

A population and distributional study of white-capped albatross (Auckland Islands)

Contract POP2005/02

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NIWA
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Disappointment Island

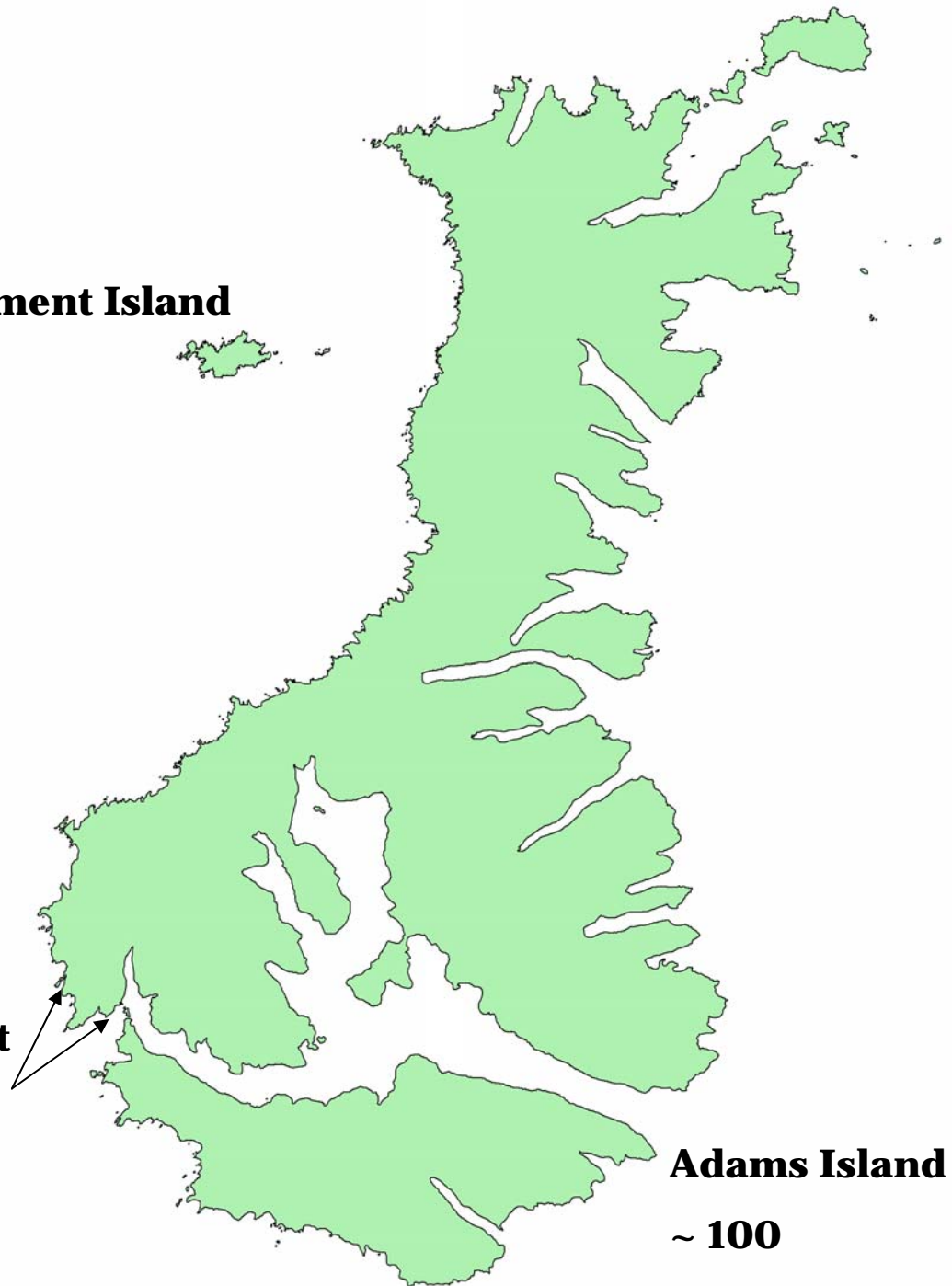
~ 100,000

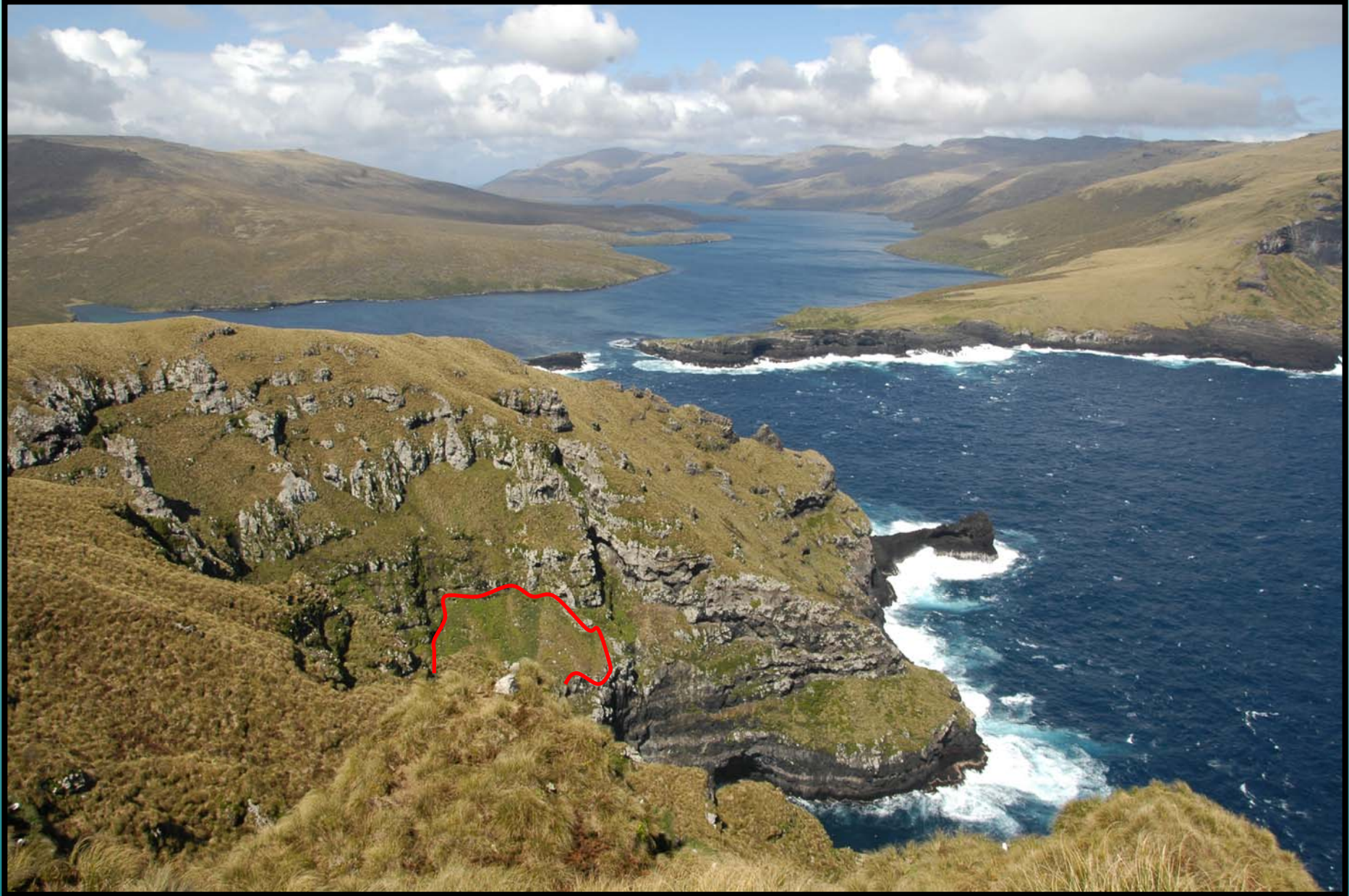
**South West
Cape**

~ 5,000

Adams Island

~ 100





2008/09 breeding season...

