Benham, contrariwise representing the Botanic Gardens, wobbled (not to mention *persona auctoris*) before he attained the summit. Perhaps this is the reason why I cannot now remember at all what was growing there.

It was a day of botany (as I have already related), incident (our treasurer's crouched head was narrowly missed by a dislodged rock, and a committee member broke her ankle), interest (the remains of a mollymawk on the beach, of a kauri snail - *Paryphanta* otherwise unrecorded for the area, and penguin nests and intact shell), and finally, philosophy. For Steve daringly asserted that he learnt his plants by family, not individual. Anne rejoined emphatically "Taxa are man-made things. Women don't like taxa!" Ewen (albeit an unambiguous gender) was silent.

North Piha, Whites Beach and Fishermans Rock

E. K. Cameron

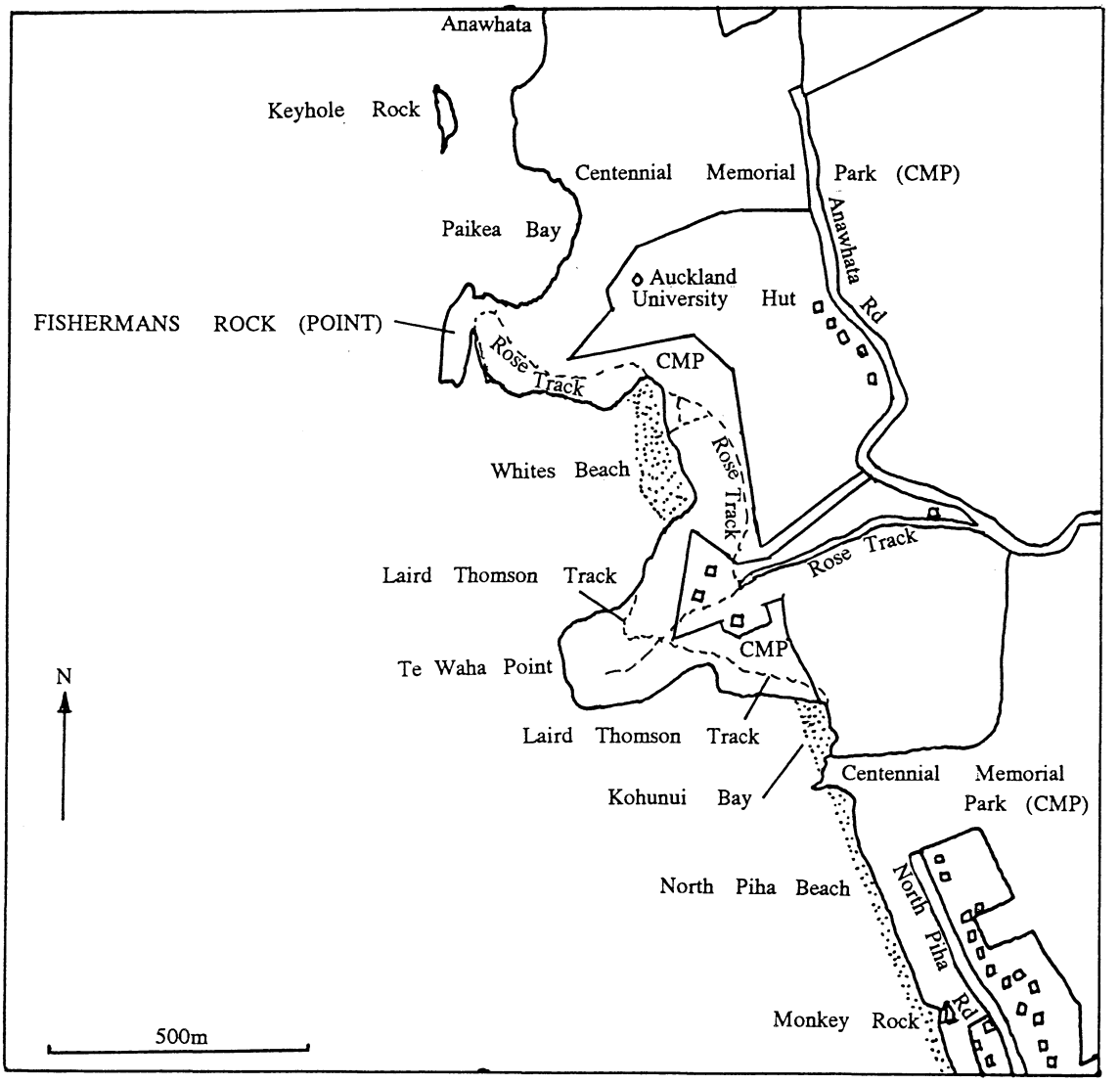
On Auckland's west coast there is a very pleasant walk from the northern end of North Piha (Kohunui Bay): up the Laird Thomson Track, out to the pa at Te Waha Point, back to the Laird Thomson and down the steep track to the rocky south shore of Whites Beach, along the beach to the north end, up then down the Rose Track to Fishermans Rock, return to Whites Beach, up a different section of the Rose Track to the narrow road, down a ridge track to the Laird Thomson Track summit and then return to North Piha via the Laird Thomson (see Figure 1). The return walking time is only c. 2 hours but it is nice to take 2-3 times this. The walk is almost entirely within the Centennial Memorial Park.

