



Fact sheet published by
Department of Conservation,
Wellington Conservancy,
P.O. Box 5086,
Wellington.
March 2003.

Coastal foredunes in Wellington

What are coastal foredunes?

Coastal foredunes are the most dynamic part of a dune system. They occupy the drier raised coastal sand and gravels seaward of the coastal forest zone. Dry beach sand is moved inland by wind and trapped by dunes and their plants.

Sand dunes form in coastal areas where there is shelter from strong waves, a good supply of sand, onshore winds, and dune-binding plants such as grasses and sedges.

The two main species of 'sand-binders' native to New Zealand are the endemic sedge pingao, and the silvery sand grass or spinifex. Other native plants in dunes are sand tussock, sand coprosma and sand daphne. A common introduced sand-binding plant is marram grass that has taken over considerable expanses of New Zealand's dune landscape.



Te Humenga dune, Palliser Bay.
Photo: Jeremy Rolfe.

Native animals in coastal foredunes

Coastal dunes are home to a diversity of native animals. Lizard species include the common gecko and three species of skink: the common skink; the spotted skink; and the copper skink. The katipo spider was once widespread in coastal dunes along the Wellington coastline but is now a nationally threatened species.



Coastal *Pimelea* species at several sites in Wellington are host to two moth species of the genus *Notoreas* that are not found anywhere else in the world. Native birds such as Caspian terns, gulls and oystercatchers also nest among coastal dunes.

Notoreas sp., a moth found only at Castlepoint.
Photo: Brian Patrick.

Threats to coastal dunes

Threats to coastal dunes in Wellington include:

- Residential development and urban encroachment into coastal areas
- Colonisation of native plant communities by exotic species such as boneseed and pampas grass and spread of garden weeds into dunes
- Extensive planting of exotic species such as marram, lupins and pines
- Grazing and disturbance by animal pests (such as rabbits) and stock
- Use of vehicles and horses in dunes (such as motorbikes and 4-wheel drive vehicles) that destroy nesting seabird habitat and vegetation
- Presence of dogs that disturb and kill nesting birds



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Plants and animals to watch out for in the dunes



Pingao
(Desmoschoenus spiralis)

One of the most beautiful native plants in coastal dunes now in decline throughout New Zealand.

Photos: John Sawyer (left, above left); Mike Orchard (right).



Sand tussock ***(Austrofestuca littoralis)***

A nationally threatened grass whose national stronghold is in Wellington.

Photo: Mike Orchard.



Silvery sand grass or spinifex
(Spinifex sericeus)

The most common native sand binding plant in Wellington.

Photos: Barbara Mitcalfe (above); John Sawyer (top).



Sand coprosma ***(Coprosma acerosa)***

A low-growing shrub up to 2 metres across. It produces white and pale blue fruit in February and March. Photo: DOC.



Sand daphne
(*Pimelea aff. arenaria*)

A low-growing shrub that grows on the landward side of fore dunes but is in serious decline nationwide.

Photos: Colin Ogle (left); Olaf John (right).

Marram grass
(*Ammophila arenaria*)

An exotic plant introduced to New Zealand from Europe in 1870 that has now become a serious weed.

Photo: DOC.



Common gecko
(*Hoplodactylus maculatus*)

Found throughout New Zealand although recent taxonomic work indicates Wellington may have its own species.

Photo: Rod Morris.



Common skink
(*Oligosoma nigriplantare*)

The lizard you are most likely to see around Wellington, even in gardens where there is enough cover and protection from cats.

Photo: Colin Roderick.



Copper skink
(*Cyclodina aenea*)

The smallest skink in New Zealand and is only found in North Island and its offshore islands.

Photo: C.R. Veitch.



Spotted skink
(*Oligosoma lineoocellatum*)

This species is widespread but localised in Wellington and generally found in coastal habitats.

Photo: Mike Aviss.



Katipo spider
(*Latrodectus katipo*)

Now in serious decline nationwide due to habitat modification and competition between it and the South African false button spider (*Steatoda capensis*).

Photo: James Griffiths.



Variable oystercatcher
(*Haematopus unicolor*)

You are likely to hear this bird before you see it. They commonly nest in isolated locations. Do not disturb them in summer when they have chicks.

Photo: DOC.

Coastal foredune conservation

The Department of Conservation has two goals for conservation of coastal dunes in Wellington. They are to ensure the continued survival of coastal dunes; and to restore dunes to sites where such vegetation occurred previously.

The Department has undertaken weed control in coastal dunes to eliminate marram grass and other weed species. Surveys have been carried out for several native plant and animal species including coastal pingao, sand tussock, *Notoreas* moths and katipo spiders. Research on restoration of coastal dunes is also underway. Native coastal foredune plants are recorded when found and monitoring of the changing condition of coastal dunes is being carried out.

The Department of Conservation has identified 10 key coastal dunes in Wellington including Ocean Beach, Pahaoa Scientific Reserve, Castlepoint Scenic Reserve and coastal areas at Hokio, Turakirae, South Wellington and Pencarrow. These areas are priorities for protection and conservation management.

What you can do

- Join or establish a local coastal care group. The Department encourages local communities, councils and landowners to work together to protect and restore coastal dunes.
- Visit and enjoy your coastal dunes but do not destroy—remember they can be damaged by vehicle use and trampling .
- Do not disturb wildlife living among the dunes.
- If you live near a coastal dune, be careful not to allow weeds to spread from your garden.
- Inform the Department of Conservation if you find any of the species identified in this factsheet.

More information

Department of Conservation

Wellington Conservancy

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Tel: (04) 472 5821

www.doc.govt.nz.

Contact DOC for information about key coastal dunes in Wellington. See also *Coastal foredune vegetation in Wellington Conservancy: Current status and future management* by Randall Milne and John Sawyer. Published by the Department of Conservation in 2002.

Coastal Dune Vegetation Network

CDVN Secretary

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www.forestresearch.co.nz (click on research - cooperatives)

Contact the CDVN for information on dune rehabilitation.