

Objections to the 1980 Draft Management Plan for Queen Elizabeth
Park, Paekakariki

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Introduction

As a plan for what is primarily a recreation area, the 1980 Management Plan gives pleasing recognition to conservation values of natural physical and biological features of the Park.

However, in a private capacity, I wish to object to some details of the Management Plan. My qualifications for these comments are as follows: I am botanist and survey scientist with the N.Z. Wildlife Service; immediate past-president of the Wellington Botanical Society, ^{for} 10 years head of biology then science departments at Tawa College; and Pukerua Bay resident for 10 years.

Recommendations

1. Natural regeneration should be encouraged by removing sheep, and perhaps some hand-releasing of seedlings from the long grass.
2. ~~Some~~ ~~seedlings~~ ~~should~~ ~~be~~ ~~released~~ ~~from~~ ~~local~~ ~~sources~~.
3. More shelter belts are desirable adjacent to and outside the forest. These may be exotic shrubs, or NZ shrubs which are not native to the district, or native shrubs of local origin.
4. Higher intensity public use should not be encouraged near the forest.
5. The wetlands and forest should be regarded and managed as one entity.
6. Retain the macrocarpa shelter belt, and exercise caution with weed control.

B. The Wildlife Area

General

The recognition given in the Plan to wildlife values of wetland was most pleasing. Such wetlands also have botanical values, since many species of wetland plants are becoming rare in districts where few remain. The swamp maire mentioned above is one example. The Wellington Region is extremely deficient in wetlands, and few of those remaining have reserve status.

For reference purposes, the zoned wetland (fold-out map in the Plan) and adjacent wet areas are considered to consist of four sections (Fig. 1) and a plant list was made for each (Appendix I). In practice, the close proximity of these four sections allows free movement of plants and animals between them, and they are functionally one wetland. The Plan correctly draws attention to the inter-relationships between the wetlands discussed here, and the Wildlife Management Reserve across the railway.

The values of the wetlands

Of the four sections of wetlands, only section 3 (Fig. 1) had water on 1.3.81. This comprised a large pool near the railway and,

towards the coast, two smaller pools separated by a clay causeway. Appendix I shows that this section contains the highest number of plant species, including the highest proportion of native plants. The Plan proposes all of section 3 as "wildlife area" and this is supported. However, the Plan describes the area quite incorrectly (see "Errors in the Plan", below), and under-rates its values for flora and fauna.

Although this submission is primarily concerned with the flora of the area, it must be noted that on 1.3.81, the following birds were seen on the pools or their margins: 12 spur-winged plovers, 15 pied stilts, 15 pukeko, 91 mallard ducks, 18 white-faced herons, a number of swallows, a small black shag (probably little black shag), and a harrier hawk. Only swallows and pukeko are named in the Plan.

The pools contain beds of emergent bamboo spike sedge (Eleocharis sphacelata) and submerged pond-weed (Potamogeton); surrounding firm mud has a short-cropped turf of milfoil and Gratiola, and wetter swamp is dominated by beds of spike sedge (E. acuta), Juncus articulatus, and floating sweet grass (Glyceria). Beyond this, firm but wet flats in all four sections are dominated by various rushes (Juncus species) with grasses (creeping bent, floating sweet grass), short sedges, and other herbaceous plants such as pennyroyal, willow weeds (Polygonum spp.), and Lotus. These wet flats are flooded in winter and when visited in August 1980 contained much milfoil and pondweed, with large numbers of frogs, tadpoles, and aquatic insects. Black swan were also present at that time, in section 3. Floristically, each section has a rather different composition as can be seen from Appendix 1.

Errors in the Plan

- (a) The botanical description given in the above bears no resemblance to the description of p. 28 of the Plan. In fact, raupo and flax (which are correctly known as Typha orientalis and Phormium tenax respectively) are not present in this wetland, Carex virgata (not C. virgatus) is uncommon, willow herb (Epilobium) was not seen but might be present, and of those named in the Plan, only Juncus lamprocarpus (more

correctly called J. articulatus) is at all obvious.

It is suggested that the description in the Plan is for the Wildlife Reserve between S.H. 1 and the NIMT railway.