On 9 November 1995 I did a reconnoitre of this route with Doug Rogan for the Auckland Bot Soc trip which I led two days later. On 16 December 1995 I repeated the trip. A species list is appended for all plants seen during these three trips (apart from the road section at the top of the Rose Track); Fishermans Rock species are also marked separately.

Laird Thomson - up

The Laird Thomson Track (often wrongly spelt Thompson, it was named after the Thomson family, see Mead 1973) begins at the back of the North Piha beach where the steep volcanic conglomerate cliffs of early Miocene age adjoin the beach. The fairly even gradient track traverses steep slopes clothed in continuous windshorn pohutukawa (*Metrosideros excelsa*) 7-10 m tall (see Cranwell, 1981: 46 for a photograph). Houpara (*Pseudopanax lessonii*) and kawakawa (*Macropiper excelsa*) are the main shrubs. This is a wonderful area for native herbs. On the shaded rocky faces by the track mats of New Zealand spinach (*Tetragonia trigyna*), *Lobelia anceps* and *Parietaria debilis* are very common. New Zealand celery (*Apium prostratum*), *Cardamine debilis*, *Stellaria parviflora*, rengarenga (*Arthropodium cirratum*), *Lachnagrostis billardierei*, *Poa anceps*, *Senecio lautus*, *Hydrocotyle dissecta*, *Ranunculus reflexus* and *Lagenifera pumila* are common. *Luzula picta* appears to be local (it is a rather difficult species to see amongst sedges and grasses). Various sedges are common including *Carex dissita*, *C. spinirostris*, *C. flagellifera*; *C. lambertiana* is rather local. Near the top *Scandia rosifolia* is present. Unfortunately onion weed (*Allium triquetrum*) is also locally present and presumably has spread down from the baches far above.

Figure 1. Location of tracks and place names.



Te Waha Point

A short no-exit bush track branches off the summit of the Laird Thomson to the grassy high point of Te Waha Point. Hayward and Diamond (1978) record this pa site comprising platform, terraces, midden material and an indistinct ditch across the saddle. Ngaio (*Myoporum laetum*) and the "endemic", Auckland west coast kowhai (*Sophora microphylla* var. *fulvida*) are common here. [This kowhai also appears to be present on Maunganui Bluff, (King, AK).] The following species seen here were not seen elsewhere along the route: *Pomaderris phylicifolia*, *Pellaea rotundifolia*, and on north-facing rocky outcrops surrounded by exotic grasses, *Cheilanthes distans* and *Geranium retrorsum*. This *G. retrorsum* record is interesting as it appears to be the first definite record of this Australasian species for the Waitakere Ranges (R.O. Gardner *pers. comm.*, 1995).

Laird Thomson - down

The short track down to Whites Beach is steep and a sign recommends it for experienced trampers only. But there are good cut steps and a sound wire rope where it traverses an open rock face. The track goes through a splendid grove of tawapou (*Pouteria costata*) trees which were not seen elsewhere. Mats of *Dichondra*, New Zealand spinach, are common and in the open the large yellow-flowered native oxalis, *Oxalis rubens*, is frequent. On the bare rocky ledges above *Celmisia major* is evident. A short section here would be impassable during big high tides.

Whites Beach

The dune area behind the beach is dominated by spinifex (*Spinifex sericeus*) with marram (*Ammophila arenaria*) more towards the back. Pingao (*Desmoschoenus spiralis*) is absent and lupin (*Lupinus arboreus*) is only occasional.

