



NIWA

Taihoru Nukurangi

Climate, Freshwater & Ocean Science

Population studies of southern Buller's albatrosses on The Snares

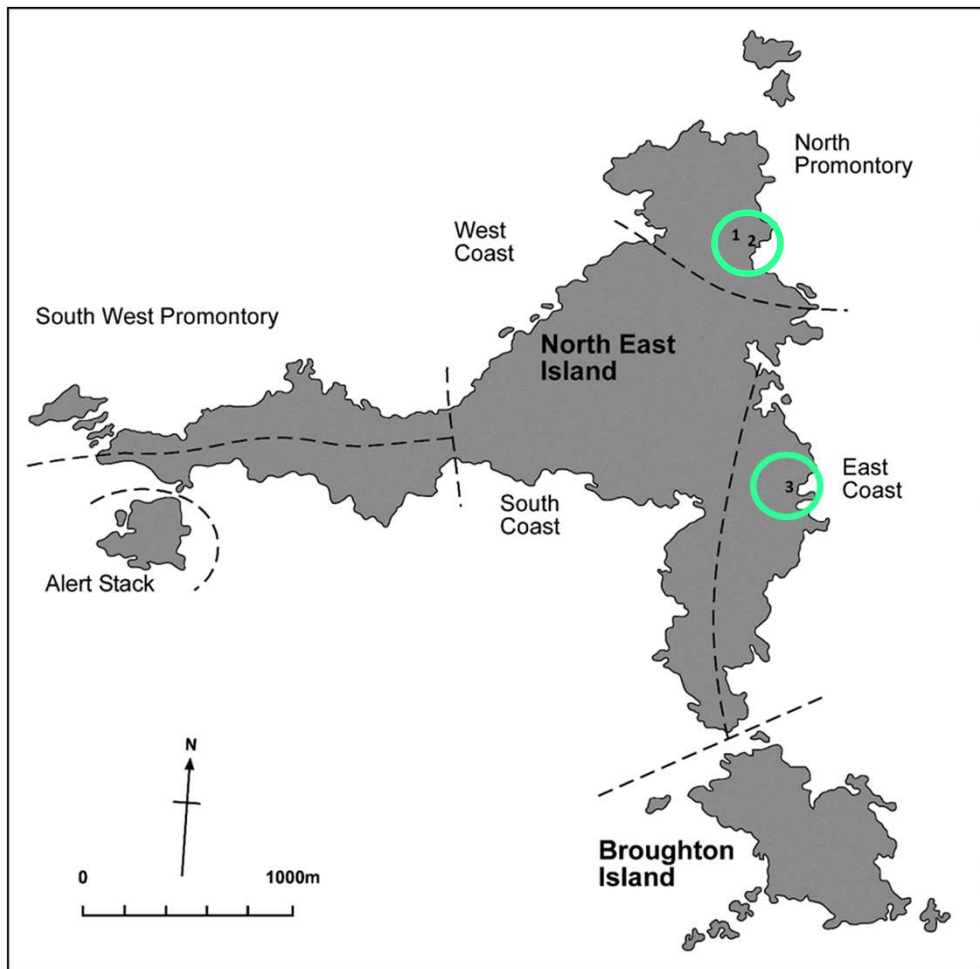
David Thompson & Paul Sagar
CSP Contract POP2019-04

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1. Complete a whole-island count of breeding southern Buller's albatrosses at The Snares, covering those areas not surveyed in 2019.
2. Establish the numbers of pairs breeding in the three established study colonies.
3. Determine the numbers of breeding pairs in other well-defined locations, and so correct whole island counts made in 2019 and 2020.
4. Establish annual survival of banded birds from recapture data.
5. Deploy up to 50 GLS tags on birds in the study colonies.
6. Using a hand-held GPS device, determine the boundaries of the three study colonies.
7. Assess likely locations in the study colonies for the deployment of cameras.



Logistics

- Transport - Awesome.
- Field team comprised David Thompson, Paul Sagar and David Sagar.
- Arrived at Boat Harbour, North East Island at 08:00 on 11 March 2020.
- Departed from Boat Harbour at 18:00 on 17 March 2020.
- Effectively only six full days.

