

Campbell Island Seabird Research

Operation Endurance February 2023

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POP2022-11

26 April 2023



New Zealand Government



Quick Outline

- Quick background
- What we hoped to achieve
- What we did achieve
- How this fits in with previous surveys
- The results
- Key points learned
- Future priorities



Quick Background

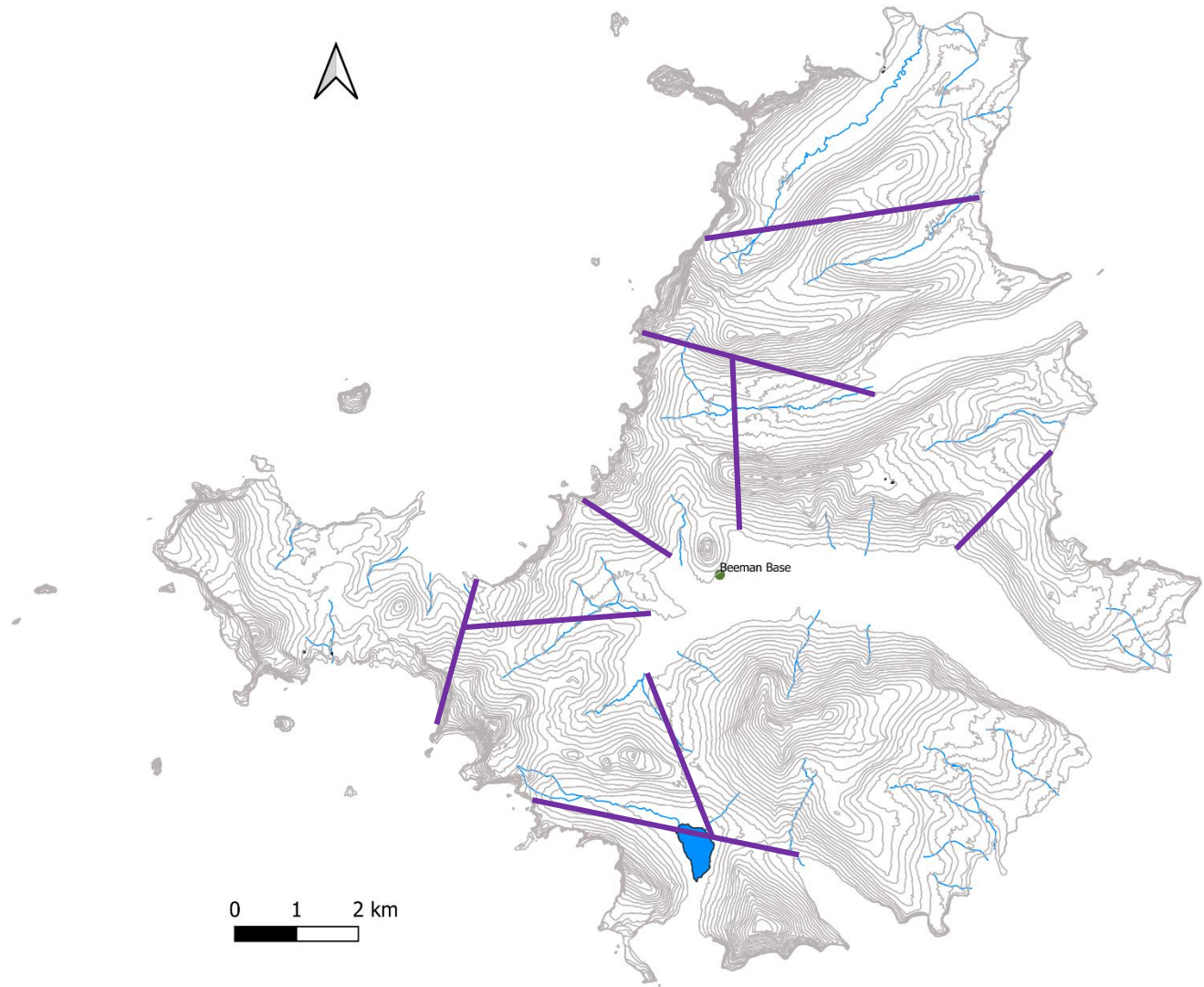
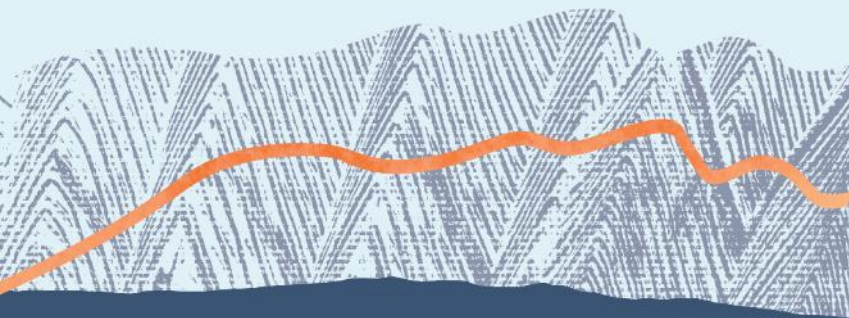
Campbell Island/Motu Ihupuku Seabird Research Operation Endurance March 2020



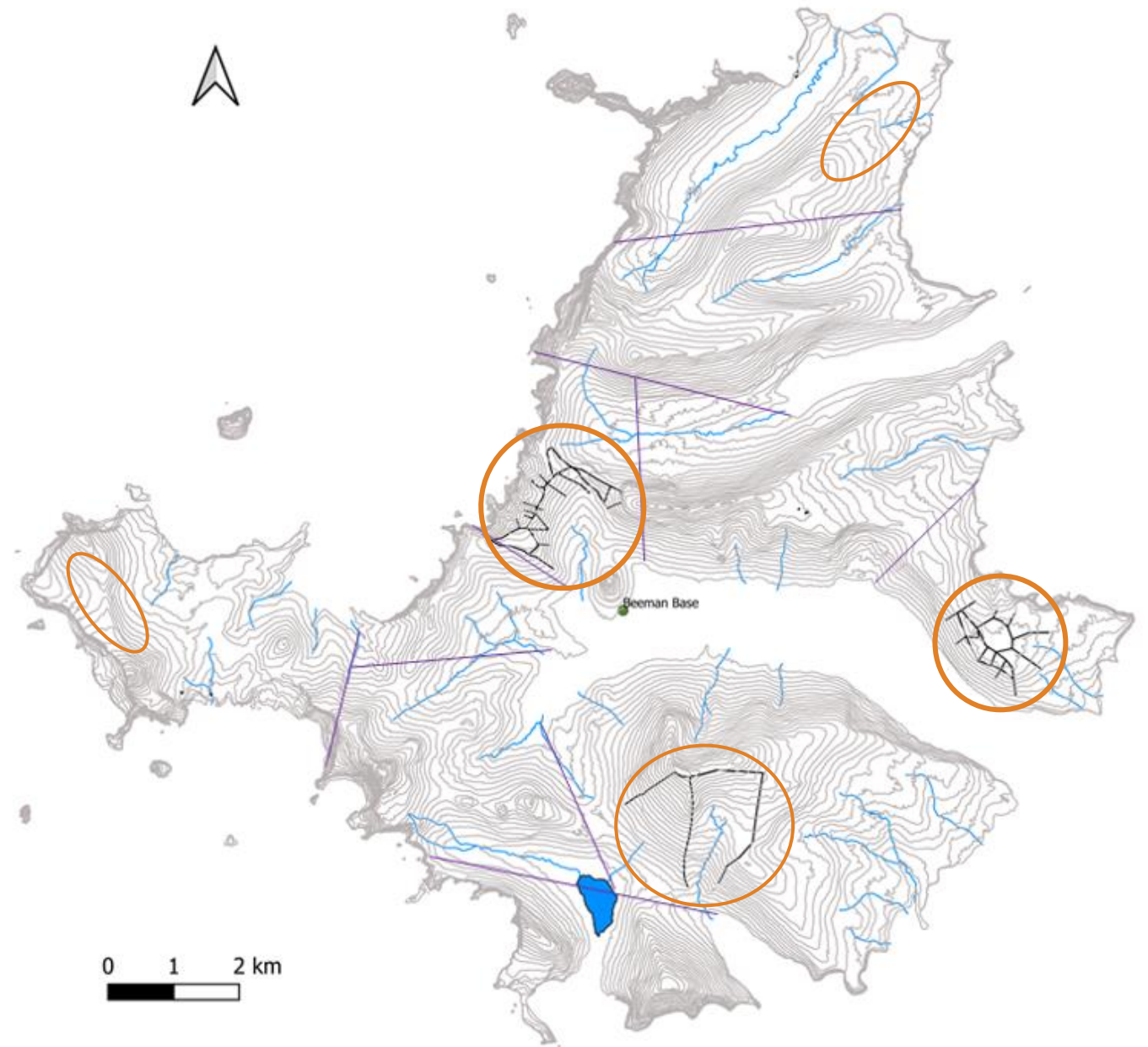
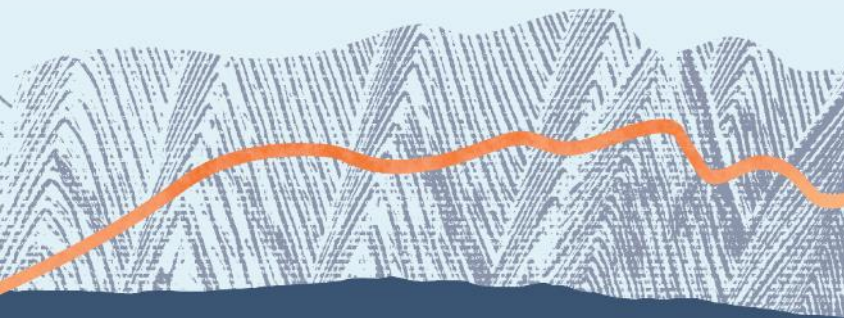
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Southern Royal Albatross – Count History



