

Research Plan for Aerial Survey of White-capped albatross, Auckland Islands



Barry Baker

Latitude 42 Environmental Consultants

background - WCA

A large albatross is shown in flight, soaring from the bottom left towards the top right. The bird has white plumage on its head and neck, with dark feathers on its wings and back. Its long, hooked beak is prominent. The background is a bright blue sky filled with soft, white clouds.

- endemic NZ species
- Auckland Islands
 - Disappointment Island (110 000 pairs)
 - SW Cape (3 000 pairs)
 - Adams Island (100 pairs)
- Antipodes Islands
 - Bollons Island (50-100 pairs)
- regularly interacts with fisheries in NZ and elsewhere

white-capped albatross

A white-capped albatross is shown in flight, soaring over a dark blue ocean. The bird has a white head and neck, a dark brown body, and a long, hooked beak. Its wings are fully extended, showing the intricate feather patterns. The background is a vast expanse of water with a textured surface.

- annual photographic counts of all WCA colonies in the Auckland Islands 2006 - 2012
- now propose to undertake another count in January 2015 of all Auckland Is colonies
- analyse photos, count breeding birds, determine popn trend

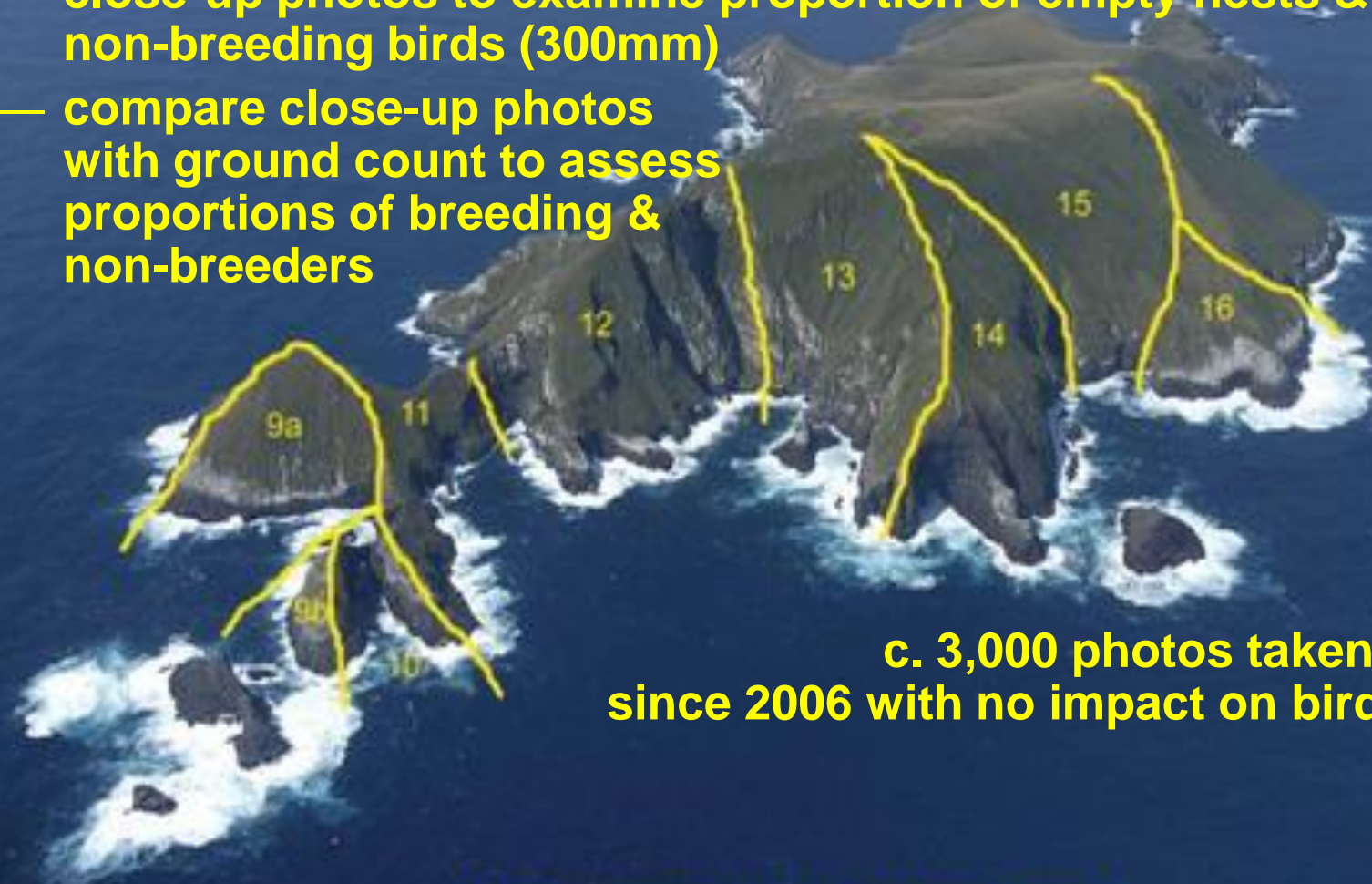
photography WCA

- conduct one photo survey of WCA colonies in Aucklands Is in January 2015
- aerial platform Squirrel Helicopter
- Nikon digital cameras & image-stabilized lenses
- series of overlapping photos of all colonies (70 - 200 mm)
- photos to be taken as fine-scale jpeg or raw files of minimum 20 MB size



