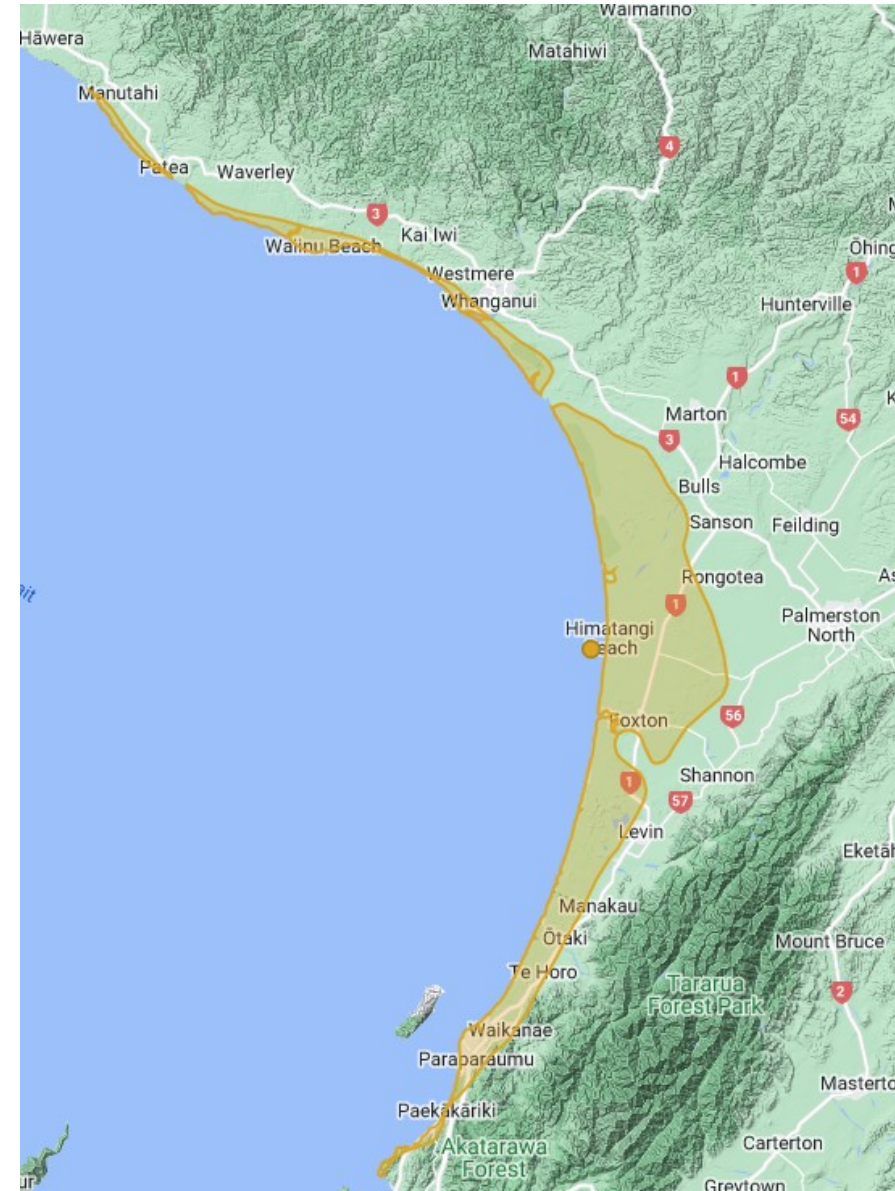


# Coastal Picture, West Coast, lower North Island

THE FOXTON ECOLOGICAL DISTRICT (105,500ha) is a narrow coastal strip from Tangahoe River near Hawera, that widens in the Foxton area and narrows again to end at Paekākāriki in the south. There are cliffs, especially in the northern section of the district, but it is otherwise dominated by dunes that have been formed by sand movement, especially that of the past. Today this sand movement continues but is so affected by human activities that few natural areas now remain. The district now contains mostly farmland, exotic pine plantations and urban areas.

From “Restoration Planting in Foxton Ecological District” – Wild for Taranaki

Map from iNaturalist

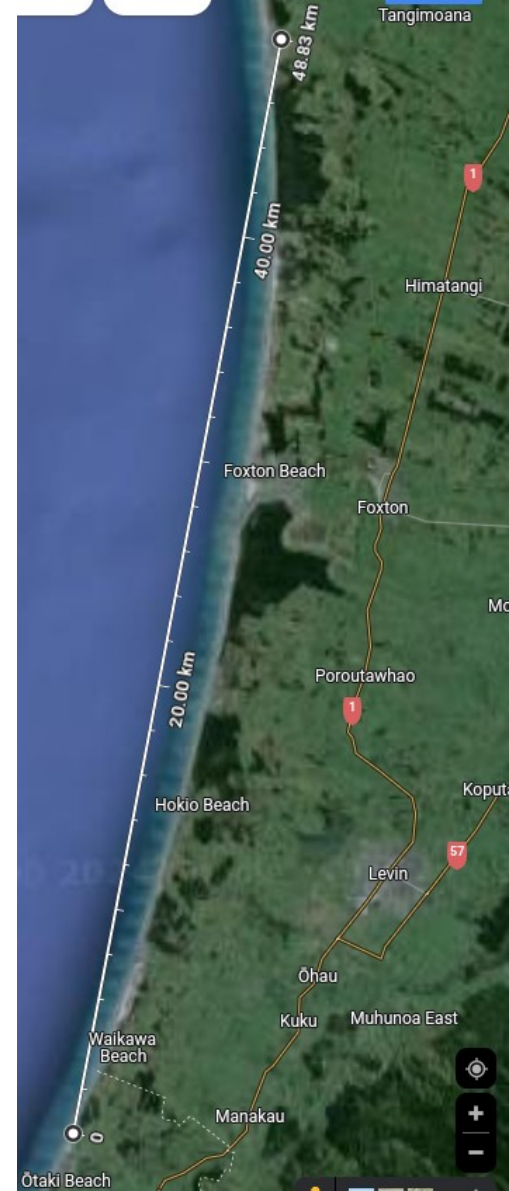


# Coastal Picture, West Coast, lower North Island

50km from Otaki Beach to Rangitikei Estuary

## The Good...

- A dynamic, ever-evolving coast
- Noteworthy ephemeral dune wetlands, with a spread of threatened species
- Foredunes are (mostly) dominated by Kowhangatara
- Xeric dunes with thriving populations of threatened species, *Coprosma acerosa* and *Pimelea villosa*
- Pingao is mostly widespread, as are Tauhinu and Wiwi (*Ficinia nodosa*)
- Biocontrol for coastal wattle is approved and in pilot, intended to self-propagate
- Drone-based marram control is in pilot
- Sea spurge is under control on this coast??
- Noteworthy estuaries



