

Northland's Coast and Us



Our dunes

What are coastal sand dunes?

Coastal dunes are sandy areas between the sea and land. Foredunes are found closest to the sea. These move constantly. Back dunes are found closest to the land. These are more stable than foredunes and often have plants or trees growing on them. Mid dunes are found between foredunes and backdunes.

Discover your
nearest sand
dunes.



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Where are Northland's sand dunes?

Dunes are found all along Northland's coast. They range from the vast, windswept, bare dunes of Poutō Peninsula and Pārengarenga Harbour...

Describe the similarities and differences between the pictured dunes.



Where are Northland's sand dunes?

... to the small, rounded dunes of beaches like Mangawhai Heads and Ocean Beach near Whāngārei.

Compare and contrast these dune systems to those nearest you.



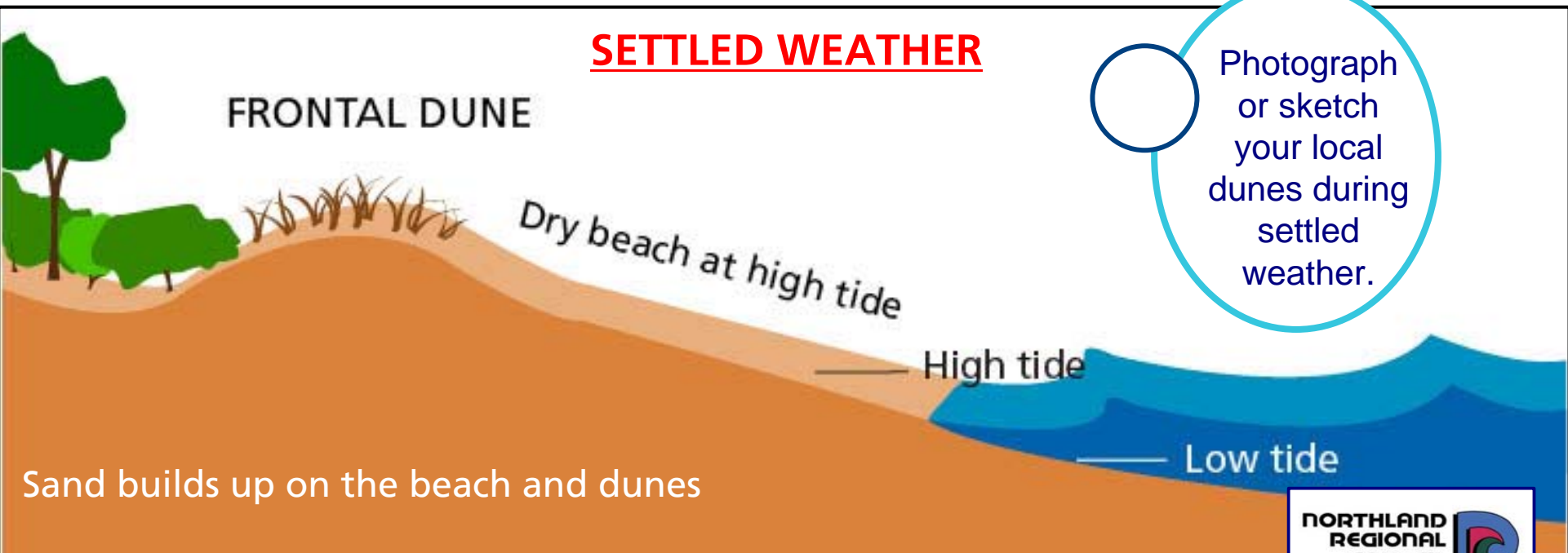
Cable Bay



Mangawhai Heads

How are Northland's sand dunes formed?

Sand dunes are unique coastal landforms. Their many parts form an interrelated system which is constantly changing. Sand build up on the beach and dunes during settled weather.