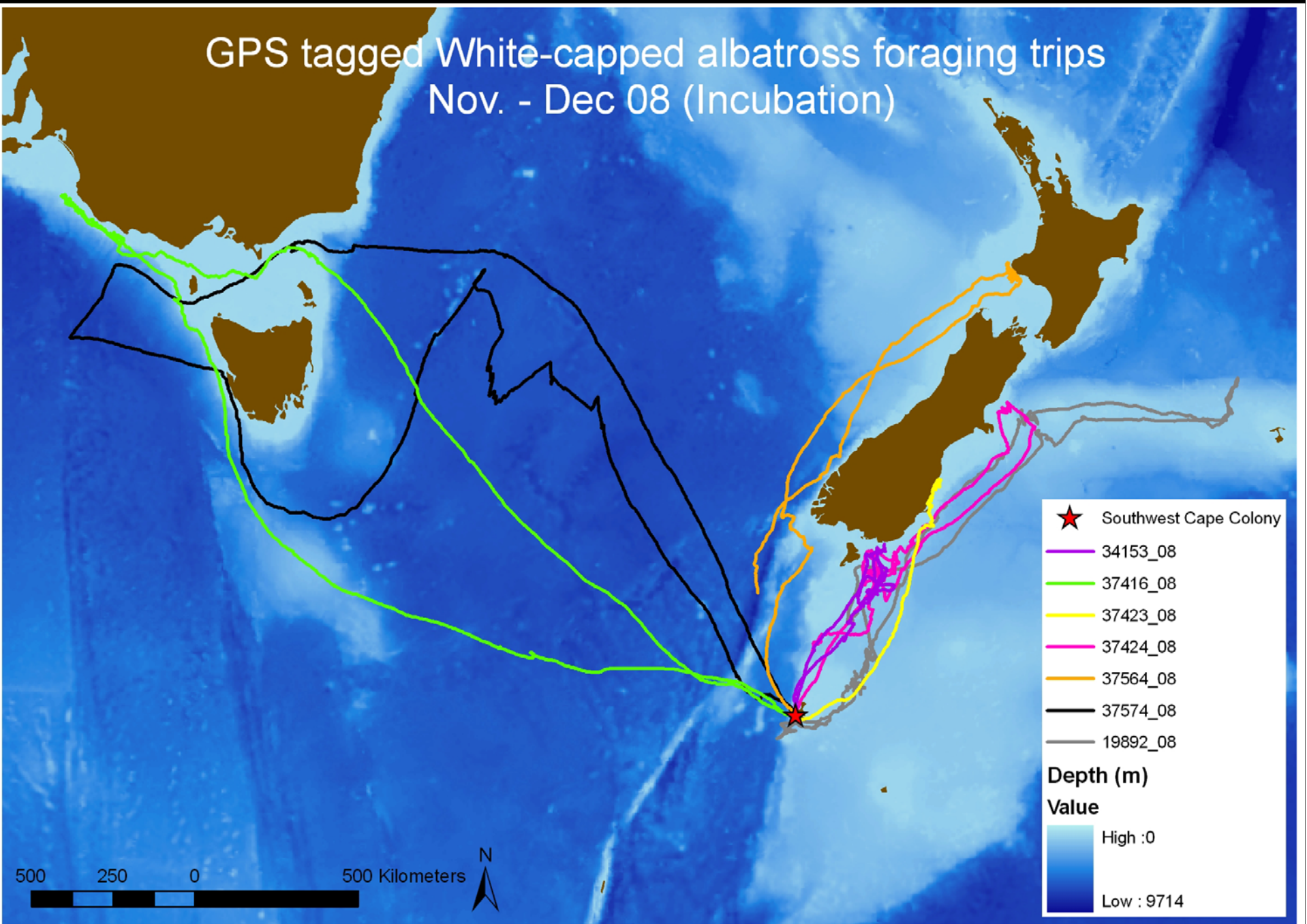
- **Fieldwork during incubation (Nov-Dec), plus short visit during chick-guard (Feb)**
- **Banding and re-sighting adults**
 - **120 breeding adults, 55 pairs**
- **Breeding frequency, nest occupancy**
- **GPS tracking at South West Cape**
- **PTT tracking at Disappointment Isl.**
- **Retrieval of geolocation tags**

