

Black petrel: At-sea captures 23/24



Chris Gaskin & Edin Whitehead
Northern New Zealand Seabird Trust



Overview

The main objective for the 2023/24 season was to capture black petrels (*Procellaria parkinsoni*) at sea to determine the proportions of unbanded birds versus banded birds. This information will be used to assess if apparent low juvenile survival is biased by dispersal away from study colonies.

An additional aim was to refine capture methodology to enable safe and efficient capture of birds in variable sea conditions.



This presentation

1. Capture methods and locations (CG)
2. Results and recommendations (EW)



Capture methods

1. Pole net
2. Hoop net
3. Net gun



Versatility of the net gun

- From stern or side of vessel with chum attraction
- From tender with chum attraction
- Effective capture distance <15m
- Very targeted (minimal bycatch)
- Capture of birds in flight
- Potential for captures from a tender where birds are following cetaceans, no chum attraction



Black petrels and cetaceans

- Our 2017 CSP report* and subsequent reports identified a key feeding association for black petrels with false killer whales, pilot whales and bottlenose dolphins. Attracted to the discards, or the promise of discards from the cetacean feeding.
- Black petrels can access prey from much deeper than they can dive.
- This concentrated activity presents a unique opportunity to capture black petrels at sea.

* Gaskin, C.P., 2017. Procellariiformes associating with shoaling fish schools – northern New Zealand. Conservation Services Programme, Department of Conservation, Wellington.



Feeding in the wake of cetaceans



Global use (net guns) - capture of threatened species at sea

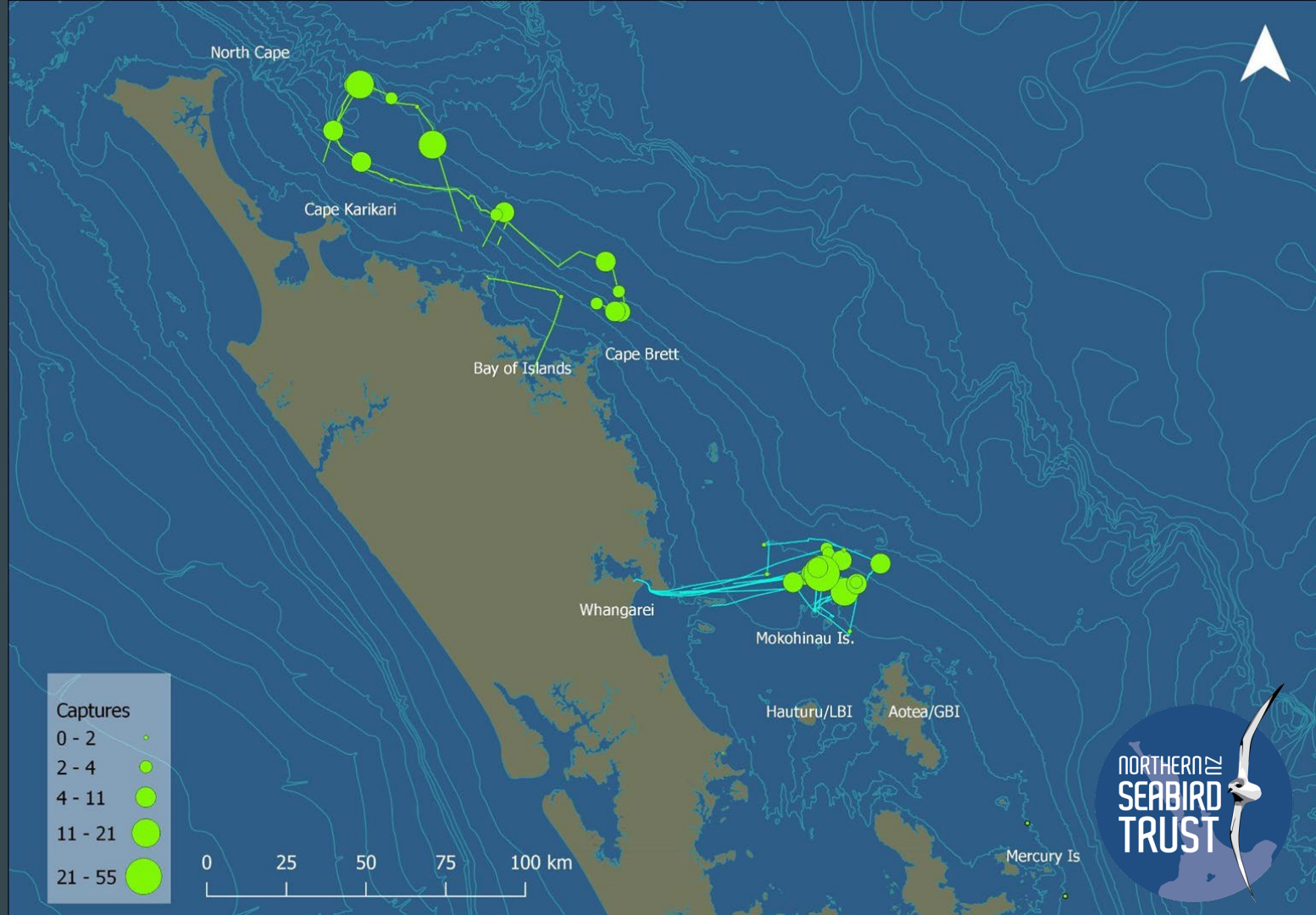
- Eight taxa
- 3 CR, 1 EN, 1 VU, 1 LC & 2 DD (IUCN Red List)
- NZ, Pincoya (Chile), & White-vented (Galapagos) Storm-petrels, Beck's (PNG), Black-capped (USA) & Black (NZ) Petrels, Balearic Shearwater (France), and Spotted Shag (Hauraki Gulf, NZ).
- 526 successful captures
- No injuries (birds)



