NZ plants named after Captain Cook, Joseph Banks and Daniel Solander.

If you are interested in attending our BGANZ seminar day in Gisborne next year, register your interest by mailing rebecca.stanley@aucklandcouncil.govt.nz and we will send you the details once they are confirmed.

DOC MOU UPDATE

To date we have completed workshops to discuss a National Ex-Situ Plant Conservation Strategy in Wellington, Auckland and Dunedin. We have a planned workshop in Christchurch, however we are first discussing with Ngai Tahu on how to best involve Iwi in this process. DOC are investigating the best way for us to proceed with this and we will update you when progress has been made over the coming months.

NZ GARDEN JOURNAL

We'd like to encourage you to check out the wonderful horticultural resource, the NZ Garden Journal. You can receive it by becoming a member of the Royal New Zealand Institute of Horticulture. The Journal is where Auckland Botanic Gardens share results of their horticultural trials: www.rnzih.org.nz

NZ YOUNG HORTICULTURALIST 2018

This year's grand final practical day will be held at Pukekohe Indian Business Centre on November 7th. The Royal NZ Institute of Horticulture's Education

Trust runs the annual NZ Young Horticulturalist of the Year awards each year (<http://www.younghort.co.nz/about.htm>). Finalists are the winners of six horticultural sector competitions: Horticulture NZ (fruit and vegetable sectors), Nursery and Garden Industry of New Zealand, NZ Winegrowers, Amenity Horticulture, NZ Flower Growers Inc. and Landscaping NZ. Our industry, Amenity Horticulture, is represented this year by Morgan Hampton from Bluestone Gardeners and Nursery in Dunedin. The amenity competition is run by the New Zealand Recreation Association.

If you are an amenity gardener, and you're under 30 years of age, and keen to enter in 2019 contact Karl Nesbitt on karl@nzrecreation.org.nz.

| Otari Native Botanic Garden

LIONS OTARI PLANT CONSERVATION LAB

In September 2017 the Karori Lions Club (Wellington) approached Otari Native Botanic Garden regarding funding they had available to celebrate the Lions Centenary during July 2017 – June 2018. After discussing several projects, it was decided that a Plant Conservation Laboratory at Otari fitted with equipment to effectively germinate and store plant germplasm such as seed, pollen, cuttings and embryos suited their requirements for a Centennial Legacy Project.



The Plant Conservation Laboratory will support plant conservation through research into seed storage behaviour, assessing seed viability, in vitro propagation and establishing germination protocols. It will also enable us to store plant germplasm in the long term through seed banking, cryopreservation and possibly tissue culture. It will equip us to study the ex situ conservation (storage, germination and propagation) of exceptional species such as fern spores, orchids, fungi and

other desiccation sensitive species.

A Portacom building was selected to store the equipment in one facility. The Portacom provides space for incubators, freezers, media and chemicals and enables us to create a sterile environment.



The decision to purchase new equipment, housed in a dedicated facility is driven by conservation objectives in the Wellington Gardens Management Plan (which includes Otari) and Wellington City Councils Biodiversity Action Plan; some of these objectives can only be effectively achieved with suitable facilities.

As an example of the work the lab will enable us to build on is the positive outcomes we (Otari Native Botanic Garden and Te Papa Museum) have had

recently with *Metrosideros bartlettii* (nationally critical). Baseline information collected during the 2017/2018 flowering period for *M. bartlettii* will be expanded using the laboratory through the following:

- Assessment of pollen viability from parent plants through germination and staining. A new microscope with camera will enable us to effectively record viable pollen.
- Determine pollen viability over time and under various storage conditions. We intend to collect and store pollen from multiple parent trees, which can be used to pollinate individual trees.
- Assessing seed viability from hand pollinated flowers.
- Storage of genetically diverse seed and/or dormant buds at -20°C and in liquid nitrogen (-196°C);
- Germinating seed in sterile environments.

The lab will also be used to house duplicate storage of seed by the NZ Indigenous Flora Seed bank.



| Wellington Botanic Garden

We have just come through a very nice spring where the tulips, having threatened to completely collapse from the *Phytophthora cactorum* infestation came right to provide a great display. Thousands of people emerged from winter hibernation on Tulip Sunday to enjoy the floral display, the music, the food from the Dutch Society and each other's company.

