

CHATHAM ISLAND DIARY

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A group of 10 Nelson Botsoccers visited the Chatham Islands during February 1997. The following are some memorable points which may be of interest to other botanists.

The vegetation of the Chathams is quite fascinating. Many of the familiar species of the mainland are absent or scarce. These include manuka and kanuka (recorded but not seen); five-finger (both lowland and upland), *Coprosma robusta*, *C. lucida* (recorded but not seen), tutu seen in two places, fuchsia in one. There are no divaricating shrubs, beeches, podocarps, or *Chionochloa* species. Instead, the natural woody vegetation is dominated by karaka, *Pimelea arenaria* or one of perhaps a dozen endemic species, subspecies or varieties in a range of other genera. Even familiar species aren't quite the same. These range from those recognised as separate species (e.g. *Pratia arenaria*) to taxa of undetermined status (a local *Polystichum*) to especially robust forms of familiar species (e.g. huge *Cyathea medullaris*).

Monday: Arrival

It was a long cramped flight from Nelson in a Metroliner, arriving in mid afternoon. After first sorting out beds and food we took a walk down to the wharf and saw our first few local endemics including *Asplenium chathamense*, *Melicytus chathamicus*, *Olearia traversii* and the queer local flax with its drooping leaf tips.

Find of the day: Roos Roost - the accommodation.

Tuesday: Kaingaroa

The trip started with a long journey through low cloud and drizzle to Kaingaroa, getting the feel of the landscapes, roads and vehicles. From near the factory we worked back along the road towards the school. Most of the shrubs and native herbs were unfamiliar. First was *Hebe chathamica*, *H. dieffenbachii*, *Pratia arenaria*, *Myosotidium hortensia* (forget-me-not) all right by the vehicles. Not far along the road there was *Pimelea arenaria* (to be seen everywhere in abundance over the next 10 days) and then a large, apparently weedy, patch of the native sow thistle (*Embergeria grandiflora*). Not much further on we found *Myrsine chathamica* with its hairy leaf underside (later useful to distinguish from *M. coxii*) and *Melicytus chathamicus*, with some difficulty recognised as being a thick-leaved version of mahoe. Then hybrid coprosma (later to be determined as *C. chathamica* x *C. propinqua* var. *martini*) and a mysterious large-leaved, dark green climber and the familiar dock stipule reluctantly admitted to be the local form of *Muehlenbeckia australis*, *Leucopogon parviflora* (a mingimingi) and *Corokia macrocarpa*, readily identified by its black bark and upright branching habit which separated it from *Olearia traversii* which had been seen en route. Finally before turning for lunch the prize, a proliferation of large purple berries was noticed on *Myrsine chathamica*.

After lunch we headed along the shore to the rock stacks past the end of the village with a local "guide". In the strand line we saw much forget-me-not (*Myosotidium hortensia*) in heaps of shell and seaweed of the beach and passed patches of the sow thistle in sandy dune areas. At the rocks

more local endemics noted included *Leptinella potentillina* (like *L. dioica*), *Asplenium chathamense*, and *Blechnum durum*. Next, we stumbled upon a single huge plant of *Lepidium oleraceum* and a small group of *Aciphylla dieffenbachii*. *Leptinella featherstonii* was located, on a fertile rock ledge. These last three species were not seen again in the wild.

Point Munning

Point Munning, at the north-east tip of the island was only a few km away. From the vehicles, the group headed down the southern fence line of the covenant area to the shore, past the dreaded large-leaved *Urtica australis*. This was common in the covenant area and along the shore. Other plants of interest here were *Carex trifida*, *Rumex neglectus* (completely prostrate on the sand here) and plantings of *Myosotidium hortensia* (away from the shore strand zone).

After a foray on the sandy shore we headed for the seal colony. Although no new species were found, the peat landscape near the colony was spectacular with its mix of peat and schist rocks. The return through the covenant area to the vehicles passed through quite dense stands of *Pseudopanax chathamicus*, *Melicytus chathamicus*, *Coprosma chathamica* (our first large trees) karaka, and *Corokia macrocarpa*. For the most part, an understorey was absent but occasional kawakawa, *Asplenium polyodon*, and *A. chathamense* were present.

Find of the day: everything - it was overwhelming for most of us.

