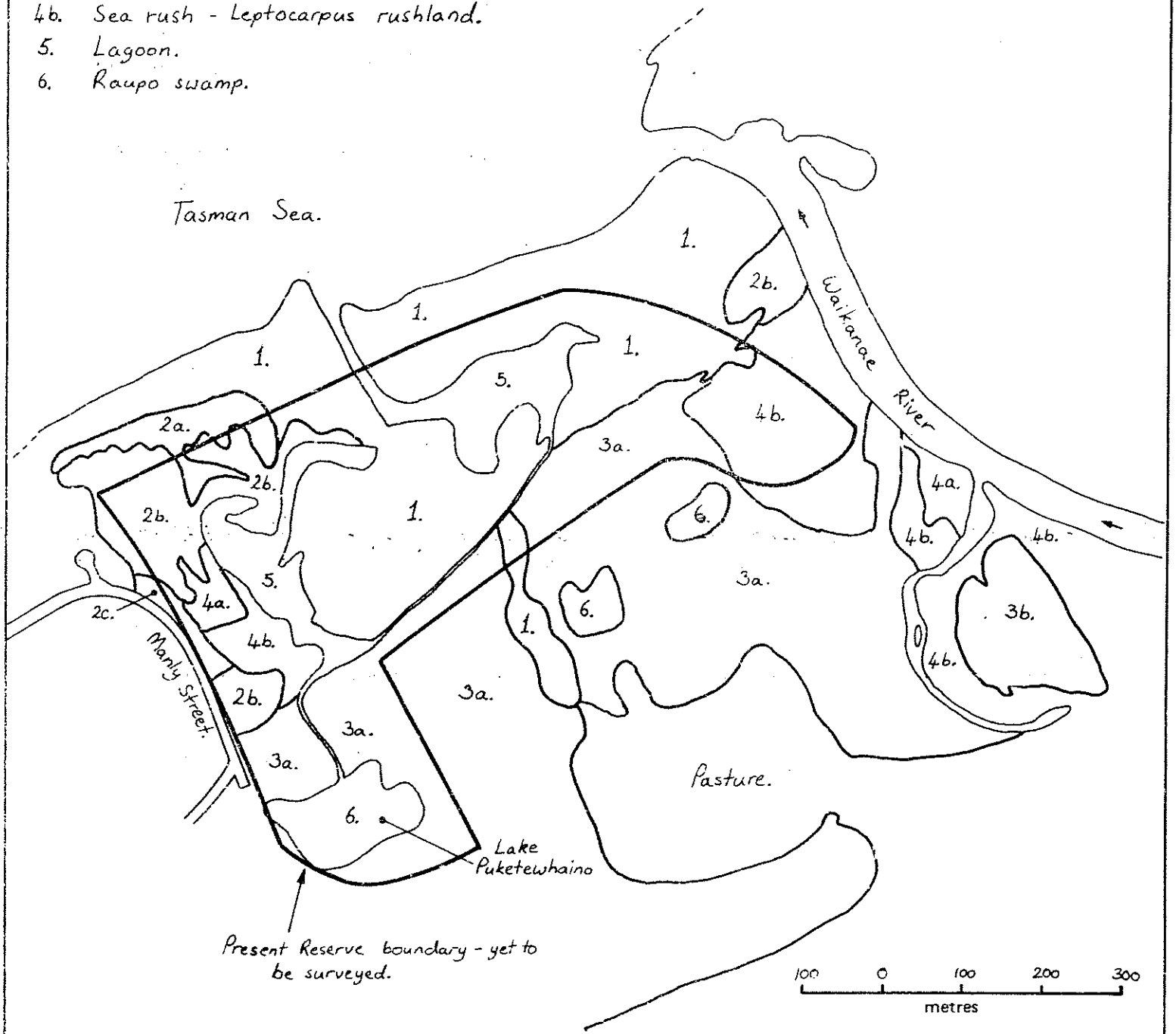


1. Bare sand flats.
- 2a. Marram - spinifex grassland.
- 2b. Marram - lupin grass - shrubland.
- 2c. Lupin shrubland.
- 3a. Lupin - Marram - blackberry shrubland.
- 3b. Gorse - tall fescue shrub - grassland.
- 4a. Low salt meadow.
- 4b. Sea rush - Leptocarpus rushland.
5. Lagoon.
6. Raupo swamp.



Waikanae Estuary Scientific Reserve (proposed)

Area: 27.3 ha

Indicator sp? not T.P.

TREES AND SHRUBS

Native

Cassinia leptophylla
Corposma propinqua
C. repens

Cordyline australis
Myoporum laetum

Olearia solandri
Plagianthus divaricatus

7

Adventive

Chamaecytisus palmensis
Cytisus scoparius
Lupinus arboreus

Lycium ferocissimum
Populus alba

Salix fragilis
Ulex europaeus

7

CLIMBERS, LIANES ETC.

Native

Calystegia soldanella

Muehlenbeckia complexa

Tetragonia trigyna

3

Adventive

Rubus fruticosus agg.