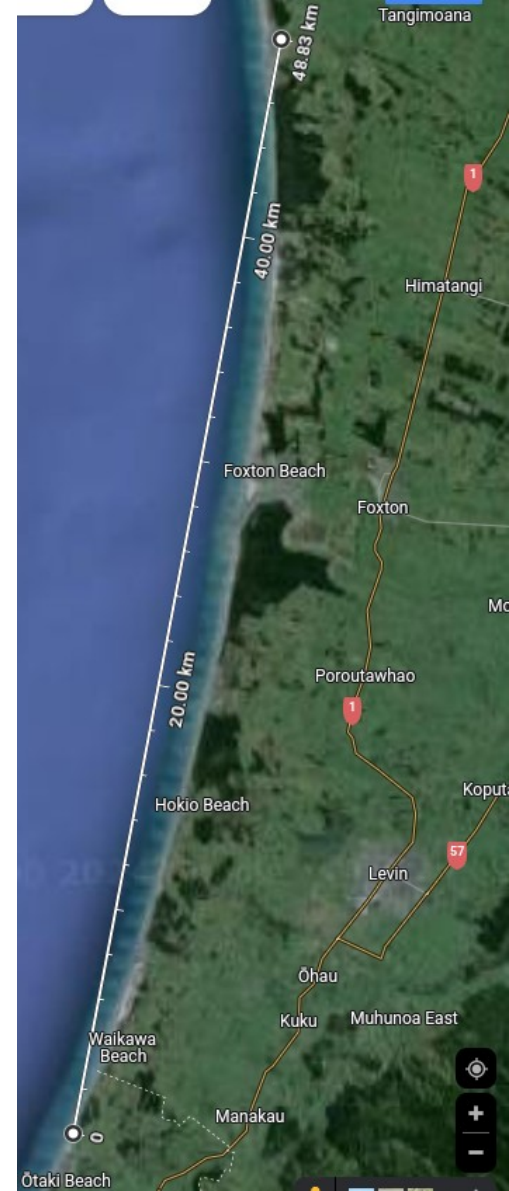
# Coastal Picture, West Coast, lower North Island

50km from Otaki Beach to Rangitikei Estuary

## The Bad and the Ugly

- Wide sand plains now reduced mostly to a coastal strip.
- Substantial dune lakes now almost gone.
- A long history of beaches as legal roads.
- Decades of prograding shoreline now slowing/reversing due to better erosion control
- Particularly susceptible to Climate Change impact
- most of this length<sup>[1]</sup> has a coastal wattle problem
- >50% of this length backs onto plantation pine

[1] and beyond, past Whanganui



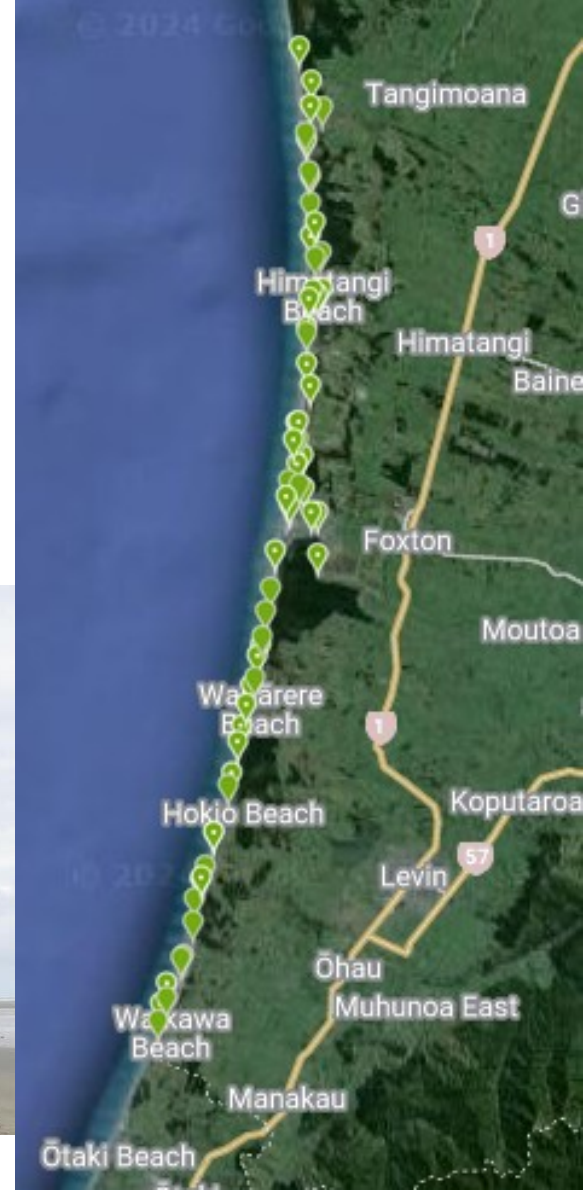
**Eye Candy: Autetaranga fruiting**



# Coastal Picture, West Coast, lower North Island

## Worst Weed problems

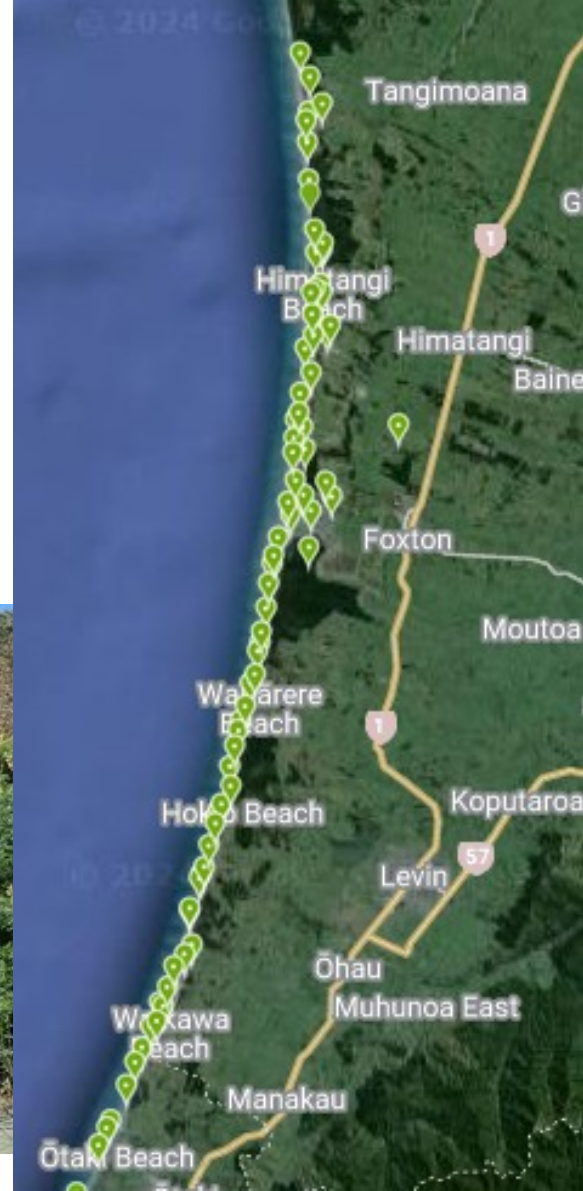
- 1 **Coastal wattle**
- 2 Tree lupin
- 3 Marram grass
- 4 Pampas grasses
- 5 Sea figs



