

Christmas pot-luck picnic and field trip to the Whatipū Sands, Manukau Heads, 5 December 2020

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We had hoped to be able to utilise a space in the Whatipū Lodge but it was not available. Fortunately, Tiago Mahalingam managed to arrange the use of a bach for our shared lunch by the Whatipū camping ground, courtesy of the Friends of Whatipū. Once our food was safely stored in the bach our group of 25 headed down the track over the Whatipū Stream footbridge and across the sand dunes for 0.5 km to the Whatipū Beach, between Paratūtai and Ninepin Rock (see map – Fig. 1). The stream by the footbridge wasn't running – the stream mouth has been blocked for several decades. The stream banks by the bridge are lined with kikuyu grass (*Cenchrus clandestinus*), and tall emergent stems of the native sedge, lake clubrush (*Schoenoplectus tabernaemontani*), were evident, sticking up in places well above the water. Summer warning: the black sand can be too hot for bare feet, and Asian paper wasps (*Polistes chinensis*) can be abundant.



Fig. 1. Location of Whatipū and where we went on 5 Dec 2020. Auckland Council Geomap (aerial base map) modified by Joshua Salter. Scale bar = 200 m.

Participants: Jenny Andrew, Jessica Beever, Maureen Burke, Helen Cogle, Janeen Collings, Ewen Cameron (field trip leader), Brian Cumber, Bev & Geoff Davidson, Neil Davies, Leslie Haines, Rebecca Jerram, Luke Luddell, Tiago Mahalingam (organiser), Peter Moosberger, Helen Preston Jones, Juliet Richmond, Olivia Rooke-Devoy, Joshua Salter, Lydia & Ian Smith, Claire Stevens, Cheryl Taylor, Elizabeth Walker, Alison Wesley, Maureen Young.

Fixed sand-dunes

After crossing the footbridge, we began by admiring a large vine of kōhia (*Passiflora tetrandra*) which covered a 4 m-tall mahoe (*Melicactus ramiflorus*); it has also spread out over the exotic grassland, some 25 m from the bridge. This is the only plant of kōhia known on the dunes. The sand-dunes in this area are dominated by two exotic sward-forming grasses: kikuyu and buffalo grass (*Stenotaphrum secundatum*). Little is able to compete with their thick cover apart from the native pōhuehue vine (*Muehlenbeckia complexa*) which is commonly mixed through it. Pōhuehue is the exclusive host plant of the copper butterfly (*Lycaena* spp.) larvae; the butterflies were common in the area. Marram grass (*Ammophila arenaria*) was locally present along the track margin, but is expanding its coverage. Few woody species are present in the dunes, the main ones being mahoe, kanukā (*Kunzea* spp.) and, more locally, gorse (*Ulex europaeus*). Karaka (*Corynocarpus laevigatus*), māpou (*Myrsine australis*), mānuka (*Leptospermum scoparium*), houpapa (*Pseudopanax lessonii*) and boxthorn (*Lycium ferocissimum*) are more local. The mahoe and kanukā were both up to 6 m tall, while the gorse was usually under 1 m.

We stopped to admire a kanukā flowering (Figs. 2, 3) and Joshua Salter declared that she thought it was a hybrid kanukā (*Kunzea* hybrid) between the widespread species (*K. robusta*) and the dune species (*K. amathicola*) – this was an addition to EKC's Whatipū Sands species list for the sand dune area from Whatipū right up to Karekare Point, some 6 km to the north. Shortly after that another addition was found, an exotic rush (*Juncus tenuis* subsp. *dichotomus*). It was right next to the common track rush (*J. tenuis* s.str.), offering a good opportunity to see the differences in these closely related rushes. Several yellow flowers of the native dune oxalis (*Oxalis rubens*, Fig. 4) were spotted. Wild carrot (*Daucus carota*) and catchfly (*Silene gallica*) were locally common and both in flower. Maureen Young encouraged us to look at the different-coloured



flower in the centre of the wild carrot's umbel of flowers (Fig. 5). Some think that this may be to attract pollinators to the flowers (Kew/wild-carrot). Another addition was a moss, *Eurhynchium praelongum*, spotted by Juliet Richmond and identified by Jessica Beever.

