Trip Report: Ahipara, 11-15 October 2013

Mike Wilcox

A group of 23 attended this camp, based at Ahipara, Northland. Local members Kevin Matthews and Bill Campbell were most helpful in assisting us. Excursions were made to the Ninety Mile Beach dunes at Ahipara; the coastal vegetation from Shipwreck Bay towards Reef Point; the Ahipara Gumfields; Lake Ohia and Lake Waiporohita; Coopers Beach to see *Todea barbara*; and to Herekino Forest.

Participants

Hugo Baynes, Jan Butcher, Bill Campbell, Lisa Clapperton, Helen Cogle, Brian Cumber, Bev & Geoff Davidson, Leslie Haines, Graeme Jane, Sandra Jones, Christine Major, Kevin Matthews, Viv Paterson, Colleen Pilcher, John & Stella Rowe, Peter Scott, Val Tomlinson, Alison Wesley, Diana Whimp, Mike Wilcox, Maureen Young. Philip, Judy and William Wrigley joined us for the walk from Shipwreck Bay.

Logistics

Accommodation was in the YHA Lodge and cabins at Ahipara Holiday Park, Takahe Street, Ahipara. It is an attractive, spacious camping ground that made a convenient and comfortable base for our various botanical forays.

Botanical background

Ahipara is renowned for plants. Early botanical visitors there were Colenso, Buchanan, Kirk, Petrie, Adams and Cheeseman (Buchanan & Kirk 1869; Cheeseman 1896). However, it was the local collectors R.H. Matthews, H.B. Matthews and H. Carse who really put Ahipara on the botanical map (Carse 1911, 1915; Hatch 1989, 1990; Godley, 1995, 1996, 1997). Sando (1936) made a great contribution with his little-known list of species for Herekino Forest. The indefatigable John Bartlett contributed valuable plant records from the district (Bartlett 1980). Important general surveys and ecological studies of the vegetation (particularly the Ahipara Gumfields and Tauroa Peninsula) were reported by Clunie and Wardle (1983), Conning (1998), Conning and Holland (2003), Clarkson et al. (2011), and Smale (2011), and species lists were compiled for the Gumfields and Tauroa Peninsula (Druce 1991) and for Herekino Forest (Bellingham 1985; Jane 2003a,b). Wetlands and their plants are covered by Northland Regional Council (2011), and some lists for lakes have been compiled by Maureen Young and Paul Champion (NIWA).

Orchids have always been of special interest to botanists in the Ahipara–Kaitaia area (Campbell 2013a,b; Forester & Townsend 2004; Hatch 1989, 1990; Matthews 2009; McCrae 1990; Molloy 1993; Scanlen 2011), and one of the main attractions for botanical visitors.

In addition to these published articles and unpublished reports, our knowledge of the flora of Ahipara and adjoining locations has come from the extensive collections housed in the herbaria at the Auckland Museum (AK), Te Papa (WELT), Landcare Research (CHR), and Scion, Rotorua (NZFRI). Important collectors have been R.H. Matthews, H.B. Matthews, H. Carse, T.F. Cheeseman, R.C. Cooper, R. Mason, N.T. Moar, J.K. Bartlett, A.P. Druce, W.R. Sykes, G.B. Rawlings, C.C. Ogle, J.G. Beachman, A.E. Orchard, P.J. Brownsey, J.E. Braggins, M.F. Large, P.J. Bellingham, R.O. Gardner, A.E. Wright, P. Sexton, L.J. Forester, A.J. Townsend, M.E. Young, L.R. Perrie and P.J. de Lange.

Fig. 1. Wellington Bot Soc campsite, Valley of Peace, Hunahuna Stream, Tauroa Peninsula. Photo: Colin Ogle, 3 Jan 1990.

The most famous botanical visit to the Ahipara area was undoubtedly the Wellington Botanical Society's Jubilee camp in 1-3 January 1990, led by Tony Druce. The group was 83 strong and camped in the bush beside the Hunahuna Stream in the "Valley of Peace" on Tauroa Peninsula (Fig. 1), exploring widely in the area (including gumfields and the Tanutanu Stream dunes) and recording plants (Druce 1991). The Auckland Botanical Society, in its 75 year history, has reported on only one brief visit to Ahipara itself (in January 1995) as part of a wider northern visit based at Pukenui (Gardner 1995), though Lake Ohia has previously attracted our attention (Gardner 1995; Young 2007). Our objectives for the 2013 visit were to familiarise ourselves with the plants of the coast, gumfields, wetlands and forest of the district, and to contribute to a forthcoming Auckland Botanical Society bulletin listing the plants of Ahipara and adjoining Herekino

Fig. 2. Whangatauatia Pa Hill, Ahipara, 207 m. Photo: Mike Wilcox, 22 Sep 2013.

Fig. 3. Ninety Mile Beach, Ahipara. Kaka Street beach entrance, dunes, golf course, Holiday Park (lower right) and Lake Waimimiha. Photo: Kaitaia Golf Club, Dec 2012.

Fig. 4. *Gladiolus carneus*, Ahipara dunes. Photo: Mike Wilcox, 11 Oct 2013.

Forest, and Lake Ohia, and including the wayside exotic flora of the Ahipara–Kaitaia–Herekino district. For many of the exotic wayside plants and orchids, which are mostly very seasonal, our observations recorded here are just a snapshot of what was showing up in mid-October.