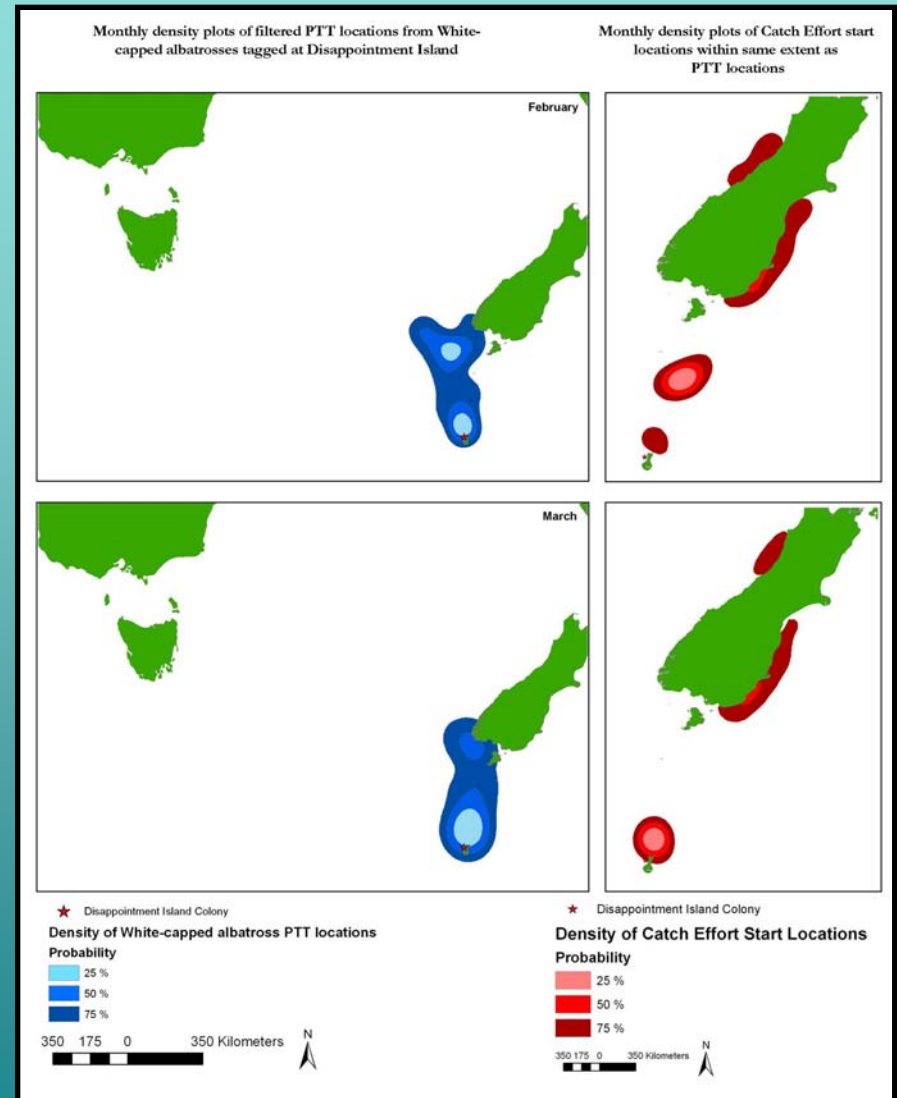
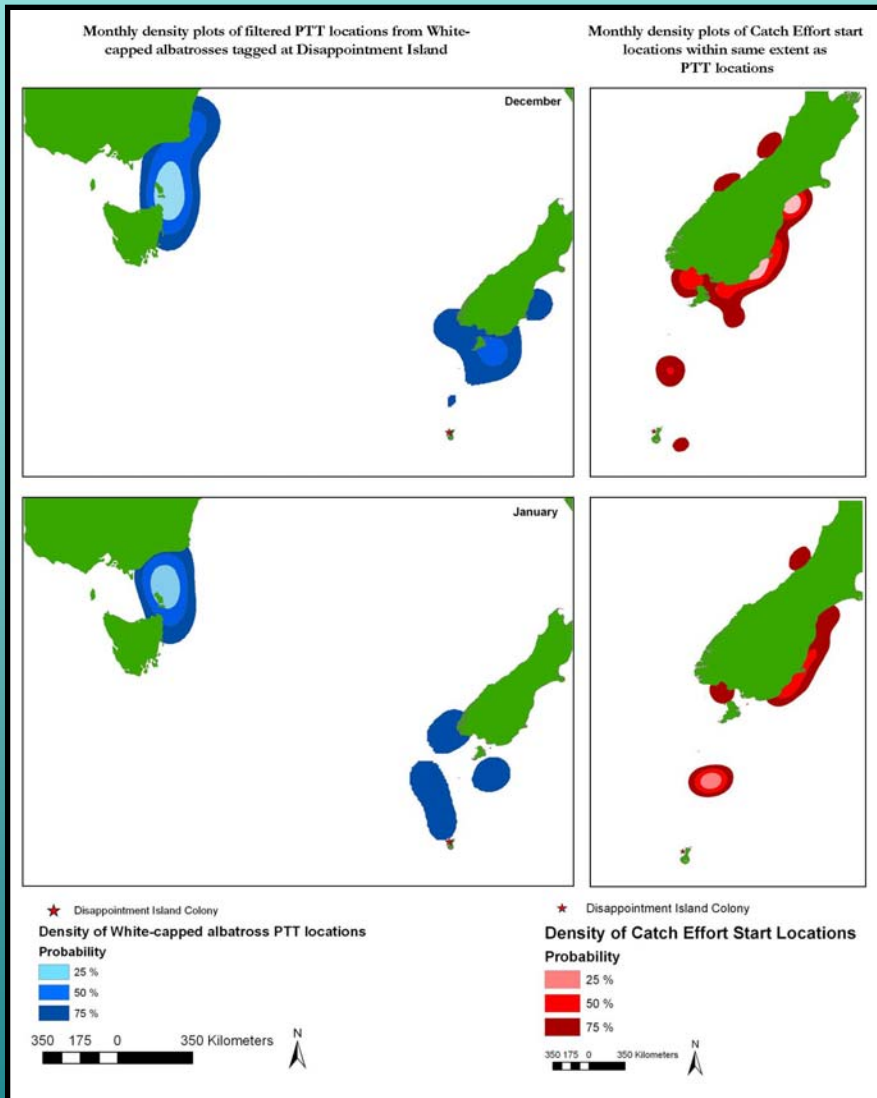
Tracking...