Southern Royal Albatross – Count History



Trip Objectives

- Southern royal albatross:
 - Population estimate (Col and Moubray study areas)
 - At-sea tracking
 - Demographics
 - Breeding success
 - Mercury sampling
- Antipodean albatross:
 - Genomics samples
 - Population count
- Grey-headed albatross:
 - Breeding success
 - Demographics



Trip Duration and Priority Objectives

- Total trip 5 days – less than 2 full days on the island
- Priority Objectives:
 - Population estimate (Col study area)
 - At-sea tracking
 - Demographics
 - Breeding success

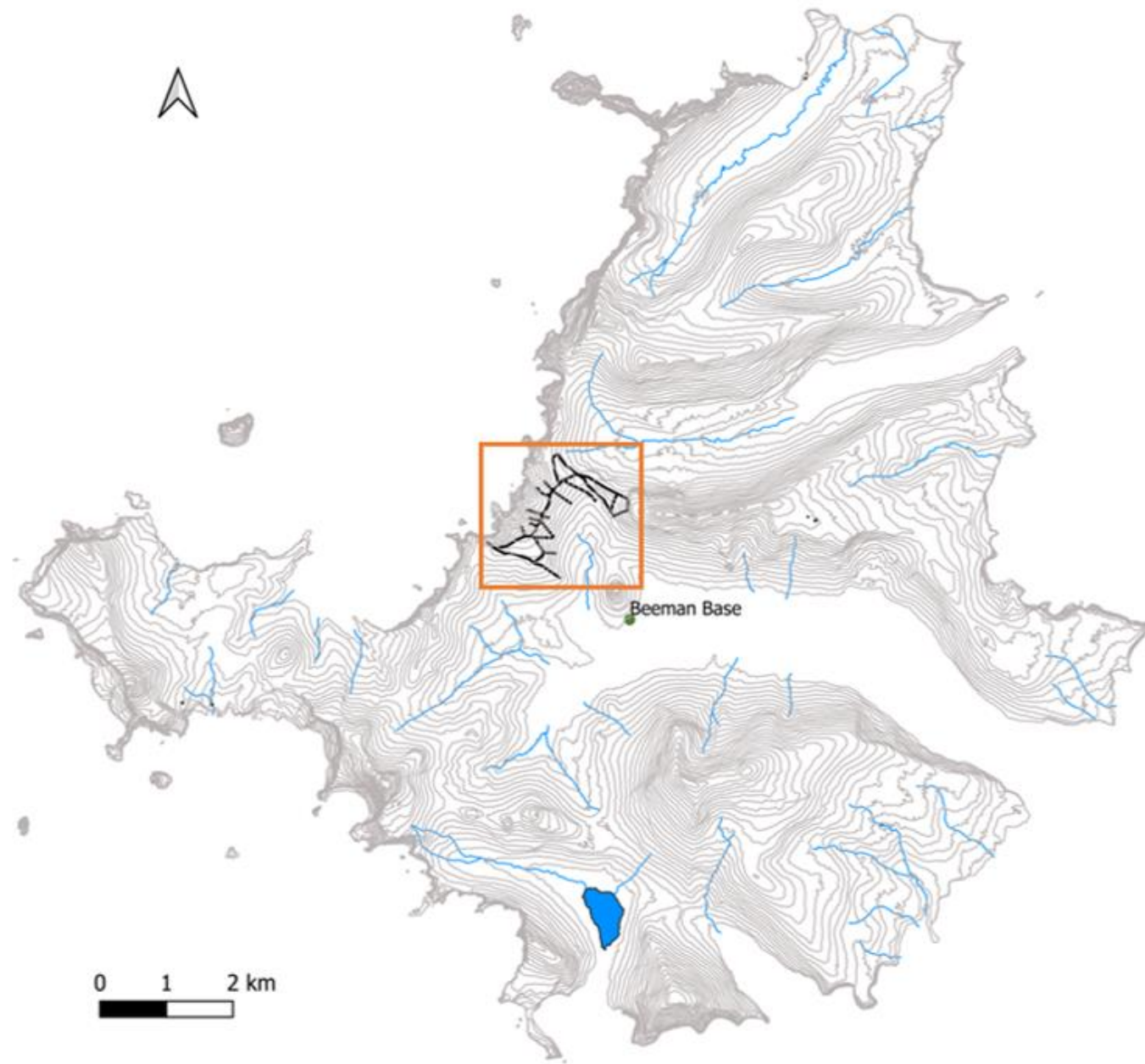
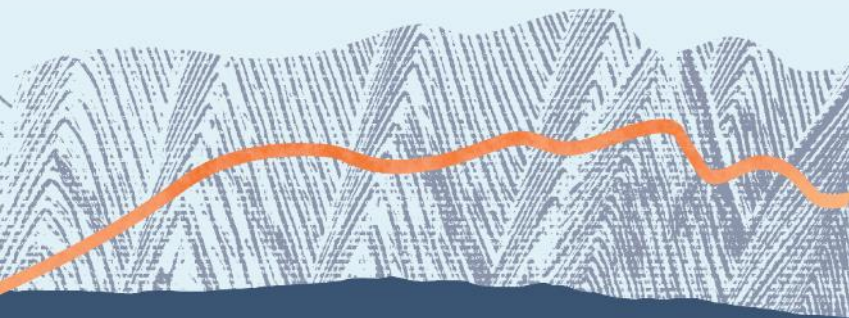


