

A photograph of two white-capped albatrosses standing on a grassy cliffside. The birds are facing each other, with their heads tilted upwards and beaks slightly open, as if in conversation. The background shows a steep, grassy slope with some rocks and a glimpse of the ocean in the distance. The text is overlaid in yellow on the image.

**Research Plan for Aerial Survey of White-  
capped albatross, Auckland Islands  
Contract 4427.**

**Barry Baker  
Latitude 42 Environmental Consultants**



# background

- endemic NZ species

- Auckland Islands

  - Disappointment Island (1 10 000 pairs)

  - SW Cape (3 000 pairs)

  - Adams Island (100 pairs)

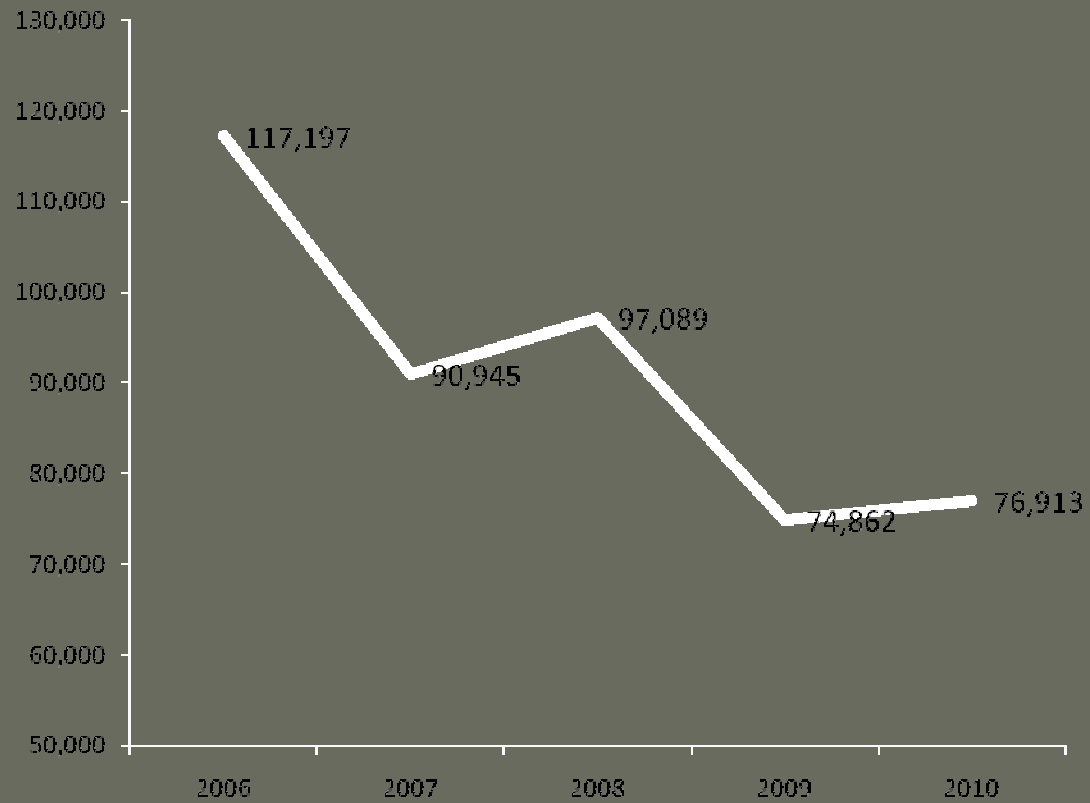
- Antipodes Islands

  - Bollons Island (50-100 pairs)

