



Meeting: Conservation Services Programme Technical Working Group
 Date: 14 June 2024
 Time: 10:00 am – 11.45 am
 Place: Microsoft Teams Meeting
 Chair: Kris Ramm (Manager, Marine Bycatch and Threats team)

Attendees: Kris Ramm, Graeme Taylor, Hollie McGovern, Olivia Rowley, Igor Debski, Steve Pilkington, Claudia Mischler, Karen Middlemiss, Richard Wells (DWC and FINZ), Biz Bell (WMIL), Peter Frost (Science Support Service), David Thompson, Paul Sagar (NIWA), Ben Steele-Mortimer (DWC), Jack Fenaughty (SRL – Sanford), Shaun Lee (STET) Chelsea McGaw (Forest & Bird), Kalinka Rexer-Huber, Graham Parker (Parker Conservation)

Presentations:

10:05 am	POP2023-02 Snares/Solander southern Buller's population study	Parker Conservation
10:50 am	POP2023-04 Campbell Island seabird study	DOC

1. POP2023-02 Snares/Solander southern Buller's population study

Kalinka Rexer-Huber presented the draft report for this project.

Discussion:

RW Note importance of continuing this work. How many of the birds not present in 2022/23, were not present again this year? If a bird is not breeding two years in a row, suggests something could be wrong from a mortality sense. Population growth rate from 1969 census data seems to be artificially rapid; could number of breeding birds from base count be artificially low? Drops are either explained by mortality or significant changes in breeding probability. Additionally, were other sites checked outside the standard study sites, and if so did they reflect similar trends?

PS Capture/recapture data, and whether bird was breeding/not breeding that year, dating back to 1992, are all available for analysis to show whether non-breeding birds breed the following year or not. Adjacent colonies were checked for banded birds, only birds that were found were birds banded as chicks, which tend to recruit to slightly different areas, whereas adults come back to the same area. The South Punui Bay colony is counted every year; this year there were 40% fewer birds breeding in that colony than the previous year, which is consistent with the three study colonies.

PF Have you considered whether higher sea surface temperatures could be influencing breeding numbers? Aerial counts showed that there were a lot of birds present, but not breeding; birds may be arriving back to the colony in substandard condition and drop out of

breeding that season. Additionally, noting potential correlation between mortality changes and changes in recorded fisheries mortality.

PS Agreed, sea surface temperatures and whether birds are in good enough condition to breed this year needs to be taken into account; that will give an indication next year as to or whether a bird was taking year off as they weren't in a condition to breed, or whether it's a more permanent decline/loss of individuals.

KRH There was something funny going on this last season with our seabirds and breeding numbers e.g. white-chinned petrels. Seems like there is a pattern that we shouldn't be excluding.

BSM Likewise with sooty shearwaters.

PF Seems to be three main sources of mortality that may be affecting these birds away from the islands (e.g. in the Humboldt current region): bycatch, plastics and food shortages as a result of increased sea surface temperature. These sources all interact; a hot year of high sea surface temperatures can cause a shortage of food, which may increase the birds susceptibility of ingesting plastic, or increase their tenancy to seek out fishing fleets and consequently their risk of becoming bycaught. Need to think about how we can get a better handle on what is happening to drive these numbers.

KRH Where we see heavy plastic load is because the birds are foraging in areas with high plastic loads, and therefore more likely to be picking them up. High resolution GPS tracking data can help us dig into that. We also see plastic at colony, however not something we noticed this season.

PS Have seen bits of plastic lying around in the past e.g. squid jigs, BIC pens, plastic lighters. Plastics hasn't been a great issue recently, mainly came across more plastics when gathering regurgitation for chicks in 1990s.