# Coastal Picture, West Coast, lower North Island

## Worst Weed problems

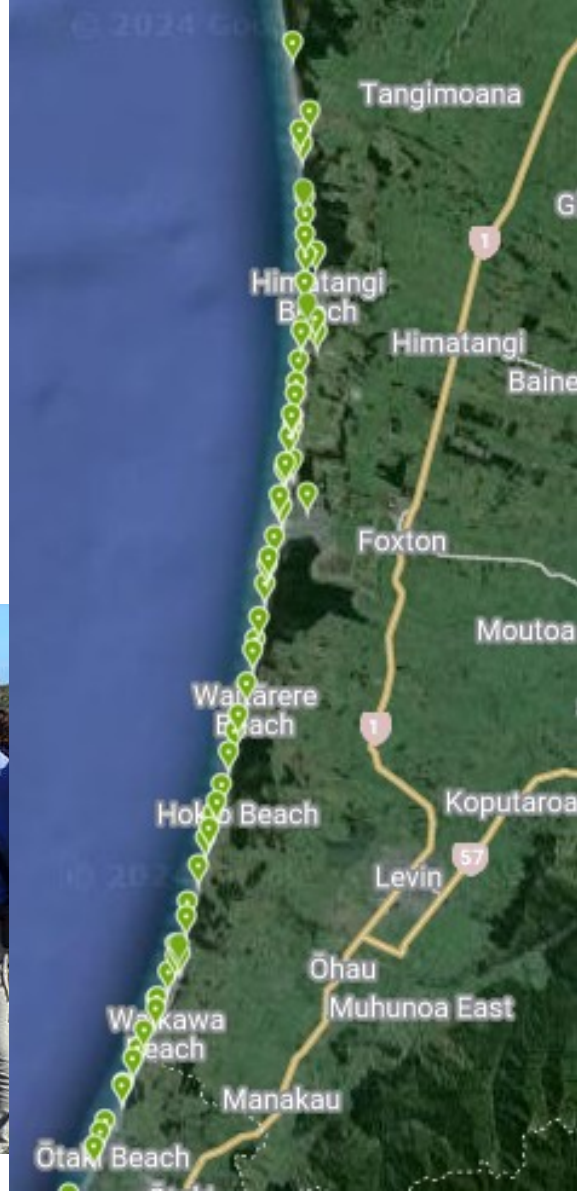
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# Coastal Picture, West Coast, lower North Island

## Worst Weed problems

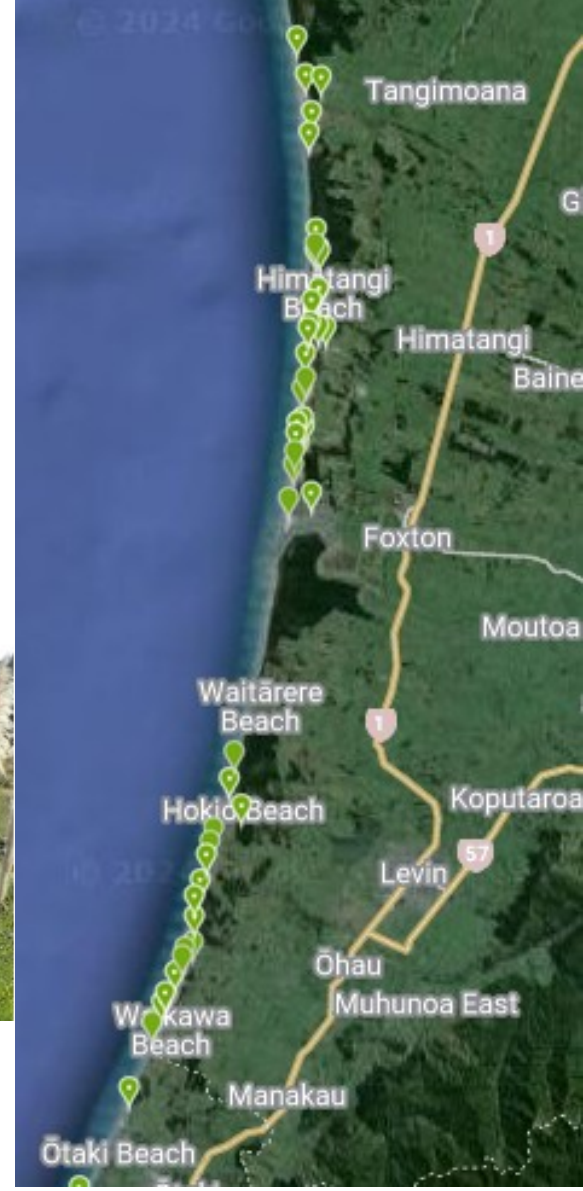
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# Coastal Picture, West Coast, lower North Island

## Worst Weed problems

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- 2 Tree lupin
- 3 Marram grass
- 4 **Pampas grasses**
- 5 Sea figs





# Coastal Picture, West Coast, lower North Island

## Worst Weed problems

- 1 Coastal wattle
- 2 Tree lupin
- 3 Marram grass
- 4 Pampas grasses
- 5 **Sea figs**



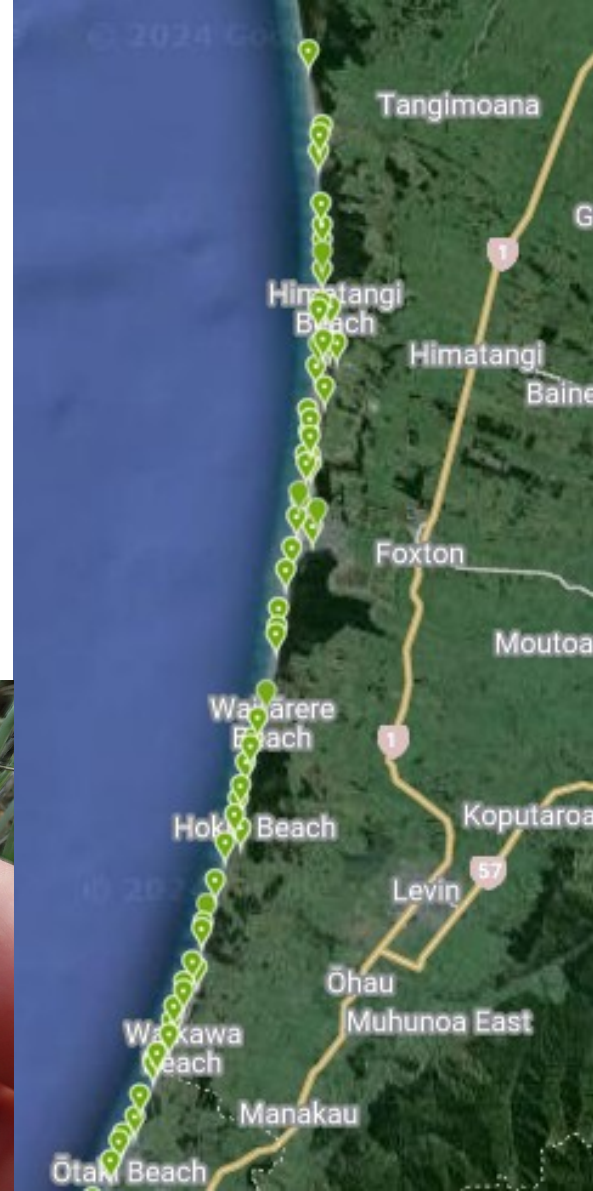
**Eye Candy:** Our coastal endemic in flower - *Goodenia heenanii*