Wednesday: Waitangi West - Cannon Pearce

The long journey through peatlands to the north-west required several stops to admire and photograph the landscape, especially the distinctive shapes of former volcanoes. Finally, we arrived at the beginning of West Waitangi beach. Not far from the vehicle we saw our first *Atriplex billardierei*; plants were abundant for the length of the beach. Here we meandered the 2 km up the beach through the dunes and dune slack vegetation. *Geranium traversii* was abundant in both pink and white flowered forms as was *Pimelea arenaria*, often in flower or showing clusters of its large black fruits. Other woody plants included *Coprosma acerosa* and *Leucopogon parviflora*. At odd places *Tetragonia tetragonoides* was recorded and distinguished from the more abundant *T. trigyna* by its horned, woody fruits.

At the lagoon which bounded the Cannon Pearce Reserve was the soon-to-become normal complement of endemics (*Melicytus*, *Pseudopanax*, *Myrsine*, *Coprosma*, *Olearia traversii* and karaka). Very close to the fence a small group of *Cortaderia turbaria* with their erect tawny flower heads was prominent in the clearings of the shrubland. In addition, *Coprosma propinqua* ssp *martini* was abundant on the fringes and hybrids between it and *C. chathamica* were common. Further in, the first plants of *Dracophyllum arborea* were encountered with their long-persistent juvenile forms and common reversion shoots. In more open areas, the stout large-leaved *Urtica australis* was common. The parts of the area which were scarcely above the lagoon level contained a network of often dry-muddy, shallow channels with much *Callitriche petriei* ssp *chathamensis* showing single tiny yellow stamens, the total flower. Among the sedges the stout *Carex trifida* was common in drier areas and *C. sectoides* in the wetter areas. In hindsight this could have been a good area to find *Astelia chathamica*.

Basalt Columns

On the return journey we stopped off and visited the basalt columns and took time to examine the coastal turflands. In this area very small forms of *Cotula coronopifolia* were present. Also noted were *Ophioglossum coriaceum*, *Pimelea arenaria*, *Urtica australis*, *Rumex neglectus*, *Australina pusilla*, and *Oreomyrrhis colensoi*.

Finds of the day: *Atriplex billardierei*, *Cortaderia turbaria*, fruit on *Pimelea arenaria*.

Thursday: Hapupu

The chief attraction at Hapupu was the dendroglyphs, at least one of which had recently been restored. The stand was mainly karaka - *Melicytus chathamicus* but time was taken to walk through to the dunes and the beach at the eastern edge of the reserve where *Leucopogon parviflorus* and marram were dominant. A brief stop on the road to the next stop in a peat area between L. Rangitai and L. Pateriki allowed us to see *Leucopogon parviflora* growing alongside *Cyathodes robusta* and gave opportunity to sort out the differences between the two species.

Ocean Mail

Near the middle of the Ocean Mail Reserve we headed to the shore where interest centred on *Coprosma propinqua* var. *martini* with abundant blue-spotted translucent berries. After lunch on the shore we pushed through blackberry and *Sporadanthus traversii*, heading inland. At first, the reward was our first sightings of *Dracophyllum paludosum* and more *Cyathodes robusta*. Then we broke out into a recently burnt area (2 years ago) and were exhilarated to see an area of about 2 ha of *Olearia semidentata* a metre or so high in full flower. On turning around more mature shrubs of *Olearia semidentata* were seen in the shrubland bordering the road, some up to 2 m tall. A retreat from there to the dunes behind gave a grand view of the area.

Just before the reserve boundary, a wander towards the Lagoon along the eastern edge of Lake Wharemanu revealed plantings of *Aciphylla traversii* and nearby, larger wilding plants of the same in flower. On the lake shore we saw *Hebe dieffenbachii*, *Blechnum durum* and the distinctive *Asplenium chathamense*. On the return journey home, a shiny bush in the peat areas begged examination. It turned out to be *Ugni molinae* a now widespread pest in the peat areas.

Finds of the day: *Olearia semidentata* in flower, sorting out the *Cyathodes*, *Aciphylla traversii*.

