

On the south side of Pararaha Point under a cliff overhang where little or no direct sunlight penetrates plants of *Myosotis petiolata* var. *pansa* were found to be growing, and the occasional cyme supported a late flower. The main population, covering an area 90 cm x 78 cm grew in dry black windblown sand directly under a cliff overhang, along with *Tetragonia trigyna* and *Peperomia urvilleana*. These plants exhibited the typical long and robust decumbent vegetative laterals, which are a characteristic morphological feature of all coastal *Myosotis*. The lamina measured 4 cm in width x 3.5 cm in length with 5 cm long petioles. The individual flowers were 1 cm in diameter.

Plants growing on the outside of this group and exposed to more light were competing with the rank and adventive grasses. The second group under an adjoining overhang was surrounded with seedling propagules. Above the cliff overhang kawakawa *Macropiper excelsum* was dominant.

On returning to just north of our first sighting, a small area of *Myosotis petiolata* var. *pansa* was found to be competing with the invasive adventive *Lotus suaveolens*. It was recommended that ARC Ranger staff could monitor these vulnerable populations and annually carry out a form of "habitat gardening."

As we worked our way southwards, we found the wetland was infested with alligator weed *Alternanthera philoxeroides*, belonging to Amaranthaceae. This aquatic herb was noticeable not only for its abundance but for the mass of small cymose white inflorescences covered in bristly bracts. Alligator weed has also proved to be a noxious invader in North America where it was introduced as crayfish fodder.

The wetlands also became more distant from the cliffs now clothed predominantly in pohutukawa *Metrosideros excelsa*, thus indicating an improbable site for this species of *Myosotis*. A venerable ngaio *Myoporum laetum* measured 132 cm in circumference at the point of branching.

Further south still, the area between the cliff and wetland appears to be evolving into a forest community with manuka *Leptospermum scoparium*, nikau *Rhopalostylis sapida*, ti kouka *Cordyline australis*, West Coast kowhai *Sophora microphylla* var. *fulvida*, and harakeke *Phormium tenax*. The handsome giant umbrella sedge *Cyperus ustulatus* and *Baumea articulata*, with the characteristic and visible septa (partitions) in the culms, were scattered throughout. The cliff vegetation became more open with whau *Entelea arborescens* and the occasional sizeable and fruiting tawapou *Pouteria costata*. According to Lucy Cranwell in her publication Botany of Auckland tawapou grows in small groves and was on the decline in the early 1980s.

The heat of the afternoon and hour indicated that it was time to pack in what had been a very successful trip. The return journey almost became eventful as the Arga began to take in water; however Maurice navigated us safely back to base and Greg transported us to Arataki.

References

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Tawharanui Regional Park ABS Field Trip - 15 November 97

Colleen Foster

Several Bot Soc'ers had gone north to study plants, so only a small group of eleven were treated to the delights of Auckland's northern-most regional park - at the end of Tawharanui Peninsula, east of Warkworth. The area has been occupied for centuries by Maori and European settlers, who have left their marks on the landscape.

all of the vegetation has been modified, most recently by farming, but there are some good stands of regenerating bush, and the Auckland Regional Council has undertaken to restore wetlands and extend the bush using ecological principles.

On the track out to Tokatu Point at the end of the peninsula, there were a number of orchids in bloom amongst low manuka, including *Caladenia chlorostyla*, *Caladenia* aff. *carnea*, *Thelymitra longifolia* and *Pterostylis graminea*. In bud were *Microtis unifolia* and *Orthoceras novae-zeelandiae*. A very large *Pomaderris phyllicifolia* with a spread of 2 m x 1.5 m was seen on the trackside. The scent of the flowering cabbage trees wafted around us.