# Coastal Picture, West Coast, lower North Island

## Xeric Dunes Native Species Distributions

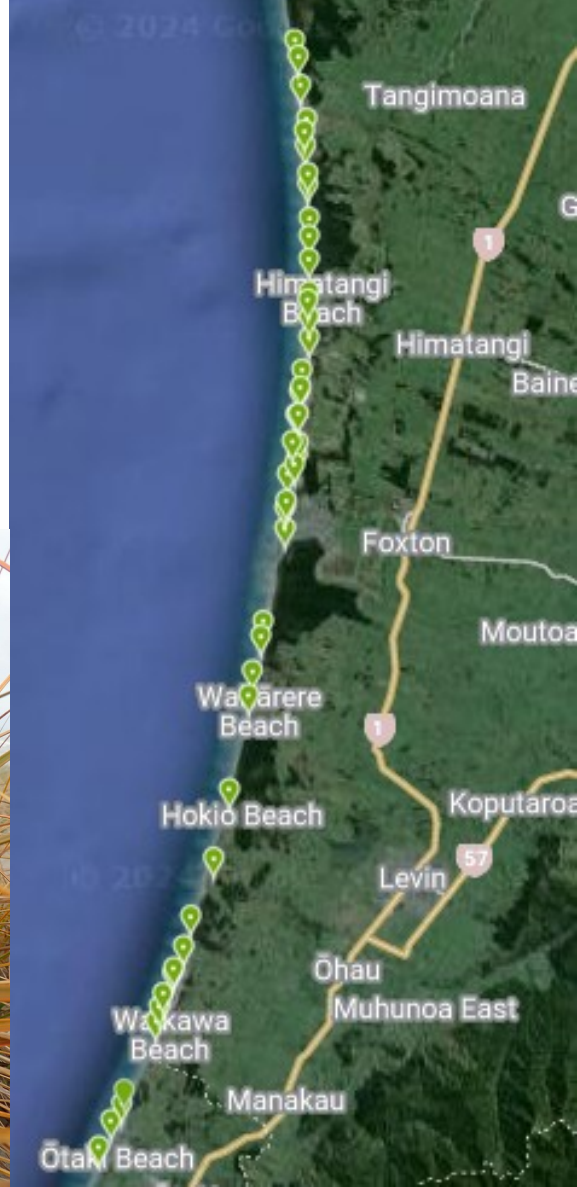
- 1 **Kowhangatara** (*Spinifex sericeus*)
- 2 Pingao
- 3 Tatarakeke (*Coprosma acerosa*)
- 4 Autetaranga (*Pimelea villosa*)
- 5 Tauhinu
- 6 **Wiwi** (*Ficinia nodosa*)
- 7 Sand wind grass



# Coastal Picture, West Coast, lower North Island

## Xeric Dunes Native Species Distributions

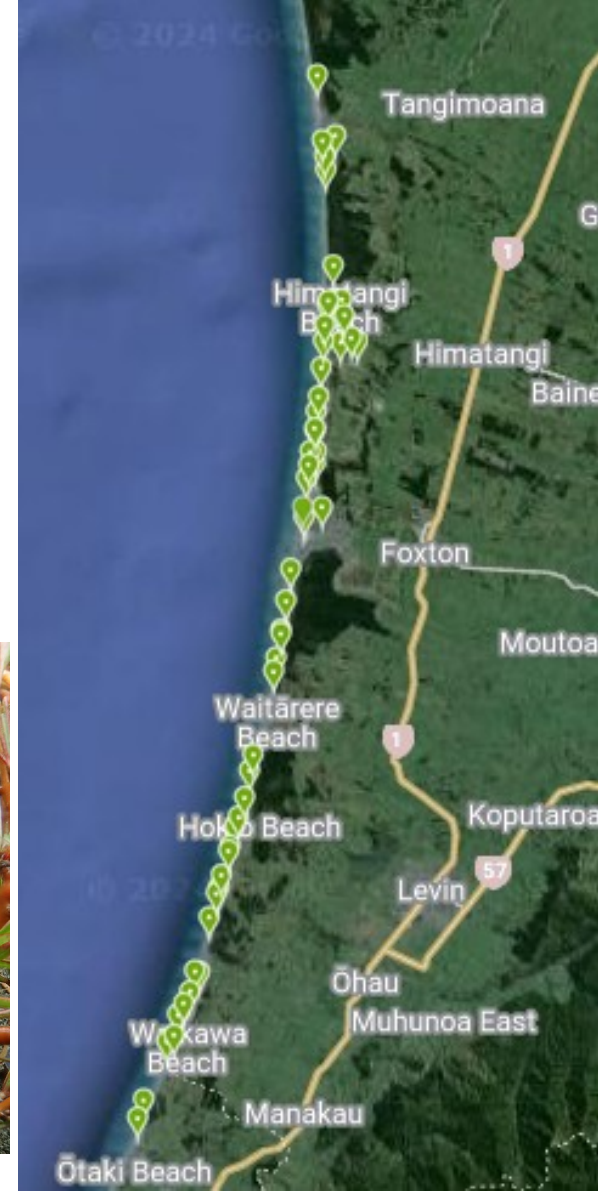
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# Coastal Picture, West Coast, lower North Island

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# Coastal Picture, West Coast, lower North Island