Geographical features

Volcanic rocks of Late Cretaceous-early Tertiary age (50-100 million years old) are prominent in Ahipara's geology. These hard basalts and dolerites of the Tangihua Group form some hills near the coast, the most conspicuous one being Ahipara's special maunga, Whangatauatia Pa Hill (Fig. 2). They also outcrop along the Ahipara foreshore, and around the coast from Shipwreck Bay (Smith & Grenfell 2002), and form the extensive Herekino massif rising to 560 m. The elevated Ahipara massif (Tauroa Peninsula) comprises underlying Tangihua basalt, Quaternary sand dunes, and on the flat gumfields at 200 m elevation there are sand deposits, clays, and iron oxide pans interspersed with lignite, of Pliocene age. These are best seen along the Erewhon Track. Lake Ohia features a 30,000 year-old fossil kauri (*Agathis australis*) forest. The sand dunes of Ninety Mile Beach are an important feature of Ahipara, as are numerous dune lakes (Northland Regional Council 2011).

Thus, the district has various habitats for plants, including raw sand dunes, consolidated sand dunes, lakes and wetlands, coastal cliffs, gumlands occupying the sites of former kauri forests, local patches of bush in coastal valleys, and forest-clad uplands.

Coastal dunes

Our first group foray was to Te Oneroa-a-Tōhē/Ninety Mile Beach sand dunes north-east of Kaka Street, and adjacent to the Kaitaia Golf Club's Ninety Mile Beach golf link course (Fig. 3). Here we were joined by three members of the Ahipara Community Coast Care Group – Doug Klever, Ned Pyne and Karen MacDonald – involved in dune restoration and an active partner in the Ahipara New Zealand dotterel sanctuary (Tuturiwhatu Pukenui Punanga).

The outer dunes here are sparsely covered in planted spinifex (*Spinifex sericeus*) but in the sheltered highly modified back dunes there was an extraordinary diversity of plants, many of them naturalised exotics from garden dumpings. Native plants of note were *Apodasmia similis*, *Calystegia soldanella*, *Cotula australis*, *Ficinia nodosa*, *Ipomoea cairica*, *Muehlenbeckia complexa* and *Tetragonia implexicoma*. Taupata (*Coprosma repens*) and pohutukawa (*Metrosideros excelsa*) were present, though planted. Common exotic plants were marram grass (*Ammophila arenaria*), shivery grasses (*Briza maxima*, *B. minor*), rip-gut brome (*Bromus diandrus*), kikuyu grass (*Cenchrus clandestinum*), veldt grass (*Ehrharta erecta*) and tree lupin (*Lupinus arboreus*) (Plate 1A), together with a diverse array of colourful bulbous monocots: *Agapanthus praecox* subsp. *orientalis*, *Aristea ecklonii*, *Babiana stricta*, *Freesia laxa*, *Freesia refracta*, *Gladiolus carneus* (Fig. 4), *Tritonia crocata*, *Tritonia lineata*, *Watsonia meriana* subsp. *bulbillifera* and *Zantedeschia aethiopica*.

Naturalised shrubs and succulents recorded were *Carpobrotus chilensis*, *C. edulis*, *Chrysanthemoides*

Pl. 1A. ***Lupinus arboreus*****, Ahipara dunes. Photo: Mike Wilcox, 11 Oct 2013.**

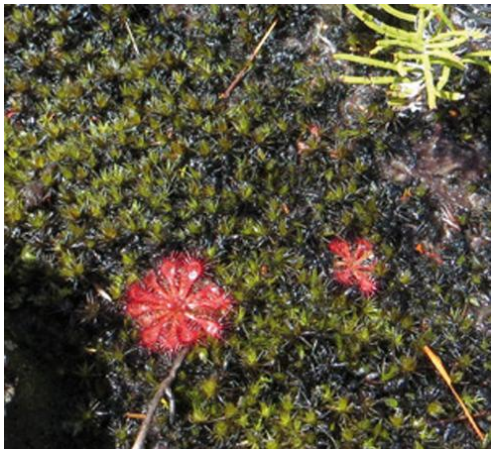
Pl. 1B. ***Plectranthus barbatus*****, Ahipara dunes. Photo: Mike Wilcox, 11 Oct 2013.**

Pl. 1C. ***Euphorbia segetalis*****, Shipwreck Bay towards Mokorau Stream. Photo: Mike Wilcox, 12 Oct 2013.**

Pl. 1D. ***Hibiscus diversifolius*****. Shipwreck Bay towards Mokorau Stream. Photo: Mike Wilcox, 12 Oct 2013.**

Pl. 1E. ***Korthalsella salicornioides*****, Ahipara gumfields, on manuka. Photo: Viv Paterson, 12 Oct 2013.**

Pl. 1F. Two fertile ***Phylloglossum drummondii*** **plants, Ahipara gumfields. Photo: Viv Paterson, 12 Oct 2013.**



Pl. 1G. ***Drosera spatulata*** **and the moss** ***Campylopus acuminatus*** **var.** ***kirkii*****, Ahipara gumfields. Photo: Viv Paterson, 12 Oct 2013.**

Pl. 1H. ***Drosera pygmaea*****, Lake Ohia. Photo: Viv Paterson, 13 Oct 2013.**

Plate 2A. *Singularybas oblongus*, Ahipara gumfields. Photo: Mike Wilcox, 23 Sep 2013.

Plate 2B. *Corunastylis pumila*, Ahipara gumfields. Photo: Viv Paterson, 12 Oct 2013.

Plate 2C. *Linguella puberula*, Lake Ohia. Photo: Viv Paterson, 13 Oct 2013.

Plate 2D. *Plumatochilos tasmanicum*, Lake Ohia. Photo: Viv Paterson, 13 Oct 2013.