Objectives 5, 6 and 7

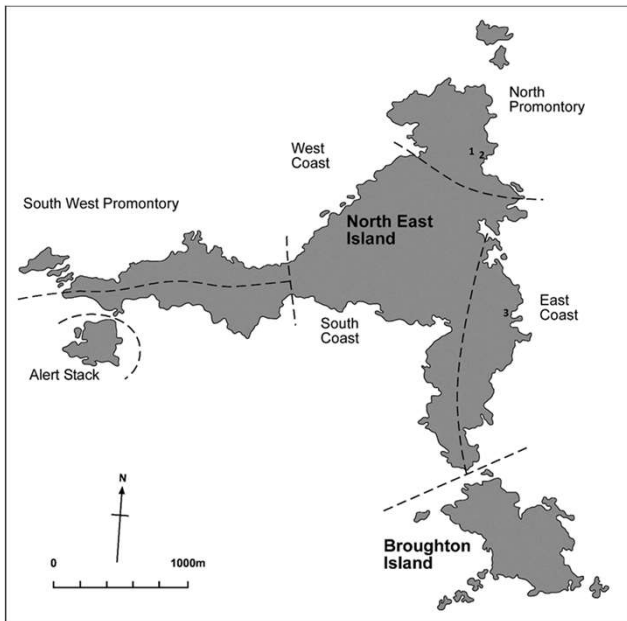
5. Deploy up to 50 GLS tags on birds in the study colonies.
6. Using a hand-held GPS device, determine the boundaries of the three study colonies.
7. Assess likely locations in the study colonies for the deployment of cameras.

LPB1	48°01'07.2" 166°36'23.8"
LPB2	48°01'07.0" 166°36'25.3"
LPB3	48°01'05.9" 166°36'25.1"
LPB4	48°01'06.4" 166°36'23.6"



Objective 1

1. Complete a whole-island count of breeding southern Buller's albatrosses at The Snares, covering those areas not surveyed in 2019.



Weather unhelpful.
South West Promontory not visited
South Coast completed except for one section

Objective 3

3. Determine the numbers of breeding pairs in (the three study colonies and) other well-defined locations, and so correct whole island counts made in 2019 and 2020.

Colony location	2019	2020	% change
Mollymawk Bay	133	135	+1.5
Lower Punui Bay	58	65	+12.1
Upper Punui Bay	68	77	+13.2
South Punui Bay	52	60	+15.4
Razorback	102	115	+12.7

Overall, 413 (2019) and 452 (2020) → correction factor of 0.914 applied to 2020 count data