## Xeric Dunes Native Species Distributions

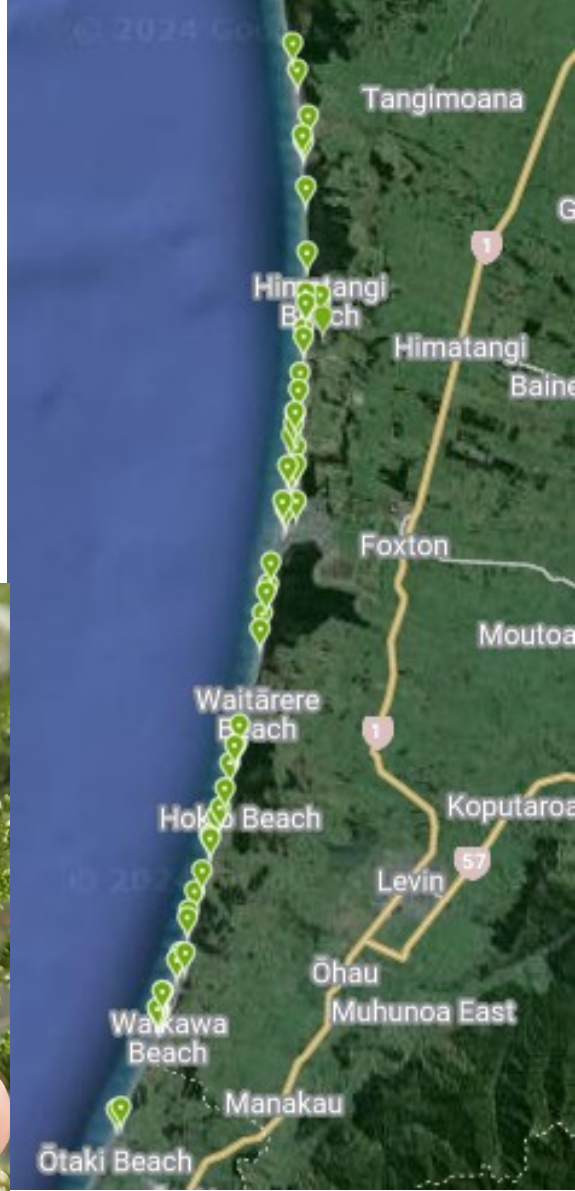
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# Coastal Picture, West Coast, lower North Island

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- 7 Sand wind grass

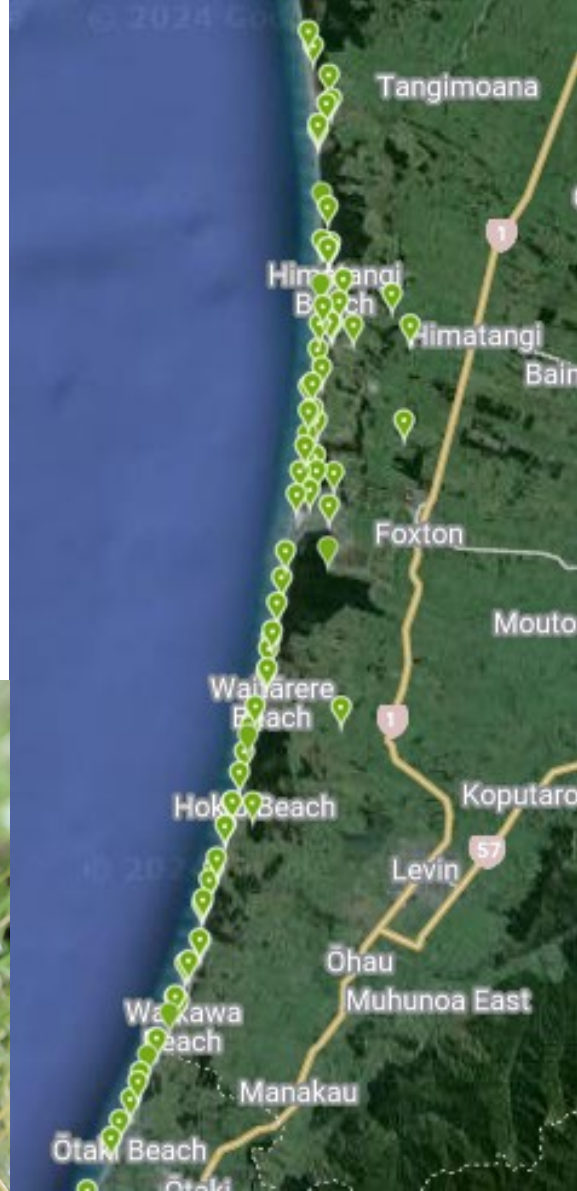


# Coastal Picture, West Coast, lower North Island

from Otaki Beach to Rangitikei Estuary

## Xeric Dunes Native Species Distributions

- 1 Kowhangatara (*Spinifex sericeus*)
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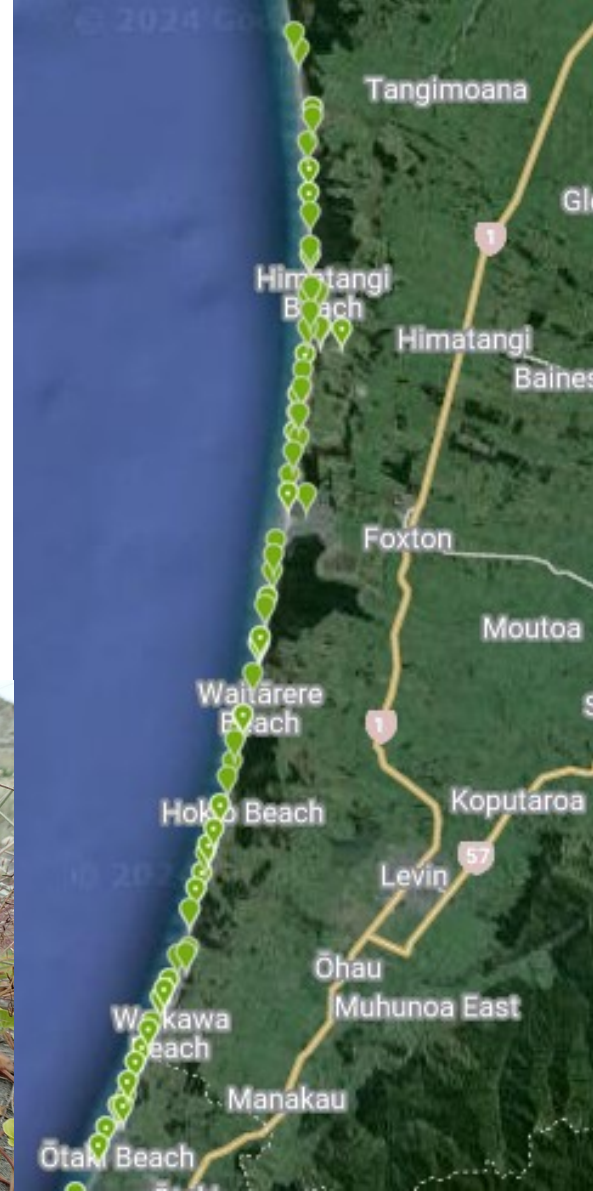