The prostrate manuka that we'd been told we'd see in the vicinity of Tokatu Point was well - words fail me! But I'll try. It was not only prostrate, it was flat-as-a-carpet prostrate, except for a bump where the trunk humped up a bit. It appeared to be a lighter green than surrounding ordinary manuka, and there was an intermediate form, low-growing but with branches turning upwards. And there was one prostrate manuka with double flowers - a normal outer set of petals and an inner set of short frilly petals. In the grass amongst the manuka were delightfully colourful blue *Wahlenbergia gracilis*, pink *Centaurium erythraea* and yellow *Oxalis corniculata*, with the contrastingly prickly *Leucopogon fraseri*.

On the cliff edges, we found an interesting association of *Coprosma repens*, *Astelia banksii*, pink-flowered ice plant *Disphyma australe* and the cream-flowered *Pimelea prostrata*. We were just a little too early for the pohutukawa to be in bloom.

Alistair MacArthur and his trusty spade did sterling work grubbing out nasties such as gorse and pampas grass. When he went down one rather steep cliff after some boneseed, we asked him for his car keys first in case he didn't come back.

After lunch we wandered down the very pleasant bush section of the Ecology Trail, where notable finds included *Streblus banksii*, *Streblus heterophyllus* and *Mida salicifolia*. Harry Beacham was awarded a metaphorical chocolate fish for his keen observations.

To finish the day, Alistair MacArthur took some of us on a 4WD tour of the southern side of the park. It was sad to see so much Kikuyu grass spreading through areas fenced off for regeneration of native forest. Alistair said that if the ARC had been able to plant kanuka before the Kikuyu took over, it would have been able to grow, close its canopy and shade out any Kikuyu that got into it. Manuka will not succeed in combating this weed, but kanuka can prevent the establishment of Kikuyu's thick mat which stops seeds from reaching the soil to germinate.

Tawharanui Regional Park Native Plant Species

(Compiled by Anne Grace)

This list has been compiled from observations by Auckland Botanical Society members, including during the trip on 15 November 1997, with additions from Auckland Regional Council staff. Key contributors were Sandra Jones, Ewen Cameron and Alistair MacArthur.

Ferns and Fern allies

<i>Adiantum</i> sp.	<i>Dicksonia squarrosa</i>	<i>Phymatosorus pustulatus</i>
<i>Asplenium flaccidum</i>	<i>Doodia media</i>	<i>Phymatosorus scandens</i>
<i>Asplenium oblongifolium</i>	<i>Histiopteris incisa</i>	<i>Pneumatopteris pennigera</i>
<i>Asplenium polyodon</i>	<i>Hymenophyllum demissum</i>	<i>Polystichum richardii</i>
<i>Blechnum chambersii</i>	<i>Lastreopsis microsora</i>	<i>Pteridium esculentum</i>
<i>Blechnum discolor</i>	<i>Lindsaea linearis</i>	<i>Pteris comans</i>
<i>Blechnum filiforme</i>	<i>Lindsaea trichomanoides</i>	<i>Pteris macilentia</i>
<i>Blechnum membranaceum</i>	<i>Lycopodium deuterodensum</i>	<i>Pteris tremula</i>
<i>Blechnum novae-zeelandiae</i>	<i>Lycopodium varium</i>	<i>Pyrrhosia eleagnifolia</i>
<i>Cyathea dealbata</i>	<i>Lycopodium volubile</i>	<i>Trichomanes reniforme</i>
<i>Cyathea medullaris</i>	<i>Lygodium articulatum</i>	
<i>Deparia petersenii</i>	<i>Paesia scaberula</i>	

Gymnosperms

<i>Agathis australis</i>	<i>Dacrydium cupressinum</i>	<i>Podocarpus totara</i>
<i>Dacrycarpus dacrydioides</i>	<i>Phyllocladus trichomanoides</i>	<i>Prumnopitys ferruginea</i>

Dicotyledons

Acaena anserinifolia
Alseuosmia quercifolia
Aristolelia serrata
Avicennia marina
Beilschmiedia tarairi
Beilschmiedia ?tawa
Beilschmiedia tawaroa
Brachyglottis repanda
Calystegia soldanella
Carmichaelia australis
Carpodetus serratus
Centella uniflora
Clematis paniculata
Coprosma arborea
Coprosma areolata
Coprosma lucida
Coprosma macrocarpa
Coprosma repens
Coprosma rhamnoides
Coprosma robusta
Coprosma spathulata
Corynocarpus laevigatus
Cyathodes juniperina
Dichondra repens
Disphyma australe
Dodonaea viscosa
Dracophyllum latifolium
Drosera auriculata

