

Dune Wilderness – *Hidden in Plain Sight*

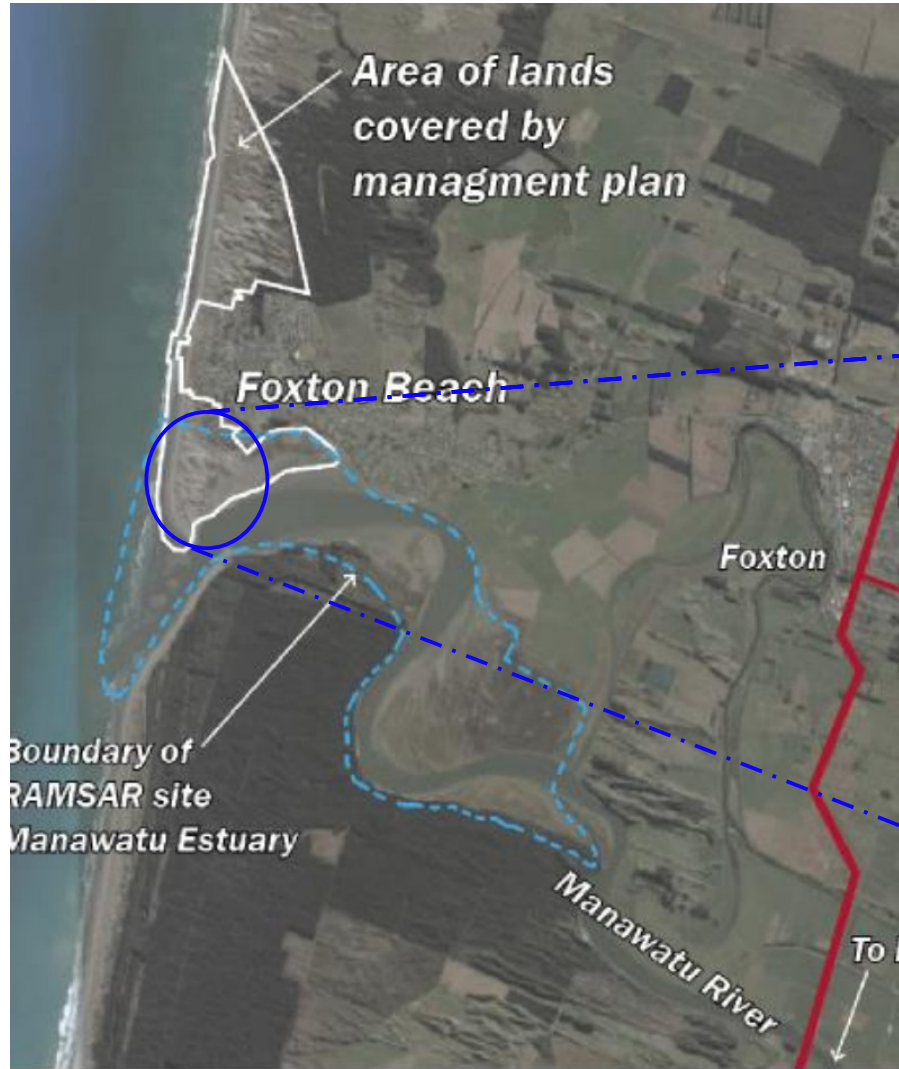
- **Uniqueness** – wetland turf habitats contain 20.6% of NZ's native flowering plant species, and 17.8% of threatened plant species^[1] in a tiny percentage of the total land area.



- **Dynamic Landscape** – we are watching the changes as the Dune Garden evolves, over seasons and years
- **Signage Requirement** – educate and inform at all entry points and key sites in the Dune Garden.

[1] <https://www.doc.govt.nz/globalassets/documents/science-and-technical/sfc230.pdf>

Manawatu Estuary Dune Garden Context



Dune Garden Background

- 50ha of dunes dune wetland within Manawatu Estuary Ramsar site
- Over 2 dozen native species, about 25% on threatened species list
- Except for marram, almost no weeds remaining. Marram programme active.
- Bare sand in 2016, growing in significantly every year
- Weed maintenance since 2019

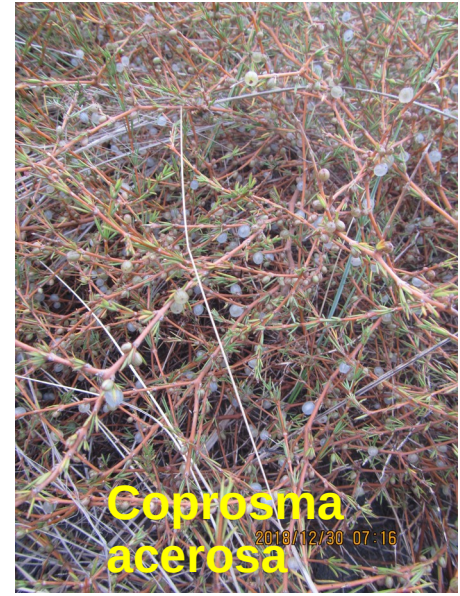


Adult female katipo

Threatened Species



Pohowera =
Banded
dotterel



Coprosma
acerosa

Biodiversity



Half-star =
Goodenia heenanii

Environmental Awareness





Birdlife in the Dune Garden



Maakoako



Sand sedge



Willowherb



Wiwi



Slender rush



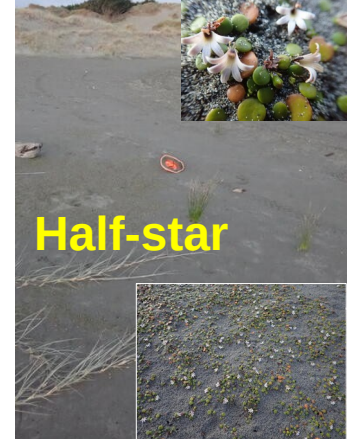
Remu remu



sand wind grass



Half-star



Arrow grass



Kokihi



Dune Garden Floral Highlights

Not highlighted: Oioi, Harakeke, Lilaepsis nz, Cudweed, Pingao, Taupata, Kowhangatara,

Punakuru



bindweed



Autetaranga



bidibid



Sand buttercup



Coprosma acerosa



Tauhinu



**Juncus
caespiticus**



Isolepis basilaris



Not shown: *Oxybasis ambigua*,
Gunnera arenaria, *Carex litorosa*,
(*Eleocharis* nz, *Pimelea aceta*)

**Gunnera
dentata**



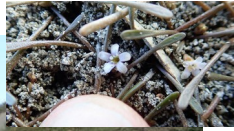
**Parabolic
dunes**



**Libertia
peregrinans**



Limosella lineata



**Mazus
nz**



**More
Foxtangi
Rareties**

**Myriophyllum
votschii**



**Thyridia
repens**



Further information

- Wetland Trust:
<https://www.wetlandtrust.org.nz/get-involved/ramsar-wetlands/>
- Manawatu Estuary Trust: <https://www.metrust.org.nz/home>
- Manawatu Estuary Dune Garden: arnim@actrix.gen.nz