Plate 2E. *Calochilus herbaceus*, Lake Ohia. Photo: Viv Paterson, 13 Oct 2013.

Plate 2F. *Petalochilus bartlettii*, Herekino Forest. Photo: Viv Paterson, 14 Oct 2013.

Plate 2G. *Simpliglottis cornuta*, Herekino Forest. Photo: Mike Wilcox, 14 Oct 2013.

monolifera (boneseed), *Crassula multicava*, *Erythrina ×sykesii*, *Lycium ferocissimum*, *Melaleuca armillaris* (Fig.5), *Opuntia monacantha*, *Plectranthus grandis* (Plate 1B) and *Schinus terebinthifolius.* Other plants noted were *Cakile maritima*, *Conyza sumatrensis*, *Facelis retusa*, *Gazania linearis*, *Delairea odorata*, *Oenothera stricta*, *Ornithopus perpusillus*, *O. pinnatus*, *Parochetus communis*, *Pelargonium ×asperum*, *Pelargonium ×domesticum*, *Rumex acetosella*, *Silene gallica* and *Solanum chenopodioides*.

Mike Wilcox had earlier explored the dunes west of Kaka Street towards Korora Park and the banks of the Wairoa Stream. Features here were an extraordinary forest of *Erythrina ×sykesii* (Fig. 6); naturalised *Banksia integrifolia*, *Lantana camara*, *Polygala myrtifolia*, *Psidium cattleianum* and *Schinus terebinthifolius*; abundant boneseed; patches of African daisies (*Arctotis stoechadifolia*, *Osteospermum fruticosum*); and various monocots including *Apodasmia similis*, *Bolboschoenus medianus*, *Ficinia nodosa* and *Juncus kraussii* on the stream bank. Veldt grass and wild gladiolus (*Gladiolus undulatus*) were common, the latter not yet in flower.

Wayside plants at Ahipara

Numerous plant species, mostly exotics, grow on the road verges, in lawns and pastures, and on waste ground at Ahipara. At the Ahipara Holiday Park there were several patches of the small rush *Juncus capitatus* and the small sedge *Isolepis levynsiana*, and abundant *Carex longii* in damp places, while the daisy *Facelis retusa* was common in gravelly places. Purple duckweed (*Landoltia punctata*) and ferny azolla (*Azolla pinnata*) were floating plants on a pond at the Holiday Park.

Conspicuous wayside grasses included silvery hair grass (*Aira caryophyllea*), sweet vernal (*Anthoxanthum odoratum*), narrow-leaved carpet grass (*Axonopus fissifolius*), stripey brome (*Bromus valdivianus*), summer grass (*Digitaria ciliaris*), Yorkshire fog (*Holcus lanatus*), annual poa (*Poa annua*) and vulpia hair grass (*Vulpia myuros*). A long list of herbaceous plants included parsley piert (*Anaphanes inexpectata*), *Cotula australis*, simple-leaved cudweed (*Gamochaeta simplicicaulis*), Australian hydrocotyle (*Hydrocotyle tripartita*), lotus (*Lotus pedunculatus*), yellow bartsia (*Parentucellia viscosa*), allseed (*Polycarpon tetraphyllum*) and subclover (*Trifolium subterraneum*).

Wayside shrubs seen in the area were kangaroo thorn (*Acacia paradoxa*), Cape honey flower (*Melianthus major*), brush wattle (*Paraserianthes lophantha*), purple broom (*Polygala virgata*), Dally pine (*Psoralea pinnata*) and woolly nightshade (*Solanum mauritianum*).

Shipwreck Bay coast to Mokorau Stream

We parked our cars at low tide on the beach at Shipwreck Bay, and then proceeded around the coast as far as Mokorau Stream. Kevin Matthews took a group on his ute further, to Reef Point. A dramatic feature of this coastline is the wide wave-cut platform along the cliff line, providing easy walking and a convenient natural road for vehicles (Fig. 7).

Fig. 5. *Melaleuca armillaris*, Ahipara dunes. Photo: Mike Wilcox, 11 Oct 2013.

Fig. 6. *Erythina ×sykesii*, Ahipara dunes. Photo: Mike Wilcox, 22 Sep 2013.

Fig. 7. Wave-cut rock platform, Shipwreck Bay towards Mokorau Stream, Ahipara. Photo: Mike Wilcox, 12 Oct 2013.

The vegetation on the steep banks was dominated by exotic plants, with pampas (*Cortaderia selloana*), boneseed, gorse, *Cotoneaster glaucophyllus*, brush wattle, coast banksia (*Banksia integrifolia*), tree lupin and *Callistachys lanceolata* prominent. Exotic herbs recorded included *Blackstonia perfoliata*, *Carpobrotus chilensis*, *C. edulis*, *Euphorbia segetalis* and *Sonchus oleraceus*. *Euphorbia segetalis* is noteworthy because T.F. Cheeseman first recorded this plant from the Ahipara coast in 1914, and it is still here and nowhere much else (Plate 1C).

Coming now to native plants, we noted that *Lobelia anceps* was here the commonest herb in freshwater seeps at the base of cliffs. We also recorded *Cotula coronopifolia*, *Disphyma australe*, *Lilaeopsis novae-zelandiae*, *Plantago raoulii*, *Samolus repens*, *Sarcocornia quinqueflora* and *Selliera radicans* in this habitat. A dry, rocky bank had a patch of *Wahlenbergia vernicosa*. Taller native herbs were *Haloragis erecta* and several patches of prickly hibiscus (*Hibiscus diversifolius*) (Plate 1D), *Ipomoea cairica*, and *Cassytha paniculata*. Native trees and shrubs were sparse, and included kawakawa (*Piper excelsum*), hangehange (*Geniostoma ligustrifolium*), coastal karamu (*Coprosma macrocarpa* subsp. *minor*) and the sandhill kanuka *Kunzea* aff. *ericoides* (a). *Coprosma acerosa* was found on a rocky outcrop.