White-vented Storm-petrel, Galapagos - avg. wt. 18.5g

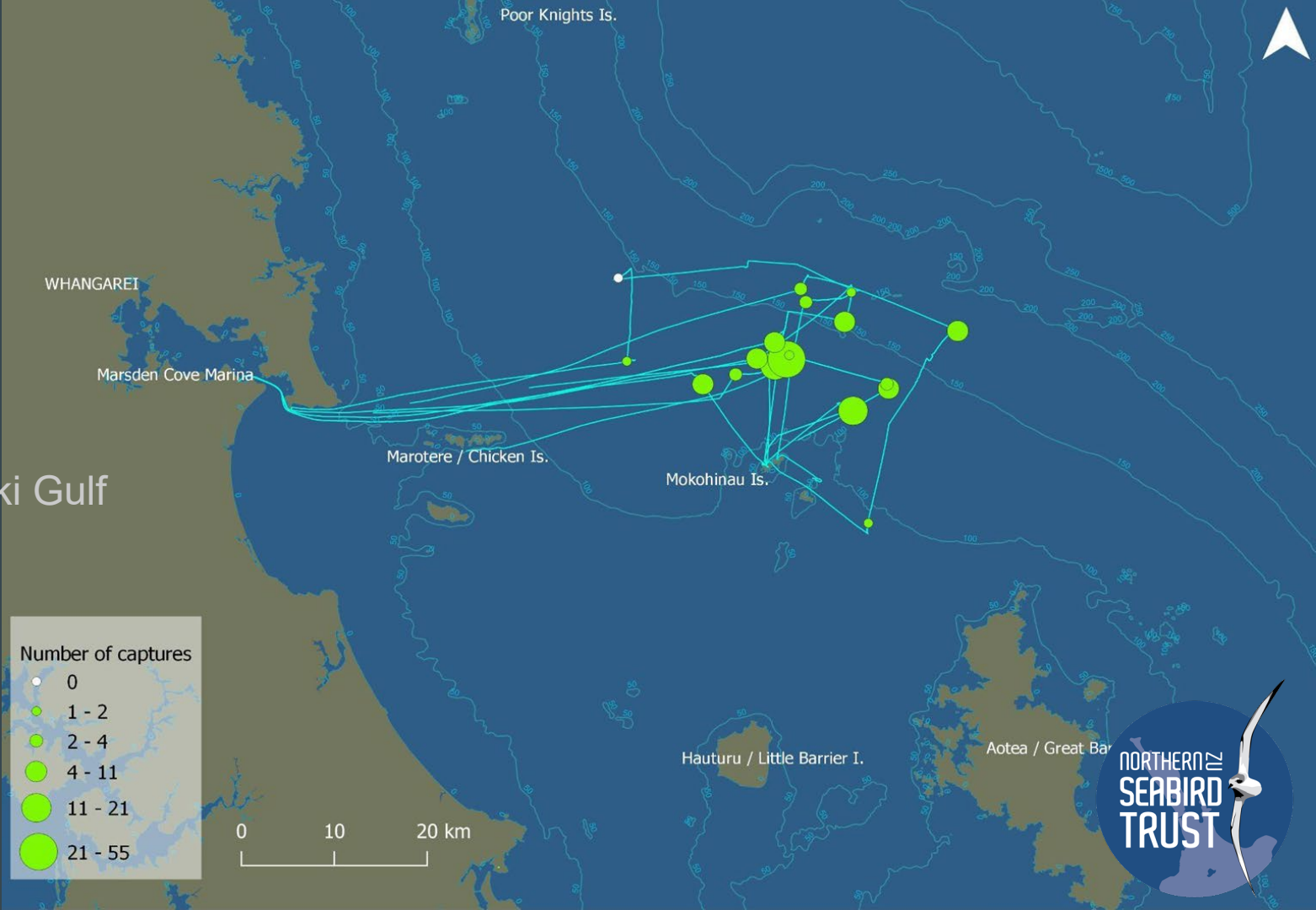


Locations



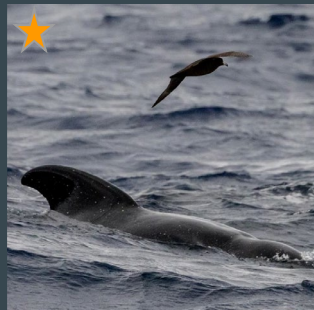
Locations

Outer Hauraki Gulf

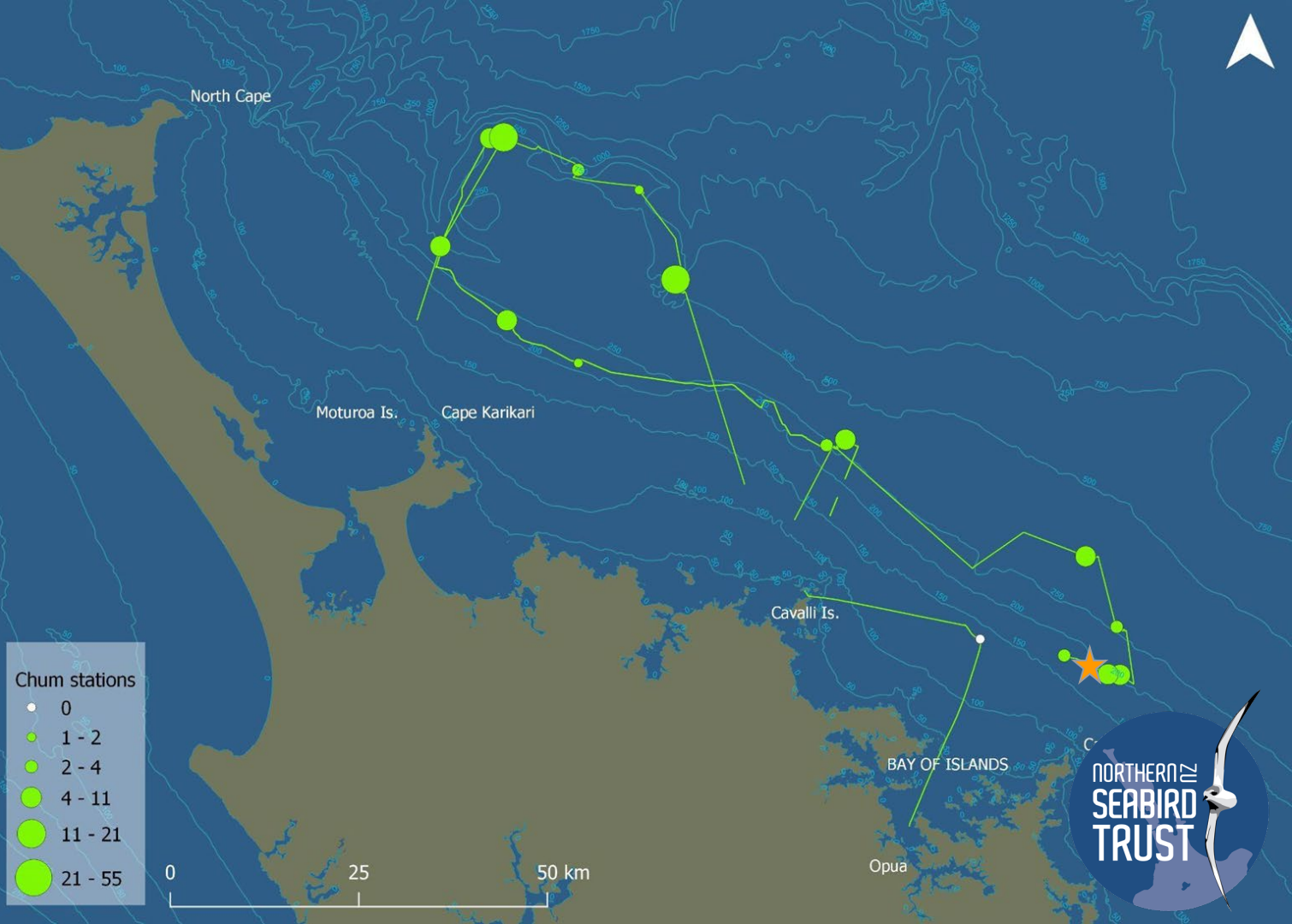


Locations

Far North



Pilot whale pod



RESULTS

268 birds captured over 5 trips (71 active catching hours)

11 recaptures of previously banded birds (one previously banded on our Feb trip)

