Life's a Beach
A Coastal Education Resource Kit

2h Introduced animals – rabbit case study

Getting to know our sand dune community

Working together to care for our coast – Kia ngatahi te tiaki takutai

Objectives for today

Today we will look at dune animals that have been introduced to the dune community by people. In particular we will be looking at rabbits in Pāpāmoa.

We will investigate:

- What is the difference between native and introduced animals?
- What impact do rabbits have on the dune system?
- How can rabbits be controlled?

How is an introduced animal different to a native animal?

- A **native** animal is one that is found living naturally in New Zealand. It was not introduced by humans.
- An **Endemic** animal is also a native but lives nowhere except New Zealand.
- An **introduced** animal is one that people have brought to New Zealand.

What introduced animals occur in the dune community?

- Introduced animals found in the sand dunes include:
  - Mice
  - Rats
  - Rabbits
  - Hedgehogs
  - Ferrets, stoats and weasels
  - Cats

How have introduced animals contributed to erosion of the coast and loss of sand dunes?

- Introduced animals (especially mammals) such as rabbits like to eat dune plants.
- Through grazing, introduced animals such as rabbits can have a negative impact on the biodiversity of dune plants.
- Wind erosion is more severe dune plants have been grazed.
- This is a problem when buildings and infrastructure are too close to the coast.

Wild Rabbit

What do rabbits like to eat?

Kōwhangatara or spinifex
Spinifex sericeus – Very abundant, least palatable

Pīngao
Desmoschoenus spiralis – Threatened, palatable

Hinarepe or sand tussock
Austrofestuca Littoralis – Threatened, palatable

Waiū-o-kahukura or shore spurge
Euphorbia glauca – Near extinction, very palatable

Rabbits pose a threat to native dune plants especially pīngao

Image shows rabbit grazed pīngao – Pāpāmoa

Waiū o Kahukura – special rabbit treats!

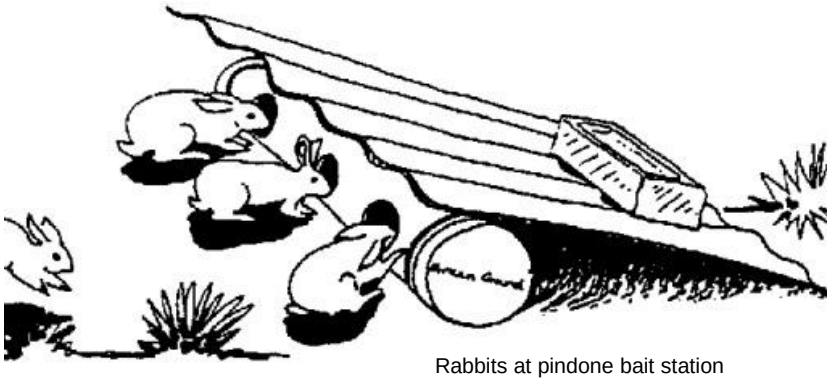
- In 1911 the botanist Dr Leonard Cockayne presented a report on dune areas in New Zealand.
- He said that shore spurge or Waiū o Kahukura was a plant found in all parts of the New Zealand coast and that it was a major sand binding plant that worked alongside kowhangatara and pingao.
- This plant is almost completely extinct.
- WHY? Severe browsing by introduced mammals such as rabbits!
- Unfortunately for the rabbits – restoring this plant successfully will depend on controlling rabbit numbers!

What rabbits do to Waiū o Kahukura or *Euphorbia*

Images show *Euphorbia* (left) and rabbit grazed stalks remaining after rabbit grazing (right).

Rabbits control methods

- Pindone baits on the ground
- Pindone baits in bait stations or on mats
- Magtoxin burrow fumigant
- Bio control e.g. RHD
- Hunting with dogs



Rabbits at pindone bait station

Why and how do we control rabbits?

- All dunes in the Bay of plenty are assessed for Rabbits.
- Rabbits have been controlled by poisoning throughout the Bay of Plenty.
- Poison is laid in a cereal based bait that becomes harmless to other animals and the environment when dissolved by rain.
- In two projects fencing has been successfully used to exclude rabbits from sensitive areas.

Limitations on control methods

- Shooting can not be used in urban areas
- Poisoning can not be used when it will affect native species like Weka.
- Stock must be excluded from areas with poison.

Bay of Plenty
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Working together to care for our coast – Kia ngatahi te tiaki takutai

coastcare
Tiaki takutai

Bay of Plenty Regional Council in partnership with Tauranga City Council; Whakatane, Western Bay of Plenty, and Opotiki District Councils; and the Department of Conservation.