# Coastal Picture, West Coast, lower North Island

from Otaki Beach to Rangitikei Estuary

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- 7 **Sand wind grass**



**Eye Candy: Naturally uncommon - *Thyridia repens***

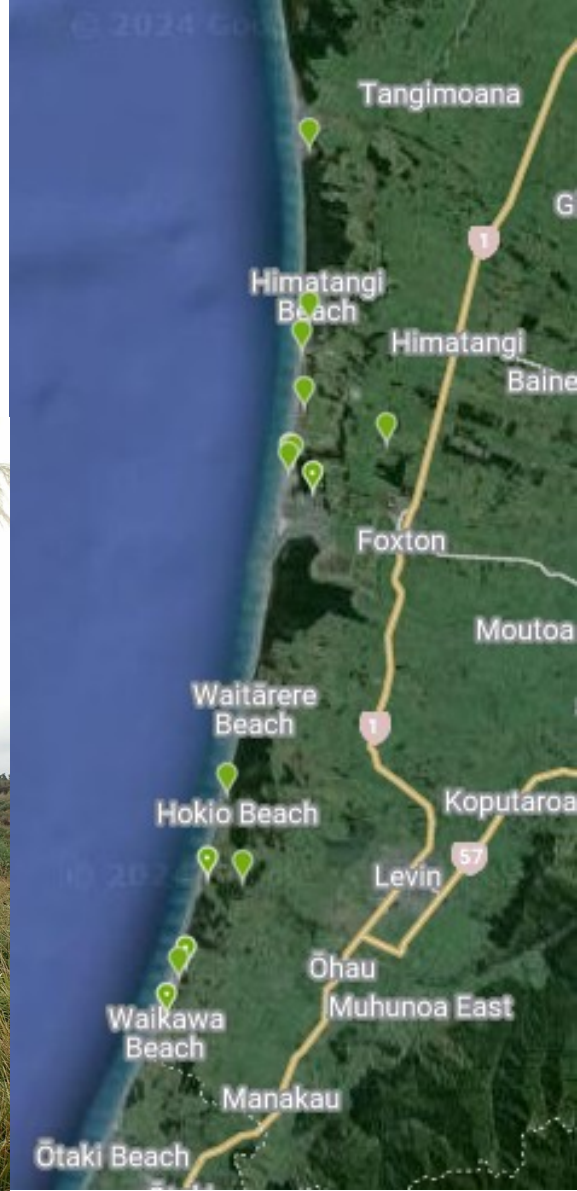


# Coastal Picture, West Coast, lower North Island

from Otaki Beach to Rangitikei Estuary

## Less Prevalent Native Species

- 1 **Toetoes**
- 2 *Carex testacea*
- 3 *Myriophyllum votschii*
- 4 *Isolepis basilaris*
- 5 Sand buttercup



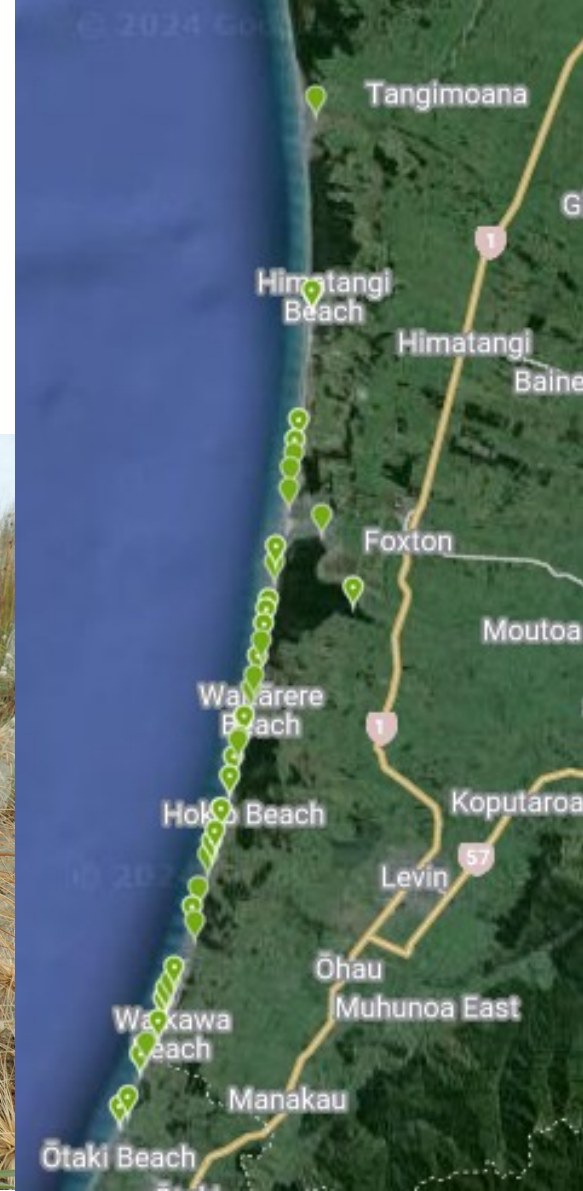
[1] There are many more!

# Coastal Picture, West Coast, lower North Island

from Otaki Beach to Rangitikei Estuary

## Less Prevalent Native Species

- 1 Toetoes
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# Coastal Picture, West Coast, lower North Island

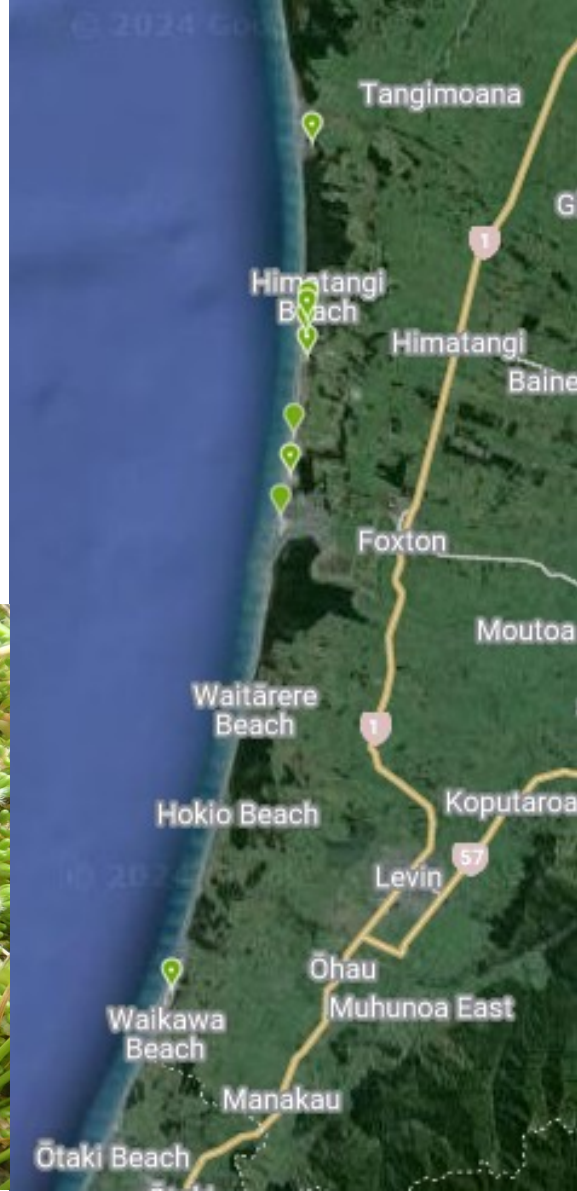
from Otaki Beach to Rangitikei Estuary

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# Coastal Picture, West Coast, lower North Island

