



**West Coast
Penguin Trust**

Fiordland crested penguins (*tawaki*)

South Westland Project Update: Jan 2015

Sponsored by DOC & Greenstone Helicopters

The Fiordland crested penguin, or tawaki, is the only crested penguin to inhabit the main islands and coasts of New Zealand.

These penguins are endemic to New Zealand, breeding in small colonies on inaccessible headlands and islets along the shores of south-western South Island and Stewart Island.

Listed as 'Nationally Endangered', they are believed to be the second or third rarest penguin in the world. These penguins are believed to be at risk from fisheries bycatch, introduced predators, dogs and human disturbance.

The West Coast Penguin Trust is leading one project and supporting other research in South Westland to better understand the ecology of and the threats to these penguins.

Pre-Predator Control Project at Jackson Head and Gorge Creek

Introduction

The most common threat on land for many native birds is introduced predators and the Trust set out to establish which predators may be a threat so that appropriate targeted action can be taken.

This followed a technical review of the conservation status of the species and past management actions by the Department of Conservation during 2010-2012. A priority action is to determine the effects of introduced predators on Fiordland crested penguin breeding success.

A funding bid for a three year pre-predator control project to the Department of Conservation under its new (2014) Community Conservation Partnership Fund was successful and 20 motion-activated trail cameras were purchased with sponsorship from local businessman, Geoff Robson of Greenstone Helicopters.

Cameras are a low impact method of obtaining the information needed and these were installed around nests in the coastal fringe of Jackson Head and Gorge River, both in South Westland, in late August.

As both batteries and memory cards required changing every week, they were installed in locations that would minimise any disruption to the birds, which have been known to abandon nests when disturbed. If predators are found to be an issue then the WCPT can swing into action and implement appropriate predator control aimed at the correct species as well as pro resulted in an agreed draft recovery strategy wide predator control strategies for use elsewhere in the species range.



If predators are found to not be an issue then resource that could have been wasted on predator control for tawaki can be used on other penguin conservation projects.

2014 Breeding Season

Initial analysis of the data from the cameras has shown that possums and rats are present, along with the occasional stoat, but that, in the main, the penguins are not bothered by their presence. There has been no sign of predation.

There have been some initial teething problems with the technology and more detailed analysis will be undertaken during the summer in order to resolve the technical problems.

Some of the cameras were moved to areas where chicks gather in groups known as crèches at a pre-independence stage.

It is hoped that more can be learned about this behaviour as well as whether there is a predation risk at this vulnerable time when both parents are at sea.

Research into other penguins suggests that this gathering together of chicks could be for one or more of three reasons, namely for greater protection against predators, cold or aggressive adults.



Foraging Ecology Project

Penguin experts, Thomas Mattern and Ursula Ellenberg, of Otago University initiated a new tawaki project at Jackson Head during the 2014 breeding season. Thomas and Ursula are investigating the foraging ecology of the penguins, including feeding at the nest and the marine foraging activity.

Their project is also supported by Greenstone Helicopters, who are keen to support the protection of this iconic mainland penguin.

Thomas and Ursula used time lapse cameras to monitor nest activity and their initial review of the data also found no sign of predation.

GPS loggers were used to track a number of birds at sea and those birds appeared to handle the addition of the tracking gadgets very well. The data showed that, while the chicks remained in the nests, the adults travelled only short distances to feed; however when the chicks emerged to gather with other pre-independent chicks in a crèche, the adults would go off on epic foraging adventures before returning with food for the chicks.

More detailed analysis of both camera and GPS data will be undertaken over the coming months and more information will be published as it becomes available, but in the meantime, it seems that the 2014 has been an excellent breeding season for tawaki.

The Trust is grateful for the sponsorship of Greenstone Helicopters and the Department of Conservation for this work to secure the future of tawaki.



What next?

The threat status for these handsome birds was elevated in 2013 and a concerted effort is needed to ensure that the risk of extinction is averted.

Investment into understanding these penguins, their behaviour and the threats they face must come before investing resources into conservation action.

With local support and sponsorship, this essential research can be carried out in 2015 and 2016 and appropriate practical management put in place with the necessary understanding and planning.

Your contribution can make a difference.

Donate now at www.bluepenguin.org.nz/donate or contact Trust Manager, Inger Perkins, to discuss sponsorship: info@bluepenguin.org.nz or 03 755 8600.

Tawaki Facts

- They are 60cm tall, weigh 4kg and have a distinctive yellow stripe from the beak, extending over the eyes and up into a crest.
- They prefer to nest in hollows under fallen trees, roots, boulders or rock crevices.
- In common with other crested penguins, tawaki lay two eggs, the larger one hatching first and generally producing the only surviving chick.
- Eggs hatch in September and chicks meet up to form a crèche after about three weeks, probably for protection from predators, aggressive adults and or poor weather.
- Adults make short inshore foraging journeys to feed young chicks until they crèche, after which fishing expeditions will be much longer.
- The chicks fledge at around 75 days old in late November or early December.
- Following breeding, the adults leave for 60-80 days to fatten up for the annual moult and return to their colonies in late January or early February. Juveniles and non-breeders moult about one month earlier.
- During moult (about 3 weeks) they use up almost half their body weight. They are not water proof until they have a complete set of new feathers and are stressed and especially vulnerable at this time.
- Most penguins will have departed to sea by early March, not returning to the colony until late June or early July.
- Prey composition varies considerably between South Westland and Codfish Island, consisting of cephalopods (squid), crustaceans (shrimp/krill), and fish.