Indian doab (*Cynodon dactylon*) and wild gladiolus (*Gladiolus undulatus*) are locally common on the grassy dunes. A small stream is present at the northern end where *Lilaeopsis novae-zelandiae*, *Triglochin striata* and watercress (*Rorippa nasturtium-aquaticum*) are present.

A large conglomerate boulder and a rocky outcrop at this north end is good habitat for some interesting plants: *Celmisia major* is common (no sign of flowers in November, flowering in mid December); *Asplenium terrestre* subsp. *maritimum* occasional with roots along rock cracks, approaching its northern geographical limit here; other natives included *Astelia banksii*, *Crassula sieberiana*, *Isolepis nodosa*, *Hebe obtusata* (scarce), New Zealand ice plant (*Disphyma australe*), *Lachnagrostis billardierei*, *Senecio lautus* and two depauperate ferns, shining spleenwort (*Asplenium oblongifolium*) and hound's tongue (*Phymatosorus pustulatus*).

Track to Fishermans Rock

We now join the Rose Track which climbs to the west through exposed shrubby vegetation and grassy areas where flax, coastal toetoe (*Cortaderia splendens*) and *Calystegia tuguriorum* are abundant. The latter showing off its white flowers and the coastal toetoe just starting to flower in December. The silky cudweed (*Gnaphalium subfalcatum*) was present here which is an addition to the Waitakere adventive flora by Mackinder (1992). Further up, the track bisects a wonderful stand of cabbage trees (*Cordyline australis*) and soon after this levels out and descends through mainly an exotic grassland down to Fishermans Rock. Lucy Cranwell (1981: 46) writes of the splendid forest here before the destructive fire in November 1949: ". . . large and beautiful pohutukawa . . coastal vegetation at its best . . puriri, and even a few handsome tawapou." Forty-six years on and much of the vegetation has progressed to a regenerating shrubland.

Fishermans Rock, almost an islet

The whole headland is known as Fishermans Rock Point. The "islet", Fishermans Rock, covers 1.0 ha and is just over 20m a.s.l. The rocky connection from Fishermans Rock Point is a ridge about 5m a.s.l, c. 20m across, sloping steeply (> 45°) to the north and more gently to the south. It would probably be wave-washed during stormy high tides. The northern face of this connection is mainly bare with *Lotus suaveolens* patches on the eastern side. But the slope to the south and continuing (but narrower) along the southern side of Fishermans Rock Point is an extensive coastal turf 8-10m wide.

The most common species in this turf is glasswort (*Sarcocornia quinqueflora*); *Dichondra repens*, New Zealand celery, New Zealand ice plant, *Lachnagrostis littoralis* and *Lotus suaveolens* are all common associates. Closer to the sea *Isolepis cernua* is common. *Samolus repens*, *Lobelia anceps*, *Senecio lautus*, *Selliera radicans* are also fairly common. Less common are *Leontodon taraxacoides* and *Paspalum vaginatum*; *Plantago australis* was scarce. It is a fabulous turf community and it is almost unbroken except for a track out to a fishing spot on the south-east side of the point. *Asplenium terrestre* subsp. *maritimum* grows in the rocky cracks above the turf on the mainland (S. Jones *pers. comm.*).

Forty-three species of vascular plants were recorded for Fishermans Rock plus two mosses and a liverwort (see Appendix). Fifty six % of the flora is native. Only two of these species were not seen elsewhere on this coastal walk: a 20cm tall succulent, *Cotyledon orbiculata* (uprooted) which is common on the coastal cliffs just to the north of here at Anawhata and also appeared to be present on the cliffs north-east of the islet some 100m a.s.l (based on their very pale colour); and sea spurrey (*Spergularia media*) which was occasional on the bare coastal rock with pink flowers, this almost certainly grows along the adjacent coast as well.