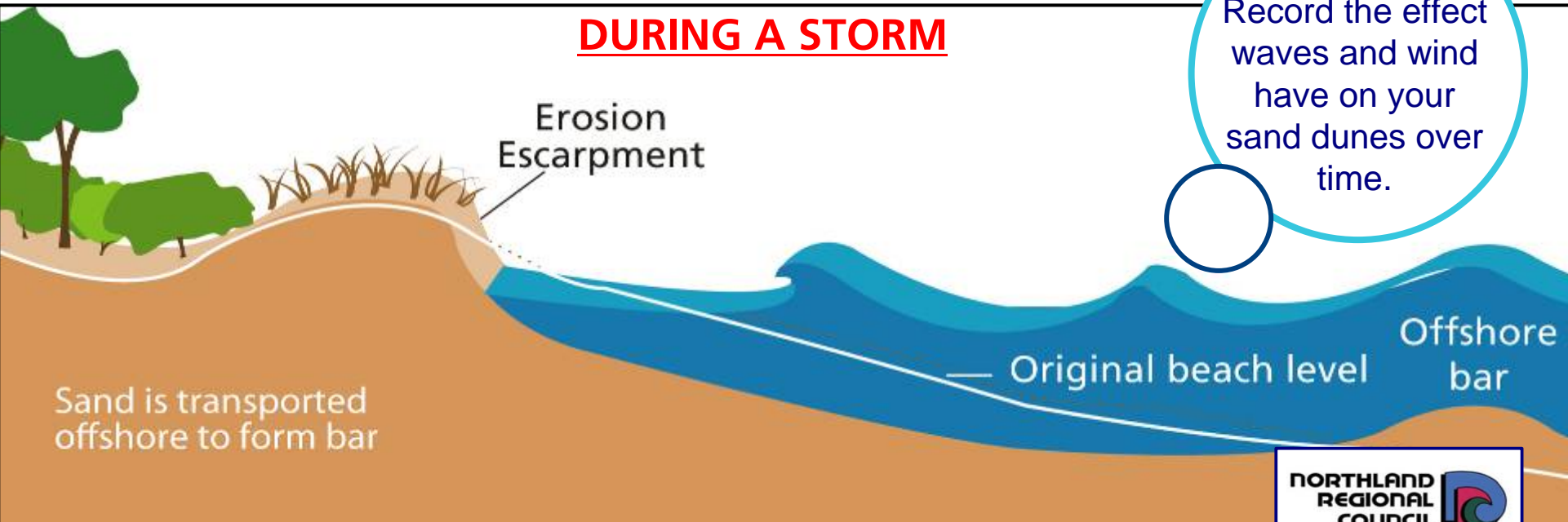


Photograph or sketch your local dunes during settled weather.

How are Northland's sand dunes formed?

Waves and wind move sand to the surf zone during storms, where it can form sand bars. Sand bars reduce wave energy.

DURING A STORM



Sand is transported offshore to form bar

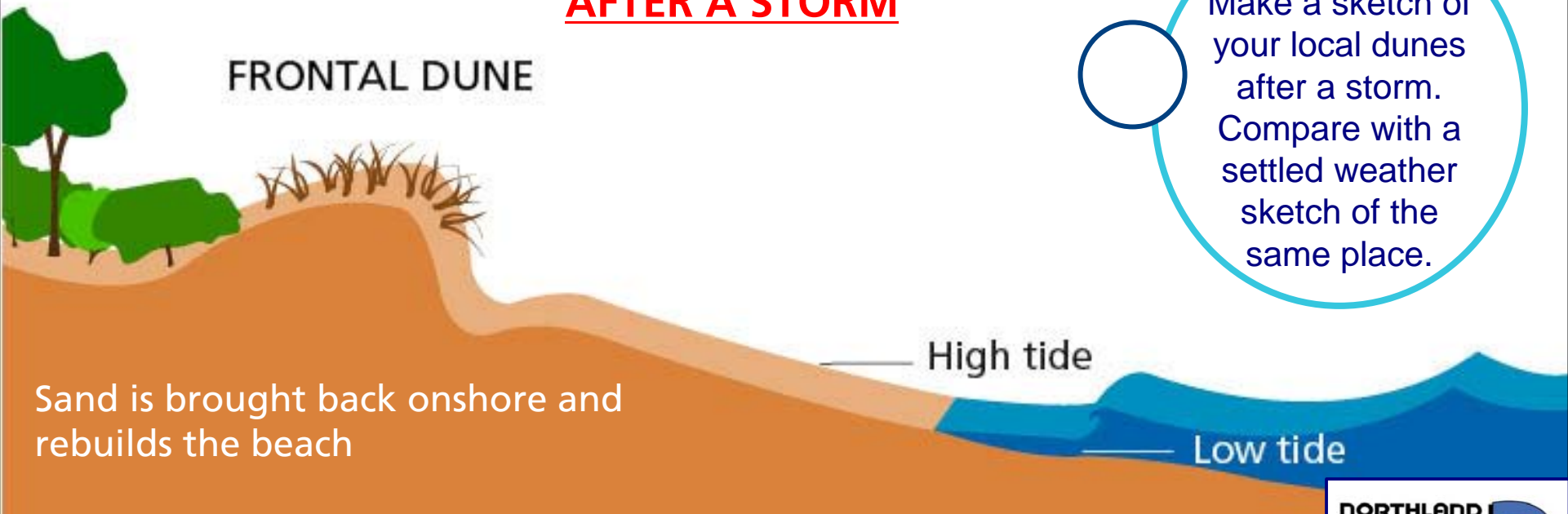
Record the effect waves and wind have on your sand dunes over time.