Southern Royal Albatross

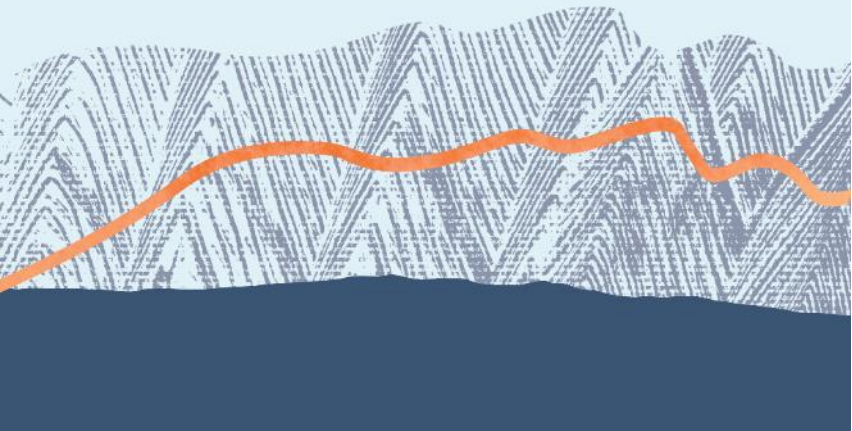
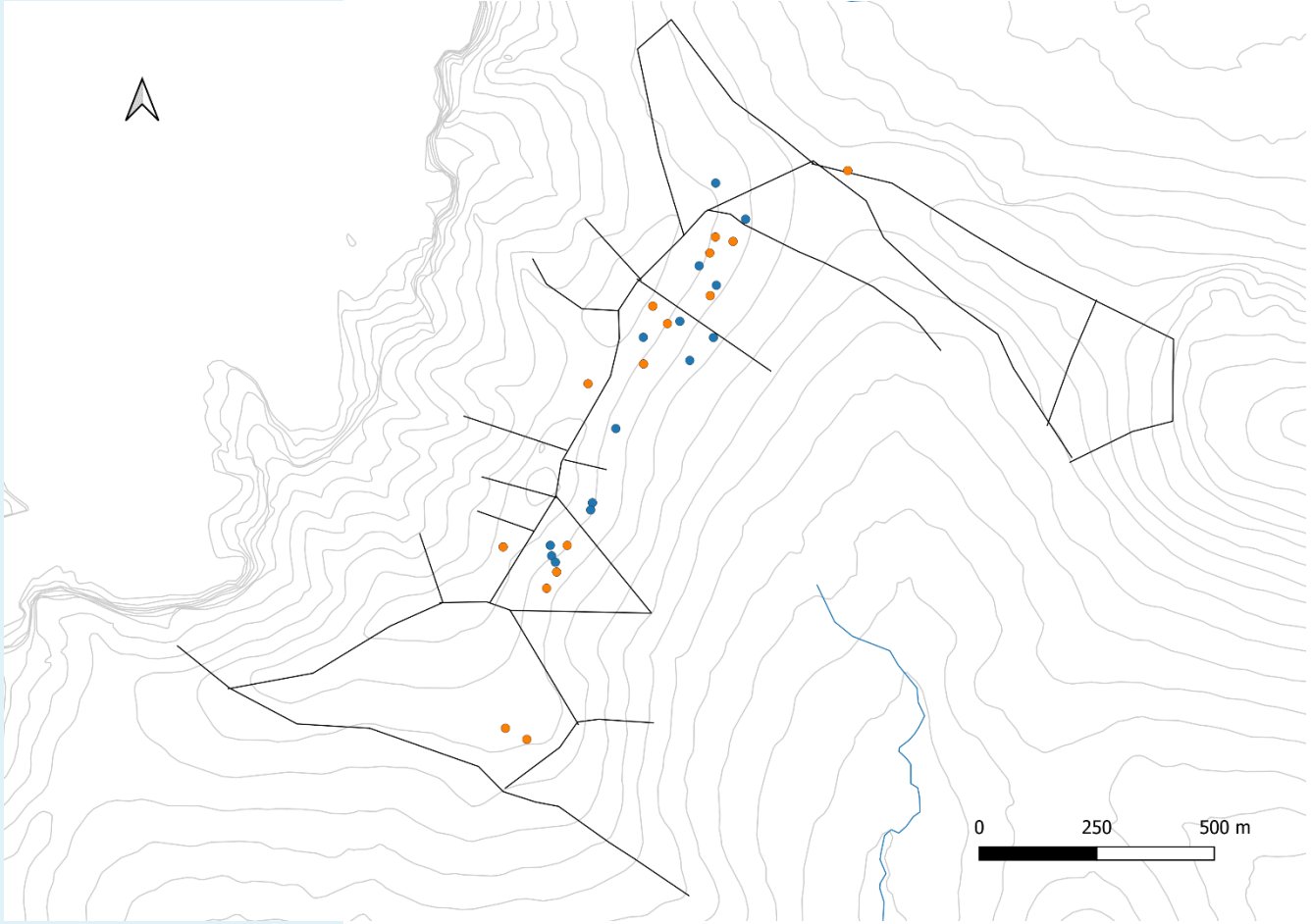
- Breed biennially
- Long-lived
- Slow to mature
- 8,300 – 8,700 pairs



Southern Royal Albatross – Col Study Area



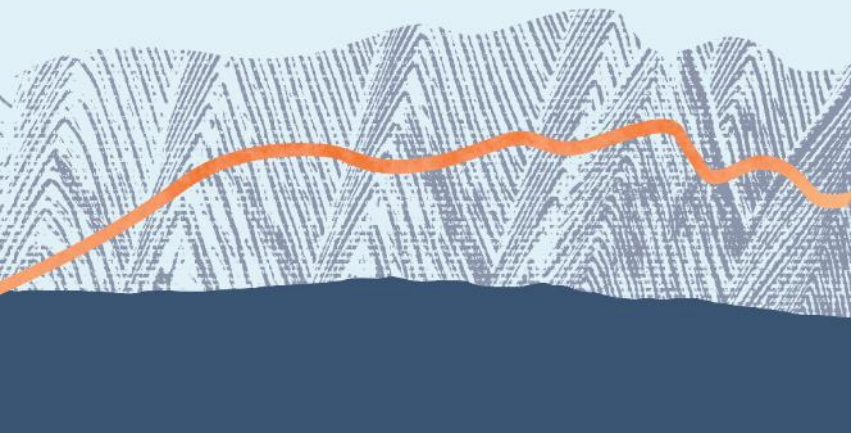
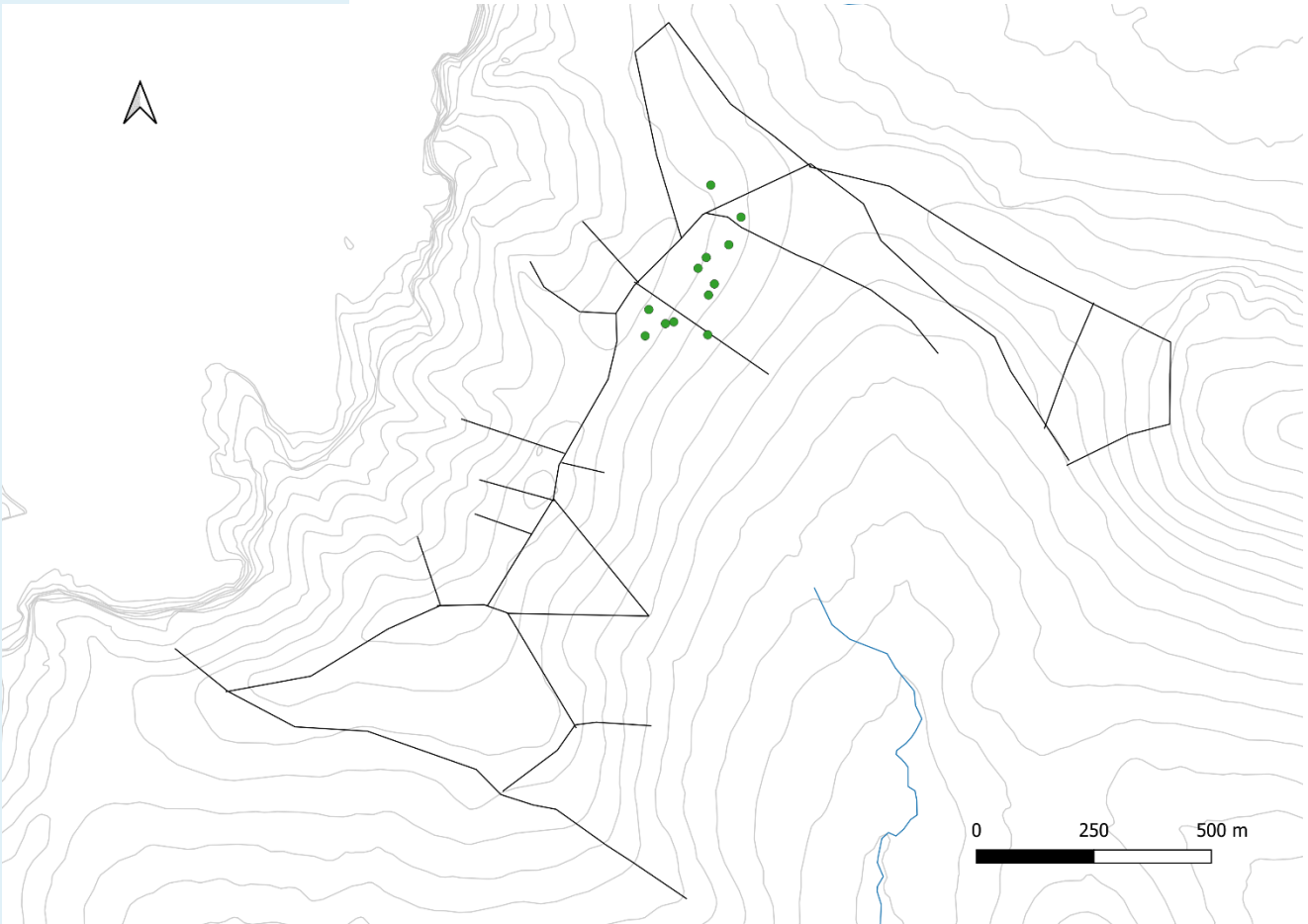
Other Objectives – GLS Deployments