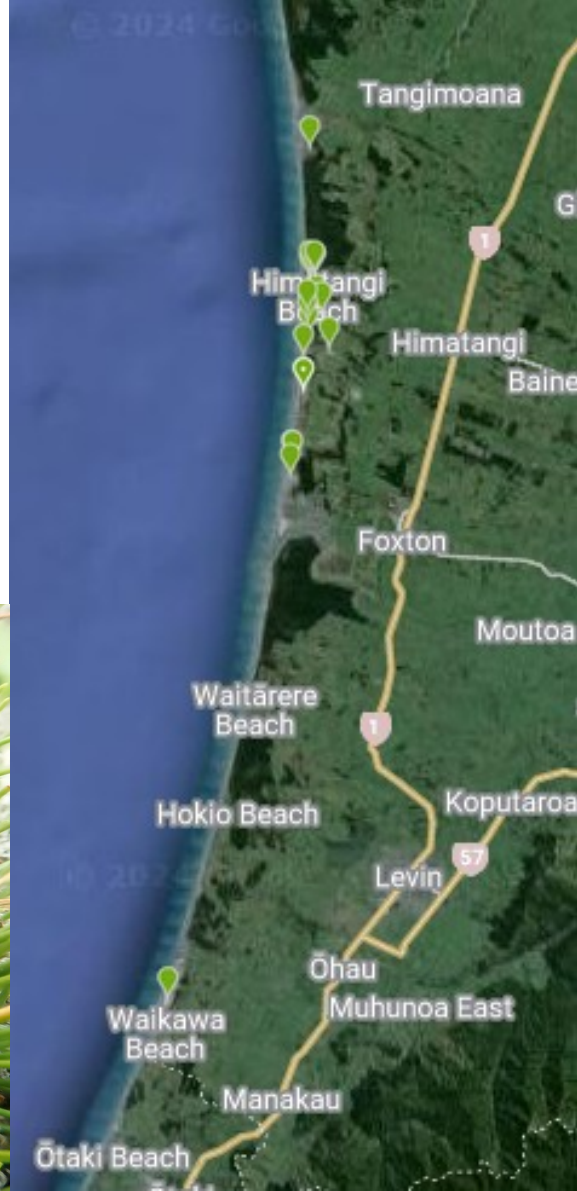
from Otaki Beach to Rangitikei Estuary

## Less Prevalent Native Species

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- 4 ***Isolepis basilaris***
- 5 Sand buttercup



[1] There are many more!



# Coastal Picture, West Coast, lower North Island

from Otaki Beach to Rangitikei Estuary

## Less Common Native Species<sup>[1]</sup>

- 1 Toetoes
- 2 *Carex testacea*
- 3 *Myriophyllum votschii*
- 4 *Isolepis basilaris*
- 5 **Sand buttercup**



[1] There are many more!



**Eye Candy:** Naturally uncommon – *Latrodectus katipo*

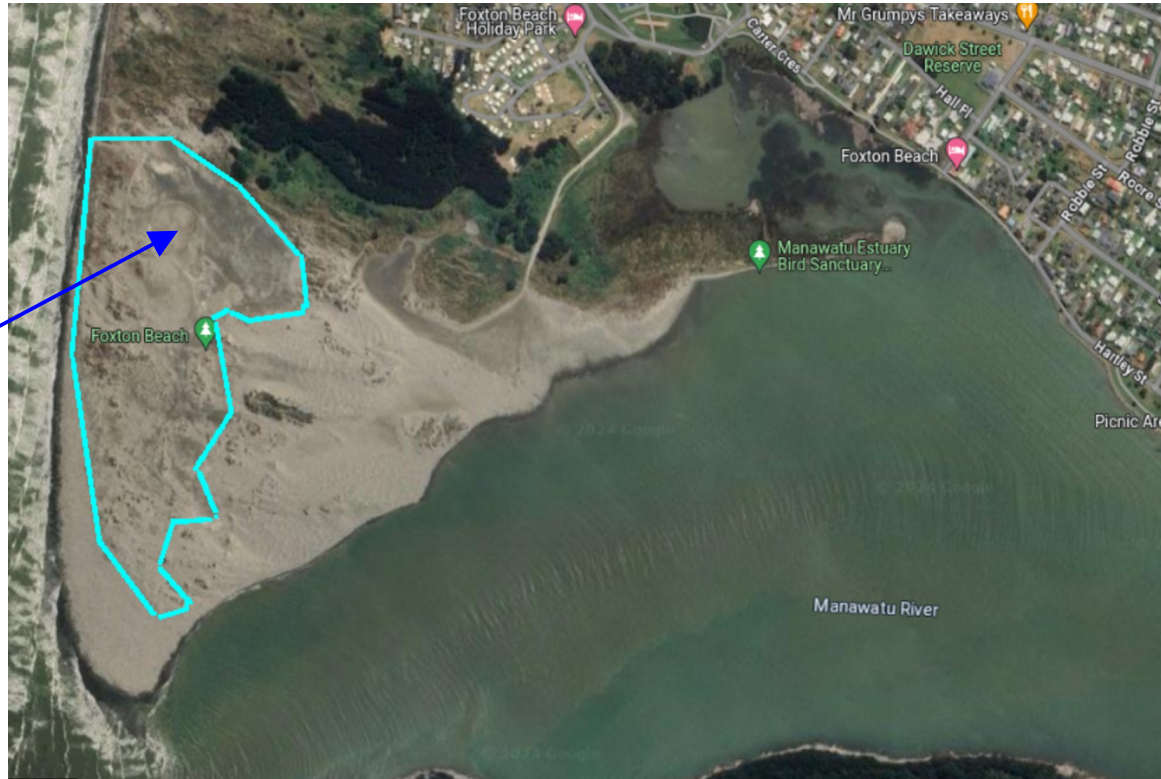




# Focus Programme #1

## Te Wharangi Dune Garden, Manawatu Estuary Ramsar site

- 25ha of dunes and dune wetland within the Ramsar site
- Dune slack cleansed by the sea in 2016
- Native species first to return
- >30 native species, 25% on threatened species list
- >10ha maintained fortnightly
- Regional Council pilot to address marram, the last major weed
- Continual issues with motorheads



Precious moment:  
Pohowera chick  
hatching. Photo  
credit Wendy of  
Kapiti

# Focus Programme #2

## Waikawa Stream to Ohau Estuary

- Iwi started wetland planting 25 years ago
- Recent Regional Council focus
- 10s of hectares of ephemeral dune wetland, incl. the largest single expanse on this coast, a biodiversity gem
- ~15 years since the Ohau River last cleansed this ephemeral dune wetland