Back to Objective 1

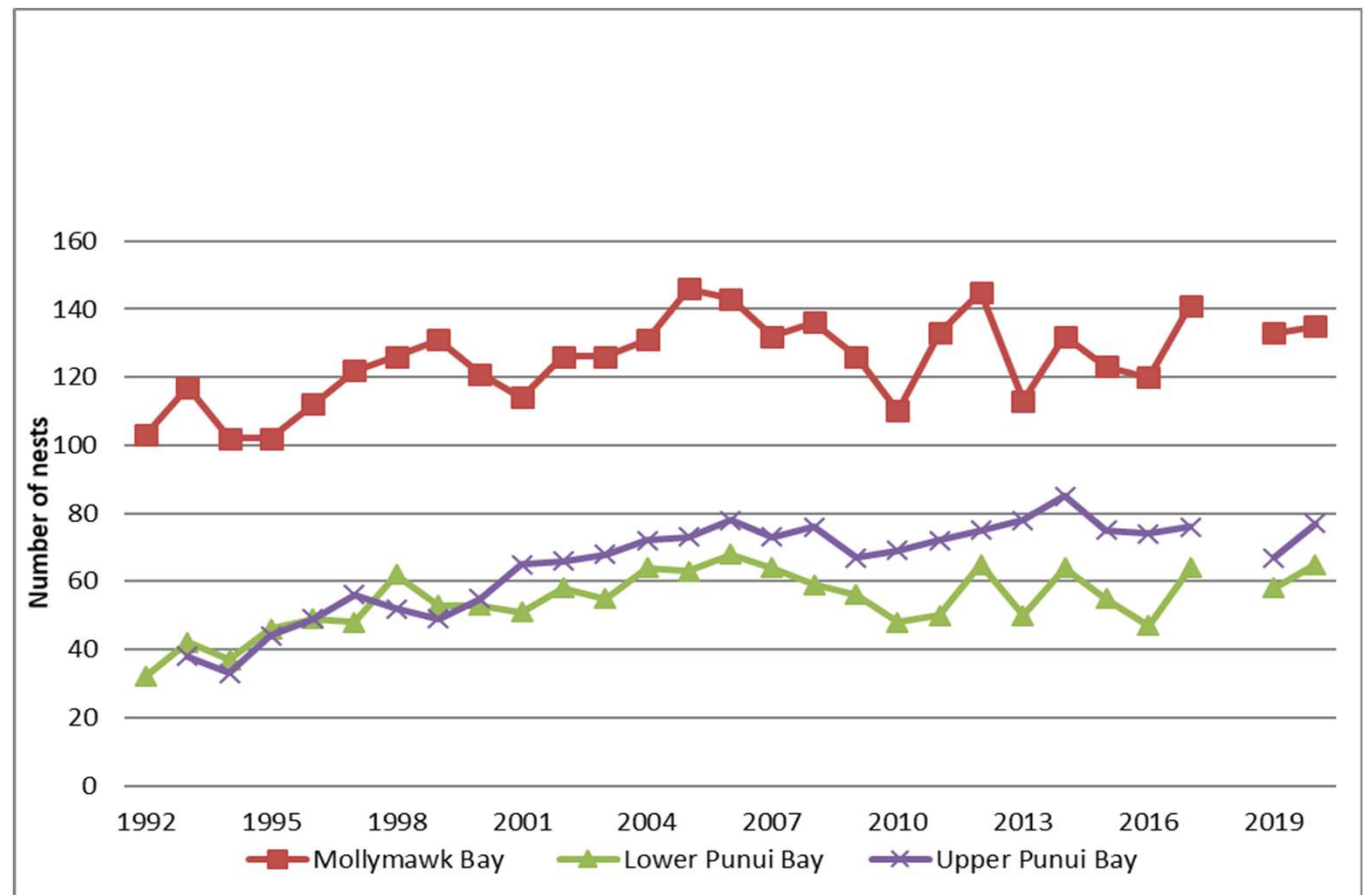
1. Complete a whole-island count of breeding southern Buller's albatrosses at The Snares, covering those areas not surveyed in 2019.

Area/Year	1969	1992	1997	2002	2014	2019
North Promontory	509	1108	1400	1643	1508	1758
West Coast	121	262	317	205	146	193
North side, South-West Promontory	305	785	520	739	427	NC
South side, South-West Promontory	763	1236	1410	1025	1201	NC
Alert Stack	112	193	223	267	305	NC
South Coast	1425	2095	2161	2554	2425	1562*
East Coast	789	1465	1693	1732	1733	1665
Total North East Island + Alert Stack	4024	7144	7724	8165	8047	5178
Total North East Island#	2574	3898	4718	4980	5305	5178
Broughton Island	NC	539	518	NC	657	621
Totals	(4448)	7683	8242	(8713)	8704	5799