15 females
14 males



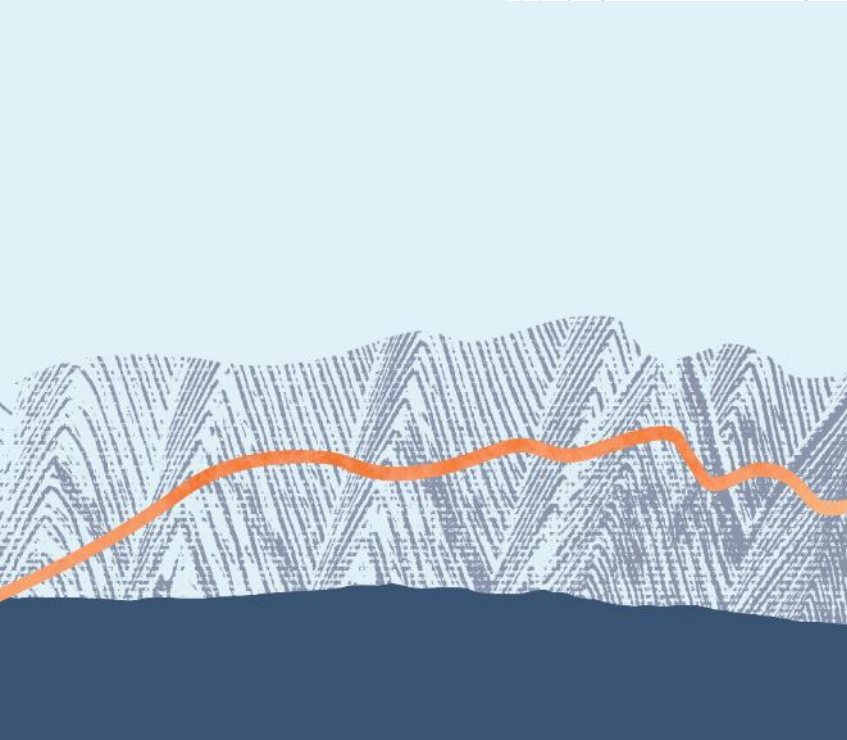
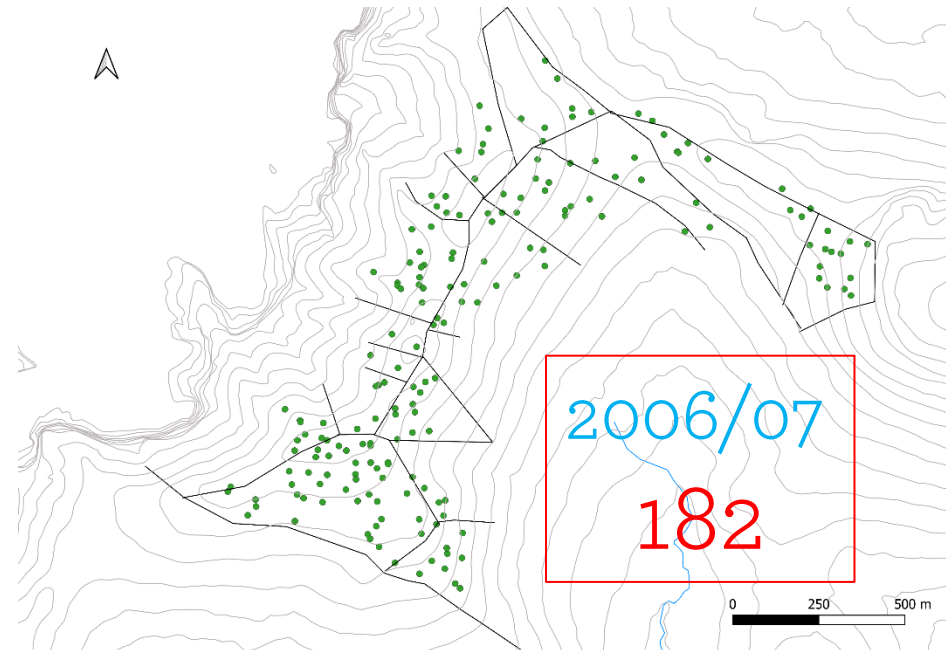
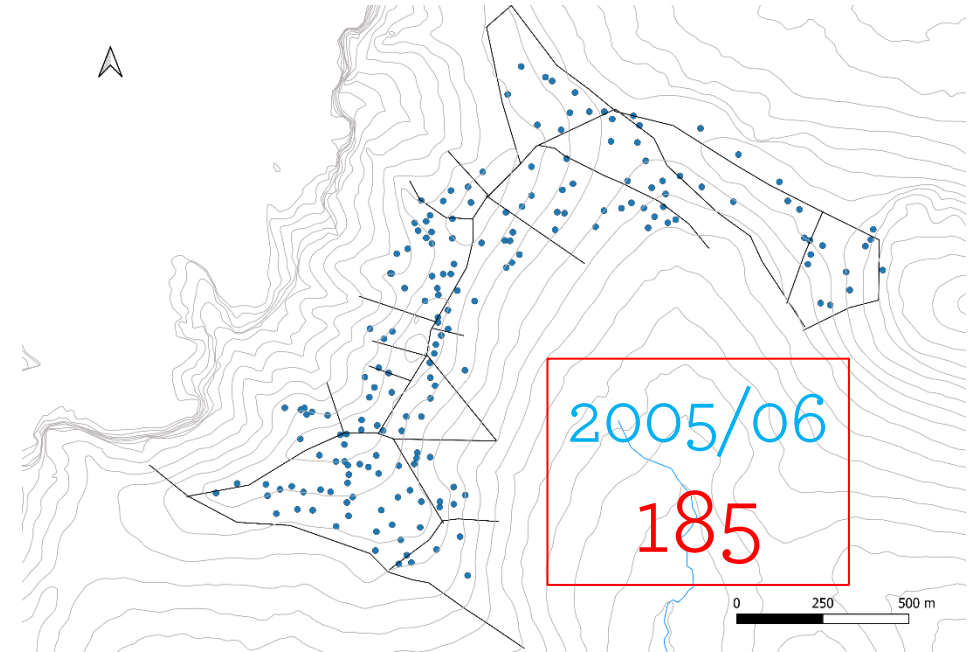
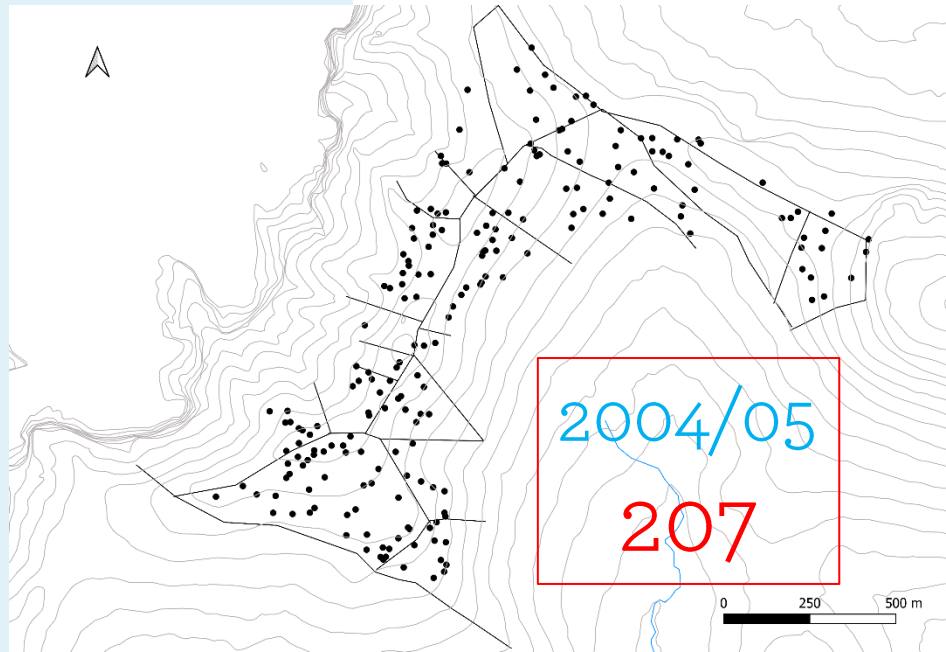
Other Objectives – Remote Cameras