Fig. 8. *Banksia integrifolia*, Ahipara gumfields. Photo: Mike Wilcox, 23 Sep 2013.

Fig. 9. Exploring the Ahipara gumfields. Photo: Mike Wilcox, 12 Oct 2013.

Fig. 10. *Empodisma robustum* under manuka, Ahipara gumfields. Photo: Mike Wilcox, 23 Sep 2013.

Of native monocots, the sedge *Machaerina sinclairii* was particularly abundant, and there were also patches of *Apodasmia similis*, *Carex pumila* (on sand), *Cyperus ustulatus*, *Isachne globosa*, *Isolepis prolifera*, *Machaerina arthrophylla*, *Machaerina articulata*, *M. juncea*, *Phormium tenax* and *Schoenoplectus tabernaemontani*. *Aristea ecklonii* and *Paspalum vaginatum* were common exotic monocots.

Ahipara Gumfields

And so to the gumfields, via the old Gumfields Road. We made a courtesy call to check in with Ross Yelash at the old Gumfields Museum, where he lives. Andrew and Melissa, who live further south along Gumfields Road, joined us for the introduction. We all signed Ross's visitors' book. Tony Yelash was the last of the gumdiggers, and the area has a very colourful past (McConnell 1980). Mitchell (2011) describes the great bike trail circuit which takes in the gumfields and the Ahipara coast.

Manuka (*Leptospermum scoparium*) is the most abundant shrub over the gumlands, with gumland kanuka or rawiri (*Kunzea ericoides* var. *linearis*), *Dracophyllum lessonianum*, *Epacris pauciflora*, *Leucopogon fasciculatus* and *Pomaderris amoena* being the other main native shrubs. Akeake (*Dodonaea viscosa*) was also present, being particularly noticeable on the road margins. The dwarf mistletoe *Korthalsella salicornioides* (Plate 1E) was found abundantly on manuka adjoining the road south of the Gumfields Museum building. Prickly hakea (*Hakea sericea*) and gorse (*Ulex europaeus*) were the dominant introduced shrubs, but with coast banksia (*Banksia integrifolia*) also abundantly naturalised (Fig. 8). The scrub varies in height from 0.5 to 3 m, depending on drainage and fire history.

The acidic, impoverished, poorly-drained gumland on sites formerly worked over for kauri gum provided us with a feast of botanical highlights (Fig. 9). The scrambling semi-scandent restiad *Empodisma robustum* occurred in the manuka scrub, often attaining a height of 2-3 m (Fig. 10). Sedges

abounded, with *Machaerina teretifolia* and *Schoenus brevifolius* being most abundant. The dominant fern was *Gleichenia dicarpa*, with some less-common ones being *Blechnum minus*, *Lindsaea linearis*, *Pteridium esculentum* and *Schizaea fistulosa*.

The lycophytes were a definite highlight, and here we saw five species. *Lycopodiella cernua* was prominent on roadside banks, while *Lycopodiella lateralis* and *L. serpentina* (Fig. 11) occurred in the wetter parts of the old gum workings, the latter being semi-aquatic. One of our main targets for the day, *Phylloglossum drummondii*, turned up in respectable numbers, at first in a few small patches here and there, but later in quantity further south along Gumfields Road (Fig. 12 and Plate 1F). Braggins (1974) refers to it as the "miniature denizen of the North".

Turning now to orchids, we found a good many species, but none in great abundance. In fact, the orchids were sparse and had to be looked for carefully. Of the smaller ground-hugging orchids, *Anzybas rotundifolus* and *Singularybas oblongus* (Plate 2A) were recorded in flower. Taller species of open substrates included *Calochilus herbaceus*, *Corunastylis pumila* (Plate 2B), *Microtis arenacea*, *Thelymitra aemula*, *Thelymitra carnea*, *Thelymitra longifolia*, *Thelymitra malvina*, *Thelymitra pulchella* and *Thelymitra sanscilia*.

The other native monocot common on the gumfields was *Dianella haematica*, while the introduced *Aristea ecklonii* was common on road margins. Native dicot herbs present were the bright red *Drosera spatulata* (Plate 1G), *D. binata*, *Centella uniflora*, *Gonocarpus incanus* and *Utricularia delicatula*.

More mesic conditions were encountered down the Erewhon Track at a site of the gumdiggers' shanty town. Here there were groves of mamaku (*Cyathea medullaris*) with shining karamu (*Coprosma lucida*), *Coprosma rhamnoides* and kawakawa (*Piper excelsum*), and some naturalised plants, notably *Dipogon lignosus*, *Elaeagnus ×reflexus*, *Impatiens sodenii*, *Phytolacca octandra*, and an unusual-looking bramble which we recorded as *Rubus ostryifolius*.