Distribution of sand buttercup (*Ranunculus acaulis*) between Waikawa Stream and the Ohau River, 2018-24

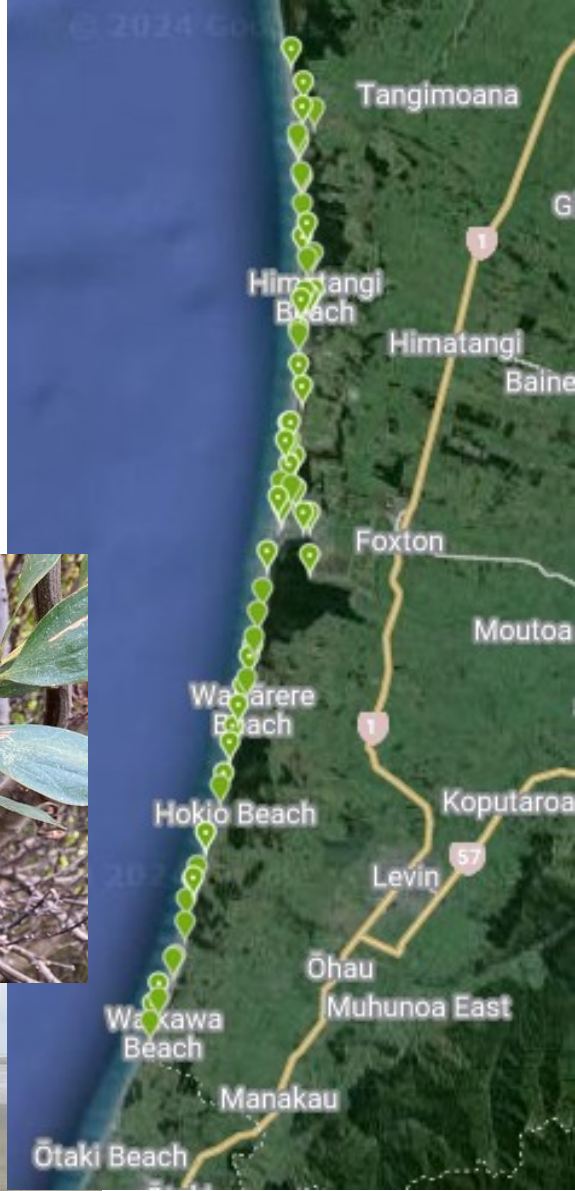


# Focus Programme #3

## Coastal Wattle Biocontrol

- S.African biocontrol declared success after 20 years. Achieved 95% reduction in coastal wattle.
- Portuguese programme passed EU muster, in place 7+ years
- NZ EPA permission for biocontrol wasp late 2022
- Pilot programme in place by Regional Council since 2023, 2 sites, intending to harvest the wasps

*Trichilogaster acacialongifoliae*



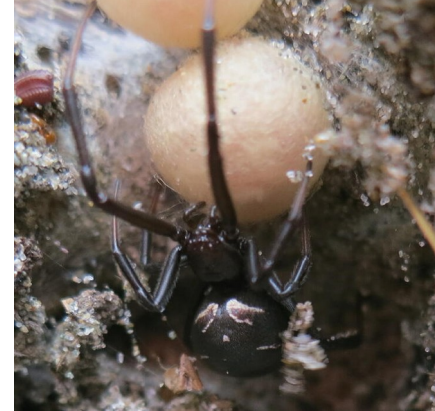
# Focus Programme #4

## Katipō Ecology

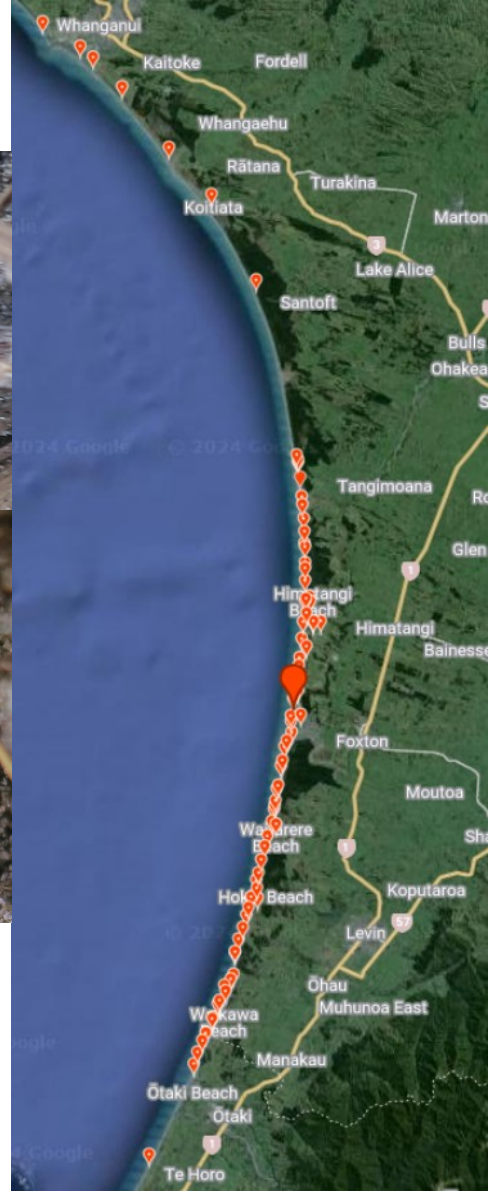
- 13 years of field study
- Thousands of katipō photos
- Predator Watch/Control
- Trends



*Black katipō*



*Katipō predation*



# Focus Programme #5

## Sea Spurge Eradication

- MPI-driven programme
- 13 known/monitored sites on this coast
- 50km of looking for new sites – newest < 1yr old



Where we get it from: eg. Darby River, Victoria, AU in a terrible state



# Background Programme #6

## Biodiversity surveys

- Every field trip in “our back yard” has potential
- Data accessible via iNaturalist
- More data improves randomisation
- Historical trends discernible?
- Data display can improve



# Background Programme #7

## Beach/Dunes Rubbish = Plastics

- Micro/nanoplastic is a global problem
- Rubbish from locals
- Farm detritus coming down rivers
- Boaties & fishermen jetsam
- Foreign ship jetsam



# References

- Restoration planting in Foxton Ecological District
- Manawatu Estuary Ramsar site – [www.metrust.org.nz](http://www.metrust.org.nz)
- [\*Biological control agent for Sydney golden wattle\*](#)
- <https://inaturalist.nz/calendar/arnim>

# Acknowledgements

- Colin Ogle and Jill Rapson for sharing decades of relevant experience
- Dr. Bob's wattle team, for decades of knowledgeable weeding effort
- The Dune Garden team for years of effort and learning
- Horizons Regional Council for playing it's role to the hilt
- The iNaturalist team, for being enablers, and iNatters for being so helpful

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