Visit to Arapawa Island, February 2015

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The opportunity to visit Arapawa Island arose during the Wellington Botanical Society summer camp at St Arnaud, when Ken Fraser mentioned he had a boat and was planning a trip to the island in February 2015. The group was naturally to be mostly from Wellington Botanical Society.

On a previous visit to Arapawa Island in January 1994 with Nelson BotSoc, I spent a week around Te Aroha Bay and East Bay. On the recent trip much had changed. The house we stayed at in 1994 was now unoccupied and gardens abandoned. New houses had appeared. Arapawa sheep, from the next bay round, and two horses now grazed the shore paddock to a low lawn. Much of the rough pasture on the slopes had disappeared into kanuka shrubland. Several tracks we had used were now overgrown. At Ruapara Bay, at the head of East Bay, an Outdoor Education camp now stood on the old school site and the last of the pasture had been abandoned, left to retire to forest in the last few years.

On the first of our two days, we traversed the 4WD access track to the summit of Narawhia. The lower part of the track was flanked by kanuka, gorse and tauhinu. The evident grazing declined rapidly as we climbed, although we saw and heard several goats. The track and banks provided a variety of shrubs and introduced herbs including Spanish heath, *Leucopogon fraseri*, *Hypericum humifusum*, *Centaurium erythraea* and *Crepis capillaris*. From about two-thirds of the way up, the track flanked the Arapawa Scenic Reserve where it was evident that culling and the fence provided good protection for the shrubs within. The reserve here was dominated by five finger, *Raukaua anomalus, Geniostoma ligustrifolium*, mahoe, *Hebe parviflora* and a fringe of recently cut broom. New records here included ruderals (plants of disturbed areas) such as *Juncus pallidus, Clinopodium vulgare*, *Cynosurus cristatus*, *Daucus carota*, *Euchiton audax*, *E. japonicus*, *Geranium microphyllum*, *Gonocarpus incanus*, *Hydrocotyle moschata*, *Isolepis prolifera*, *Juncus articulatus*, *Pilosella officinarum*, *Plantago major*, *Prunella vulgaris*, *Pseudognaphalium luteoalbum*, *Rytidosperma clavatum*, *Senecio hispidulus*, *Soliva sessilis*, and obviously previously-missed native species such as *Carex breviculmis*, *C. forsteri*, *C. cockayneana*, *Clematis foetida*, *Gahnia setifolia*, *Lagenophora cuneata*, *Leptostigma setulosum*, and *Viola filicaulis*. Soon both sides of the track were flanked by patches of

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broadleaved scrub including broadleaf, tawa, abundant *Raukaua anomalus*, fuchsia and the odd hinau.

At the main ridge, the track continued northwards along to the hunters' hut where we had lunch. En route we penetrated the forest at several points, descending steeply downhill for short distances through a variety of forest. At the first point the forest was dominated by patches of red and black beech. Here for the first time we encountered a good variety of ferns, especially *Hymenophyllum demissum* and *Blechnum filiforme*, but also some crown fern. The canopy included southern rata, kamahi and toro. Shrubs included *Coprosma grandiflora*, heketara, horopito and its imitator, *Alseuosmia pusilla*. At later points the more common canopy plants were kamahi, broadleaf, hinau, five finger and huge fuchsia with abundant tree ferns in the subcanopy. The highlight here was rather common, huge terrestrial (not epiphytic) *Raukaua edgerleyi* with stems up to 35 cm in diameter. *Pterostylis graminea* and *Gastrodia cunninghamii*, well past flowering, were also seen near the hut. New records included *Hymenophyllum flabellatum*, *Notogrammitis billardierei* and *Hydrocotyle moschata*.

After lunch we continued west along the fence beyond the hut. There were several more large areas of similar forest and more *Raukaua edgerleyi*. After about an hour we descended the north ridge of the bay, initially through similar forest, quite bare underneath from pig rooting and goat browsing, contrasting with the much healthier forest through the fence. One huge *Raukaua edgerleyi* here was over 50 cm in diameter. The forest was quite weedy including plants such as feverfew, *Sagina procumbens*, *Clinopodium vulgare* and *Euchiton* species. Eventually the forest became very low, and bounded by tauhinu and kanuka scrub and patches of lightly grazed browntop grassland (Fig. 1). Here, there were several huge *Hebe parviflora* (Fig. 2) with stems perhaps 40 cm in diameter, vindicating their former name of "*arborea*". The choice of path then became between open patches of scrub and low forest. About halfway down the ridge, travel turned to patches of grass and low kanuka scrub.