Senecio angulata

2

GRASSES, RUSHES AND LIKE PLANTS

Native

Carex flagellifera
C. pumila
C. virgata
Cortaderia toetoe
Cyperus ustulatus
Eleocharis acuta
Juncus maritimus var. australiensis

Juncus pallidus
Leptocarpus similis
Scirpus pungens
Scirpus cernuus (Isolepis cernua)
S. fluviatilis (Bolboschoenus fluviatilis)

Scirpus lacustris
S. nodosus (Scirpoides nodosa)
S. prolifer (Isolepis prolifer)
Spinifex hirsutus
Typha orientalis

17

Adventive

Agrostis tenuis
Ammophila arenaria
Anthoxanthum odoratum
Bromus catharticus
Dactylis glomerata

Festuca arundinacea
F. rubra
Holcus lanatus
Juncus articulatus

Juncus bufonius
Lagurus ovatus
Spartina X townsendii
Stenaphrum secundatum

13

HERBS

Native

Acaena anserinifolia
Apium australe
Atriplex sp.
Cotula coronopifolia
C. dioica ssp. monoica

Epilobium pallidiflorum
Hydrocotyle moschata
Lemna minor
Potentilla anserinoides
Ruppia megacarpa

Samolus repens
Sarcocornia quinqueflora
Sonchus littoralis
Triglochin striatum

14

Adventive

Achillea millefolium
Anagallis arvensis
Beta vulgaris
Brassica campestris
Cirsium vulgare
Conium maculatum
Cotula australis
Crepis capillaris
Erigeron canadensis
Foeniculum vulgare
Fumaria officinalis
Galium aparine

Geranium molle
Hypochaeris radicata
Leontodon autumnalis
Lotus pedunculatus
Nasturtium officinale
Oxalis sp.
Parentucellia viscosa
Plantago coronopus
P. lanceolata
P. major
Ranunculus scleratus
R. repens

Rumex acetosella
R. conglomeratus
R. obtusifolius
Sagina procumbens
Senecio elegans
S. jacobaea
Solanum sublobatum
Sonchus asper
S. oleraceus
Trifolium repens
T. subterraneum
Vicia sativa

36

FERNS AND ALLIES

Native

Azolla rubra

Pteridium esculentum

2

BIRDS

Antarctic fulmar
Antarctic prion
Arctic skua
Australian bittern
Australian gannet
Australasian harrier
banded dotterel
blackbird
black-billed gull
black-fronted tern
black shag
black swan
blue penguin
blue petrel
broad-billed prion
Buller's shearwater
Cape pigeon

Caspian tern
chaffinch
diving petrel
eastern bar-tailed godwit
eastern little tern
fairy prion
flesh-footed shearwater
fluttering shearwater
giant petrel
goldfinch
greenfinch
grey duck
greywarbler
hedge sparrow
house sparrow
Hutton's shearwater
Kerguelen petrel

knot
lesser broad-bill prion
little black shag
little shag
mallard
mottled petrel
narrow-billed prion
New Zealand dabchick
New Zealand kingfisher
New Zealand pipit
New Zealand shoveler
North Island fantail
northern blue penguin
paradise duck
pheasant
pied shag
pied stilt

BIRDS (Continued)

pomarine skua
pukeko
red-billed gull
redpoll
reef heron
rock pigeon
short-tailed shearwater
shy mollymawk
silveryeye
skylark

song thrush
sooty shearwater
southern black-backed gull
South Island pied oystercatcher
spotless crane
spotted shag
spur-winged plover
starling
turnstone
variable oystercatcher

welcome swallow
white-backed magpie
white faced heron
white-fronted tern
white-headed petrel
white heron
wrybill
yellow-eyed penguin
yellowhammer

| | | |
|---|---|---|
| WAIKANA E ESTUARY SCIENTIFIC RESERVE (PROPOSED) | | GRID REF N 156/157 540720 |
| for: <input checked="" type="checkbox"/> general <input checked="" type="checkbox"/> bush <input type="checkbox"/> scrub/tussock etc <input type="checkbox"/> wetland <input checked="" type="checkbox"/> plants <input checked="" type="checkbox"/> animals <input checked="" type="checkbox"/> geology/soil <input type="checkbox"/> history/prehistory <input type="checkbox"/> water supply | LOCATION South side of Waikanae River mouth. | AREA ha/000 27.3 L.D. No. |
| ACCESS Along Waikanae Beach, and from Manly Street on south side of the reserve. | OUTLINE & TOPO Estuary of the Waikanae River, includes sand dunes, lagoon and freshwater lakelets. | STATUS Scientific RES sub-Cttee CONTROL CCL GAZETTED RESERVED 1978 Ministerial requirement for a proposed wild- HISTORY life and recreational reserve was served on Kapiti Borough and Horowhenua County Councils in 1973. Reserve purchased by Crown in 1978. AIR PHOTO SN 5497 H/2 date 6.10.1980 |
| SURROUNDINGS Cook Straits to the west. Suburban development to south and north of the Waikanae River. Rough pasture to the east. | GEOLOGY Very recent deposits. | nearby town 6 km Waikanae nearest reserve 4 km Paraparaumu Scenic public road 0 km sea (km) 0 ALTITUDE m/000 0-5 ASPECT West RAIN mm/00 (approx) 1050 NAT FERTILITY Low |
| SPM Unconsolidated sand, shells, driftwood. | SOIL Coastal sands. | |
| DRAINAGE Very good on sand dunes, impeded on sand flats. | | |