Otari Open Day held on 22 December was also even more successful this year than usual with the 1000 plants being sold out within minutes, visitors enjoying the Otari Wilton's Bush Trust hospitality and the market in the Leonard Cockayne Centre. This was also the first opportunity for the public to look through the windows into the new Lions Otari Plant Conservation laboratory. The Otari team have continued with seed collection of *Syzygium maire* and *Metrosideros umbellata* for the ongoing seed banking trials

We are currently going through a procurement process for design and installation of new interpretation for the Treehouse in the Botanic Garden. This will be the first permanent purpose designed interpretation created for this building which will be very exciting. Following on from Auckland Botanic Garden we hosted the World Botanical Art exhibition at the Treehouse. After a successful launch with the Friends over 2000 people subsequently visited the exhibition.

The Victoria University Museum and Heritage Studies masters students presented back to us on projects they have been working on at Truby King Park and Bolton Street Cemetery. Both focussed on interpretation and better telling our stories and both teams did an excellent job of taking a wider scan of similar sites and feeding the recommendations back to us. We will look through these and look at how we can implement the best of them.

| Australian Landscape Conference

Pat Elliot from Wellington Botanic Garden.



Thanks in part to the generous support of BGANZ I was able to travel to this year's Australian Landscape Conference. The theme for 2018 was 'Design with Nature; reconnecting people + place'. I thought this theme was particularly

relevant for Botanic Gardens who are looking to reflect their commitment to conservation and education in their garden design.

I can't summarise four days of talks and workshops here, so I will just work through a few of the issues I found most interesting and the various arguments and solutions proposed.

To begin: should gardens mimic their surrounds or contrast with them?

Bernard Trainor showed work that celebrates place by borrowing views and fitting seamlessly into the surrounding south California landscape. The beauty of the garden points out the specific character and beauty of the broader landscape.

Instead, Miguel Urquijo's gardens are walled oases, starkly contrasting with the arid Spanish landscapes that surround them. The rocky Mediterranean landscape looks more itself by comparison to the lush green garden; and the lush green garden is all the more affecting for its rugged surroundings.

So are gardens an idealised version of nature or are they high art made with plants?

Kate Cullity illustrated how each approach can work. Around the Uluru visitor centre she decided on a strategy of minimal intervention, bringing no new materials into the landscape; just barely sketching out paths by clearing sticks and bracken and leaving a large dead eucalypt as the centrepiece. Her design at Cranbourne is almost the opposite: its largescale abstract plantings are based on aboriginal art and mythology, visually describing the deep relationship between people and place.

Are people better connected to place by awe inspiring developments or with everyday opportunities to engage?

Architect Kathryn Gustafson's huge abstracted landforms are major developments that aim to win the hearts and minds of stakeholders, like the Princess Diana memorial fountain in London, and in doing so justify their substantial cost. Build it and they will come.

Professor Cassian Schmidt's small botanic garden in Weinheim designs mixed planting systems that are environmentally specific, sustainable, low maintenance, and low cost. They can be made to fit the budgets of the most underfunded traffic islands while still being diverse high impact environments.

Should we be driven by aesthetic or environmental considerations?

Noel Kingsbury, one of Europe's most prominent garden communicators, stressed the need for field staff to be as much ecologists as gardeners: the gardener with an eye to aesthetic appeal (necessary for garnering political support); and the ecologist with an eye to genuine ecological function (life, death, regeneration, value to wildlife and biodiversity).

How does ecology relate to design and maintenance?

Bettina Jaugstetter and Cassian Schmidt ran workshops on habitat based planting designs and their maintenance. Both advocated for designs that take less time but more skill to maintain. By paying careful attention to how plants, soil and weather interact with one another over time; and how ones horticultural interventions affect this complex garden ecology; experienced gardeners (ecologists) can drastically reduce maintenance hours while greatly improving biodiversity and sustainability.

These sketches are just the tip of an iceberg that I'm sure will continue to inform my thinking throughout my career. I want to thank BGANZ for helping me get to Melbourne, experiences like this can make a huge difference for individuals and the institutions they work in.

UPCOMING EVENTS:

9th BGANZ Congress: Wellington October (2019)

Don't forget to mark the dates 20-23 October 2019 into your calendar for the BGANZ Congress to be held at Te Papa in Wellington. The Congress website will be going live shortly so look out for it.

We are working through a short list of keynote speakers and the call for abstracts for the 10 minute presentations and afternoon workshops opens in January. Take the opportunity between now and then to think about Plants from the Past: Plants for the Future and what your 10 minute presentation with a focus on plants will cover.

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10th BGANZ /VGCI Congress: Royal Botanic Gardens 2021

This newsletter has been produced by the **New Zealand Branch of BGANZ.**

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