A population and distributional study of white-capped albatross (Auckland Islands)
Contract POP2005/02

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Provisional Fieldwork Plan for the 2009/10 Breeding Season
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Background

The forthcoming 2009/10 breeding season represents the fifth (in total) and final field season for this project. Previously, fieldwork has been undertaken during the chick-guard stage (05/06), chick-rearing stage (06/07) and incubation stage (07/08 and 08/09), with shorter field trips during the chick-rearing stage (07/08) and chick-guard stage (08/09).

Tracking of breeding adults has been undertaken during each of the four main field trips, with most success achieved during the 05/06 visit coincident with the chick-guard stage and relatively short foraging excursions by adults. In addition to relatively high resolution tracking using GPS technology, and to a lesser extent PTT technology, the first three years of the project saw the deployment of a total of 46 light-based geolocation tags, half of which have been successfully retrieved to date.

At a relatively small, feral pig-free area, all but ten actively breeding adults have been uniquely banded at a total of 65 marked nests. Records of presence at the colony and breeding histories have been compiled for these study birds.

Outline of Proposed Work in 2009/10

We propose to visit the South West Cape study colony on two occasions during the 2009/10 breeding season. An initial, short visit is planned for mid-November 2009, at the start of the breeding season. Work during this visit will focus specifically on recording band details of breeding adults present at the colony, banding any remaining unbanded breeding birds and retrieving any remaining geolocation tags. No tracking work (other than retrieval of geolocation tags) will be carried out during this visit.

A second, longer field trip is planned for February 2010, coinciding with the chick-guard stage. During this visit we plan to continue to record band details of breeding birds together with breeding frequency information and to band any remaining unbanded breeding birds. Additionally, we plan to document foraging trips of breeding adults guarding chicks using a combination of high-resolution GPS tags and activity recorder tags. The activity tags are essentially a geolocation tag which records each landing on, and take-off from, the sea. The geolocation tags also record light level which can be used to derive relatively coarse location data, but these data will be ignored in this deployment. The tags' clocks will be synchronised which will then allow us to overlay bouts of landing and take-off activity and periods of sitting on the water (from the geolocation tags) onto plots of highly detailed tracks (from the GPS tags). Each bird will carry two tags simultaneously – a GPS tag for detailed foraging tack information, and a geolocation tag for activity data. These data will allow us to further refine our estimates of 'overlap' and 'interaction' between white-capped albatross and commercial fishing activity. We will also use this final trip to retrieve any remaining geolocation tags deployed in the first three years of the study.

Band re-sighting data, breeding frequency information and breeding success estimates acquired over the course of the study will then be applied to NIWA's SEABIRD model in

order to derive key life history parameters (in particular adult survival and population trajectory).

Tracking data from 09/10 will be analysed in relation to commercial fishing operations, and earlier tracking data sets will hopefully make use of Australian commercial fishing data in addition to New Zealand fisheries data (acquired).