A number of lower plants flourish in acidic, wet conditions of the gumfields, and are an important aspect of the ground vegetation. Abundant mosses seen in damp places were *Campylopus acuminatus* var. *kirkii* (Plate 1G), *Sphagnum cristatum* and *S. falcatulum*. Open banks supported prominent patches of the lichens *Cladia retipora*, *Cladonia confusa*, and *Stereocaulon ramulosum*. Puddles and damp ground had large expanses of a green alga, *Cylindrocapsa geminella*. This species has filaments enclosed in a thick gelatinous sheath, with its green chlorophyll masked by reddish pigments, giving it a dark appearance in the field. Its special ecological niche seems to be these damp acidic substrates.

Fig. 11 *Lycopodiella serpentina*, Ahipara gumfields. Photo: Mike Wilcox, 23 Sep 2013.

Fig. 12. *Phylloglossum drummondii*, Ahipara gumfields, Photo: Viv Paterson, 12 Oct 2013.

Fig. 13. *Lepidosperma neozelandicum*, Lake Ohia. Photo: Mike Wilcox, 13 Oct 2013.

Lake Ohia

Lake Ohia at the base of Karikari Peninsula has always featured strongly in the world of orchid people (Molloy 1993; Campbell 2013b), so it was with great expectations that we headed over to this extensive gumfield with our local guides, Bill Campbell and Kevin Matthews. As described by Molloy (1992), the two primary orchid habitats at Lake Ohia are the scrub-covered dune ridges and the sedge-covered lake floor. With Bill leading the way our first stop was along Tahanga Road in dense gumland scrub. As at Ahipara, this gumland on the

Fig. 14. Slash pine (*Pinus elliottii*), Lake Ohia. Photo: Mike Wilcox, 13 Oct 2013.

Fig. 15. Exploring Lake Waiporohita. Photo: Mike Wilcox, 13 Oct 2013.

Fig. 16. *Gratiola pedunculata*, Lake Waiporohita. Photo: Mike Wilcox, 13 Oct 2013.

dune ridges is dominated by manuka and rawiri, *Dracophyllum lessonianum*, and *Epacris pauciflora*. *Hakea sericea* is also abundant, and there is another abundant invasive Australian, *Acacia longifolia*, which we did not see on the Ahipara gumfields. We soon had our quarry – thriving populations of the rare orchids *Linguella puberula* (Plate 2C) and *Plumatochilos tasmanicum* (Plate 2D). Our photographers were kept busy striving to get the perfect shot. At this site another notable feature was the prevalence of the tussock-like sedge *Lepidosperma neozelandicum* (Fig. 13), and some good colonies of *Phylloglossum drummondii* and *Schizaea fistulosa*.

Our second stopping point was down Lake Ohia Road off Inland Road, and on a grassy verge we had the perfect spot for getting to know *Drosera hookeri*, conveniently growing intermingled with *D. auriculata*. To cap things off, the miniscule *D. pygmaea* (Plate 1H) was also found here. Further along Inland Road, we again turned down to the lake, but it was so flooded that we could not get in very far. One discovery of interest, though, was a naturalised population of young slash pine trees (*Pinus elliottii*) (Fig. 14).

Our final Lake Ohia stop was along the road to Rangiputa Station. This yielded several interesting plants, notably the orchids *Calochilus herbaceus* in flower (Plate 2E)*, Thelymitra* aff. *pauciflora* "Darkie", and *Thelymitra* "rough leaf" (Rolfe & de Lange 2010), and also several patches of the large introduced Australian grass *Poa labillardierei*.

Lake Waiporohita

Of immediate botanical interest at this small lake beside Inland Road were aquatic plants in the shallows and on the margins, and taller emergent plants in deeper water (Fig. 15). The fern *Histiopteris incisa* was found on damp ground, together with the grasses *Agrostis stolonifera*, *Cynodon dactylon*, *Digitaria ciliaris*, *Paspalum distichum*, and the restiad *Apodasmia similis*. The sedge *Carex longii* was abundant on damp ground at the lake edge, while *Eleocharis sphacelata*, *Machaerina articulata* and *Schoenoplectus tabernaemontani* were the main tall sedges in standing water. *Aristea ecklonii* and *Gladiolus undulatus* were abundant on the shore.

A dicot herb plant of special interest was the Australian *Gratiola pedunculata* (de Lange 1997). It was common, with numerous mature plants emergent above shallow water and an abundance of seedlings (Fig. 16). It is probably a natural introduction. Alligator weed (*Alternanthera philoxeroides*) was abundant, but we saw just a few plants of *A. nahui* and *A. denticulata* (also an Australian vagrant). Other herbs of note were penny royal (*Mentha pulegium*), annual saltmarsh aster (*Symphyotrichum subulatum*), gravel groundsel (*Senecio skirrhodon*), *Persicaria decipiens*, *Myriophyllum propinquum*, *Ludwigia palustris*, and the pondweed *Potamogeton cheesemanii*.

Coopers Beach

Bill Campbell took us here to see a fine colony of *Todea barbara*. Here it grows on steep faces amongst old trees of black wattle (*Acacia mearnsii*).

Herekino Forest

A full day was devoted to exploring this large block of native forest, which we did via the Herekino Track starting from Te Arai at the top of Herekino Gorge. The prevailing vegetation is second-growth forest dominated by kanuka, and with a diverse admixture of forest tree species. Herekino Forest (formerly State Forest No. 1 of the NZ Forest Service, Auckland Conservancy) covers 4282 ha. Logging of kauri started in 1906 and proceeded at first in the south until 1920, including the Rangihika and Waitotoki Stream catchments (where dams were used for log extraction), adjoining the Kaitaia-Awaroa Road, in the area where we walked through the forest. The Kaitaia Timber Company started milling mainly rimu, but also hardwoods (especially taraire, kohekohe and puriri) and some kauri in 1942, and this continued to about 1980 (N.Z. Forest Service 1962). Forester C.T. Sando carried out surveys of the timber resources and also made the first plant species list for the forest (Sando 1936). Sando observed that kauri had a patchy distribution, mainly on ridges, with the best remaining groves then in the north of the forest. Our trek through the forest was therefore mostly through secondary forest resulting from logging 80-110 years. We did not reach the best remaining kauri groves in the northern part of the forest, and did not get anywhere near the highest country above 500 m altitude around Taumatamahoe Trig.