On the second day we travelled by boat to Ruapara Bay to climb Mt Ross. After entering the broadleaved scrub, dominated by five finger and mahoe, the track soon passed into taller kanuka forest with an understorey of *Coprosma rhamnoides*. Here there were many small clearings where school parties had planted a variety of species including puriri. Ruderals appearing here included *Pteris tremula*, *Daucus carota*, *Stellaria media*, *Physalis peruviana*, *Solanum chenopodioides* and *S. nodiflorum*. The uncommon *Solanum aviculare* with its pale flowers was a surprise here. Further up, the forest was quite dense with few ground cover plants appearing, except in

Figure 1. Typical low scrub on the north ridge of Te Aroha Bay, Arapawa Island, looking into Otanerau Bay.

Figure 2. A large *Hebe parviflora* living up to its old name of "*arborea*".

clearings. These included *Dichondra repens*, browntop, *Acaena anserinifolia* and foxglove.

On reaching the narrow ridge, the track followed the boundary between older forest on cliffs on the Cook Strait side and regenerating broadleaved scrub dominated by five finger on the other, with great views of The Brothers and across Cook Strait through the shifting sea mist. The forest was dominated by dense kohekohe on a very rocky substrate often with only

litter beneath, but in open areas and on small bluffs a good variety of ferns and kiekie or supplejack occurred. A highlight here was the soft *Lastreopsis velutina* which likes these places. On the rocky ridge, *Metrosideros perforata* was often in flower. Other plants included prickly mingimingi, native passionfruit, the sweet-scented holy grass and *Astelia fragrans*. As we neared the summit, *Senecio rufiglandulosus* became very common in the open areas, unfortunately well past its spectacular flowering. The vegetation here became dominated by five finger scrub overlooking taller kohekohe forest beneath the bluffs with *Metrosideros fulgens* in flower and the odd *Lophomyrtus bullata* showing up as a bronze-leafed canopy plant. Within the forest, *Leptolepia novae-zelandiae* was one of a few additions.

The summit provided good views of the Queen Charlotte Sound heads and Cook Strait as the fog lifted (Fig. 3). Our return descent to the bay was through reverting pasture along a 4WD track around the head of Ruapara Bay. Here, in the upper part of the farm track, a great variety of plants was present along the banks including many seen earlier but also the white flowered *Wahlenbergia rupestris*, *Melicytus crassifolius*, and a form of *M. obovatus*. Damper banks in shaded areas included herbs such as *Leptostigma setulosum*, *Plantago raoulii*, *Raoulia glabra*, *and Nertera depressa*. The final stretch along the beach to the wharf was inhabited by many of the usual shore plants including *Atriplex prostrata*, *Selliera radicans*, *Ranunculus acaulis*, *Plantago coronopus* and *P. australis.*

Figure 3. Near Mt Ross, with recently retired shrubland, looking towards Cape Koamaru. Mt Ross is the local name for the peak of 429 m elevation.

The nice thing about this day trip was the lack of animal sign. Large areas of rank grass indicated recent removal of stock. Scrub and forest areas showed little sign of ground browsing. There was also regular evidence of a trapping program for stoats and rodents.

The vegetation in the two areas was quite strikingly different. At Te Aroha Bay beeches were present and tawa often dominant. At Ruapara Bay, kohekohe was dominant. The main difference in the forest areas seemed to be due to the dominance of clays at Te Aroha Bay and coarse broken rock at Ruapara Bay. Also the ruderal herbs were different, probably because of different farming practices and seed sources. Fewer new records were present at Ruapara Bay, perhaps because of the large areas of rank grass but also because more attention was paid on this trip to the scrub areas at Te Aroha Bay, rather than the forest as on the previous trip.

Nevertheless some species were much more apparent, especially *Carex* "Frosted Curls". This originated from house plantings at 41.16295N,174.34742E where, on the last visit, it was largely confined to, and dominated, a fenced area housing goats. It is now found throughout the area traversed at Te Aroha Bay. *Clinopodium vulgare* was also abundant at Te Aroha Bay (and not previously recorded) but not seen at Ruapara Bay. Other new records at Te Aroha Bay could have been made more evident by the partial shade of the Pylon track; however, some may have arrived recently such as *Isolepis prolifera*, *Pilosella officinarum*, *Clinopodium vulgare*, *Plantago major* and perhaps *Prunella vulgaris*.

It is always surprising how much the landscape can change in 20 years. Often the area is cleared for farming or plantation, but here it is rewarding to see nature reclaiming the land and rough scrub changing to secondary forest. In the fenced reserves, the changes are strong at all levels in the canopy, but around Te Aroha Bay forest recovery is still impeded by animals such as pigs and goats. Elsewhere in the Sounds, similar changes are occurring with pines progressively disappearing, as on Arapawa Island, with the help of numerous volunteers.

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A species list for Arapawa Island is available on request to the author.