## Going to war at Mason Bay

It's 1930 and the sand shifts at Mason Bay, Stewart Island just as it always has. The movement builds dunes and a habitat for plants and the animals that live there.

Pingao the sandbinders dot the shifting foredunes and other plants and animals, specially adapted for sand drift live there and in the wetlands. But people want to farm the land so they plant marram grass. It spreads quickly.
and they're pleased.
They keep planting for the next 30 years.



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The dunes are more stable. They shift and change less.
"Good effort,"
say the people and they farm their land.

It's 2001 and DOC declares war on the invader.
Helicopters spray using GPS technology. The 'argo', an 8-wheel dune buggy with a 250-litre spray tank has two hoses reaching out for 100 metres either side.

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More marram grass goes down every summer and creamy white dunes are topped with a crest of golden pingao.
"Good effort," say the people and they come from around the world to see the amazing plants and wildlife of Mason Bay



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Marram
spreads like a blanket in
places and removes
breeding habitat for birds
like the endangered New
Zealand dotterel.



Native plants are surviving in the dune community but only just. One of the largest populations in New Zealand of the native sand tussock, is threatened by the marram invader.



The marram brings more cover for introduced predators, like wild cats, and it helps other exotic plants invade like gorse, hawkweed, and lupin.



Native invertebrates like the katipo spider depend on pingao and a changing native dune systems. They may not survive in a marram grass habitat.