# background

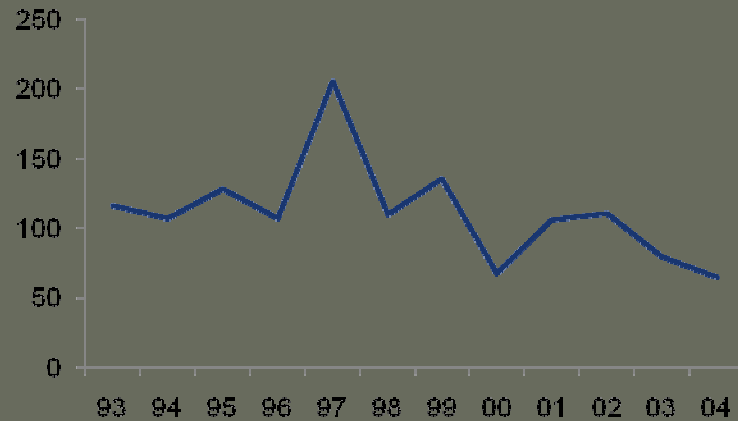
- in 2006 we commenced annual photographic counts of all white-capped albatross colonies in the Auckland Islands
- population estimates have been derived for 2006/07 – 2010/11
- all colonies photographed in 2011/12 but photos not yet analysed

# WCA total counts

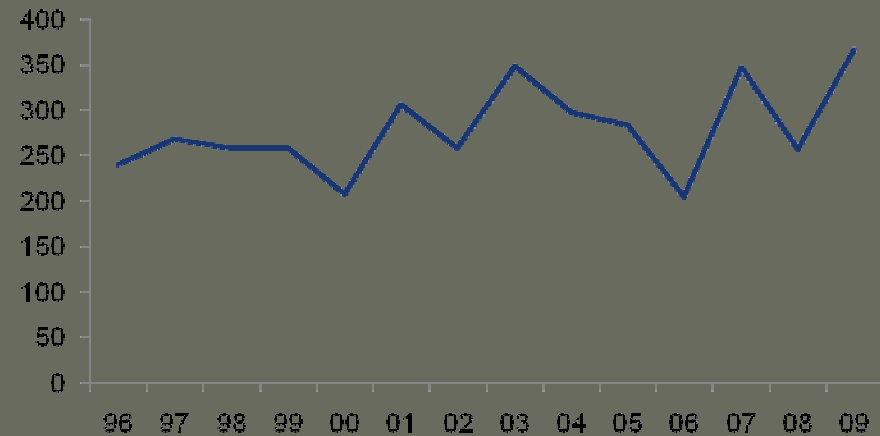


# what does difference in counts mean?

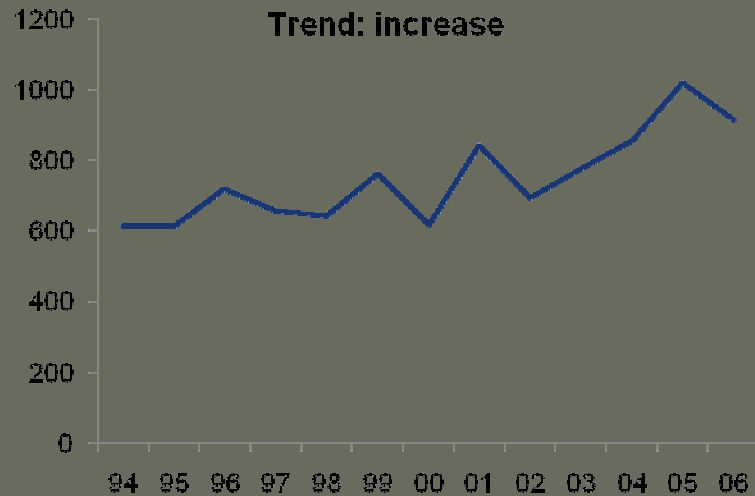
**Sooty - Possession Is.**  
Trend: moderate decline



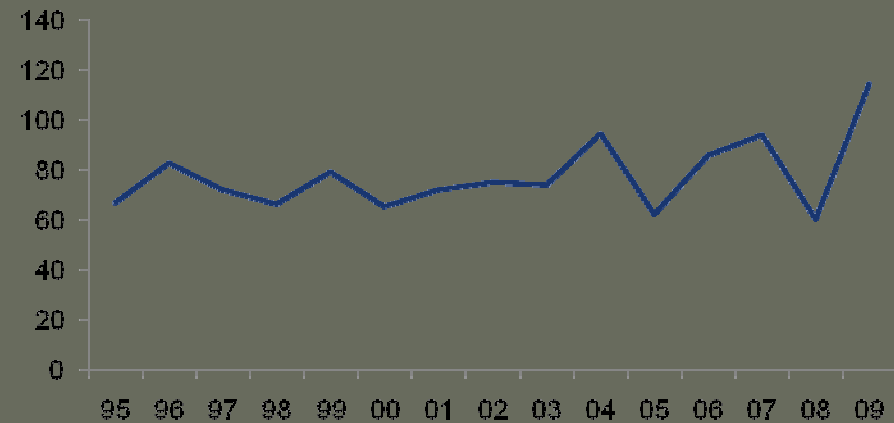
**LMSA - Macquarie Is.**  
Trend: moderate increase



