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2017 New Zealand exchange experience

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I was this year's lucky recipient of the IPPS-New Zealand exchange fellowship, sponsored by the IPPS-Western Region. It was an incredible trip. I spent the first week and a half visiting nurseries, followed by the New Zealand Region's annual conference, and then two additional weeks exploring the country. It's hard to sum up my experience in just a few words; there was no central theme, but so many little nuggets of wisdom. Here is a brief account of what I learned.

A VIEW OF NEW ZEALAND

The New Zealand landscape is beautiful and diverse. The country has everything from glaciercapped mountains to high desert tussocklands to subtropical forests, all within an area roughly the size of Oregon. The North Island is considered subtropical and is very green and lush. The South Island is more like the Pacific Northwest, wet and mountainous on the west side and flatter and drier on the east side, and with more agriculture. The North Island boasts an extensive forestry industry, with the California native *Pinus radiata* comprising 90% of the forestry trees in New Zealand. At one time, New Zealand had the largest continuous, non-native tract of forestry in the world. Many nurseries are producing *Pinus radiata* seedlings and cuttings. *Pinus radiata* can escape from cultivation (known as "wildlings"), and is often eradicated when it appears in conservation areas.

Botanically, New Zealand is fascinating. New Zealand has tree ferns, groves of *Nothofagus* (beech), and the southernmost-growing palm in the world, the Nikau palm (*Rhopalostylis sapida*). The vast majority of native plants are evergreen. Lancewood (*Pseudopanax crassifolius*) in its juvenile form has downward-pointing leaves with spines on the margins that are thought to be a defense mechanism against the now-extinct moa (a 12-foot-tall flightless bird). The silver fern (*Cyathea dealbata*), a tree fern, is the unofficial national emblem of the country and often appears on the jerseys of sports teams. The semi-deciduous tree fuschia (*Fuschia excorticata*), the largest fuschia in the world, provides most of the fall color in the native bush. The average Kiwi thinks their native flora is quite boring, and is envious of our colorful perennials and deciduous trees. I would cut off my right arm to have such an extensive selection of evergreen native shrubs and groundcovers to recommend to landscapers and homeowners. The grass is always greener...

The native birds are fascinating (even to a plant person) and serve an equivalent role in New Zealand to salmon in the Pacific Northwest, focusing and driving much of the conservation work in the country. The keas were my favorite, but I also saw spoonbills, wood pigeons, and a few species of flightless birds, to name a few. Possums are a major threat to native birds. Different from our possums in the U.S., these possums are native to Australia and were introduced to New Zealand in 1837 to establish a fur trade. They have no predators in New Zealand and are a major ecological pest. There are possum trapping and eradication programs throughout the country aimed at allowing the native bird populations to rebound.

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THE NURSERY INDUSTRY IN NEW ZEALAND

I had the opportunity to visit 13 nurseries while in New Zealand, including The Native Plant Nursery in Taupo and Christchurch; Elliott's and Southern Woods in Christchurch; Multiflora, Lyndale, Nga Rakau, and Container Nurseries in Auckland; Kilmarnock Nurseries and Starter Plants Limited in Palmerston North; and Appleton's Tree Nursery, Waimea Nurseries, and Titoki Nursery in Nelson. Most of these container nurseries were small to medium in size (by U.S. standards). Each had their niche, but all were well cared for and obviously run by talented propagators. Familiar themes were concerns about labor shortages and succession planning (how to find the right person to take over after retirement). A "number 8 wire mentality" (a.k.a. Kiwi ingenuity) was another obvious and common thread. I saw custom-manufactured harvesting machinery still being maintained by the same person that built it 20 years ago. Another nursery had planted sugarcane along all their irrigation ditches to soak up water, to act as a windbreak, and to provide the raw materials for hobby rum brewing. Some folks were even brewing their own rooting hormones and mycorrhizal inoculants!

MYRTLE RUST

All my tours and the New Zealand Region conference were colored by discussion of the disease myrtle rust, which showed up in New Zealand only two days before I arrived. It is suspected that spores blew over from Australia. Myrtle rust affects various species in the Myrtaceae family, primarily the new growth. The native pohutukawa (*Metrosideros excelsa*) may be susceptible, which would be a major blow to this iconic species both in landscapes and in its native setting. It remains to be seen whether feijoa (*Acca sellowiana*, also known as pineapple guava) will be susceptible.

The first positive identification of myrtle rust was at a nursery. As I travelled around the country, I learned that the disease was being identified at new locations almost every day. Confirmed cases ramped up as the conference began, and the nursery field trips were canceled at the last minute per a request from the federal government. The Executive Committee had to develop a new tour itinerary in less than 24 hours, with the new tour including a kiwi fruit grading and packing house, an orchid nursery, and a cucumber greenhouse. A forum on myrtle rust was also added to the schedule and we had a very thoughtful and timely conversation about what this disease might mean for the nursery industry. My favorite quote from the forum was, "Without the movement of plants, we don't have a business. With the right to move plants comes a great responsibility."

CLOSING THOUGHTS

The last thing that really stood out from my trip was how willing everyone was to share information. I'm sure this is at least in part because Kiwis (and plant people) are inherently friendly folks, but I think it is also a reflection of IPPS membership. As an early-career propagator, I'm very excited about the access to knowledge and mentorship that IPPS will give me over the coming years.

ACKNOWLEDGEMENTS

Finally, I want to express my gratitude to the Western Region for sending me to New Zealand, my wonderful hosts (Juliette Curry, Antony Toledo, Philip Smith, and Mary Duncan) for taking such great care of me, and to all the other lovely folks I met along the way. Meeting everyone was the best part of the trip. Thanks to you all. And to any young propagators who fit the criteria, I strongly encourage you to apply. The program will be repeated next year, and it is truly a great experience.