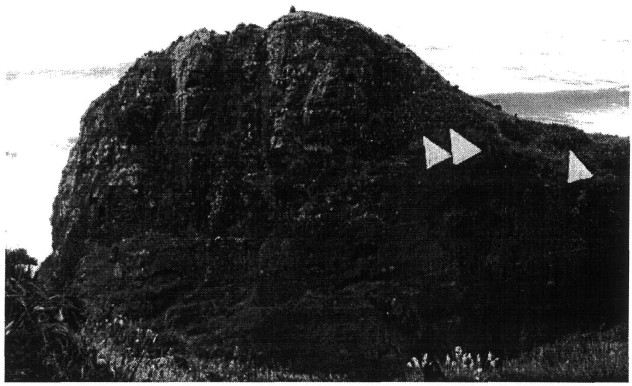
The main ridge of the "islet" runs north-south, reaching a high point near the south and is only a few metres wide at the summit, it drops to the north and widens to a maximum of about 10m (Figure 2). The "islet" sides are near vertical and are predominantly bare rock (volcanic conglomerate), with occasional grassy ledges and small caves (Figure 2). Climbing up onto the "islet" is only possible in the north-east corner where the turf vegetation extends up for several metres from the low adjoining mainland ridge.

The vegetation of the flattish ridge is mainly exotic grasses, clumps of *Isolepis nodosa*, scattered low tauhinu (*Cassinia leptophylla*) bushes and rocky outcrops. There is a 8 x 6m patch of flax on the ridge which is 1.4m tall (the tallest vegetation on the island) with occasional coastal toetoe. There is another patch of flax which covers a small shoulder on the east side (Figure 2). This was the dampest area on the "islet" where pearlwort (*Sagina procumbens*) and the liverwort, *Chiloscyphus semiteres* were growing on the shaded rock face. The outer western shoulders of the main ridge are covered in mats of glasswort and New Zealand ice plant with *Samolus* along the lower edges. *Bromus hordeaceous* and *Lotus suaveolens* with the occasional toetoe tussocks were also present amongst them.

Hayward and Diamond (1978: 37) record a pa on top of Fishermans Rock consisting of several narrow flats and terraces with shell patches down both sides (still evident). They also record terraces, middens and rock shelters opposite Fishermans Rock on the point. On all visits possum droppings were common on the islet, although browsing signs were not evident. In December a pair of black-backed gulls with two chicks were present in a small islet cave facing the mainland. No other sign of nesting birds was seen, although a blue penguin was present in the sea gut by the turf herbfield in November.

The immediate mainland adjacent to Fishermans Rock is an exotic grassland with clumps of flax, coastal toetoe and tauhinu; hangehange (*Geniostoma rupestre*) shrubs are occasional. Both Fishermans Rock and the adjacent point have been burnt in the past, probably repeatedly.

Figure 2. Fishermans Rock, east side, single arrow denotes flax terrace, double arrow denotes flax ledge. December 1995.



A comparison of the Fishermans Rock vascular flora with Taitomo Island (see Cameron *et al.*, 1995) 4km to the south highlights the following points:

- both contained a coastal turf community where the sea spray zone coincided with a non-vertical slope;
- except for four species (*Crassula sieberiana*, *Cotyledon orbiculata*, *Plantago australe*, *Festuca arundinacea*) all Fishermans Rock species were present on the larger and taller Taitomo Island. It is possible that these species (apart from *C. orbiculata*) are also present on Taitomo and were overlooked, especially *C. sieberiana* which is so very small;
- apart from *Celmisia major*, Fishermans Rock lacks the more interesting species of Auckland's west coast flora;
- only three seedling pohutukawa were recorded for Taitomo and none for Fishermans Rock. The predominant on-shore winds would not favour westward seed dispersal, the presence of possums may also be a factor. But the most probable explanation is that in such extreme exposed conditions with little top soil any seedlings that manage to establish die of dessication during the dry summers. As more shaded areas are created by other vegetation, pohutukawa establishment should increase.

Return trip

This requires retracing the Rose Track back to Whites Beach where the gentler gradient of the Rose Track which continues behind Whites Beach is the better climb than the steep Laird Thomson. It was disappointing to see Montpellier broom (*Teline monspessulana*) has locally naturalised about half way up this track. Presumably it has spread down the cliffs from the baches above. Hopefully it can be eradicated before it spreads too far. This track emerges onto a narrow "road" (a continuation of the Rose Track), which provides access for three baches. A

short down-the-ridge track soon connects with the summit of the Laird Thomson Track which can be retraced back to north Piha.

Conclusion

From this walk a large variety of native vascular plants can be seen (115 recorded here), from salt-tolerant herbs to forest trees. The views are fantastic. In mid December the *Celmisia* is in full flower and is locally common, especially at the north end of Whites Beach. It is sad to think a spectacular piece of native forest was burnt relatively recently by careless fishermen. But most areas are regenerating well and should once again return to their former glory if they escape fires. The local naturalisation of Montpellier broom and onion weed highlight the dangers of having private dwellings above natural areas.