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 (300mm)
- compare close-up photos with ground count to assess proportions of breeding & non-breeders



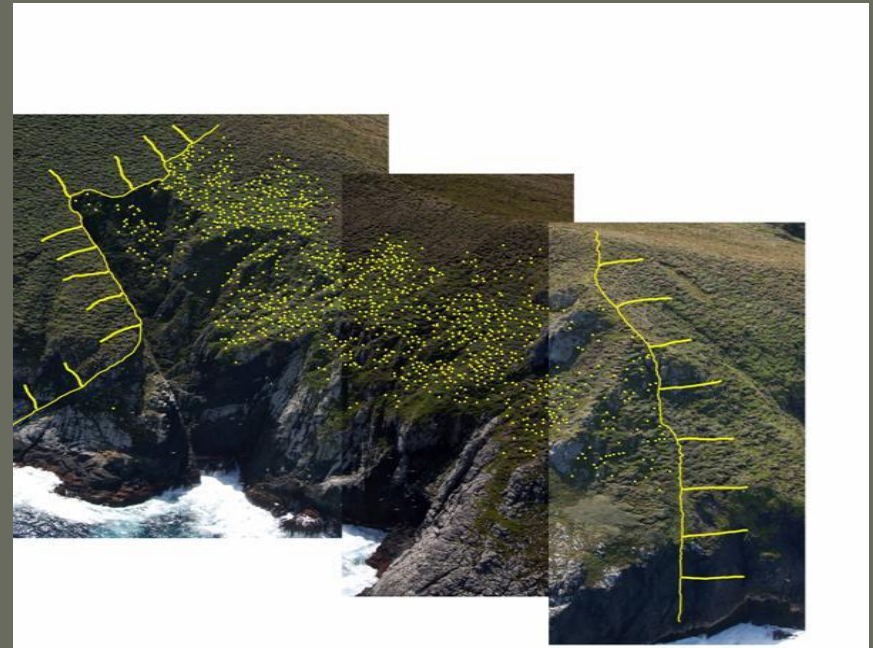
c. 3,000 photos taken each year,
since 2006 with no impact on birds detected



Close- up photos

counting protocol for WCA

- 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 an annual breeding pair.
- close up photos & ground truthing will be used to estimate proportion of birds present but not breeding, so counts can be subsequently adjusted
- 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

WCA photographic data storage

- photographs will be submitted to DOC for archiving
- photos will be provided in one directory *White-capped albatross 2015* with three sub-directories
 - *Original photos*
 - *Stitched images*
 - *Counted images*
- Two set of photographs also retained by Latitude 42 and stored on and off the office site

White-capped albatross at Disappointment Island

David Thompson & Paul Sagar

Presentation to CSP Technical Working
Group, December 2014



White-capped albatross at Disappointment Island, Auckland Islands

- Largest population, 95% of breeding pairs
- No pigs, cats or mice
- Ongoing aerial survey work
- ACAP funding received to undertake white-chinned petrel population estimate
 - virtually nothing known about this species at the Auckland Islands
 - Kalinka Rexer-Huber PhD, Otago University
 - field team on island for ca. 8 days
- Opportunity to:-
 - carry out ground-truthing of aerial survey
 - establish study population



White-capped albatross – Disappointment Island

- Conservation status: At Risk – Declining
 - No conclusive evidence of a decline from aerial surveys
- ‘Very High’ risk, L2 Seabird Risk Assessment
- Draft CSP 5-year seabird research plan: 2015/15 – review M-R feasibility (Table 4)



Ground-truthing

- Temporally-aligned with aerial survey work in January 2015
- Experienced 3-person field team
- Each to walk a transect encompassing at least 200 nests within 3m either side of transect (at least 600 nest total)
- At time of day of aerial survey
- Record:
 - number of pedestals
 - actively breeding
 - on obviously failed nest
 - on empty nest
 - loafing



Mark-Recapture Feasibility

- Main issue – access to/from island
- Burrows
- No shortage of nesting birds
- No pests
- Logistic support
- January visits would maximise band re-sight



January 2015

- Establish study population, size only constrained by time, and future time on island for re-sighting
- Metal band and large plastic band
- Defined study area, topographically and