How are Northland's sand dunes formed?

Sand is transported back onshore and rebuilds the beach. Dune vegetation grows seaward down eroded dune faces towards the sea.

AFTER A STORM

FRONTAL DUNE

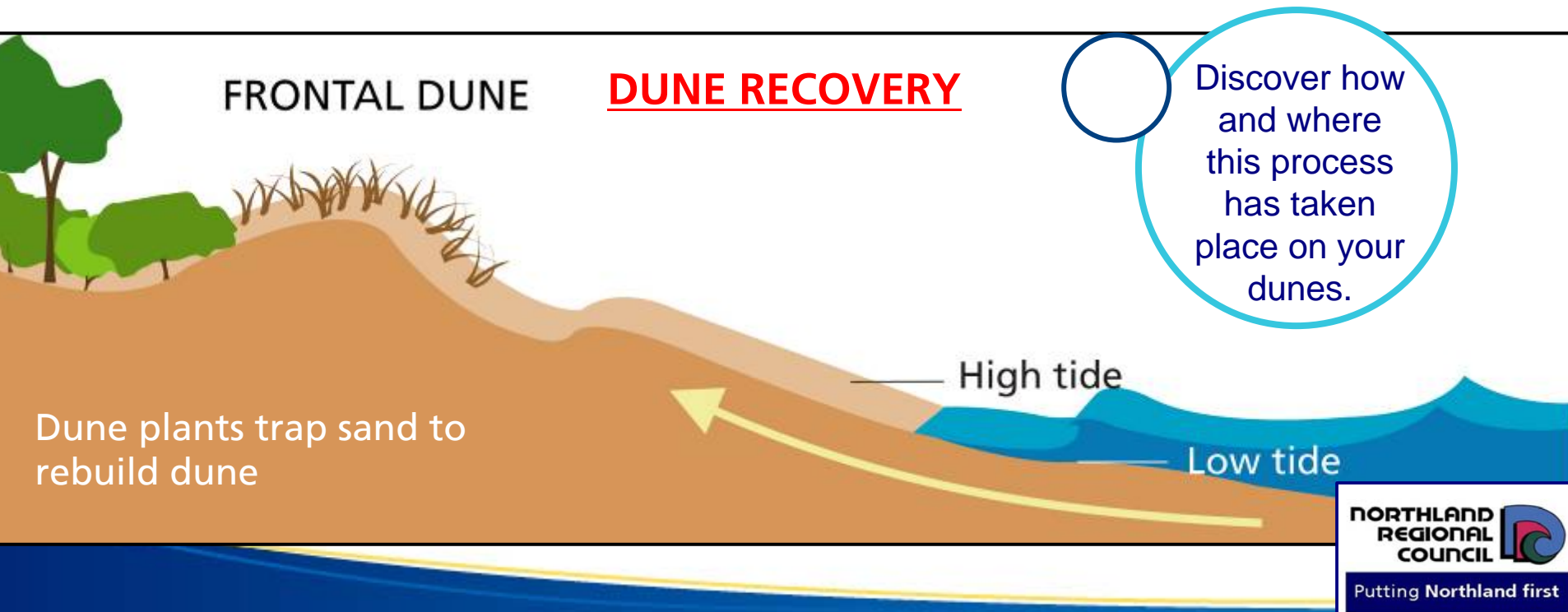


Sand is brought back onshore and rebuilds the beach

Make a sketch of your local dunes after a storm. Compare with a settled weather sketch of the same place.

How are Northland's sand dunes formed?

Sand blown onto the land from the beach is trapped by dune vegetation. This gradually rebuilds the dune. It can take just hours for a dune to be eroded – but years for it to build back up.



Why are sand dunes important?

Sand dunes

- provide a great buffer against waves
- protect land against coastal erosion and flooding
- provide and protect the natural character and beauty of beaches



Matapouri Beach

Dunes protect and enhance the coast. What can you do to help protect and enhance your dunes?

What do we know about Northland's dunes?



CoastCare - caring for our dunes at Waipapakauri

Tell the story of your local dune community.

- they are home to many life forms
- most Northland dunes have been badly damaged by humans
- many local communities are taking action to restore their dune systems

What is found on Northland's dunes?