7 From Aotea/GBI

3 from Hauturu/LBI

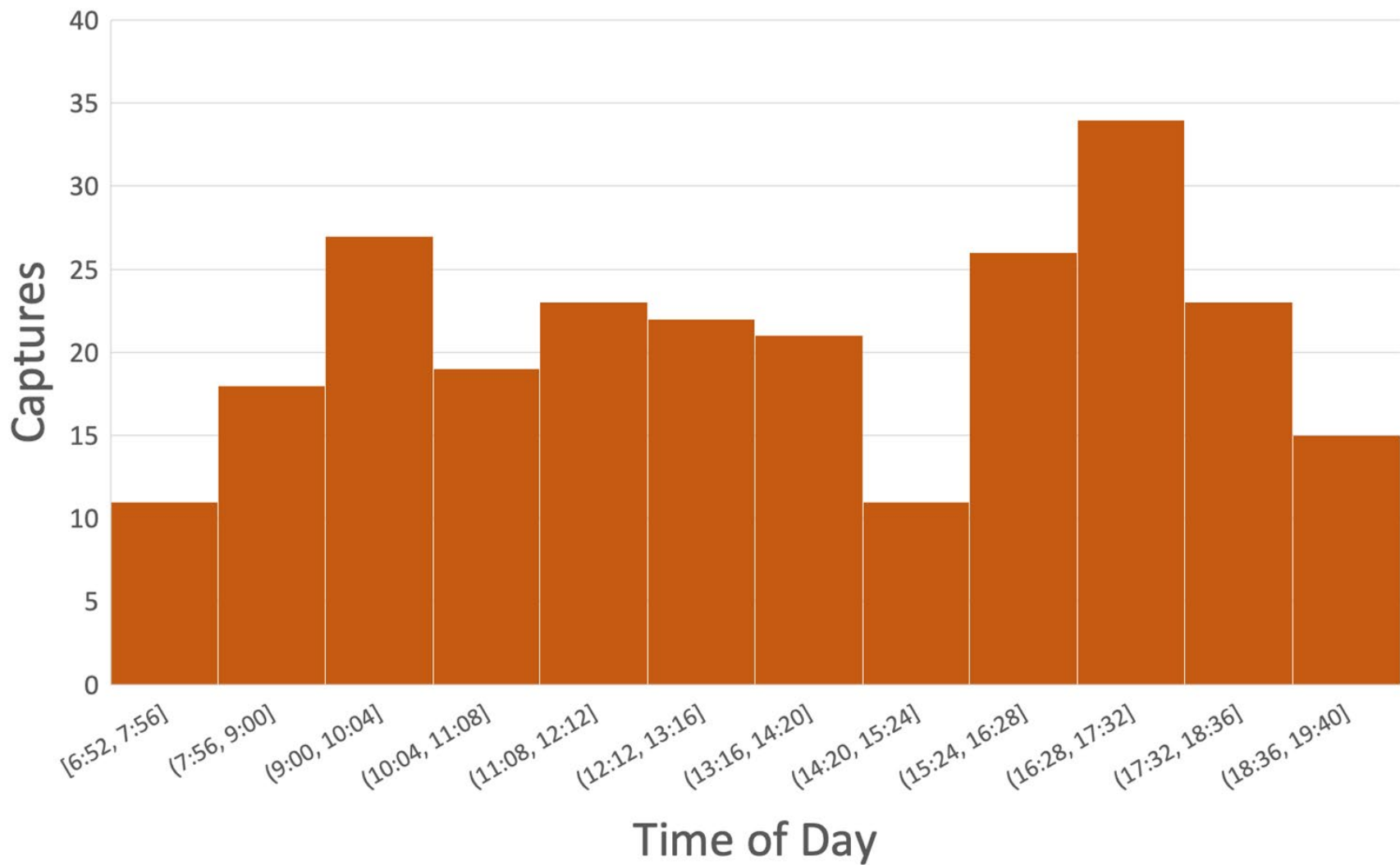
257 new banded birds



Catching effort

Dates	Total trip captures	Total chumming effort (hours)	Captures / hour
9-10 December 2023	16	15.89	1.01
30-31 January 2024	32	11.05	2.9
8 February 2024	34	10.69	3.18
21-22 March 2024	76	16.22	4.69
3-5 April 2024	110	17.2	6.21





Handling and processing (from net capture to release)

Average (mean) handling time = 7 minutes (S.D. 2.28)

Minimum handling time = 3 minutes

Maximum handling time = 17 minutes

Handling time reduced with new thicker gauge nets (faster extraction)

Number of double captures = 15



Miscellaneous

- Re-sighting of banded Gibson's wandering albatross (Darvic Black-70E) previously seen on NZ storm petrel catching trip in Far North April/May 2022
- One metal-banded Campbell island albatross (unable to get details)
- Megafauna sightings contributed to other research: Long and short-finned pilot whale pods, offshore bottlenose dolphin (fin photos for catalogues), whale shark, manta ray





Small white tag with printed text, likely a field identification or tracking label, attached to the dark blue fabric.



NORTHERN
SEABIRD
TRUST

Recommendations

- Birds boatshy and harder to capture early in the season - prioritise catching trips during later dates for higher yields (more birds per hour effort)
- More offshore catching effort
- Sampling birds in feeding aggregations - high yield when found, reduces reliance on chum
- Increasing data yield from sampling events - Given we capture birds that may be a different portion of the population from those captured during colony monitoring, what else can easily be included that would increase our knowledge about black petrels? Feather samples, diet samples?



Acknowledgements

Skippers: Trevor Jackson, Jochen Zaeschmar

Crew: Martin Bonham, Gier Sveeas

Catching/processing teams: Chris Gaskin, Edin Whitehead, Cathy Mitchell, Pete Mitchell, Karen Baird, Steph Borrelle, and Inka Pleiss

Far Out Ocean Research Collective

CSP team support