Acknowledgements

For the company of Doug Rogan, Auckland Bot Soc and my two sons during the three trips respectively, Jessica Beever and David Glenny for identifying the bryophytes, Sandra Jones for the extra *Asplenium terrestre* site, Rhys Gardner for pointing out the importance of the *Geranium retrorsum* record, Graeme Taylor for discussion about the lack of pohutukawa establishment, Marjorie Cutting and Graeme Murdoch for checking the spelling of Thomson, Doug Rogan for calculating the size of Fishermans Rock, and Antoinette Nielsen for typing this article.

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Appendix: Plant list for North Piha, Whites and Fishermans Rock

Ferns (20)

Adiantum cunninghamii	lc	
A. hispidulum	o	
A. terrestre subsp. *maritimum*	I	AK 224585
Asplenium gracillimum	I	AK 224506
A. oblongifolium	o; FR, x4	
Blechnum membranaceum	c	
B. sp. 1 (kiokio)	I	
Cheilanthes distans	TW, I	
Cyathea medullaris	o	
Doodia media	lc	
Dicksonia squarrosa	s	
Phymatosorus pustulatus	o	
Pellaea rotundifolia	TW, I	
Pneumatopteris pennigera	I	

Polystichum richardii	c	
Pteridium esculentum	o	
Pteris comans	lc	
P. comans x *P. saxatilis*	lc	
P. saxatilis	o	
P. tremula	o	

Dicotyledons (106)

Acaena novae-zelandiae	l	
Anagallis arvensis var. *arvensis**	c; FR, o	
A. arvensis var. *coerulea**	c	
Apium prostratum s.str.	o; FR, lc	
Brachyglottis repanda	o	
Calystegia soldanella	c	
C. tuguriorum	c	
Cardamine debilis	o	
Carmichaelia cunninghamii	s	
Cassinia leptophylla	o-lc; FR, c	
Celmisia major	o-lc; FR, c	
*Centaurium erythraea**	o	
*Cerastium glomeratum**	o	
*Cirsium vulgare**	o; FR, x1	
Clematis paniculata	o	
*Conyza albida**	o	
Coprosma macrocarpa	a	
C. rhamnoides	o	
C. robusta	o	
Corynocarpus laevigatus	o	
*Cotyledon orbiculata**	FR, x1	
Crassula sieberiana	lc; FR, c	
*Crepis capillaris**	o	
Dichondra repens	o-lc; FR, lc	
Disphyma australe	o-lc; FR, c	
Dysoxylum spectabile	o	
*Galium aparine**	l	
Geniostoma rupestre	c	
Geranium retrorsum	TW, l	AK 224583
Gnaphalium audax	o	
*G. coarctatum**	c	
G. gymnocephalum	o	
*G. simplicicaule**	c	
*G. subfalcatum**	l	AK 224507
Haloragis erecta	o	
Hebe macrocarpa	lc	
H. obtusata	o	
H. stricta	lc	
Hoheria populnea	o	
Hydrocotyle elongata	lc	
*Hypochoeris radicata**	c	
Kunzea ericoides	TW, l	
Lagenifera pumila	l	