As we neared the beach there was a damp dune hollow near the track (west side). Cabbage trees (*Cordyline australis*) surrounded it and harakeke (*Phormium tenax*) was common. A little further on there was a pond of open water (Fig. 6), c. 10 x 20 m, with a sward of Mercer grass (*Paspalum distichum*) around the margin, and between the track and the pond *Machaerina juncea* dominated locally. Close to the pond the exotic, bright green sedges, *Cyperus brevifolius* and the European *Carex punctata* (Fig. 7), were present. In 2003 this area of the track was choked with tussocks of purple pampas grass (*Cortaderia jubata*) (see Cameron 2006: p. 195, fig. 1) – Auckland Council successfully eradicated it, although pampas (*Cortaderia* spp.) keeps trying to re-establish. By the beach, tree lupin (*Lupinus arboreus*) was well established. It died back in the late 1980s throughout New Zealand due to a fungus, *Colletotrichum lupini*. When Bot Soc visited Whatipū in 2012 we saw the first signs of tree lupin returning to the Whatipū dunes (Cameron 2013: fig. 10) – a fungus-resistant strain of lupin? A patch of *Vicia disperma* first observed here on the track margin in 2017, had greatly expanded and now virtually reached the beach.

Wet brackish sandflats on Whatipū Beach

This beach was gouged out and invaded by the sea on the 14 July 2005 (see Pegman 2005, Timoti 2005). The sandflats generally have always been a wonderfully dynamic place of rapid progradation since 1940, reaching maximum extension in 1987 (> 1 km wide), and since that time generally oscillating between progradation and erosion (Williams 1977, Pegman & Rapson 2005). Whatipū Beach itself is extremely dynamic, with storms altering where the freshwater flows out on to the beach and where the beach drains to (EKC pers. obs.). We admired and identified the small herbaceous vascular plants growing on the wet sand flats (Fig. 8), often in mats of a filamentous green alga, most likely

Rhizoclonium riparium (see Wilcox 2018; Fig. 9). Many of the herbaceous native favourites were present: *Carex pumila*, *Myriophyllum votschii*, *Triglochin striata* (Fig. 10), *Lilaeopsis novae-zelandiae* (Fig. 10), *Isolepis cernua* (Fig. 11), *Lobelia anceps* (Fig. 11), and *Samolus repens* (Fig. 12). Some exotics were also present: *Juncus bufonius*, *J. sonderianus*, *Vellereophyton dealbatum* (Fig. 9) and the weedy saltwater paspalum (*Paspalum vaginatum*, Fig. 12). The most exciting find was a couple of tiny plants of the sand buttercup (*Ranunculus acaulis*) – this appears to be the first record of this species on the Whatipū Sands, although it is well-known in the Manukau Harbour (AK herbarium specimens) and at several places on the exposed Waitakere coast (EKC, pers. obs.). Small concentrated areas of rabbit droppings were seen (Fig. 11), often on slightly higher ground – the place of the guard rabbit? In the wetter areas taller vegetation was present: lake clubrush, oioi (*Apodasmia similis*), sea rush (*Juncus kraussii*), areas of three-square (*Schoenoplectus pungens*), and two weedy exotics that need controlling, spike rush (*Juncus acutus*) and aristeas (*Aristea ecklonii*) (Fig. 13).

Mouth of the Whatipū Stream near Cutter Rock

We continued along the beach until we reached the outflow of the Whatipū Stream, which was only a trickle. This stream feeds into a large wetland north of Cutter Rock which is also partly fed by a virtually continuous wetland from a southern branch of the Pararaha Stream south to Cutter Rock (part of this Pararaha wetland usually also flows out to the west of Cutter Rock). Much of that 4 km Pararaha-to-Whatipū wetland is dominated by oioi. In the mouth of the Whatipū Stream just behind the beach was a single large clump of yellow flag (*Iris pseudacorus*) c.1 x 2 m across (Fig. 14) amongst lake clubrush. There were only a few withered yellow flowers seen – the end of flowering. However, copious amounts of green pods were present. A few keen members carefully picked all the pods (Fig. 15) which were bagged and removed. Each pod contained 3 rows of c.25 seeds (Fig. 16), potentially totalling >20,000 seeds! EKC first saw this clump in October 2017 during the Whatipū BioBlitz