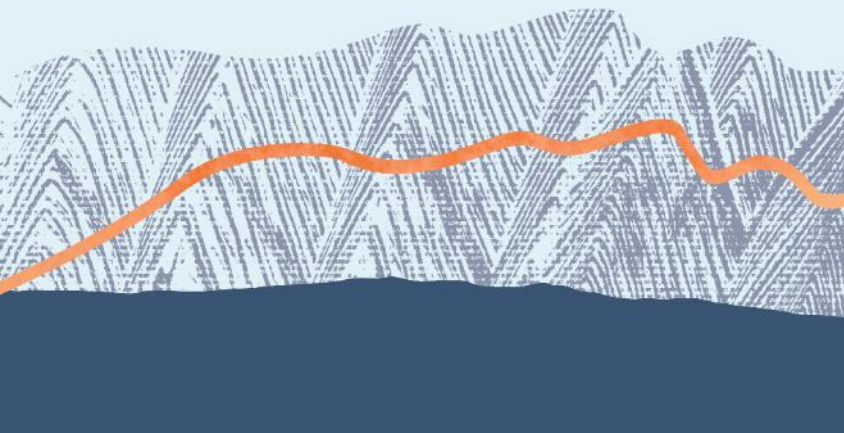
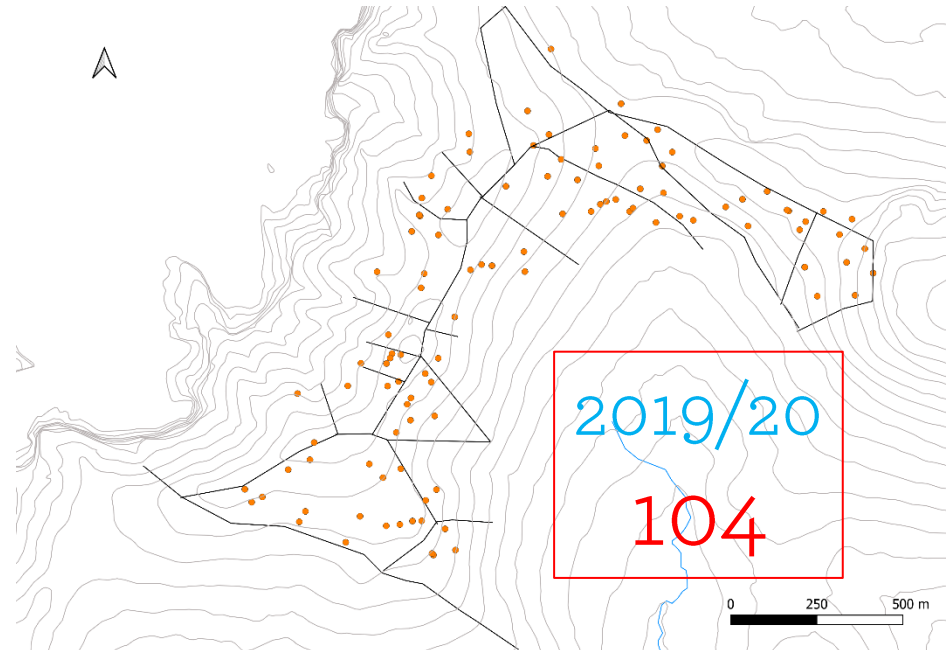
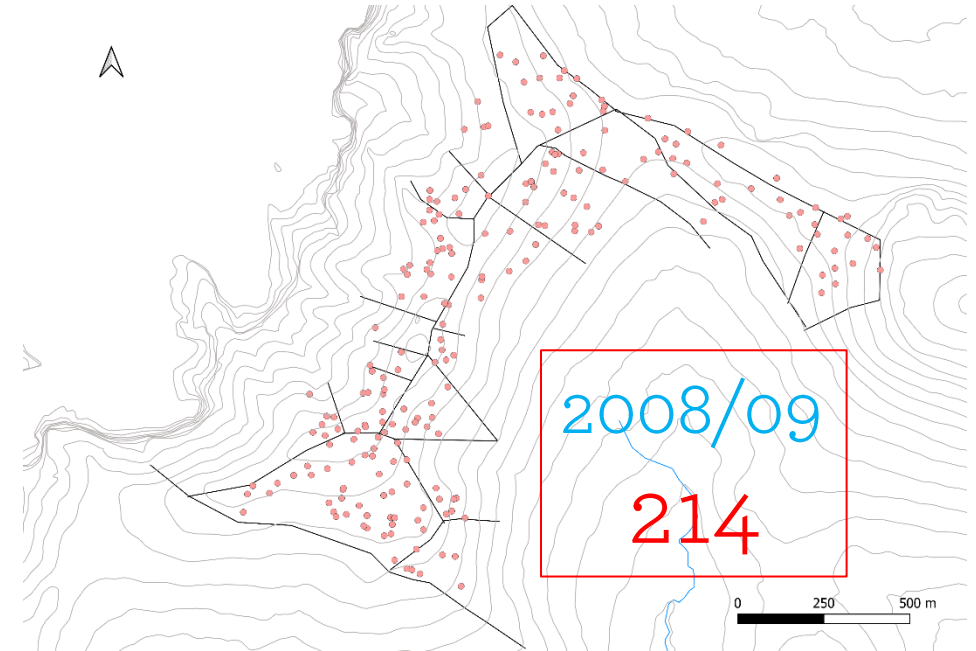
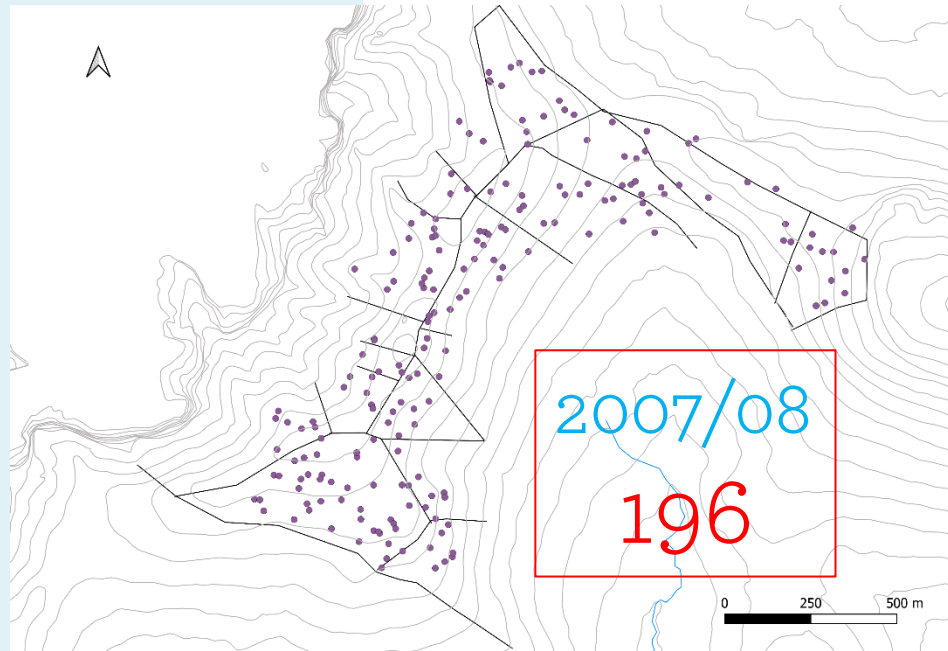
12 cameras