Friday: Henga

Of particular interest was *Coprosma acerosa* which became almost unrecognisable in the shade, yet the variation could be tracked in the same or adjacent plants over some 15 m from open ground to shaded areas. The main stand proved to be dense karaka with occasional *Olearia traversii* or *Coprosma chathamica*, only identifiable by their huge trunks; a good test of our growing knowledge of the flora. A little further on limestone tors were discovered under the karaka canopy on which debate raged for some time over the huge fronds of *Asplenium lyallii* It was only the frond colour, typical irregular shape and transitional fronds that convinced all that

hybridism was absent. After a short traverse of grass, the coastal faces were reached and descent made to the shore along the foot of some interesting limestone. Along the rocky outcrops notable plants included *Hebe dieffenbachii* and *Myosotidium hortensia* (the latter apparently planted). The shores yielded no new species but now familiar *Geranium traversii* was quite abundant.

DOC nursery

On the return to base the DOC nursery provided an opportunity to see some of the important species not yet encountered. Of particular interest was the precocious flowering of *Aciphylla traversii*. It was also the only real opportunity to see some huge, fully mature *Aciphylla dieffenbachii*. Almost all stock was marked with its seed source and clearly destined for replanting there.

Finds of the day: Huge *Asplenium lyallii*, *Aciphylla dieffenbachii* (in the nursery).

Saturday: Pitt Island

The flight in both directions provided ample opportunity to become familiar with the landscape character, especially the lagoons, southern cliffs (which we visited later) and Pitt and the outlying islands. We landed a few hundred metres from the main forest area and it was not far before the first *Brachyglottis huntii* were found. After a thrash through the blackberry we were soon able to admire some in flower (although now mostly finished). A further short thrash led into tall, open forest dominated by *Dracophyllum arboreum*. Beneath the canopy, ferns were especially rich and varied. The *Hymenophyllum multifidum* in particular was very broad fronded, appearing more like *H. sanguinolentum* except for its serrations. In all, 32 ferns were recorded with the filmy ferns being particularly prominent. Perching in the trees, *Earina mucronata?* was in full flower and abundant. Its colour was especially dark orange and the leaves much shorter and stouter than usual. It seemed unusual to see it flowering so late.

After completing an unintentional loop of the stand the valiant leader, under the guidance of a compass proceeded northwards through an understorey of tree ferns and supplejack along a variety of pig tracks to come back out on the fence line. The return towards the airstrip led into a small group of *Myrsine coxii* along a streamside. It made its presence particularly obvious by a mass of suckers from the main trees rising to about eye height. The upright branching habit of the parent trees was particularly distinctive.

Once back to the airstrip, we continued southward through the open areas and made several forays into the main stand. At the first, huge Chatham Is *Polystichum* attracted much attention. Where it had the freedom to reach its full size, the dark green, shiny, soft fronds were about 2 m long and arched well over a person's head. Fronds were truly dramatic. Also here, Chatham Is mamaku had fronds over 5 m long. The next foray took us past a large hebe (probably *H. barkeri*). Finally, before returning to catch the plane, a vantage point gave views of the local nikau, here growing on the ridges and with wind shortened fronds held erect. The explanation for this unusual habitat appears to have more to do with the deep peat soils in the valleys and more exposed mineral soils on the ridges than with frost escape and temperatures, as on the mainland. As one part of the party had to hasten back for the first flight home, the rear guard had

more time to examine a wetland. Hardly had we stopped than *Deschampsia caespitosa* was spotted and soon over a dozen clumps had been identified in the immediate vicinity.

Finds for the day: *Brachyglottis huntii* in flower, the huge local *Polystichum*, the dark coloured and late flowering *Earina mucronata*, *Deschampsia caespitosa*.

Sunday: Rangaika

The 4-wheel drive track climbed rapidly from the Owenga Road but after only a few km vehicles had to be abandoned before they became bogged in the soft wet peat. It then became a long slow plod in soft peat to the beginning of the Rangaika Reserve along a rough vehicle track. The flanking vegetation was *Dracophyllum paludosum*/*Cyathodes robusta* shrubland about 1.5 - 2 m tall containing regenerating forest. The vegetation is kept open by stock (cattle) but it was difficult to see what was being eaten as few grasses or edible herbs appeared to be present. At various stops it was often profitable to probe under *Cyathodes robusta* bushes. There we saw a variety of orchids, *Lycopodium varium* and *Coprosma* hybrids. In one place *Aciphylla traversii* was found on the track and nearby, a patch of plants of all sizes within the Gillespie Creek covenant. Beside the track *Olearia semidentata* was quite common but only sporadically and erratically flowering - in contrast to the massed flowering at Ocean Mail.