| RES | NOT | MAIN HABITATS and FEATURES | % area | area ha | native | | EX | regen | NAT | trend | EXOTICS |
|-------------------------------------|-------------------------------------|--|--------|---------|----------------|--------------------|----|-------|-----|-------|---------|
| | | | | | 1 ^o | 2 ^o ind | | | | | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1. Bare sand flats. | 35.9 | 9.8 | ✓ | | | | | | |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 2. (a) Marram-spinifex grassland on unfixed sand dunes. | 1.5 | 0.4 | ✓ | | ✓ | H | M | S | H |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | (b) Marram-lupin grass-shrubland on unfixed sand dunes. | 7.4 | 2.0 | | | ✓ | H | L | S | H |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | (c) Lupin shrubland on unfixed sand dunes. | 1.5 | 0.4 | | | ✓ | H | L | S | H |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3. (a) Lupin-marram-blackberry/grasses shrubland on fixed sand dunes. | 23.3 | 6.4 | | ✓ | ✓ | M | L | I | H |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | (b) Gorse-tall fescue shrub-grassland on fixed sand dune. | - | - | | | ✓ | M | L | I | H |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 4. (a) Shore primrose-Scirpus-bachelor's button herbfield on low salt marsh. | 1.5 | 0.4 | ✓ | | | M | H | S | L |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | (b) Sea rush-Leptocarpus rushland on high salt marsh. | 11.1 | 3.0 | ✓ | | | M | H | S | L |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Lagoon with horse's mane weed and algae in brackish water. | 13.0 | 3.6 | ✓ | | | | | | M |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Raupae swamp in freshwater lakelets. | 4.8 | 1.3 | ✓ | | | M | M | I | M |
| | | 1. Extensive areas of bare sand between the beach, river mouth and sand dunes. Few plants present. 2. Unfixed sand dune areas are dominated by marram and lupin. Open sand-grass dunes behind the sea frontage are dominated by the grasses, marram and spinifex (2a). Lupin dominates on the sand dunes around the lagoon and in front of the freshwater lakelets; marram, tauhinu, tall fescue are also common in the shrubland. 3. The fixed dunes are covered in a complete cover of low shrubland dominated by lupin, blackberry, tall fescue, boxthorn and marram. Gorse is common in the oxbow region of the Waikanae River. Gorse plants have been cleared from other areas of fixed dune. 4. Submergent salt meadow covered in a low turf of sea primrose, <i>Selliera</i> , <i>Scirpus cernuus</i> and bachelor's button. Area is inundated at nearly every flood tide. The emergent marsh, covered by spring tides, is dominated by sea rush and <i>Leptocarpus</i> and lesser amounts of <i>Scirpus nodosus</i> . Shore ribbonwood is common in the northern area of salt marsh near the oxbow. Areas of low salt meadow and associated species are found in the emergent rush land. Areas of emergent marsh which are flushed with freshwater contain the large <i>Scirpus</i> species <i>S. pungens</i> , <i>S. fluviatilis</i> and <i>S. lacustris</i> . (Continued..) | | | | | | | | | |
| | | | 100 | 27.3 | | | | | | | |

CONDITION
 Good. Although many adventive species are well established as vegetation dominants the communities are now typical of the dune country of the west coast.

FENCING None.

PRIORITY Nil.

RATING 0-10

SCIENTIFIC 9... Very important bird habitat; variety of coastal and estuarine plant communities present.

SCENIC 8

RECREATION 6... Much potential for passive recreation such as walking, bird watching, fishing, whitebaiting etc.

CONCLUSIONS and RECOMMENDATIONS

This area has had a long history of ornithological study and supports a rich avifauna at different times of the year. Over the years the increasing numbers of people visiting Waikanae estuary have had little detrimental effect on the use made of the estuary by shore birds. However in recent times there has been an increase in the number of trail bikes, four-wheeled vehicles, dogs and horses around the estuary and their present is incompatible with the wildlife features of the estuary.

Spartina X townsendii has established itself in the lagoon and a regular check should be made of the clumps to ensure that they are not spreading.

The reserve should be extended to the south to include all lakelets and the oxbow region of the estuary. The rare plant *Cotula dioica* sub. sp. *monoica* would be protected by an extension around the oxbow.

5 ... hours Overcast conditions MCW September 1983

¹ NATURALNESS ² TREND: D deteriorating; S steady; I improving

