

THE VEGETATION OF MONTAGU ISLAND

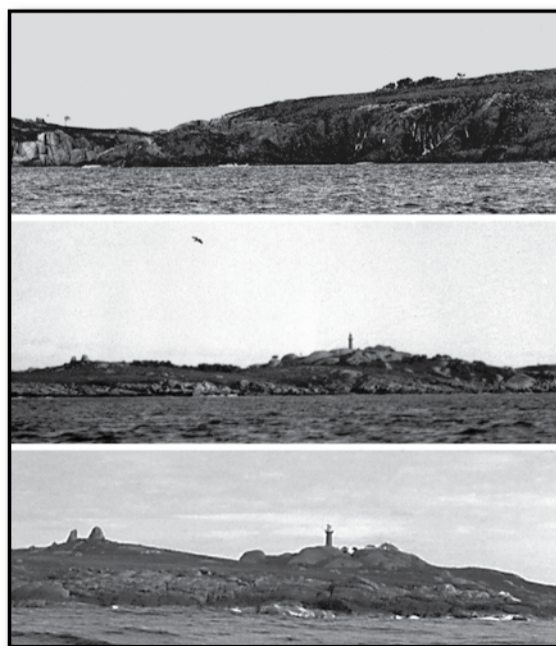
Montagu Island is situated 10 km offshore from Narooma and in glacial periods, when sea levels were considerably lower, formed part of the mainland. Consequently, the vegetation would have been similar to that now found at and near the coastal fringe of the mainland, namely a low forest of Bangalay *Eucalyptus botryoides*, Coast Banksia *Banksia integrifolia*, Tree Broom-heath *Monotoca elliptica* and Black She-oak *Allocasuarina littoralis* with Coast Wattle *Acacia longifolia* var. *sophorae* and Coast Beard-heath *Leucopogon parviflorus* along the seaward edges.

The Island has a long history of use by indigenous people (Pacey 2001) and, over time, the effects they had on the vegetation have been profound. Matthew Flinders, on passing the island in February 1798, noted that it 'produced small trees,' while in the early 1880s, at the time the lighthouse was built, the vegetation consisted of 'Shrub, Trees and rank Grass', 'Scrub and Trees' and 'Scrub and Stunted Trees'. This is borne out by photographs taken from steamers that passed up and down the coast around the turn of the century.

By 1907, 25 years after residential occupation of the Island, Basset Hull (1908) noted that 'A few very ragged and dwarfed Banksia *Banksia integrifolia* and Pigeonberries *Monotoca elliptica* scattered at wide intervals, were the only trees on the Island, but the sandy soil between the granite boulders was thickly overgrown with masses of the red-flowering pea-creeper *Kennedia rubicunda*. Under these creepers, tangled up with tussock grass, rushes and stinging nettles, the penguins' runs and burrows extended in every direction.' Hence it is clear that since the lighthouse was built trees and shrubs had almost disappeared, and the vegetation was dominated by Spiny-headed Mat-rush *Lomandra longifolia* and Tussock Grass *Poa poiformis*. This change was brought about by the need for firewood by the light keepers, the introduction of rabbits and goats, and grass fires.

With the European inhabitants many foreign plants came to the island. Several were introduced to provide fresh produce, others were brought in with feed for the horses or arrived adhering to clothes and footwear. In 1916, when erosion of the sandy soil around the living quarters became a nuisance, Buffalo Grass *Stenotaphrum secundatum*, a lawn grass of coastal foreshores, was introduced to combat the problem (Higgins 1990). On April the 4th, 1932, F.A. Rodway was the first botanist to visit the Island and listed 46 species of which he made collections. Forty one years later a survey team from CSIRO investigated Montagu's natural assets and recorded about 100 species of plants for the Island. In the late 1980s an intensive plant search yielded 140 species of which 55 were non-native. The latter included several survivors from the days that vegetables and ornamental plants were grown by the light keepers. Some of the introduced species are notorious for their capacity to overrun existing vegetation. Foremost among these is Kikuyu Grass, *Pennisetum clandestinum*, while Rambling Dock, *Acetosa sagittata*, is a close second.