Trackside ferns were abundant, starting with *Deparia petersenii* near the track entrance. *Adiantum viridescens* was prominent along the steep first 200 m of the track, together with *Blechnum membranaceum* and *Pteris macilenta*. Further up, *B. fraseri* and *Lygodium articulatum* were abundant, and in turn *Dicksonia lanata* var. *hispida* became common. We got to about 320 m altitude, at which elevation *Blechnum discolor* was present. Also at this level we found good numbers of the tiny filmy fern *Hymenophyllum armstrongii* (Fig. 17), and also *Notogrammitis pseudociliata*, both on tree trunks. *Tmesipteris tannensis* was also a notable feature (Fig. 18).

Dicot herbs were not abundant. There was a fine patch of parataniwha (*Elatostema rugosum*) at the start of the track, some *Nertera depressa*, and a hairy species which turned out to be *Leptostigma setulosum*.

Kauri was present, at first mainly just as scattered rickers coming through kanuka, but we eventually reached some more extensive ricker stands and groves of big trees, down below our track. We got to one big tree beside the track (Fig. 19), which was our turning point for the return trek. Few other large conifers were seen but there was a good amount of

Fig. 17. *Hymenophyllum armstrongii*, Herekino Forest. Photo: Alison Wesley, 14 Oct 2013.

Fig. 18. *Tmesipteris tannensis*, Herekino Forest. Photo: Viv Paterson, 14 Oct 2013.

Fig. 19. A large kauri, Herekino Forest. From left Christine Major, Lisa Clapperton, Helen Cogle, Peter Scott. Photo: Mike Wilcox, 14 Oct 2013.

Fig. 20. Strikingly bullate form of *Alseuosmia quercifolia*, Herekino Forest. Photo: Viv Paterson, 14 Oct 2013.

Fig. 21. Orowhano Peak, 525 m, Herekino Forest. The peak is a site for *Veronica perbella*. Photo: Mike Wilcox, 14 Oct 2013.

pole tanekaha (*Phyllocladus trichomanoides*), rimu (*Dacrydium cupressinum*), Hall's totara (*Podocarpus cunninghamii*), and miro (*Prumnopitys ferruginea*) throughout. Kahikatea (*Dacrycarpus dacrydioides*) was seen at the Herekino Gorge, while kawaka (*Libocedrus plumosa*) became plentiful in more open gumland-type vegetation. A highlight was finding *Halocarpus kirkii*, not to our knowledge recorded in the forest since Sando's time (1936).

The dominant broadleaved trees were towai (*Weinmannia silvicola*), taraire (*Beilschmiedia tarairi*), tawa *(B. tawa*), rewarewa (*Knightia excelsa*) and white maire (*Nestegis lanceolata*). Northern rata (*Metrosideros robusta*) was frequent, but less common were hinau (*Elaeocarpus dentatus*) and swamp maire (*Syzygium maire*), this latter a single tree beside a creek. Abundant understorey small tree and shrubs were lacebark (*Hoheria populnea*), heketara (*Olearia rani*), toru (*Toronia toru*), hangehange (*Geniostoma ligustrifolium*), Kirk's tree daisy (*Brachyglottis kirkii*), mahoe (*Melicytus ramiflorus*), big-leaved mahoe (*Melicytus macrophyllus*) and shining karamu (*Coprosma lucida*). Less common were *Ackama rosifolia*, *Coprosma parviflora*, *C. spathulata*, *Dracophyllum latifolium*, *Leionema nudum*, *Lophomyrtus bullata*, *Melicytus ramiflorus* and *Myrsine salicina*.

We were very intrigued with *Alseuosmia quercifolia* with its varied leaf forms, including numerous patches with blistered leaves having an uncanny resemblance to *Lophomyrtus bullata* (Fig. 20). A couple of patches were seen of *Alseuosmia banksii* – its northernmost known site. Two small trees we were very pleased to find were *Pittosporum ellipticum* (in flower) and *Nestegis montana.*

The undergrowth in the forest was generally dense, with *Gahnia xanthocarpa*, in abundance, and *Astelia trinervia* at higher elevations, and with plentiful ferns and shrubs.

We had a good day in the orchid department. Our finds were *Acianthus sinclairii*, *Corybas cheesemanii*, *Diplodium alobulum*, *Diplodium trullifolium* (one of the commonest ground orchids), *Earina autumnalis*, *E. mucronata* (in flower), *Ichthyostomum pygmaeum*, *Nematoceras acuminatum*, *N. trilobum*, *Petalochilus bartlettii* (Plate 2F), *Pterostylis agathicola*, *P. banksii* (common), *Simpliglottis cornuta* (Plate 2G), *Singularybas oblongus*, *Thelymitra aemula*, *T. carnea*, *Thelymitra* "rough leaf", *T. pauciflora*, *T. pulchella* and *Winika cunninghamii*.

