

cast a rain shadow? It does, but according to Te Ara (The Encyclopedia of New Zealand) <https://teara.govt.nz/en/taranaki-region/page-2>, this tends to be to the south and east of the mountain. Or is it simply that this forest is only at an early stage of regeneration and that bryophyte diversity will increase in time? And is this typical for the whole reserve, or just a feature of the small central bush patch that is isolated from the rest by grassy farm

tracks? A more thorough survey of bryophytes in the rest of this reserve is the first step to answering some of these questions.

Acknowledgements

I thank John Braggins for checking and verifying or correcting my liverwort identifications.

References

- Beever, J.E. 2021: Mosses of Mahood-Lowe Reserve, Taranaki. *Auckland Botanical Society Journal* 76 (1): 24–26.
Davidson, G. (ed.) 2021: Report of the Auckland Botanical Society trip to Taranaki on 29 Jan – 1 Feb 2021. *Auckland Botanical Society Journal* 76 (1): 10–24.

Appendix. Liverworts recorded in Mahood-Lowe Reserve, Taranaki, on 5 Feb 2021.

<i>Plagiochila annotina</i>	AK 382253
<i>Porella elegantula</i>	AK 382254
<i>Radula grandis</i>	AK 382252

Botanising with nonagenarian Auntie Anne in the King Country

Ewen K. Cameron

Anne Fraser, known to most of us as Auntie Anne, has been keen for many years to show Auckland botanists some of her local botanical oddities, specifically:

- odd hīnau (*Elaeocarpus*);
- a weeping tōtara (*Podocarpus*); and
- odd tree daisy (*Olearia*).

With the Auckland Botanical Society anniversary weekend trip to Taranaki, it seemed the ideal opportunity to take up her kind offer to come and stay, and see her interesting plants, on the way down, or on the return trip. Ewen and Cheryl Taylor decided to stay on their way down; “the girls” (Dhahara Ranatunga, Yumiko Baba, Zara Skuse), and the following day, Geoff and Bev Davidson, stayed on their way back.

Anne has lived all her life in the Ongarue Valley in the King Country, growing up on her parents’ farm and marrying the boy next door in 1949. In 1952, the day King George VI died, they moved into the 1923 farmhouse where she still lives. House improvements/additions were made over the years and since her husband’s death in 1997, Anne has lived there alone.

Her instructions to us were to: “turn off SH 4 at Ongarue, cross the railway line, go along Tuhua

Road and from the Ongarue River bridge it’s 10 km down the gravel Ngakonui-Ongarue Road – I’ll cut the grass at the front by the driveway to make it obvious”. The instructions were perfect. The cut grass was useful because the house is scarcely visible from the road. After being warmly greeted by Anne (Fig. 1) and a quick look around the slightly overgrown garden with some lovely flowering roses, we made plans to utilise the afternoon and do some botany.

The hīnau

We were soon being driven by Anne along the backcountry gravel road for 30 minutes (later tarseal) first east, then north to Waituhi, our first destination, her grandson Guy Fraser’s farm. The newish farmhouse on a ridge had a splendid view down to a river and up to the Pureora Forest Park to the north. After a welcoming cup of tea, we drove to his southern boundary which was adjacent to the small forest patch with the odd hīnau. Anne had already spoken to the owner for permission to visit. We carefully crossed a paddock of ‘Chou moellier’ kale, over the fence by a treefall and into a small stand of forest on flat land. Both hīnau (*Elaeocarpus dentatus*) and pōkākā (*E. hookerianus*) were present as adult trees and also as seedlings (Figs. 2, 3). Anne’s sharp eyes had noticed the more prominent toothing of the leaves of several of the adult trees



Figs. 1–9: **1.** Ewen and Auntie Anne in her King Country garden with her weed-eater that she'd used to cut the roadside grass that morning. Photo: 26 Jan 2021, C. Taylor. **2.** Anne, Yumiko (at the back) and Zara under the cattle-trimmed, odd hīnau. Photo: 2 Feb 2021, D. Ranatunga. **3.** Hīnau and pōkākā seedlings growing together under a mixed *Elaeocarpus* canopy. Photo: 2 Feb 2021, Y. Baba. **4.** The hīnau fruiting and leaves with prominent teeth. Photo: 2 Feb 2021, D. Ranatunga. **5.** The weeping tōtara near Waituhi at 380 m asl, with Anne and Cheryl admiring the ongaonga patch next to it. Photo: 26 Jan 2021, E. Cameron. **6.** The extreme branching upper trunk of the weeping tōtara. Photo: 26 Jan 2021, E. Cameron. **7.** The weeping outer branches of the tōtara, 1.0–1.5 m long. Photo: 26 Jan 2021, E. Cameron. **8.** Fibrous bark of the base of the weeping tōtara. Photo: 26 Jan 2021, E. Cameron. **9.** The wide-branching, 4-m-tall flowering *Olearia* cf. *furfuracea* from which the specimens were collected. Photo: 4 Feb 2021, G. Davidson.