Kikuyu Grass was introduced into Australia by the New South Wales Department of Agriculture as seed from the Belgian Congo (Whittet 1921). In 1919 it was propagated in the Botanic Gardens in Sydney and proved successful as cattle feed. Cuttings were sent for further testing to no less than 40 locations in New South Wales. These included Pambula on the South Coast, where the cuttings 'made good growth.' Some time in the 1920s cuttings were taken home from the Royal Easter Show by the Bates' family who were farming in the Bodalla district. How it arrived on Montagu Island is unknown, but in the late 1980s it occurred over about 16% of the Island, mainly on the west side in inaccessible and wet places, on tracks and around the quarters. The vegetation of the remainder of the island was dominated by Spiny-headed Mat-rush and Bracken *Pteridium esculentum*, in varying densities and Tussock Grass was prominent in the northern parts of the Island. It may come as a surprise to see Common Reed *Phragmites australis* on higher parts of the island. The explanation is to be found in the presence of granite lying close to the surface, thus creating an elevated water table.



Two views of the east side of the island in the early 1900s compared with same view in 1988

ANNIVERSARY FACT SHEETS

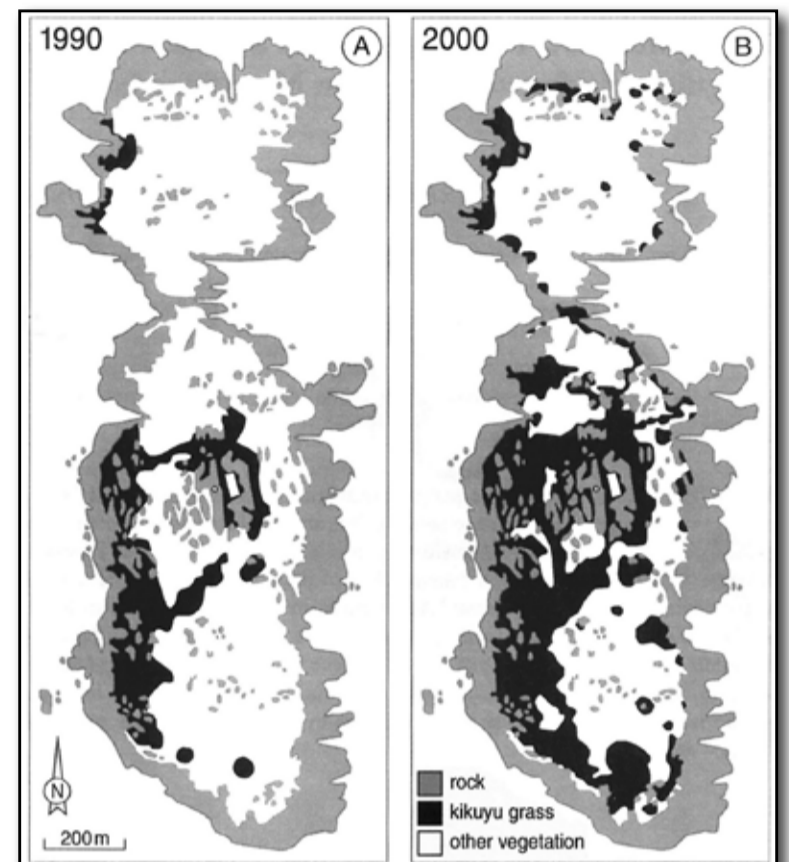
VEGETATION

CELEBRATING

50 YEARS OF MONTAGUE ISLAND

SHEARWATER RESEARCH

2009



Spread of Kikuyu Grass *Pennisetum clandestinum* between 1990 (L) and 2000 (R)

Montagu Island, because of the lighthouse, came under the auspices of the Commonwealth from 1901 until the light was automated with the introduction of solar power in 1987. At that time, responsibility for the island reverted to the New South Wales Government and it became a Nature Reserve. In contrast to the previous period, an active management regime was implemented by the National Parks and Wildlife Service, which started with the eradication of the goats. Once released from the goats' grazing pressure and aided by the demise of the rabbits, Kikuyu Grass spread rapidly and by 2001 covered an area of 37%. This led to the decision to push back the Kikuyu Grass by creating a cover of Coast Wattle and other native species and thus to restore the vegetation to something probably close to what originally existed on Montagu Island.

Most of the information in this Fact Sheet is based on Heyligers and Adams (2004).

Further reading

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