*Leontodon taraxacoides**	lc; FR, c	
Leptospermum scoparium	o	
*Leucanthemum vulgare**	l	
Leucopogon fasciculatus	o	
Lilaeopsis novae-zelandiae	l	
*Linum bienne**	o	
Lobelia anceps	o	
*Lotus angustissimus**	l	
*Lotus pedunculatus**	o-lc	
*L. suaveolens**	c; FR, a	
*Lupinus arboreus**	o	
Macropiper excelsum	c	
Melicytus ramiflorus	o	AK 224512
Metrosideros excelsa	c	
*Modiola caroliniana**	s	
Muehlenbeckia complexa	c; FR, o-c	
Myoporum laetum	o	
Myrsine australis	s	
Olearia furfuracea	l	
*Ornithopus pinnatus**	o	
Oxalis exilis	o	
O. rubens	o-lc; FR, o	
Parentucellia viscosa	o	
Parietaria debilis	lc	AK 224515
Parsonsia heterophylla	l	
Peperomia urvilleana	o	
Pittosporum crassifolium	c	
*Plantago australis**	o; FR, o	
*P. lanceolata**	o-lc	
*Polycarpon tetraphyllum**	o; FR, o	
Pomaderris phylicifolia var. *ericifolia*	TW, l	
Pouteria costata	lc	
Pseudognaphalium luteoalbum	o	
Pseudopanax crassifolius x *P. lessonii*	s	
P. lessonii	c	
*Ranunculus parviflorus**	l	
R. reflexus	o-lc	
*Rorippa nasturtium-aquaticum**	l	
*Rumex acetosella**	l	
*R. brownii**	o	
*R. obtusifolius**	s	
*Sagina procumbens**	o-lc; FR, l	
Samolus repens	lc; FR, c	
Sarcocornia quinqueflora	la; FR, la	
Scandia rosifolia	o	
Selliera radicans	lc; FR, lc	
*Senecio bipinnatisectus**	o	
S. glomeratus	s	
S. hispidulus	c	
S. lautus	c; FR, lc	
*Silene gallica**	c	
*Soliva sessilis**	l	

*Sonchus oleraceus**	c; FR, o	
Sophora microphylla var. *fulvida*	o-l	
*Spergularia media**	o; FR, o	
Stellaria parviflora	lc	
*Teline monspessulana**	lc	AK 224510
Tetragonia trigyna	c; FR, lc	
*Trifolium dubium**	lc	
*Trifolium repens**	lc	
*Ulex europaeus**	o	
*Veronica arvensis**	o	
Wahlenbergia "vernicosa"	o-lc	

Monocotyledons (58)

*Agrostis capillaris**	l	
*Aira caryophyllea**	lc	
*Allium triquetrum**	la	
*Ammophila arenaria**	lc	
*Anthoxanthum odoratum**	lc	
Arthropodium cirratum	o	
Astelia banksii	c; FR, l	
*Briza maxima**	o	
*B. minor**	o	
*Bromus diandrus**	lc; FR, o	
*B. hordeaceus**	o; FR, c	
*B. lithobius**	o	AK 224508
*B. willdenowii**	lc; FR, c	
Carex breviculmis	o	
C. dissita	c	
C. flagellifera	c	
C. lambertiana	l	
C. lessoniana	l	
C. pumila	l	
C. spinirostris	c	
C. testacea	o; FR, x1	
Cordyline australis	c	
*Cortaderia jubata**	lc	
C. splendens	o-lc; FR, o	
*Cyonodon dactylon**	lc	
Cyperus ustulatus	o	
*Dactylis glomerata**	o; FR, la	
Dianella nigra	o	
*Festuca arundinacea**	c; FR, c	
Gahnia lacera	o	
*Gladiolus undulatus**	lc	
*Holcus lanatus**	o; FR, c	
Isolepis cernua	l; FR, l	
I. nodosa	o-lc; FR, o	
*Juncus tenuis**	o	
Lachnagrostis billardierei	o; FR, l	
L. littoralis	lc; FR, lc	AK 224584
*Lagurus ovatus**	lc; FR, c	

Luzula picta	l	AK 224586
Microtis unifolia	o	
Oplismenus imbecillis	o	
*Parapholis incurva**	o	
*Paspalum dilatatum**	o-lc; FR, o	
*P. distichum**	l	
*P. vaginatum**	o	
*Pennisetum clandestinum**	lc	
Phormium cookianum	l	
P. tenax	c; FR, lc	
Poa anceps	c; FR, lc	
*P. pratensis**	c; FR, a	AK 224509
Pterostylis banksii	l	
Rhopalostylis sapida	o	
*Rytidosperma racemosum**	lc	
*Sporobolus africanus**	o-lc; FR, c	
Spinifex sericeus	la	
Triglochin striata	l	
Uncinia uncinata	o	
*Vulpia bromoides**	c, FR, lc	

Bryophytes (for Fishermans Rock only)

Mosses (2)

Bryum dichotomum	o	AK 224529
Weissia controversa	LC	AK 18376

Liverworts (1)

Chiloscyphus semiteres	l	AK 224774

a = abundant
c = common
o = occasional
l = local
s = scarce (< 5 plants seen)
* = adventive species
AK = voucher specimen in Auckland Museum herbarium
FR = (also) present on Fishermans Rock
LC = collected by Lucy Cranwell in May 1934
TW = only seen at Te Waha Pt