- plants
- birds
- insects
- reptiles



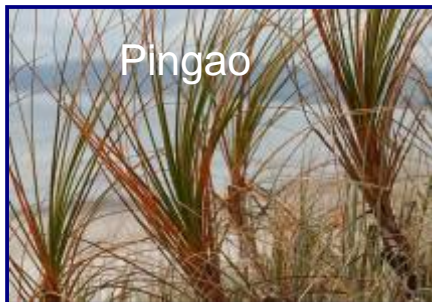
Identify and record the creatures and plants on your local dunes during a beach trip.

Sand dunes provide a highly specialised ecosystem

What native plants are found on Northland's dunes?

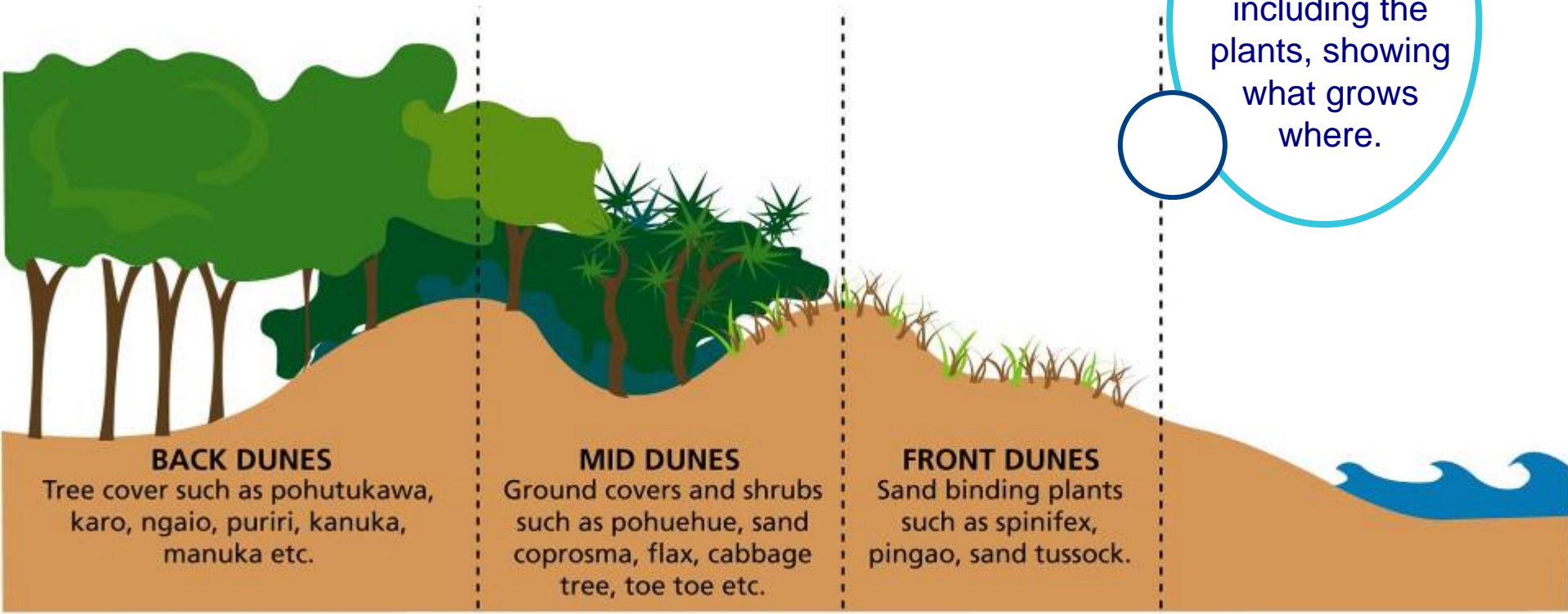
- Sand binding plants - spinifex, pingao, sand tussock
- Ground covers and shrubs - pōhuehue, sand coprosma, flax, toe toe
- Trees - pōhutukawa, karo, pūriri, kānuka, mānuka, cabbage tree

On a trip to your dunes, how many native plants can you identify?



Where are these native plants found on Northland's dunes?

NATIVE PLANT SPECIES IN NORTHLAND'S DUNES



Sketch a dune cross section including the plants, showing what grows where.

How do native plants contribute to Northland's dunes?

Dune plants are critical to sand dune health.

Dune plants

- build up sand dunes
- reduce wave erosion
- reduce wind erosion
- speed dune recovery after storms

Check out local groups involved in dune planting. What can you do to help?

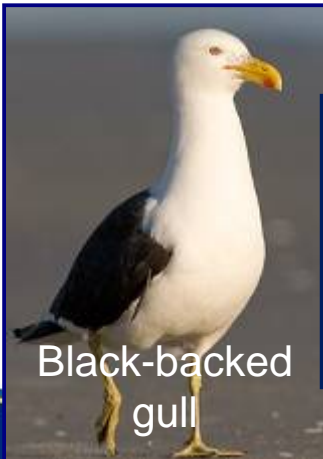


What birds are found on Northland's dunes?