- (b) The Plan (p. 28) describes the area as "relatively undisturbed". In terms of direct human disturbance this is true, but the entire area is and has been much modified by stock grazing. Very little cover exists for waterfowl and other wetland birds. Some grazed pastures are advantageous for waterfowl as loafing areas, but undisturbed cover is also necessary if the existing fertile feeding areas are to be complemented by local breeding sites. Partial fencing would lead to greater plant diversity as well.

Deficiencies in the Plan

Management of the wetland is not discussed in the Plan. Control of water levels can improve values for both wetland birds and plants. At present the least common plant known here is Gratiola sexdentata, a native herb with 10mm long tubular white flowers, related to snapdragons and only known elsewhere in the Wellington region near Plimmerton, Makara, and Silverstream. Even the nationally widespread Ranunculus rivularis, milfoil, water-meal, bamboo spike sedge, Hydrocotyle pterocarpa, and Centipeda are uncommon in this region because of the paucity of habitat. Some of these plants would benefit from higher summer water levels, less intensive grazing and a larger area of wetland. Other wetland plants would arrive of their own accord, and some might be considered for introduction.

For these reasons, and for improved and expanded bird habitat, an extension is sought for the "wildlife area". This is marked in Fig. 1. Such an area would also provide both a buffer and a link with the forest remnant discussed above. Public viewing of wetland would be largely in the sections 1 and 4 of this map, and the birds which are less tolerant of disturbance would be less disturbed in section 3.

Recommendations

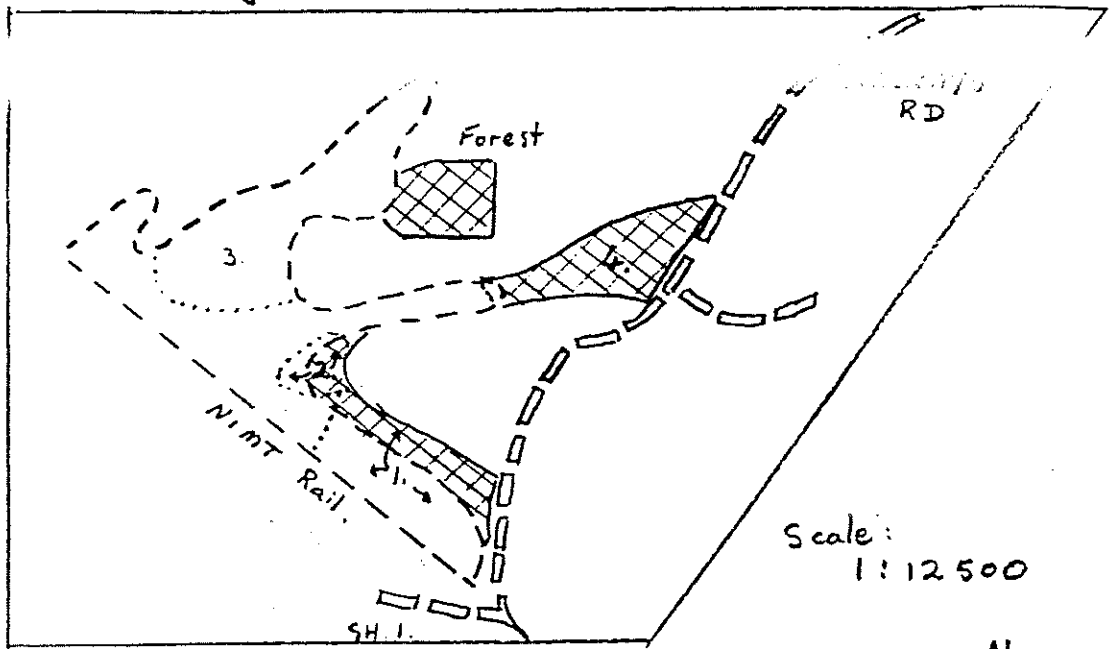
1. Fence parts of the wetland from stock.
2. Extend the zone marked "wildlife area" to include the wetlands marked in Fig. 1.
3. Consider controlling water levels. Consultation with N.Z. Wildlife Service should provide guidelines for this.