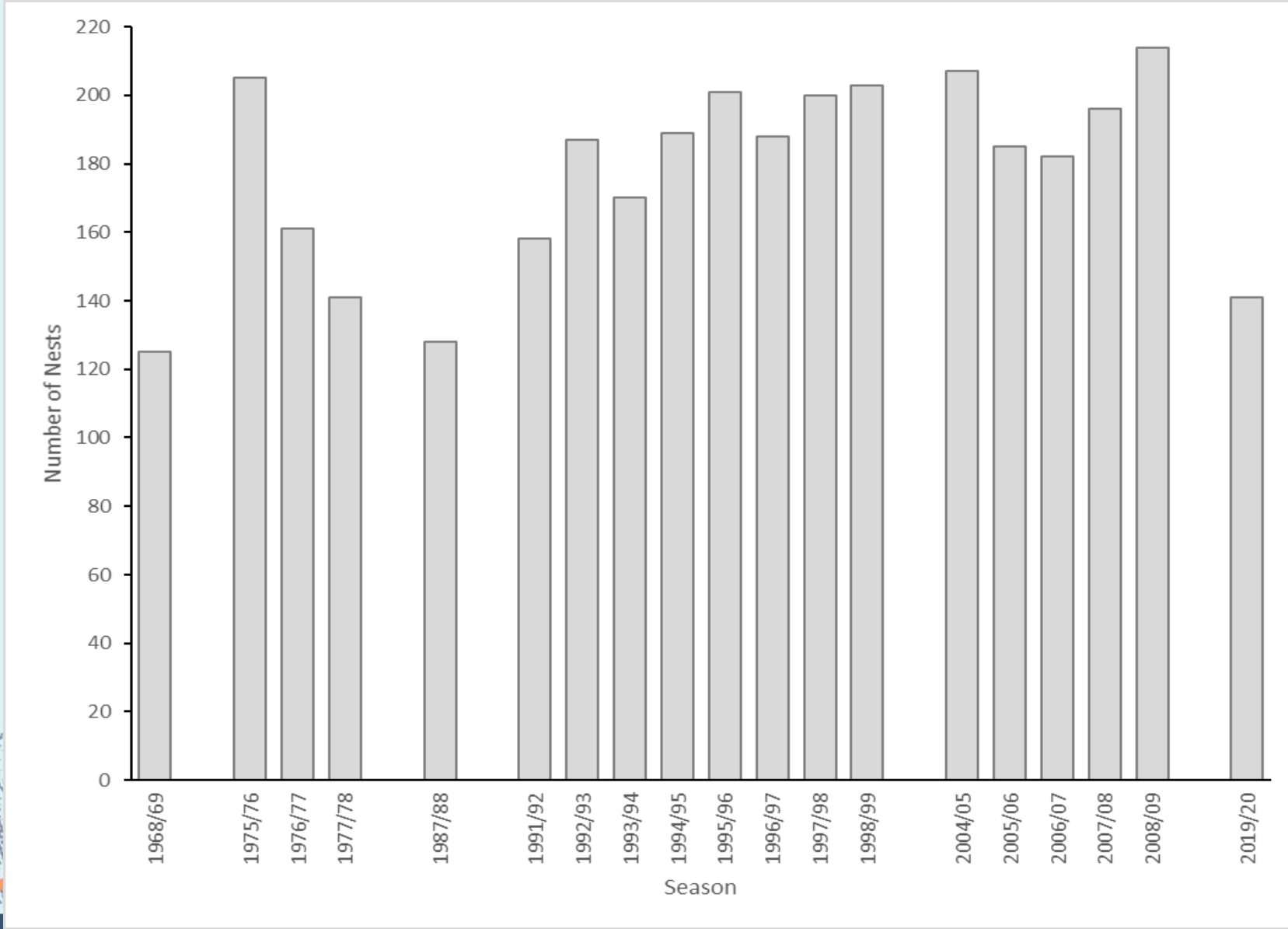
Southern Royal Albatross – Col Nest Counts



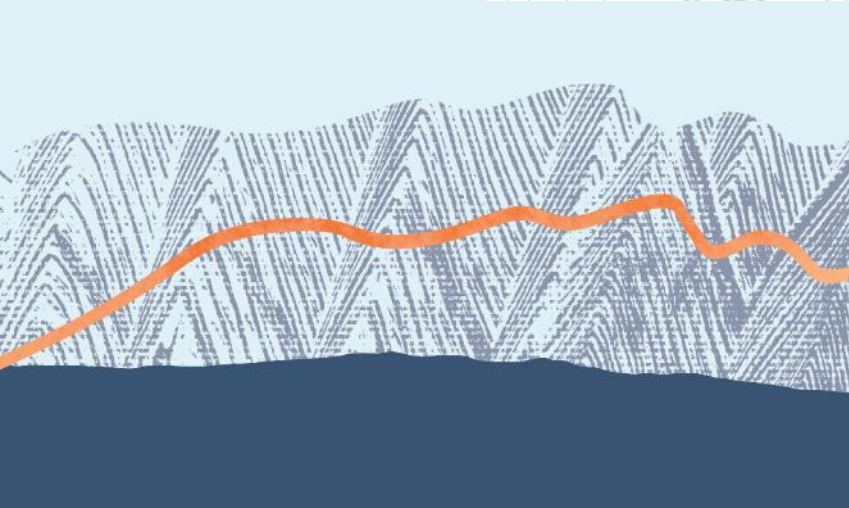
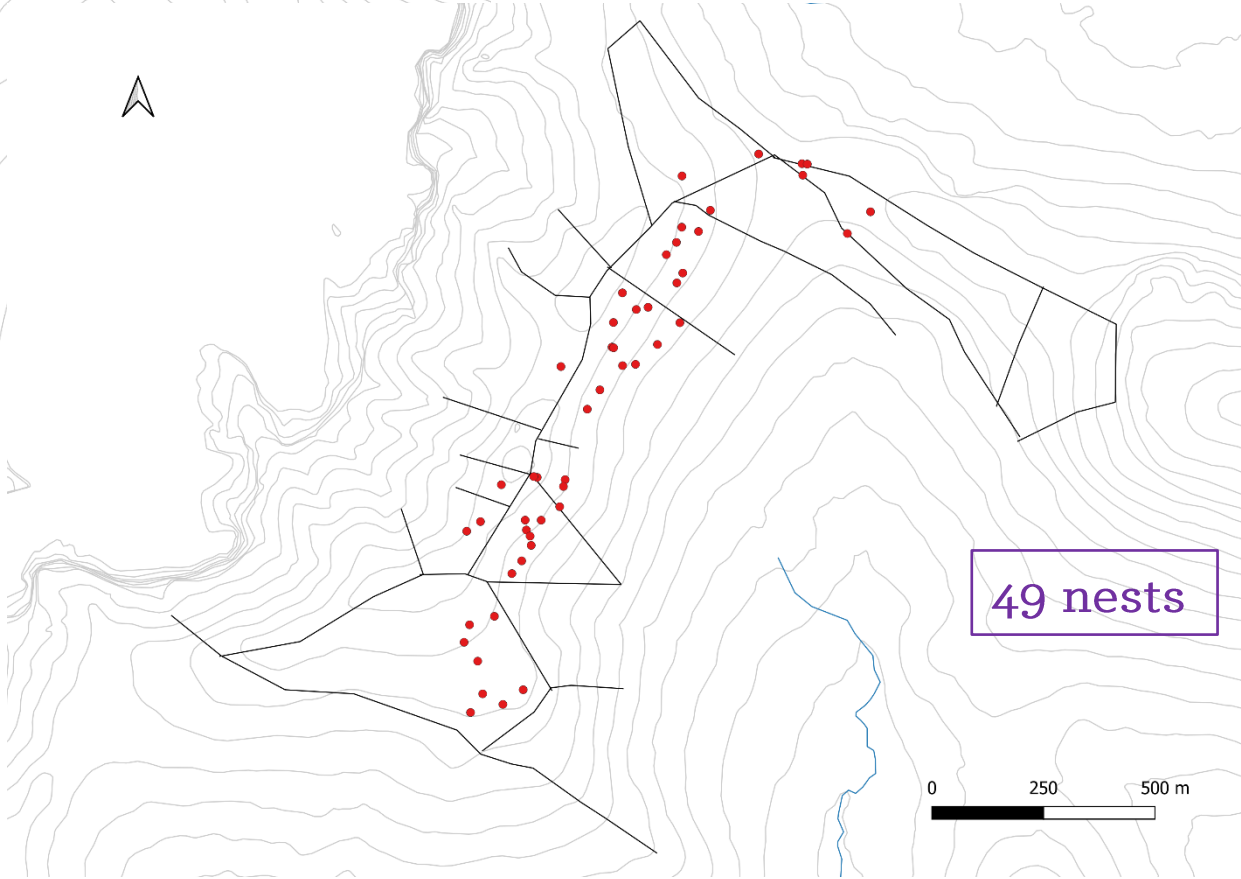
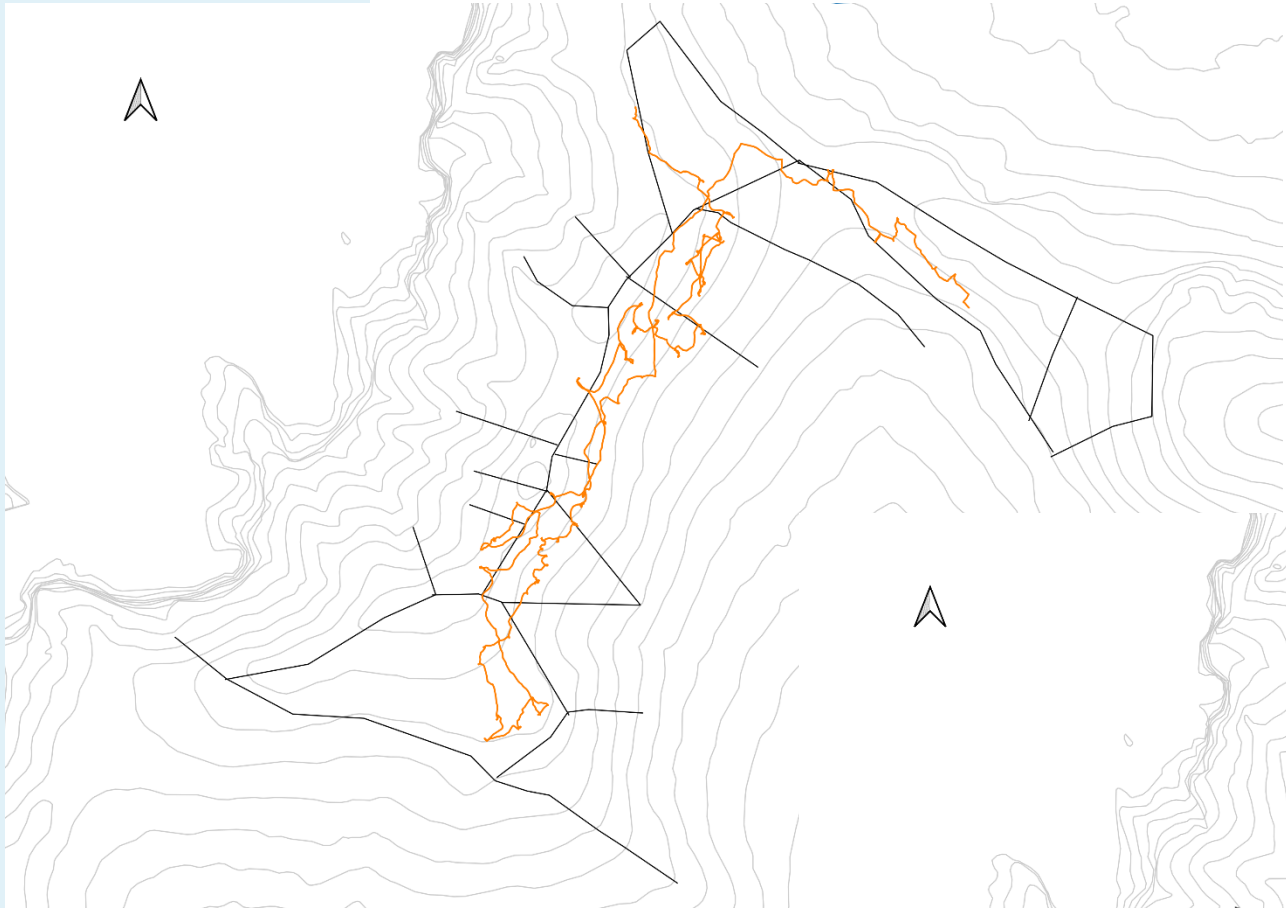
Southern Royal Albatross – Col Nest Counts