At the fence, the difference protection made was quite evident. An access track across the reserve to the southern cliffs at first traversed similar vegetation to that already seen but soon it entered largely intact *Dracophyllum arboreum* forest with a profusion of filmy ferns beneath. The fast moving stream flowed darkly, like a good stout with a firm head on it, as is typical of streams on the island. Beside the stream we re-familiarised ourselves with *Myrsine coxii* and again saw an abundance of the dark coloured *Earina mucronata*? in full flower. After a considerable distance, the track finally emerged on the opposite fence line which was followed to the southern cliffs. Here the vegetation changed dramatically to low shrublands, flaxlands and tall, unbrowsed grasses. Along the edge of the trees *Olearia oporina* var. *chathamica* were prominent with a few trees showing the last of the season's flowers.

After admiring the spectacular views we began a push through the grass and flaxlands along the track. A short distance on a bundle of *Astelia chathamica* was found laid strategically across our path by some unknown hand (or mouth). A few minutes searching located the first plants, or at least their remains. Almost all the plants in the area had been ripped up by pigs seeking the soft leaf bases for food. Only by searching amongst the flax could seedlings be seen which the pigs had not yet found. Descent down the cliffs to less accessible places revealed large mature plants in good number.

In the shrublands back across the plateau, *Olearia semidentata* x *O. oporina* hybrids were common. The long walk down the fence line back to the vehicles then began. At first, walking was easy with only a few wet patches but by the time the end of the reserve was reached the hard slog of soft wet peat was on in earnest. One plant frequently noted here was *Poa chathamica*. The only light relief on the return journey was debate about unusual habitats for *Leptocarpus similis* (it was the only patch seen so far inland) and comparison with *Sporadanthus traversii*.

Finds for the day: *Astelia chathamica*, *Olearia oporina* var. *chathamica*, *Brachyglottis huntii*, *Aciphylla traversii*, and spectacular views of the southern cliffs.

Monday: Plum Tree and Pear Tree Bays

This was a really lazy day. It was only a few km drive to the main lagoon at what turned out to be a popular recreation place. The first area visited had stock throughout but had a quite remarkable range of species in the more sheltered hollows. 19 ferns were listed, including a good range of epiphytes. There were many grand old trees and the main species of note was ribbonwood (*Plagianthus regius* var. *chathamicus*) which had not previously been seen. We then walked the glaringly white shore (one of our few sunny days) to Plum Tree Bay and along its length. The shores were fringed by grass and a narrow strip of forest which often contained patches of karaka, kowhai, or ribbonwood. Some of the latter were huge in size. In the cliff areas *Hebe dieffenbachii* was common with a variety of other shrubs including *P. arenaria* and *Leucopogon parviflorus*. At one point, considerable debate concerned the identity of a plant which turned out to be the Chatham form of *Linum monogynum*. A huge range of introduced herbs was recorded. Prominent native plants included the tape measure plant (*Lilaeopsis novae-zelandiae*), *Chenopodium glaucum* and *Carex pumila*. Within the shallow water, algae were few and the main plant was *Ruppia polycarpa*, although the beaches had a fringe of rotting *Ulva* and occasional *Codium fragile*.

On some of the wet banks, the Chatham Is *Polystichum* and *Adiantum cunninghamii* were common. At one point petroglyphs were seen on a rock face. Searching of the less accessible cliffs produced no new finds but led to another patch of forest. Here elder (*Sambucus nigra*) and *Solanum chenopodioides* was recorded for the first time.

Finds for the day: *Linum monogynum*, ribbonwood, the petroglyphs.

Tuesday: Tuku

The road progressively degraded and after the last house (and a no maintenance beyond this point sign) to a stop above the Tuku River which gave grand views of the coast, the Tuku covenant and behind to the Tuku Nature Reserve. The group descended to the coast at the river mouth to browse on the cliffs. The river flowed to the sea like liquid chocolate from suspended peat. The peat then washed up and formed heaps on the shore and the sea was dark-stained for some 20 m from the shore. One early find was *Rumex neglectus* (larger here than at Point Munning) but the find of the morning was *Festuca coxii* growing in the rock clefts and ledges. A foray further along the shaded, rocky shore and wet cliffs brought several good specimens of *Carex trifida* and pink *Geranium traversii*. Crossing to the sunny side of the bay revealed patches of *Hebe chathamica*.