Other areas


The detailed discussion (p. 26-27 of the Plan) of the sand dune communities was far superior to that of the forest remnant and wetlands. For some years between 1969 and 1978 I used this same area for teaching ecology to 6th form classes, and the following minor additions and changes are suggested from these studies:

- (a) p. 26 has several typographical errors, including Ammophila (not Ammophilia), Muehlenbeckia (not Muelenbeckia) and Phormium cookianum (not P. cookiaum). The last-named flax is, in fact, all P. tenax as far as I recall.
- (b) two further native plants of these dunes are sand-bent (Deveuxia billardieri) and a creeping sand-sedge, Carex pumila.
- (c) the "dune wilderness area", at its extreme southern end, immediately above the stream on the highest dune, has a good stand of tall kanuka with an understorey of young mahoe and a ground-cover of hound's-tongue fern. This takes Petrie's description of succession one further stage.
- (d) near the mouth of the Whareroa Stream are two large sedge species of very local occurrence: Scirpus caldwelii and Scirpus lacustris. In this region, the former occurs at the mouth of the Taupo Stream at Plimmerton, the Pauatahanui Harbour, and the mouth of Kenepuru Stream at Porirua. The latter is known in the Pencarrow Lakes and at Pekapeka. Neither is at immediate risk, but if the Whareroa Stream were to be altered, these species could disappear.

FIG. 1 : Area south of Mackays Rd, showing Management Plan boundaries and extensions proposed in report of C.C. Ogle.



Legend:

- 1980 Management Plan Boundary of wildlife area
-  Extensions sought for wildlife area
- Boundaries of sections 1, 2, 3, 4 (see Appendix 1.)

Plants species list for wetlands in Queen Elizabeth Park, lying between NIMT Railway, Mackays Road, and fenced remnant of coastal forest. Plants of adjacent dry pastures not listed. Numbers 1-4 indicate the species' presence in different sections of the wetland - see Fig. 1.

* = exotic species. C.C. Ogle 1/3/81

DICOTYLEDONS

- Centipeda orbicularis
- *Cotula coronopifolia (batchelor's button)
- *Galium palustre (?) (marsh bedstraw)
- Gnaphalium involucreatum
- Gonocarpus micranthus
- Gratiola sexdentata
- Hydrocotyle pterocarpa
- Hypericum japonicum
- Lobelia anceps (NZ lobelia)
- *Lotus peduncularis (lotus major)
- *Ludwigia palustris (water purslane)
- *Mentha pulegium (pennyroyal)
- *Myosotis caespitosa (water forget me not)
- Myriophyllum propinquum (milfoil)
- *Polycarpon tetraphyllum (allseed)
- *Polygonum hydropiper (waterpepper)
- P. sp. (c.f. P. decipiens) = *salicifolium*
- *Ranunculus repens (creeping buttercup)
- R. rivularis = *amphitrichus*
- *R. sceleratus (celery-leaved buttercup)
- *Rumex crispus (curled dock)
- *Sagina procumbens (pearlwort)
- *Trifolium repens (white clover)

Area

	1	2	3	4
			X	
X			X	
X	X		X	
			X	X
			X	
			X	
	X		X	
			X	
X	X		X	X
X	X		X	
X	X		X	X
X	X		X	X
X	X		X	X
X				X
X				
X			(M4)	
			X	
				X
				X
X	X		X	X

MONOCOTYLEDONS

- *Agrostis stolonifera (creeping bent)
- ~~Carex virgata~~
- Cordyline australis (cabbage tree)
- Cyperus ustulatus
- Eleocharis acuta (spike edge)
- E. sphacelata (bamboo spike sedge)
- *Festuca arundinacea (tall fescue)
- *Glyceria declinata (floating sweet grass)
- *Juncus articulatus
- J. australis
- *J. effusus
- J. gregiflorus
- J. pallidus
- J. sarophorus
- Lemma minor (duckweed)
- Potamogeton cheesemanii (pond weed)
- Schoenus maschalinus
- Scirpus nodosus
- S. prolifer
- *S. setacea
- *Spirodela punctata (purple-backed duckweed)
- Wolffia australiana (water meal)

X	X	X	X
X		X	
	X	X	
	X		
X	X	X	X
		X	
X			
X	X	X	X
X	X	X	X
		X	
X	X	X	X
X	X	X	X
X		X	X
	X		
X		X	
		X	
		X	
		X	

FERN

Azolla rubra (red water fern)

X		X	
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Additions to area 3 in 1982-84

- Amphibromus fluitans
- *Lythrum hyssopifolia
- Lobelia anceps
- Lachnagrostis sp. (L. filiformis agg.)