(Fig. 4) compared with the usual hīnau leaves. Knowing that Yumiko was also going to be shortly visiting this site I deferred it to her to give a taxonomic ruling on it, as Yumiko studied *Elaeocarpus* in Queensland for her PhD and is currently researching the appropriate status of Cheeseman's *E. dentatus* var. *obovatus*. Yumiko later told me the individuals are from one of her tentative morphological groups found in a huge variety of hīnau leaf shapes, sometimes suspected as a hybrid between *E. dentatus* and *E. hookerianus*, but it is a casual speculation and needs to be investigated fully. Several fruiting specimens were collected by her for the herbarium (AK) and further study.

The tōtara

Then it was back in the car for the weeping tōtara which was on Guy's farm a little to the west. We parked and Anne headed off up a grazed paddock with a scattering of trees, mainly kahikatea (*Dacrycarpus dacrydioides*) and tōtara (*Podocarpus totara*). Further up, Anne waited for me to catch up and pointed across the paddock to the weeping tree (Fig. 5). Although other tōtara were present, only one was weeping. It was c.9 m tall, multi-stemmed, above 3m there was a mass of small erect branches (Fig. 6), and only the outer branches were weeping (Fig. 7). Both the leaves and the fibrous bark (Fig. 8) appeared to match lowland tōtara (*P. totara*). We searched for some fertility and only found 3 old male cones caught in the foliage, unattached. Therefore, it is likely to be a male tree, although the cones may have blown from adjacent trees.

Simpson (2017) mentions weeping tōtara in his book on tōtara and specifically mentions a well-studied weeping one at Woodbury, near Geraldine, photographed in 1946 (Simpson 2017: 249). A study using marker chemicals reported by Simpson (op. cit.) showed surprisingly that it was the result of a 3-way hybrid, initially between *Podocarpus acutifolius* × *P. nivalis* and then this hybrid crossed with *P. totara*. Simpson went on to say that pendulous tōtara are occasionally found throughout New Zealand and that they are nearly always hybrids between *P. laetus* and *P. totara*, (= *P. ×loderi*) combining the weak juvenile branches of the former and gangliness of the later. Two species of tōtara would occur in the wider Waituhi area: *P. laetus* and *P. totara*, and *P. nivalis* should not be far away – its pollen is perhaps blown here? Therefore, hybridism involving *P. nivalis* is also possible. Because of the fibrous bark I'm suggesting that it might be a *P. nivalis* × *P. totara* cross, and a specimen was collected for the herbarium (AK 381781). A straight mutant of *P. totara* is also a possibility. A genetic test would be interesting to try to resolve it.

Adjacent to the weeping tree was a healthy patch of ongaonga/tree nettle (*Urtica ferox*), which Cheryl spent most of her time next to, trying to photograph the red admiral butterflies visiting one of its main host species. Back where we parked, Auntie Anne later showed "the girls" a magnificent *Eucalyptus* tree c.30 m tall. They took a specimen of it back to the herbarium where Yumiko identified it as shining gum (*Eucalyptus nitens*), a cold-hardy species with a beautiful silver topping.

The tree daisy

From the tōtara we then returned to Anne's place after briefly stopping on the way at the hīnau landowner's house to update her on our visit. The *Olearia* site closer to Anne's house in the Mangakahu Valley by the Mangakahu Stream was pointed out – the *Olearia* had already been collected by her two days before (and also nearly 30 years previously). I pressed her recent specimen to take back to the herbarium. However, Anne was concerned that she hadn't been able to reach the flowers. This was rectified the following week when Geoff and Bev visited, and Geoff was coerced to collect a good flowering specimen which he brought back fresh. In the herbarium I struggled to key it out, the fact that there were only 7–9 florets/capitula made it difficult at the key couplet 28 in Allan (1961: 658):

"Capitula, all or most, with not >6 florets..."

Capitula, all or most, with at least 10 florets..."

I asked Rhys Gardner to also try, but he confessed that he couldn't match it to any species.