Journeying up-river to the covenant brought patchy stands of the former lowland forest, rich in ferns (34 species recorded). The most spectacular were huge Chatham Is *Polystichum*. Tree ferns were also prominent, including huge diameter *Dicksonia fibrosa* and mamaku, and numerous *Cyathea cunninghamii*. As before, the *Earina mucronata* was an abundant epiphyte and distinctly dark flowered. When the vegetation changed to *Dracophyllum* forest the creek was crossed and a return made up hill to the vehicles, obtaining good views of the valley during the long climb up-slope.

The next stop was the Awatotara. Here the main attraction became the huge *Brachyglottis huntii*. These trees although only 3 m tall sprawled for over 5 m along the ground and in one case had layered. By now, most of the plants were familiar and no new species were recorded for this area.

Finds for the day: *Festuca coxii*, flowering *Hebe chathamica*, the huge, photogenic Chathams *Polystichum*.

Wednesday: Chudleigh

This was a long promised expedition to the highest point in the north of the Island (all of 188 m tall). Amongst the grass in the Chudleigh Reserve on the lower slopes seedlings were common but in one place we saw an extended patch of the dreaded *Selaginella kraussiana*. After passing through the reserve, the climb of Chudleigh began. On the steep rocky faces quite a range of ferns and shrubs perched out of reach of the stock. Of particular note was the prostrate coprosma previously seen on the shore at Ocean Mail reserve. The summit provided good views of the lagoon and peatlands and down into the reserve that had just been traversed. The boundary between the old and recently fenced areas was very obvious and begged investigation.

After descending from the summit, a route through the older stand was followed. Here, the result of probably over a decade of protection was very obvious. Most of the grass had been displaced by regeneration now over 3 m tall and a good leaf litter. Ferns such as *Lastreopsis microsora* and *Hypolepis lactea*, scarcely evident in the other area, now covered quite large areas. On the lower slopes, several large trees of ribbonwood were surrounded by dense regeneration.

Nikau Bush

The changes of nearly a decade were dramatic. Instead of an open forest with a light regeneration of *Pseudopanax chathamicus* only 10 cm or so tall we were confronted by thickets of the species now over 5 m tall and still only a few cm apart. In many places, the forest looked quite undisturbed by its previous history of grazing. The former grassy clearings are now ferny glades and the forest contains abundant ferns. The most spectacular was mamaku with stems over a metre across (two people could just link hands around it) and fronds 5 m or more in length.

Finds for the day: *Selaginella kraussiana*, the huge mamaku and the spectacular contrast between Nikau bush and other more recently enclosed areas visited.

Thursday: Mangape Creek - Lake Huro

Having returned the rental vehicles the previous day, we walked to Lake Huro from the village. The first part of the walk was down a side alley and along a streamside walk. Here the now easily identified *Polystichum* "Chathams" was quite common and of reasonable size. About 1 km from the village towards Te One we headed across the paddocks to a streamside stand.

As we approached the trees, several huge cabbage trees became apparent amongst the scattered *Olearia traversii* and *Pseudopanax chathamicus*. The stream formed a barrier to stock but we

soon found a narrow point to jump the gap and get into *Dracophyllum arboreum* forest beyond. The forest had a good range of species little affected by browsing, including *Myrsine coxii*. We also saw the first fuchsia (*Fuchsia excorticata*) and tutu (*Coriaria arborea*) of the trip. After a scramble through the forest on to sedge and rushland where both *Sporadanthus traversii* and *Leptocarpus similis* were present, a foray back into the stand revealed some large plants of *Astelia chathamica*, one with a finished flower head. At our lunch spot further large plants were recorded, suggesting a good population in the area.

Stock had free access to the lake shore and an expected fringe of sedge was absent. After a brief foray through the pasture along the shore, we re-crossed the stream to the other bank. The trees on this side were wide-spaced and stock kept the vegetation short, so it was soon time to head back home across the paddocks.

Friday: Return Nelson

The return to Wellington was more comfortable than that from Christchurch in the Metroliner. The Convair was less noisy, seats were spaced as for business class and there was plenty of room to stand and talk to the crew. With nothing to see but cloud or ocean for much of the way, the air was quite noisy with chatter about Island experiences. After a brief stop in Wellington it was back into the air for the last leg home over the Sounds.

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