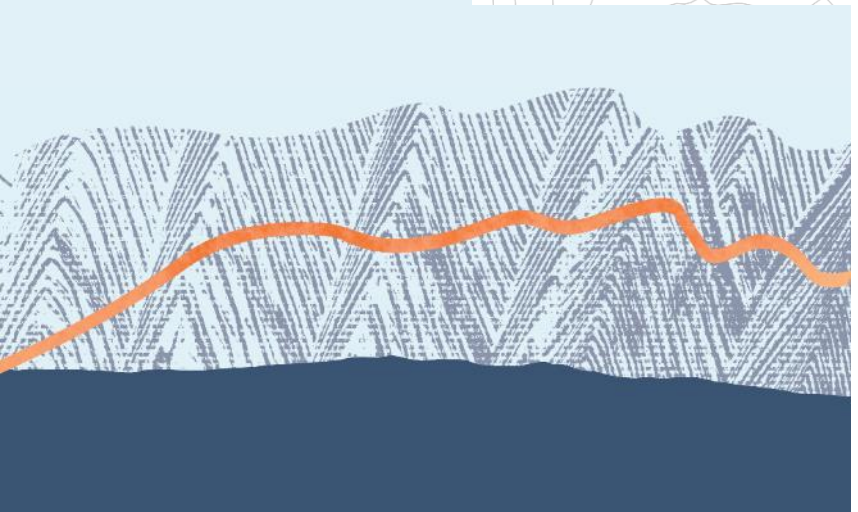
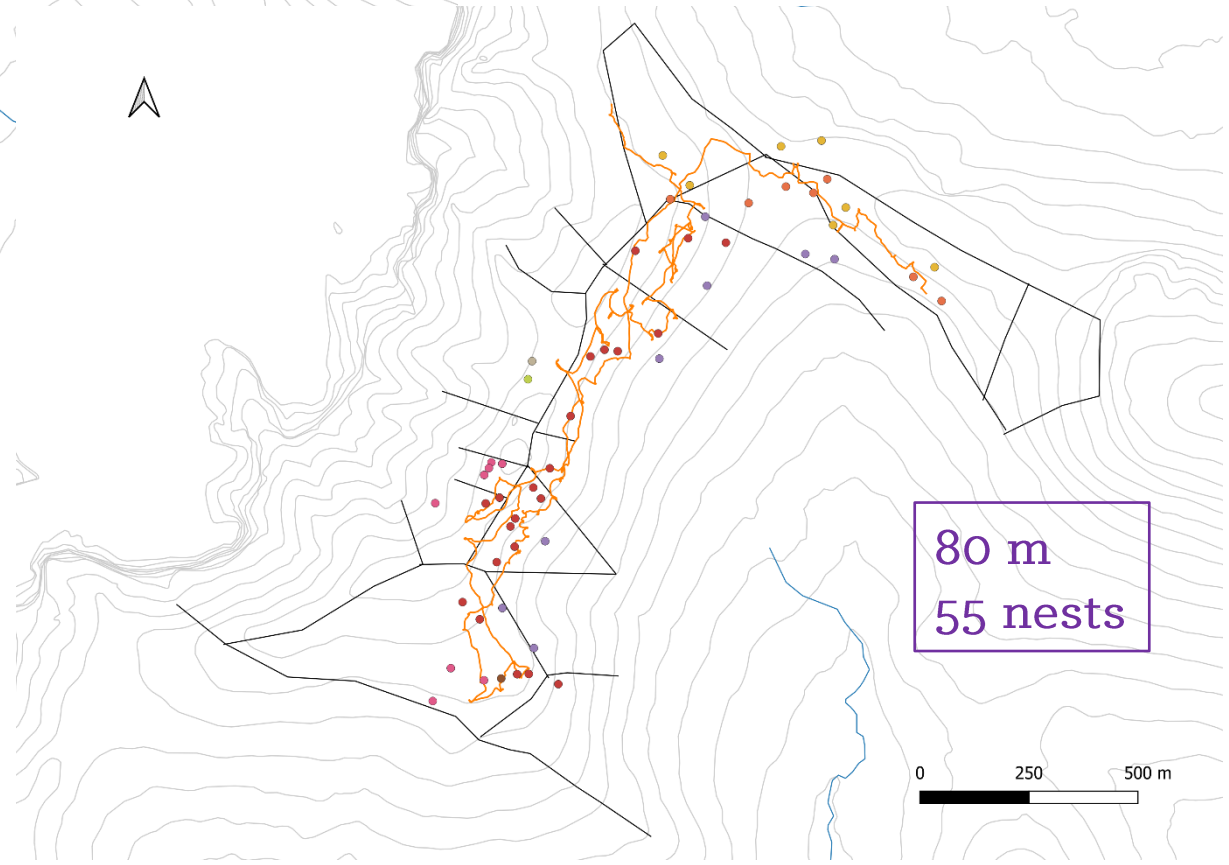
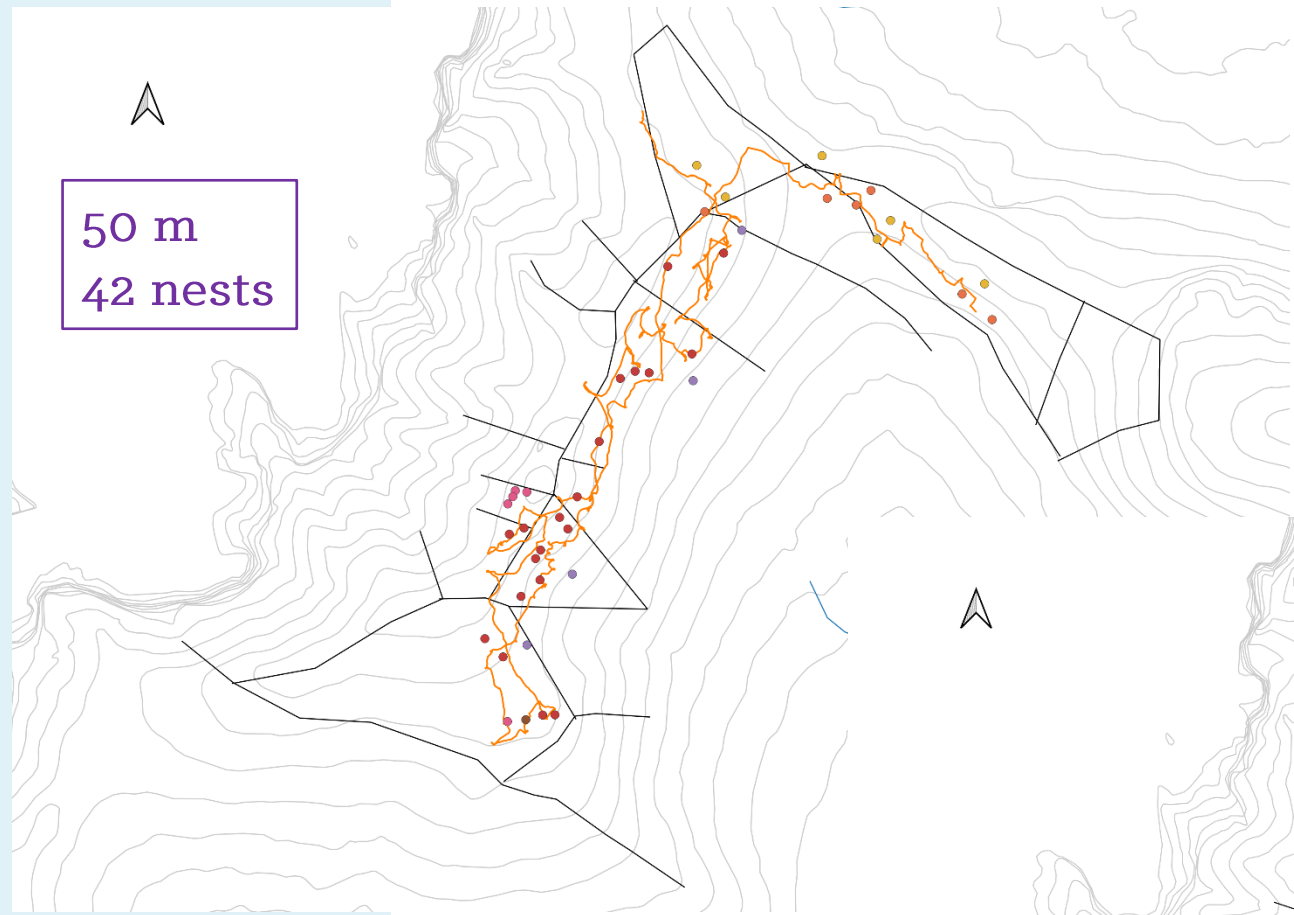
Season	Month	Nests	Mean ± S.D.
2019/20	January (estimated)^	131-161	141
2019/20	March (actual)	104	
2008/09	March	214	
2007/08	March	196	
2006/07	March	182	
2005/06	March	185	
2004/05	March	207	
2004/05	March	203	
2004/05	March	200	
2004/05	March	188	
2004/05	March	201	
2004/05	March	189	
2004/05	March	170	
2004/05	March	187	
2004/05	March	158	
2004/05	March	128	
2004/05	March	141	
2004/05	March	161	
2004/05	March	205	
2004/05	March	125	
2004/05	March	169.0 ± 32.7	
2004/05	March	187.0 ± 15.8	
2004/05	March	196.8 ± 13.8	