**LMSA Possession Is.**  
Trend: increase



**GHA - Macquarie Is.**  
Trend: moderate increase



# Project Aims

- analyse photos collected in January 2012
- conduct another aerial survey of WCA in the Auckland Islands in January 2013
- determine population trend

## proposed methods

- Conduct one photo survey of WCA colonies in Aucklands Is in January 2013, using digital Nikon cameras & lenses
- aerial platform Squirrel Helicopter
- note that earlier field work has been carried out in December each year, early incubation



### 3 groups of photos

- overall scenic shots of the colony to assist later when building photomontages of the site
- series of overlapping photos of all areas with nesting birds (70 mm)
- close-up photos to examine proportion of empty nests & non-breeding birds (200 mm)



c. 3,000 photos taken each year,  
year saved as fine jpeg files  
No impact on birds detected



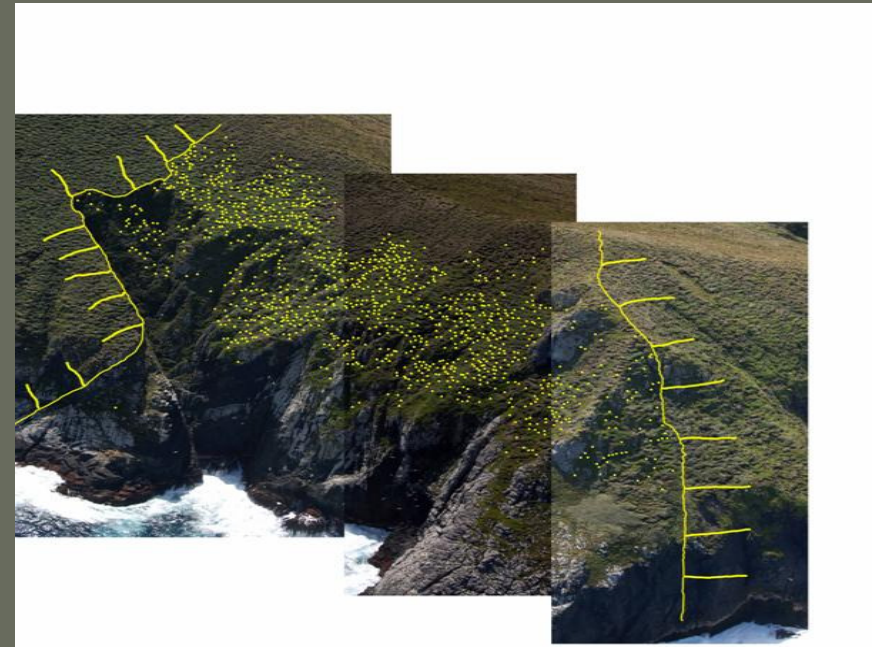


**Close-up photos**



## counting protocol

- photomontages constructed using Adobe Photoshop software
- paintbrush tool mark off counted birds



# data assessment

- all birds on the ground counted.
- each single bird assumed to represent a an annual breeding pair.  
Close up photos & ground truthing in previous years has indicated 94% of birds present were sitting on nests, confirming that most birds in colonies were breeding birds
- all images will be counted by one observer
- repeat counts of randomly selected montages by 2 other observers in previous years has confirmed no evidence of observer bias in counting

# photographic data storage

- photographs will be submitted to
  - DeepWater Group
  - Ministry of Primary Industries
  - Department of Conservation
- photos will be provided in one directory
  - White-capped albatross 2013* with three sub-directories
    - *Original photos*
    - *Stitched images*
    - *Counted images*
- set of photographs also retained by Latitude 42<sub>42</sub>