Herekino Harbour

Mike Wilcox, Hugo Baynes, John Rowe and Stella Rowe made a brief visit to the upper reaches of Herekino Harbour, along Rangikohu Road. There was a broad expanse of *Apodasmia similis*, fringes of mangroves (*Avicennia marina*), and turfs of *Selliera radicans*, *Samolus repens*, *Atriplex prostrata*, *Cotula coronopifolia* and *Lilaeopsis novae-zelandiae*. On the margins were dense thickets of *Plagianthus divaricatus* and *Coprosma propinqua*, with some manuka and *Phormium tenax*, and with tall fescue (*Schedonorus arundinacea*) a prominent plant on the margins. This was a good place to view Orowhano Peak, the impressive southern high point in Herekino Forest (Fig. 21).

Birds

Farm and garden birds: California quail, common pheasant, white-faced heron, swamp harrier, shining cuckoo, kingfisher, grey warbler, tui, skylark, silvereye, welcome swallow, blackbird, song thrush, starling, myna, house sparrow, chaffinch, goldfinch, yellowhammer.

Shipwreck Bay: little blue penguin (beach wreck), Buller's shearwater (beach wreck and one living bird rescued by Val Tomlinson), gannet, little shag, variable oystercatcher, black-backed gull, red-billed gull.

Lake Ohia: California quail, peafowl, swamp harrier, kingfisher, white-faced heron, grey warbler, skylark, fernbird (also heard on the Ahipara gumfields), pipit, starling, myna, chaffinch, goldfinch, redpoll.

Lake Waiporohita: black swan, Canada goose, paradise shelduck, mallard, NZ dabchick, black shag, pied shag, white-faced heron, swamp harrier, pukeko, and welcome swallow.

Herekino Forest: NZ pigeon, grey warbler, tui, fantail, tomtit, silvereye.

Conclusions and follow up

The Ahipara area has a rather long list of critically endangered or threatened plants (de Lange et al. 2010). We were therefore pleased to see several of these, namely *Linguella puberula*, *Phylloglossum drummondii*, *Hibiscus diversifolius*, *Plumatochilos tasmanicum*, *Todea barbara*, and *Lycopodiella serpentina*. Weeds are an issue on the Ahipara coast and hills, and from our observations we would regard the worst of these to be pampas (*Cortaderia selloana*), boneseed (*Chrysanthemoides monolifera*), prickly hakea (*Hakea sericea*), gorse (*Ulex europaeus*), coast banksia (*Banksia integrifolia*), veldt grass (*Ehrharta erecta*), watsonia (*Watsonia meriana* subsp. *bulbillifera*), and at Lake Ohia, Sydney golden wattle (*Acacia longifolia)*. Coral tree (*Erythrina* ×*sykesii*) gives definite character to the area, with its red blossoms borne on leafless branches in winter and spring. It has been planted to aid dune stabilisation, but readily spreads vegetatively from broken branchlets taking root.

Our visit has contributed several new plant records, not databased in herbaria and/or not mentioned on reported species lists. A consolidated, annotated species list is under preparation by the author; it is hoped that this will be a useful reference for local people interested in and involved with restoration of habitats, conservation of native vegetation and species, and weed management.

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References

Bartlett, J. K. 1980: New and significant plant distribution records from northern New Zealand. *New Zealand Journal of Botany* 18: 347-351.

Bellingham, P.J. 1985: *Indigenous vascular flora of Herekino Forest*. Unpublished list, Landcare Research, Lincoln.

Braggins, J.E. 1974: *Phylloglossum*. Miniature denizen of the North. *Wellington Botanical Society Bulletin* 38: 28-34.

Buchanan, J.; Kirk, T. 1869: List of plants found in the Northern District of the Province of Auckland. *Transactions of the New Zealand Institute* 2: 239-247.

Campbell, W. 2013a: Bill's Far North blog. *The New Zealand Native Orchid Journal* No. 127: 38-42.

Campbell, W. 2013b: Native orchids of Lake Ohia Scientific Reserve. *The New Zealand Native Orchid Journal* 129: 13-14.

Carse, H. 1911: On the flora of Mangonui County. *Transactions of the New Zealand Institute* 43: 194-224.

Carse, H. 1915: The ferns and fern allies of Mangonui County, with some notes on abnormal forms. *Transactions of the New Zealand Institute* 47: 76-93

Cheeseman, T.F. 1896: On the flora of the North Cape district. *Transactions of the New Zealand Institute* 29: 333-385.

Clarkson, B.R.; Smale, M.C.; Williams, P.A.; Wiser, S.K.; Buxton, R.P. 2011: Drainage, soil fertility and fire frequency determine composition and structure of gumland heaths in northern New Zealand. *New Zealand Journal of Ecology* 35: 96-113.

Clunie, N.M.U.; Wardle, P. 1983: Botany of the Ahipara Gumlands and Tauroa Peninsula. *Unpublished report*, Botany Division, DSIR.

Conning, L. 1998: Natural Areas of Ahipara Ecological District. *New Zealand Protected Natural Areas Programme No. 39.* Department of Conservation, Whangarei.

Conning, L.; Holland, W. 2003: *Natural areas of Aupouri Ecological District*. Department of Conservation, Whangarei.

de Lange, P.J. 1997: *Gratiola pedunculata* (Scrophulariaceae): a new addition to the New Zealand flora. *New Zealand Journal of Botany* 35: 317-322.

de Lange, P.; Heenan, P.; Norton, D.; Rolfe, J.; Sawyer, J. 2010: *Threatened plants of New Zealand*. Canterbury University Press, Christchurch.