I later reread the species descriptions for *O. furfuracea* in Allan (1961: 665): "florets 8–12, ray florets up to 5", and decided that this was a closer match to the flowering specimen with 7–9 florets, including 4 ray florets/capitula (achenes pubescent). However, the untoothed leaves were narrower than most *O. furfuracea*, and more closely matched *O. thomsonii* which has 12–20 florets/capitula (Allan 1961). So, I'm referring to it as *O. cf. furfuracea*, and *O. furfuracea* does key out in both branches of couplet 28. Herbarium material from this site: AK 209160, 382245–46 (for herbarium images see: <https://www.aucklandmuseum.com/discover/collections>). It's great that Duncan Nicol, PhD student at Otago University, has begun to study the *Olearia furfuracea* clade, which includes *O. furfuracea*, *O. allomii*, *O. pachyphylla*, *O. townsonii* and *O. thomsonii*. I wish him success in sorting out the boundaries of these, at times, challenging species.

Farewells

Anne cooked us a lovely meal, a bottle of shiraz was shared, and her semi-wild cats remained outside – did I count seven? A hot teapot and a pot of porridge

were waiting for us first thing in the morning and after breakfast we said our farewells and thankyou and we departed for Taranaki, full of thoughts of this tough and capable nonagenarian living alone in the King Country!

The following week the three “girls” stayed with Auntie Anne followed by the Davidsons who were separately also taken to the same spots that we were shown. Talking to them afterwards, we were all impressed by how independent Anne is, fit and able. For instance, when a gravel truck met Anne and “the girls” head-on at a tight gravel corner, Anne evidently showed very speedy reflexes taking evasive action. Our visits haven’t totally answered Anne’s

botanical queries, but good herbarium material has been collected, and with further work might be resolved.

Acknowledgements

Your recent botanical guests all thank you Anne for your warm hospitality, sharing your house, history and for the guided tour of your botanical discoveries; Ewen also thanks Yumiko Baba for her initial thoughts on the hīnau, and for the eucalypt addition; Geoff Davidson for the flowering *Olearia* specimen; fellow visitors for the use of their images (acknowledged in the captions); and Rhys Gardner for kindly commenting on the *Olearia* specimens.

References

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Field trip to Arthur Leigh Titchener Memorial Covenant, Waiheke Island, 20 February 2021

Peter Moosberger

The third day of Auckland’s Covid Alert Level 3 fortunately dropped a level at midnight on the Wednesday prior allowing the trip to proceed under Level 2 rules. The weather was great – a fine and summery day. Most of us were aboard the 9am ferry, and a few travelled on the separate Devonport service. Transport from Matiatia to the top of the reserve had been generously arranged by the QEII Trust. Eighteen be-masked participants were aboard the bus for the ten-minute journey there.

Leaders: *Helen Preston Jones, Chris Floyd* (QEII National Trust). Participants: *Kerry Titchener* (property owner), *QEII Covenanters Sue Fitchett, Lyndsay Maeger*, locals *Helene Adeane, Ksenia Goliban, Lincoln Jackson (and 2 children), Nat Primak, Rod Morton, Hanne Sorensen; and Nona Banks*, Trust Manager for Waiheke Weed Control Trust. ABS members: *Jenny Andrew, Ann Brabant, Maureen Burke, Ewen Cameron, Neil Davies, Beth Gibbs, Leslie Haines, Sarah Hood, Peter Moosberger, Kim Patterson, Juliet Richmond, Mere Roberts, Joshua Salter, Cheryl Taylor, Alison Wesley, Maureen Young*.

On arrival at the Walter Frank Drive entrance we were met by Chris Floyd (who outlined the work of

the Trust and the specifics of this site), and by Kerry Titchener. Kerry’s father had fenced the gully from stock in the mid-1980s, allowing the gully to regenerate unassisted, a far-sighted move to protect the landscape. He set in place the QEII covenant in 2004. It was useful to hear from Nona of the weed control methods, targetting specific species, and seeing the results of the work throughout the visit. Chris briefed us on Health and Safety and distributed an information sheet showing topographical details, an aerial photo of the reserve and the Covid tracer QRcode.

The site, of some 53 ha extent, lies between Walter Frank Drive and Te Wharau Bay about 2 km southwest of Oneroa (Fig. 1). Chris told us the reserve was about a 50/50 mix of secondary coastal forest on the lower hill slopes, and primarily kanuka (*Kunzea robusta*) on the upper slopes, with a small area of raupo (*Typha orientalis*) wetland. Our visit to the site was to explore more of the Waiheke natural areas and to prepare a species list for this reserve. The vascular plant list of Whakanewha Regional Park by Mike Wilcox et al. (2002) was circulated as a checklist for the trip.