Objective 2

2. Establish the numbers of pairs breeding in the three established study colonies.

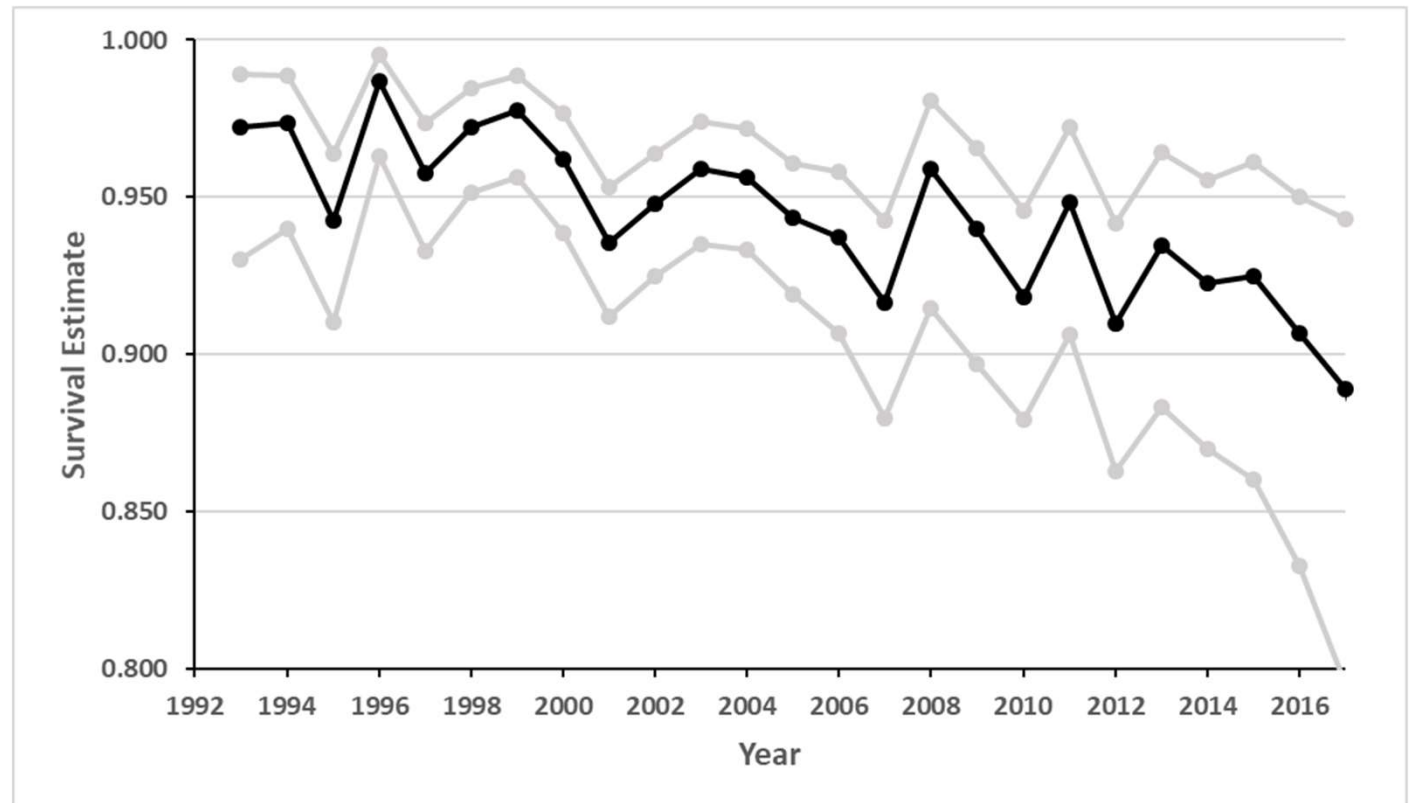
135 Mollymawk Bay
65 Lower Punui Bay
77 Upper Punui Bay



Objective 4

2. Establish annual survival of banded birds from recapture data.

Very generally:
>0.95 pre-2005
<0.95 post-2005



Additional results

Recruitment: 13 known-age birds, banded as chicks 1992-2004, were found breeding for the first time

- seven were aged 16 years (banded as chicks in 2004)
- two were aged 17 years
- one was aged 18 years
- one was aged 19 years, and
- two were aged 21 years

One bird banded as a chick in 1972, was recaptured at 48 years of age.

A bird banded as a chick on Big Solander Island in 2002 was recaptured on an empty nest

Conclusions

Whole-island counts need cooperative weather if time is relatively limited

Study colonies (east coast) less affected by prevailing weather

Southern Buller's albatross population appears more or less stable over the last 20 years

Annual survival appears to be generally lower post-2005

Potential of fixed trail cameras looks promising