Druce, A.P. 1991: Indigenous higher plants (Lycopods, ferns, gymnosperms, flowering plants) of Ahipara Gumfields and Tauroa Peninsula, North Auckland, sea level to 330 m. *Druce List No. 310* (unpublished).

Forester, L.; Townsend, A. 2004: *Threatened plants of Northland Conservancy*. Department of Conservation, Wellington.

Gardner, P. 1995: Field Trip, Far North 25-30 January 1995. *Auckland Botanical Society Journal* 50: 40-42.

Godley, E.J. 1995: Biographical Notes (20): Richard Henry Matthews (1835-1912). *New Zealand Botanical Society Newsletter* 42: 17-19.
Godley, E.J. 1996: Biographical Notes (21): Henry Blencowe Matthews (1861-1934). *New Zealand Botanical Society Newsletter* 43: 12-13.
Godley, E.J. 1998: Biographical Notes (29): Harry Carse (1857-1930). *New Zealand Botanical Society Newsletter* 51: 13-16.
Hatch, E.D. 1989: Orchid extracts from the Matthews correspondence. *Auckland Botanical Society Journal* 44: 54-58.
Hatch, E.D. 1990: More extracts from the Matthews correspondence. *Auckland Botanical Society Journal* 45: 19-21.
Jane, G. 2003a: Species list, Herekino-Awaroa Road, 22 Apr. 2003 (unpublished).
Jane, G. 2003b: Species list, Kaitaia Walkway from Larmer Rd, 25 April 2003 (unpublished).
Matthews, K. 2009: Far North Diary. *New Zealand Native Orchid Group Journal* 114.
McConnell, P.R. 1980: *The Ahipara Gumfields*. Dissertation, Diploma in Parks & Reserves, Lincoln College. P.R.McConnell, Reserves Ranger, Department of Lands & Survey, Kaitaia (unpublished).
McCrae, D.P. 1990: A survey of the orchid flora of Te Paki Farm Park. *Auckland Botanical Society Journal* 45: 29-44.
Mitchell, D. 2011: *Mountain Biking North. 34 great rides in New Zealand's North Island*: 1. Tauroa Peninsula. Craig Potton Publishing, Nelson.
Molloy, B. 1993: Management of native orchids, Lake Ohia, Northland. *Conservation Advisory Science Notes* No. 11, Department of Conservation, Wellington.
N.Z. Forest Service 1962: *Working Plan for Herekino State Forest 1, 1962-1972*, N.Z. Forest Service, Auckland (Record 923, Archives NZ, Auckland).
Northland Regional Council 2011: Ranking of top wetlands in Northland Region. Stage 4 – rankings for 304 wetlands. *Contract Report No. 2489*, Wildland Consultants Ltd, Mt Wellington, Auckland.
Rolfe, J.R.; de Lange, P.J. 2010: *Illustrated guide to New Zealand sun orchids* Thelymitra *(Orchidaceae).* Jeremy Rolfe, Lower Hutt.
Sando, C.T. 1936: List of indigenous pteridophytes and spermophytes found in Herekino Forest. *Appendix D in Interim Report on the Kauri Management Plan, Herekino State Forest*, N. Z. Forest Service File 34/1/2 Volume 1. Record 925, Archives New Zealand, Auckland.
Scanlen, E. 2008: Diggers Valley orchids. *New Zealand Native Orchid Group Journal* No. 107.
Smale, M. 2011: Gumlands, forgotten treasures of the North, *New Zealand Geographic* 110: 64-74.
Smith V.; Grenfell H.R. (Editors) 2002: Fieldtrip Guides, Geological Society of New Zealand Annual Conference "Northland 2002", Geological Society of NZ Miscellaneous Publication 112B, 116 p.
Young, M. 2007: Easter Camp: Karikari Peninsula and environs, 6-9 April 2007. *Auckland Botanical Society Journal* 62: 41-47.

South Island trip to the Catlins, 11 – 17 January 2014

Maureen Young (editor)

Introduction

Alison Wesley

Participants: *Jessica Beever, Jan Butcher, Ewen Cameron and Cheryl Taylor, Lisa Clapperton, Geoff and Bev Davidson, Anne Fraser, Leslie Haines, Peter Hutton, Cathy Jones, Peter Maddison and Eila Lawton, John Millett, Viv Paterson, Colleen Pilcher, Dhahara Ranatunga, Juliet Richmond, John and Stella Rowe, Joshua Salter, Jennifer Shanks, Vijay Soma, Claire Stevens, Alison Wesley, Diana Whimp, Anthony Wright, Angelina Young, Maureen Young*. Images were provided by Ewen Cameron (EC), Cheryl Taylor (CT), Joshua Salter (JS) and Vijay Soma (VS).

Fig. 1. The hall and/or dining room, Tautuku Outdoor Education Centre. Photo: EC, 16 Jan 2014.

Twenty-nine members of the Auckland Botanical Society journeyed, mostly by plane, to Dunedin Airport, where they congregated together. They then divided among a collection of hired vehicles for the final journey to Balclutha, and then to Tautuku Outdoor Education Centre (Pl. 1A), which is inland from Tautuku Bay (Pl. 1B), c. 25 km south of Owaka, the main town of the Catlins region. The Catlins lies mostly within the Otago province.

The group arrived at Tautuku Outdoor Education Centre about 4 pm, allowing plenty of time to find rooms and beds to everyone's liking. The camp was expansive with more than enough beds, allowing us to spread out. There was a satisfactory kitchen and large hall/dining room where we met for meals, discussion, recreation and examined plant specimens (Fig. 1). A wonderful temporary botanical library was set up thanks to Cathy and Anthony. An