Dysoxylum spectabile
Gaultheria antipoda
Geniostoma rupestre
Gonocarpus incanus
Griselinia lucida
Haloragis erecta
Hebe macrocarpa
Hebe stricta
Hedycarya arborea
Hoheria populnea
Knightia excelsa
Kunzea ericoides
Lagenifera pumila
Leptospermum scoparium
Leucopogon fasciculatus
Leucopogon fraseri
Lobelia anceps
Lophomyrtus bullata
Macropiper excelsum
Meliccytus ramiflorus
Metrosideros excelsa
Metrosideros fulgens
Metrosideros perforata
Mida salicifolia
Muehlenbeckia complexa
Myrsine australis
Myrsine salicina
Nertera depressa
Nertera dichondrifolia

Nestegis lanceolata
Olearia furfuracea
Olearia rani
Ozothamnus leptophylla
Parsonsia heterophylla
Passiflora tetrandra
Pimelea prostrata
Pittosporum crassifolium
Pittosporum tenuifolium
Pomaderris phyllicifolia
Pouteria costata
Pseudopanax arboreus
Pseudopanax crassifolius
Pseudopanax lessonii
Pseudopanax hybrids
Ranunculus reflexus
Ranunculus macropus
Rhabdothamnus solandri
Rubus australis
Rubus cissoides
Schefflera digitata
Sophora microphylla
Streblus banksii
Streblus heterophyllus
Vitex lucens
Wahlenbergia sp.

Monocotyledons

Acianthus sinclairii
Arthropodium cirratum
Astelia banksii
Baumea juncea
Bulboschoenus sp.
Caladenia aff. carnea
Caladenia chlorostyla
Caladenia minor
Carex sp.
Collospermum hastatum
Cordyline australis
Cordyline pumilio
Corybas trilobus
Cyperus ustulatus
Desmoschoenus spiralis
Dianella nigra

Earina mucronata
Echinopogon ovatus
Eleocharis acuta
Freyinetia banksii
Gahnia lacera
Gahnia pauciflora
Gahnia setifolia
Isolepis nodosa
Juncus australis
Juncus flavidus
Juncus gregiflorus
Juncus procerus
Lemna minor
Lepidosperma laterale
Leptocarpus similis
Microlaena avenacea
Microlaena stipoides

Microtis unifolia
Oplismenus imbecillis
Orthoceras novae-zeelandiae
Phormium tenax
Pterostylis alobula
Pterostylis banksii
Pterostylis graminea
Rhopalostylis sapida
Ripogonum scandens
Schoenus tendo
Spinifex sericeus
Thelymitra longifolia
Typha orientalis
Uncinia banksii
Uncinia uncinata

Tawharanui Regional Park Preliminary Species List of Adventives

Acmena smithii
Agapanthus praecox
Ageratina adenophora
Allium triquetrum
Anagallis arvensis
Anredera cordifolia
Arum italicum
Araujia sericifera
Atriplex prostrata
Centaurium erythraea
Cirsium vulgare
Chrysanthemoides monilifera

Cortaderia sp.
Cotoneaster glaucophyllus
Cupressus macrocarpa
Daucium carota
Euonymus japonica
Fragaria vesca
Hedera helix
Juncus acutus
Lagurus ovatus
Ligustrum sinense
Myosotis sp.
Oxalis corniculata

Pennisetum clandestinum
Pinus radiata
Salvia repens
Silene gallica
Solanum mauritianum
Solanum sodomaeum
Stenotaphrum secundatum
Tradescantia fluminensis
Ulex europaeus
Verbena bonariensis
Vinca major
Zantedeschia aethiopica