- Juncus planifolius
- Gonocarpus micranthus
- Gnaphalium involucreatum
- Hypericum japonicum
- Hydrocotyle novae-zelandiae

APPENDIX

Plant species list for fenced coastal forest remnant, Queen Elizabeth Park, just south of Mackays Rd. (The number of specimens seen is given for a few tree species). * denotes exotic species.

C.C. Ogle 1.3.81

GYMNOSPERMS

- * Cupressus macrocarpa (macrocarpa)
Podocarpus dactyloides (kahikatea) (25+)
Prumnopitys taxifolia (matai) (1) [found 11/81]

DICOTYLEDONS

- Alectryon excelsus (titoki) (3)
Beilschmiedia tawa (tawa)
Centipeda orbicularis
* Carduus tenuiflorus (winged thistle)
* Cerastium glomeratum (mouse-eared chickweed)
* Cirsium arvense (Californian thistle)
* C. vulgare (Scotch thistle)
Coprosmma repens (taupata)
Corynocarpus laevigatus (karaka) (2)
* Crepis capillaris (hawksbeard)
* Digitalis purpurea (foxglove)
Dioscorea spectabilis (kohekohe)
Elaeocarpus dentatus (hinau) (2)
* Galium aparine (cleavers)
* Geranium molle (soft dove's foot)
* G. robertianum (herb Robert)
Hydrocotyle moschata
H. sp. (H. novae-zelandiae agg.)
* Hypochaeris radicata (cat's ear)
Knightia excelsa (rewarewa) (1)
Laurelia novae-zelandiae (pukatea) (13)
Leptospermum ericoides (kanuka)
L. scoparium (manuka) (1)
* Lotus peduncularis (lotus major)
* Lophomyrtus bullata (sumatran myrtle)
* Lupinus arboreus (lupin)
Melicytus ramiflorus (mahoe)
* Mentha pulegium (penny royal)
Metrosideros perforata (white climbing rata)
Muehlenbeckia australis (pohuehue)
M. complexa (pohuehue)
Myoporum laetum (ngaio)
Myriophyllum propinquum (milfoil)
Myrsine australis (mapou) (1 juvenile, 1m tall + 2 adults)
Paratrophis banksii (large-leaved milk tree) (1)
P. microphylla (small-leaved milk tree) (1)
Parietaria debilis
Parsonsia heterophylla (NZ jasmine) (1 seedling, 2 adults)
* Phytolacca octandra (ink weed)
* Polygonum hydropiper (water pepper)
* Rumex conglomeratus (clustered dock)
* R. crispus (curled dock)
* Sambucus nigra (elderberry)
* Senecio bipinnatisectus
* Solanum nigrum (black nightshade)
* S. pseudo-capsicum (Jerusalem cherry)
† Griselinia lucida (broadleaf)

DICOTYLEDONS (Continued)

- S. sp.* (*S. aviculare* or *S. laciniatum*) (poroporo)
Stellaria media (chickweed)
Syzygium (*Eugenia*) *maire* (swamp maire) (5)
Tetragonia trigyna (NZ spinach)
Trifolium dubium (suckling clover)
T. repens (white clover)
* *Ulex europaeus* (gorse)

FERNS

- Asplenium flaccidum* ssp *flaccidum* (hanging spleenwort)
Hypolepis sp. (*H. tenuifolia* of NZ authors)
Phymatosorus diversifolius (hound's tongue)
Pteris tremula
Pyrrhosia serpens

MONOCOTYLEDONS

- * *Agrostis stolonifera* (creeping bent)
* *A. tenuis* (brown top)
* *Anthoxanthum odoratum* (sweet vernal)
* *Arrhenatherum elatius* (tall oat grass)
Carex virgata
Cordyline australis (cabbage tree)
* *Cynosurus cristatus* (crested dog's tail)
* *Dactylis glomerata* (cock's foot)
* *Ehrharta erecta* (veldt grass)
Eleocharis acuta
* *Holcus lanatus* (Yorkshire fog)
* *Juncus articulatus*
J. australis
J. gregiflorus
J. pallidus
J. sarophorus
Microlaena stipoides (meadow rice grass)
Ripogonum scandens (supplejack)
Scirpus prolifer
* *Zantedeschia aethiopica* (arum lily)