

LAKE MARAETAI FIELD TRIP

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On Saturday 11th October 2014 a boat load of botanists gathered at the lakefront at Mangakino. The lakefront is now a popular destination, with a permanent coffee bus, and Taupo District Council has recently ‘redeveloped’ the lake margin to make it more user-friendly for recreationalists. Mangakino is also part of the Waikato River Trail, with a section of track along the western side of the lake, which is now very popular with cyclists.

Lake Maraetai is ‘central’ on the Waikato hydro system, between Lakes Waipapa and Whakamaru. It is a long narrow lake, extending over about 10 km, with a typical ignimbrite gorge in the upper reaches. The surrounding landscape is predominantly pine plantations and farmland, and plantation being converted to farmland. Having spent some time on and around the lake, I was not overly optimistic of any new interesting botanical finds. Nevertheless, we set off up the main lake optimistic of a good day out.

Our first brief ‘stop’ was at the complex of wetlands adjacent to the township, in the vicinity of Matekuri Island. This isn’t a ‘real’ island, being connected to the mainland, and is a popular stopping point for motor-campers. Grey willows (*Salix cinerea*) are locally common but there is nevertheless reasonably extensive indigenous wetland vegetation, comprising beds of raupō (*Typha orientalis*), kuta (*Eleocharis sphacelata*), *Machaerina rubiginosa*, and various mixtures of these species, with local concentrations of *Isachne globosa*. We didn’t spend any time here, but on previous visits up to seven wetland *Carex* species have been found at this site.

We proceeded upstream, passing the Mangakino Arm on the true left (more on that later), and headed towards the Whakamaru Dam at the head of the lake. The lake soon

reduced to a narrow gorgy confine. Here we encountered an ignimbrite bluff system on the true left side of the lake, and quickly slowed to botanise our way upstream along this side of the gorge.

Initially there was a narrow scrubby band of low indigenous forest with kānuka (*Kunzea ericoides*), kamahi (*Weinmannia racemosa*), mahoe (*Melicytus ramiflorus*), with grey willow and kiokio (*Blechnum novae-zealandiae*) near the water. Bright yellow flowering Montpellier broom (*Teline monspessulana*) was locally common on dry open sites, with patches of wilding pines and eucalypts. Totara (*Podocarpus totara*) was also locally common, with occasional rimu (*Dacrydium cupressinum*), along with horoeka (lancewood; *Pseudopanax crassifolius*) and wheki (*Dicksonia squarrosa*).

Open ignimbrite bluffs became more frequent as we proceeded upstream, with hanging patches of *Metrosideros perforata*. Tanekaha (*Phyllocladus trichomanoides*) also became more common. It was a beautiful hot sunny non-windy day, and the melodious calls of korimako (bellbird; *Anthornis melanura melanura*) floated across the still water from where they were feeding in heavily-flowering kotukutuku (*Fuchsia excorticata*) adjacent to the water. Tui (*Prosthemadera novaeseelandiae novaeseelandiae*) were also prominent in large emergent kōwhai (*Sophora tetraptera*) higher on the slopes below the dam, also flowering heavily.

We proceeded as far upstream as the Whakamaru Dam, with nice stands of tanekaha close to the dam, before repeating the exercise on the true right side of the gorge. We stopped for lunch in a quiet spot before continuing downstream, collecting various 'new' records for the trip. We were impressed by the openly-exposed hanging root systems of large radiata pines (*Pinus radiata*) on the true left side of the lower gorge, with 5-10 m of roots exposed from the large old trees perched on the tops of ignimbrite cliffs. It was evident that root penetration into ignimbrite fissures, followed by subsequent growth and expansion, had in places forced large slabs of ignimbrite to peel off the cliffs.

Continuing downstream we entered the Mangakino Arm and boated a surprisingly long way upstream, between four and five kilometres from the main lake. This side excursion provided the ecological and botanical highlights of the trip. This is another steeply-sided ignimbrite gorge, much of which is clothed with dense tanekaha-totara forest. Although largely secondary, this is nevertheless quite impressive. Also impressive are the light grey/pinky ignimbrite cliffs towering above the water. Although narrow in places, and shallow, with a locally strong flow, the gorge was quite navigable.

Machaerina sinclairii was locally common on damp seepages on the lower gorge walls. Great hanging mats of *Metrosideros perforata* were present on dry cliffs. It was a considerable surprise to find mānatu (lowland ribbonwood; *Plagianthus regius*) here: four small trees, some flowering heavily. On our way upstream we also briefly saw an interesting white-flowered plant close to the water, and earmarked it for closer inspection on the way back. The gorge soon ceased, and the surrounding landform was more gentle and farmed, and the stream channel diminished markedly, whereupon we carefully made our way back to the white-flowered plant which, surprisingly, was *Ourisia macrophylla*. There was only one plant, in full flower, immediately adjacent to the water, in a good damp site. We got up close for photographs. Although surprising to find it on the day, on reflection it is really not surprising that it is here. Titiraupenga, as the crow flies, is only c.11 km from where we found it, and the upper tributaries of the Mangakino Stream drain an extensive area of indigenous forest on the slopes of Titiraupenga and Mt Pureora. No doubt there is plenty of good stream-side habitat in that area, so it is easy to see how water-borne seed could be carried to where we found the plant perched only slightly above water level.

Our trip downstream was further punctuated by an exploration of the understorey beneath tanekaha-totara forest, and discussion of *Collospermum microspermum* on a standing dead totara killed when the lake was formed. We then passed back beneath the main road bridge and the newish Waikato River Trail bridge, which has an impressive span.

We made a brief visit to the largish unnamed arm on the true right side of the main lake, opposite Mangakino township. There were limited beds of lake clubrush, but otherwise nothing special. The extensive area of pine plantation forest on the true right (eastern) side of the lake has been harvested relatively recently, right to the water's edge. It would be of considerable concern if this was not returned to forest cover as conversion to dairy farming, which is happening widely in the central North Island, would almost certainly have deleterious effects on water quality.

Little aquatic botanising was done during the day other than to note that hornwort (*Ceratophyllum demersum*) was prevalent wherever aquatic macrophytes were present.

We then returned to Mangakino after a very pleasant day, with some surprising finds.



Totara-tanekaha forest on gorge sides of Mangakino Stream. Photo: Paul Cashmore