- **GPS data acquired to augment 07/08 data**
- **15 PTTs deployed at Disappointment Isl.**
- **10 geolocation tags retrieved - 23 data sets**

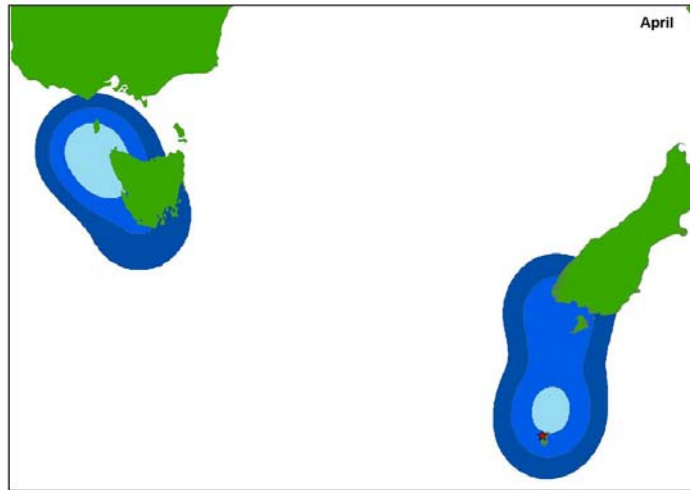


GPS tagged White-capped albatross foraging trips Nov. - Dec 08 (Incubation)

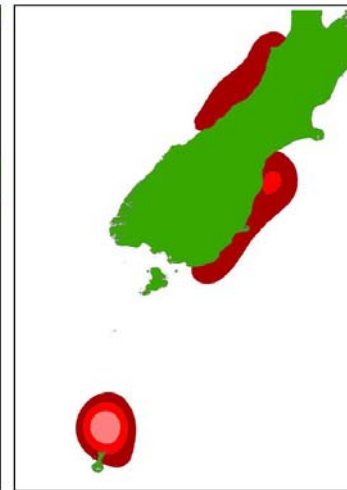




Monthly density plots of filtered PTT locations from White-capped albatrosses tagged at Disappointment Island