Figs. 2–9: **2.** Our group discussing the botany as we traverse the fixed sand-dunes. The hybrid kanukā is on our left and a mahoe on the right. Photo: CT. **3.** A 2 m-tall x 4 m-across (on a lean) flowering hybrid kanukā (*Kunzea amathicola* x *K. robusta*), closest to *K. amathicola* but the leaves are too narrow. Photo: JS. **4.** Evident through a sward of exotic grass, is the yellow-flowering, native dune oxalis (*Oxalis rubens*), frequent in the Whatipū dunes. Photo: BD. **5.** A patch of pink-flowering wild carrots had a deep-purple flower in the centre of the umbel, whereas the usual white-flowering carrots had a pink central flower. Photo: JS. **6.** A pond in the fixed dunes near the beach was surrounded by Mercer grass, with cabbage trees, flax and mostly dead mahoe. Photo: BD. **7.** The bright green European sedge (*Carex punctata*), 30-40 cm tall, with 1 male and 2 female spikes, by a pond in the fixed sand-dunes. Photo: JS. **8.** The changeable wet sand flats on Whatipū Beach, currently being kept wet by the Whatipū Stream disgorging at the western end of the beach. Ninepin Rock behind. Photo: BD. **9.** The exotic *Vellereophyton dealbatum* (pale-coloured) and *Juncus sonderianus* (fruiting) amongst a mat of the filamentous green alga, most likely *Rhizoclonium riparium*. Photo: JS.





Fig. 18. The panoramic view from Trixie's seat over the camping ground, the picnic bach, fixed sand-dunes, Ninepin Rock (L) and Cutter Rock (R) and the Manukau Harbour entrance behind. Photo: CT.

that several of our members participated in. Auckland Council removed the clump in 2021 (Belinda Harvey pers. comm.; EKC pers. obs. Apr 2022). I suspect that the seed possibly originates from the infestations of this species along the margins of the Waikato River (easily observed near Huntly, AK 293447). Pods could be carried down the river, and then the northern drift transports them along the coast, and during storms they occasionally get washed into wetlands, such as at Whatipū (AK 381539) and Karekare (AK 363193).

Shared lunch

Stomachs were rumbling, it was time to retrace our steps and return to the bach for our lunch. We shared a wonderful potluck lunch, and said our goodbyes to Janeen who informed us that she

had just accepted a job in Nelson. Then several people took on the short, steep climb behind us up to the memorial Trixie Harvey seat (Fig. 17) and gained the splendid view over Whatipū and the Manukau Heads (Fig. 18). Catherine ('Trixie') Harvey (1938–2018) was a local champion for conservation in west Auckland.

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Figs. 10–17: **10.** *Triglochin striata* fruiting and *Lilaeopsis novae-zelandiae* with the banded leaves, on the wet sand flats. Photo: JS. **11.** Rabbit droppings on sward of *Isolepis cernua* and flowering *Lobelia anceps*, wet sand flats, Whatipū Beach. Do the rabbits favour the native or exotic plants? Photo: EKC. **12.** *Samolus repens* on the wet dunes being invaded by the exotic saltwater paspalum. Photo: JS. **13.** A sterile plant of the aggressive weed aristeia (*Aristea ecklonii*) was present on the wet sand flats among *Isolepis prolifera*, *Juncus sonderianus* and *Myosotis laxa*. Aristeia is still very local at Whatipū. Photo: EKC. **14.** Members de-podding a yellow flag iris clump, partially blocking the Whatipū Stream near the Whatipū Beach. Foreground: flax, kikuyu and lake clubrush; background: (L to R) gorse, pampas grass tussocks (dead), mānuka and a cabbage tree. Photo: EKC. **15.** The 344 green pods, collectively producing >20,000 seeds, removed from the single clump of yellow flag iris. Photo: EKC. **16.** Yellow flag seed pods dissected. Photo: EKC. **17.** A few members climbing up to the Trixie Harvey memorial seat, above the Whatipū camping ground (see also cover illustration). Photo: JS.