*2003 Restoration and Rehabilitation State and Local Government Grant* *$100,000*

# RESTORATION OF SEABIRD NESTING HABITAT ON MONTAGUE ISLAND

## *overview* of the project

Montague Island provides important nesting habitat for a variety of seabirds including Shearwaters, Petrels and Little Penguins. This project by the Department of Environment and Climate Change (National Parks and Wildlife Service) has restored approximately 8ha of seabird habitat that was over run by kikuyu grass. Research by Charles Sturt University has shown that kikuyu has been responsible for the deaths of 300 penguin chicks a year and was threatening the breeding success for all seabird species that nest on the island.

The restoration project used a program of controlled burns, revegetation and follow-up spraying to reduce the area of kikuyu on the island by 50% over a four year period.

*Crested Tern and chick*

## *how* the project was carried out

The island was divided into 14 management zones with the plan to treat one zone per year. Funding from the Environmental Trust was used to completely restore two zones, to purchase seedlings for another three zones, and to undertake weeding in all zones.

Searches were conducted for Little Penguins before treatment commenced and any penguins found were temporarily relocated. Each zone was sprayed for weeds prior to a controlled burn to remove all weeds and kikuyu. This stage was followed by planting of seedlings and follow-up spraying to control regenerating weeds.

A temporary nursery has been established on the island. This allows seedlings to be maintained and cared for if controlled burns must be postponed because of rain. The kikuyu is being replaced with *Lomandra longifolia*, a hardy native groundcover, and a mixture of small trees and shrubs such as casuarinas, paperbarks, banksia, wattle, native rosemary and native fuschia.

## *outcomes* now and in the future

A total of 51,000 seedlings have been planted in four zones since 2004. Research by Charles Sturt University has confirmed that the treatment and revegetation carried out during the project has eliminated much of the Kikuyu in the major infested areas and increased Little Penguin breeding success rates in these areas.

*A controlled burn is the first step in the rehabilitation process*

Other seabirds benefiting from the program include Shearwaters and Crested Terns which also breed on the island. Staff on the island have also reported seeing a lot more terrestrial birds on the island, such as finches, as a result of the more diverse plant community that now exists.

NPWS has entered into a formal agreement with Charles Sturt University regarding the future of research on Montague Island Nature Reserve. The University will offer Post Graduate and Doctorate research projects to Environmental Studies students to complement the past research into Little Penguin breeding success. They will also initiate a new area of research in vegetation modelling which will aim to predict the mature vegetation habitat and structure based on the species currently being planted.

## *benefits, challenges & lessons learned*

This project has resulted in the development of a successful treatment methodology that can be used to restore marine coastal environments that are dominated by kikuyu. The Illawarra staff of NPWS are interested in applying the same treatment methodology to burn and revegetate Five Islands Nature Reserve in Wollongong, which is also heavily infested with kikuyu.

The major challenge for the project was the difficulty in gaining accurate weather forecasts for the timing of the controlled burns. This was crucial as each burn involved the rostering of 25 staff, transport, catering, fire equipment, and a helicopter.

The eradication of kikuyu from Montague Island is a long term project and it is estimated that all 14 zones will be completed in 2017. As each zone is treated the amount of follow-up spraying will increase proportionally. It is estimated that the project will incur an annual cost of $50,000 to buy seedlings and fund labour, in addition to Departmental staff and resources for prescribed burning and aerial spraying.

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