Monthly density plots of Catch Effort start locations within same extent as PTT locations



★ Disappointment Island Colony

Density of White-capped albatross PTT locations

Probability

- 25 %
- 50 %
- 75 %

350 175 0 350 Kilometers



★ Disappointment Island Colony

Density of Catch Effort Start Locations

Probability

- 25 %
- 50 %
- 75 %

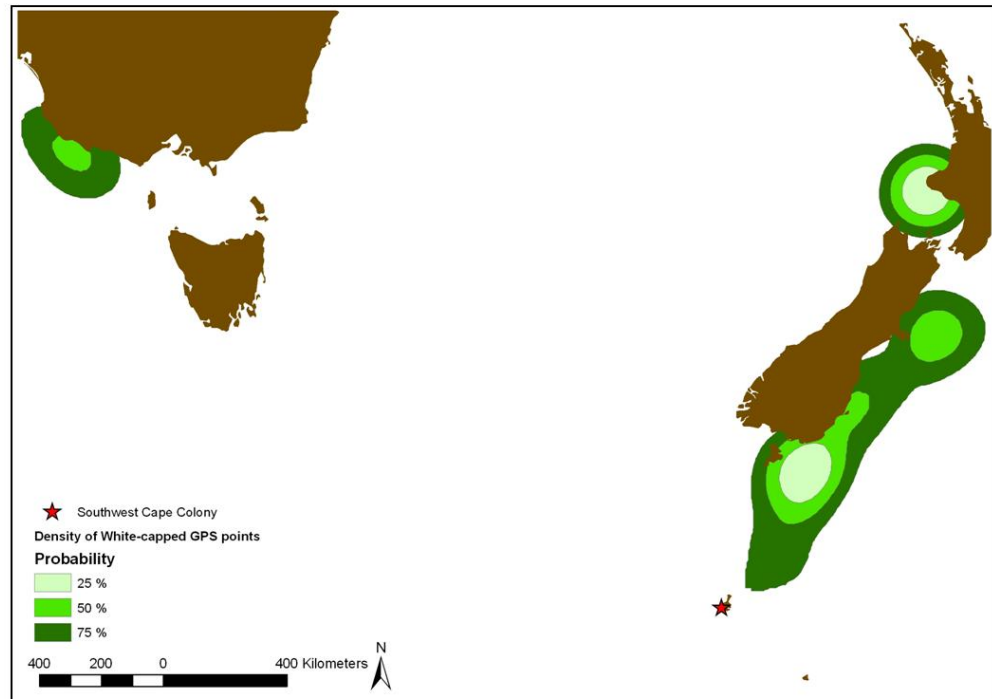
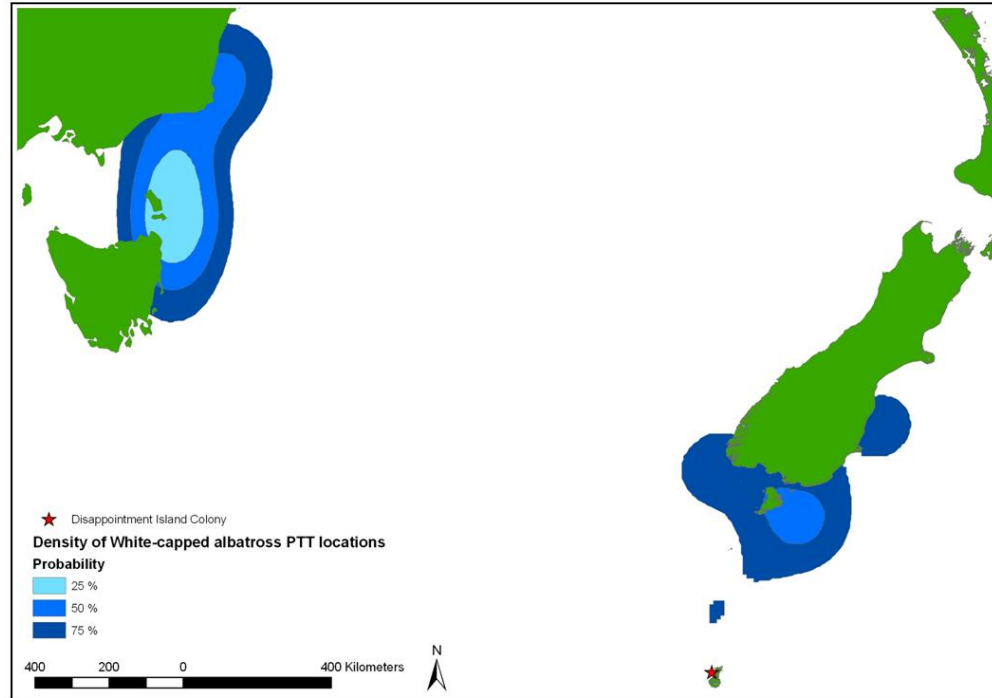
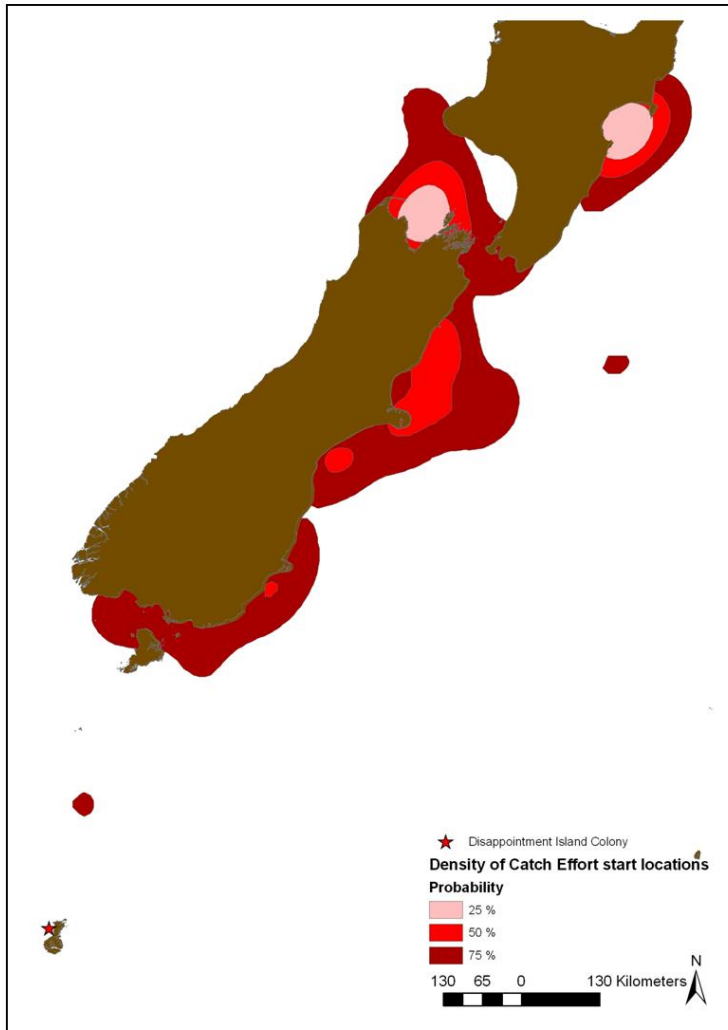
350 175 0 350 Kilometers