Birds living around our dunes include

- New Zealand dotterel
- New Zealand fairy tern
- variable oystercatcher
- red-billed and black-backed gulls

What birds can you identify on your dunes?



What insects are found on Northland's dunes?

- beetles
- spiders
- dragonflies
- wasps
- flies



Sit quietly on your dunes and see how many insects you can identify.



What reptiles are found on Northland's dunes?

- geckos
- skinks



Whereabouts
on the dunes
do reptiles
live?

Why are Northland's dunes special to Maori?

As a source of identity – a sense of place.



What whakatauki (proverb), waiata (song) or pakiwaitara (legend) are linked to your dunes?

Why are Northland's dune plants special to Maori?

What are the local Maori stories about dune plants like pingao?

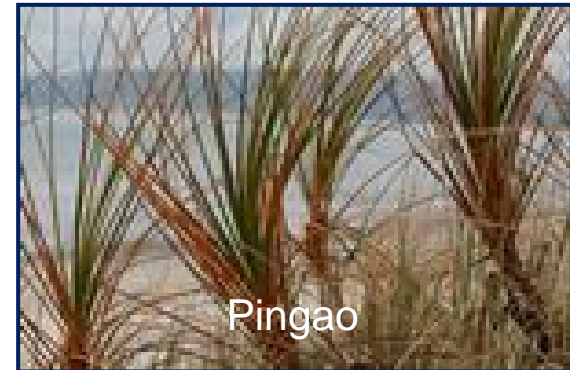
Plants like pingao have a special place in the purakau (stories) of Northland Maori.



Food basket
(Kete)



Pingao tags on
traditional cloak
Photo: Sue Scheele



Pingao

How are Northland's dunes damaged by humans?

- vehicles eroding dunes
- stock eating and trampling dune plants
- sand or pebbles removed
- garden waste dumped
- dogs chasing shorebirds
- rubbish left on the dunes
- inappropriate development
- running, jumping or surfing on dunes



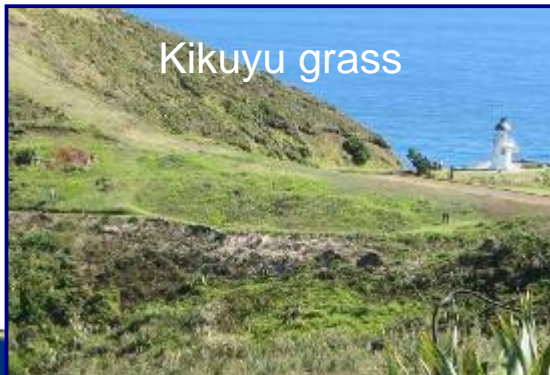
How are humans damaging your nearest dunes?
What can be done to prevent such damage?

What pest plants threaten Northland's dunes?

Introduced plants like these can overwhelm natives, are not as good at dune protection and can hasten erosion.

Pest plants include agapanthus, exotic iceplant, prickly pear, daisies, acacia, boneseed, coastal banksia, freesias, kikuyu grass, agaves and many more.

Check out what's happening in your area to protect dunes from these plants. What can you do to help?



What happens when we damage dunes?

- dune plants, insects and birds lose their habitats
- land behind the dunes becomes exposed to flooding and erosion
- sand is lost
- natural beach beauty is destroyed



Track changes to local dunes and display your findings at a public event.

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What organisations help look after dunes?

CoastCare is a partnership between the community, Northland Regional Council iwi, district councils and the Department of Conservation. All are working together to protect and restore Northland's dunes.

Check out what your local CoastCare group is doing to look after your dunes at www.nrc.govt.nz/CoastCare

What does Northland Regional Council do to help?

The Northland Regional Council (NRC) helps look after Northland's dunes in a variety of ways.

How does the council look after our coast? Go to www.nrc.govt.nz to find out.



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How can you look after Northland's dunes?

- read the CoastCare code at www.nrc.govt.nz
- drive only on marked tracks and hard sand
- avoid walking, riding or driving over dune plants
- keep stock in well-fenced paddocks
- ride the waves, not the dunes
- take rubbish home
- leash dogs and clean up after them
- leave sand and pebbles on the beach
- keep weeds and garden waste off the beach.



**Follow the
CoastCare
Code!**

Northland's Coast and Us



Our dunes

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have you clicked on yet?

www.nrc.govt.nz