Southern Royal Albatross – Col Nest Counts 2023

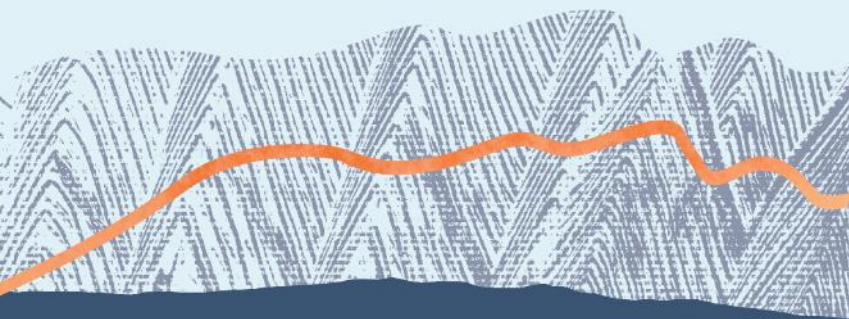


Southern Royal Albatross – Col Nest Counts - Overlay 2020



Southern Royal Albatross – Col Nest Counts - Overlay

Season	Nest Count	Nests counted along 2023 track	Nests within 50 m buffer of 2023 track	Nests within 80 m buffer of 2023 track
2022/23 (Feb)	-	49	-	-
2006/07 (Dec-Feb)	182	-	78	103
2008/09 (Dec-Feb)	214	-	97	127
2019/20 (March)	104 (141)	-	42	55



Southern Royal Albatross – Island Wide Nest Counts

- Increase in the 20th century
 - 2,300 nests in 1957
 - 7,800 nests in 1995
- Levelling off between 1995 to 2004-08
 - 7,855 nests in 2004-08
- Study and index areas (1995 to 2004-08):
 - Col stable
 - Remaining four declined



Southern Royal Albatross – Key Points

- Severe decline in the number of nests in the Col study area
- Biennial breeders – 2019/20 covered one cohort and 2022/23 the other cohort
- Enderby Island
 - Increase from 3 to 33 nests (1954-1987)
 - 1992-2001 had a mean nest count of 50 with a high of 69 nests in 2001
 - 47 nests in 2022/23



Future Priorities

- Repeat detailed survey of at least both study and all index areas, over at least two years
- Increase monitoring (resight data)
- Identify problem areas using high resolution GPS tracking
- Remote cameras
- Population estimates for Antipodean and grey-headed albatross and northern giant petrel



Acknowledgements

- HMNZS *Canterbury* and staff
- Conservation Services Programme Funding (POP2022-11)
- Johannes Fischer, Igor Debski, Graeme Taylor, Kalinka Rexer-Huber, Graham Parker, and DOC Invercargill for pre- and post-trip support
- Amy Evans and Glen Greaves for field assistance
- Charlie Barnett for support on island



Department of
Conservation
Te Papa Atawhai