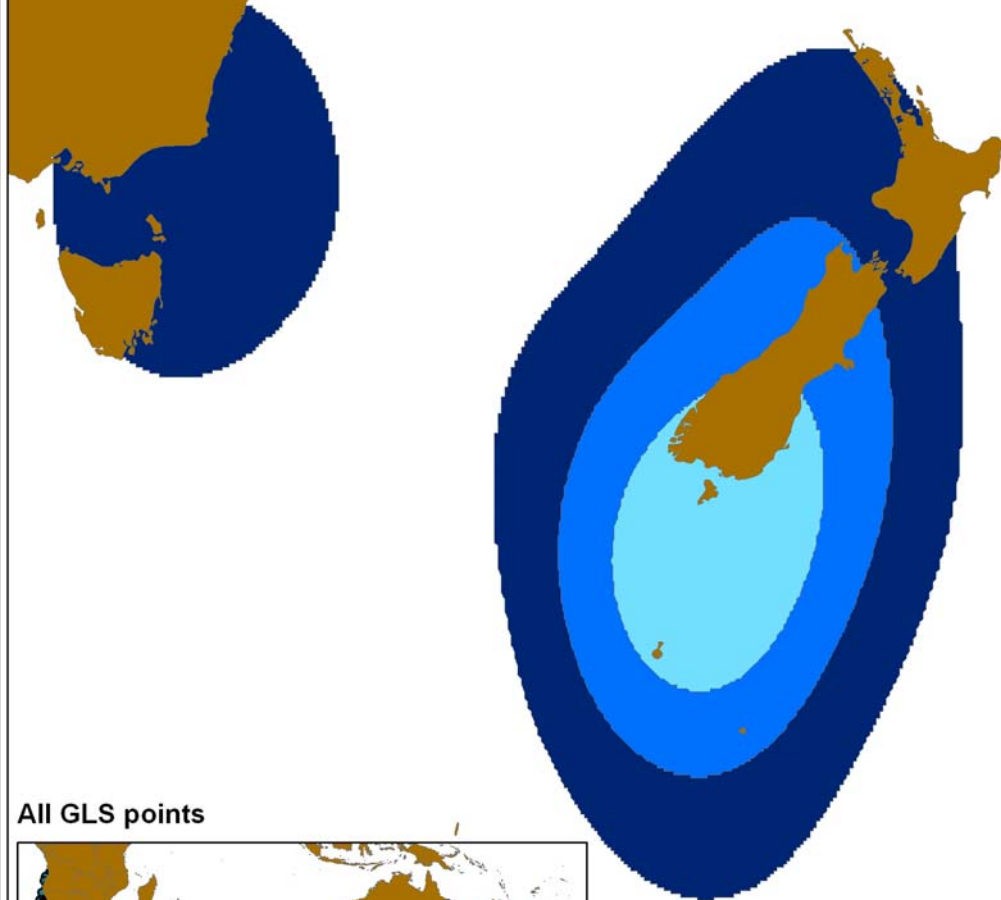
Comparison of density plots
during December 2008:

White-capped PTT locations
White-capped GPS locations

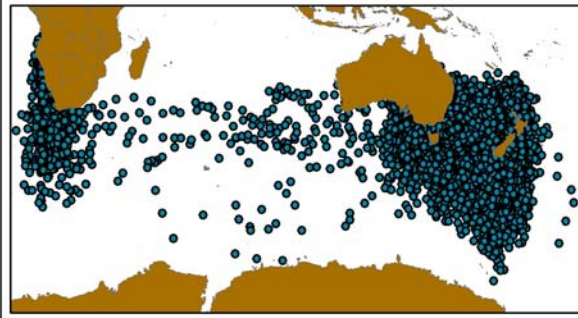
NZ Fisheries Catch-Effort start locations



Distribution of 23 recovered GLS tags from white-capped albatrosses



All GLS points



Kernel Home Range of all GLS pts
PROBABILITY

- 25 %
- 50 %
- 75 %

300 150 0 300 Kilometers

Summary of geolocation data...

- **To date 3 of 23 (13%) birds migrate to South Africa (~ 10-20%)**
- **Migration destinations appear consistent**
- **Most within Australasia → NZ's EEZ**
- **NW Tasmania**
- **Implications for fishing mortality estimates**

Preliminary nesting observations...

- **In 08/09 ~ 38% nests unused**
- **Pop. estimates for 06/07, 07/08 & 08/09**
 - **Disappointment: ~ 111k, 86k & 92k**
 - **SW Cape: ~ 6.5k, 4.8k & 5.3k**
- **Only ~ 37% successful birds in 06/07 attempted to breed in 07/08, 52% for 07/08 and 08/09**

Conclusions...



- **Data point towards white-capped albatross being predominantly a biennial breeder**
- **Adult white-capped albatross dispersive**
 - **Visit Tasmania except during guard stage**
 - **Small proportion migrate to South Africa**