GP Difficult to tie in dramatic changes in survival rates directly to the cause such as fishing e.g. challenge to get accurate observations of mollymawk warp interactions with offshore trawlers, observers are on the bridge, and no cameras on these boats. No empirical data to contribute to cryptic mortality rates, as MPI have been unable to secure vessels to participate in trials. Note challenges in international waters; poor or no observer coverage in other nations' waters and the high seas. Cameras on inshore vessels appear to be showing higher mollymawk rates than the low observer coverage, especially in southern NZ. Note dramatic expansion in Chinese fishing fleet off western South America, and also a number of other Asian fishing fleets that have human rights issues, some crews lacking food could potentially result in intentional harvesting of albatross.

BSM Do the tracking data from across the years show any patterns of changes in terms of where birds are foraging in the Tasman Sea or South America? Are we seeing some of these changes as a result of changes in oceanographic conditions?

PS Will hopefully be able to answer that question once we get all the data back from the tracking devices that are currently out.

RW Trawler and longline effort in the southern ocean has reduced by half since 2012, so something significant has occurred, either where the birds forage and therefore the risk they

overlap with fishing effort, or the way fleets operate over the standard bird overlap, to cause a drop in adult survival since 2012. Supporter of Tasman Sea problem.

KRH Very complex issue. A lot of effort in trying to understand what is going on with high seas effort, and we have much less of a handle on how things have changed there, but getting more quantified. Can do those summaries where it's relatively well documented e.g. national jurisdiction, CCAMLR etc.

GP Bird behaviour may have changed too as far as amount of risk that they are taking. Scarcer resources could be causing individual birds to take higher risks around fishing gear. A past French study on wandering albatross, suggests there has been selection for more confident birds, which has explained some changes in bycatch over time.

GT Survival data collected by Mike Bell on Northern Buller's will be quite informative. Northern Buller's don't forage in the Tasman Sea, so that would show a difference in those two populations versus the fact that they both go over to the eastern Pacific region at different months of the year.

JR Note ongoing PHD study looking at fisheries overlap with these birds.

2. POP2023-04 Campbell Island seabird study

Claudia Mischler presented the results from the Campbell Island seabird study.

Discussion:

Southern royal albatross

PF Is there any indication from the tracking data of sexual segregation in the nonbreeding Southern Royal season when they move to South America?

CM Yes sexual segregation does occur based on bycatch in those areas off South America.

GT There was some concern that numbers were decreasing during 2004-2008 period, however as numbers increased to quite high levels in the final 2008/09 season, we concluded the population was not in major decline at that point, and could be a fluctuating species that is affected by heavy snowfall events etc. on Campbell Island. This is likely the reason for the delay in going back, and in hindsight we probably should have gone back sooner.

GP A lot of southern royals nesting a long way from where landing would be easy, so could be interesting to look at the amount of *Dracophyllum longifolium* on Campbell Island. Additionally, a number of fishers near Bluff have observed that it used to be very rare to see southern Royals, and now see them all the time.

CM Peter Moore confirmed that *Dracophyllum* has definitely expanded upwards towards higher elevation, since he was last on Campbell Island in the early days. A change in vegetation recovering from farming will influence where the birds can nest.

GT Don't think it's a limiting factor though, there is still a huge amount of available open habitat above the *Dracophyllum* line.

RW It is clear as well stated in the report that repeating this work 24/25 is imperative.

PF Agreed. Being a biennial breeding species (at best), there has to be a sequence of years in which breeding activity and success (if possible) is obtained if we are begin understanding what is happening with this population.

Grey-headed and Campbell albatross

PF Note the interactions between grey-headed albatross and fisheries; some fleets moving into less productive ocean areas traditionally exploited by grey-headed albatross. Need to gather global datasets on fishing effort and fleet movements to understand and mitigate potential conflicts with these species in the future.

KRH Was nest contents checked to improve accuracy in distinguishing between sitting and loafing birds.

CM Ground transects from 2019 were repeated for this purpose.

GT There are challenges in obtaining information on these species due to the remote nature of photo-taking (largest colony is inaccessible on the south side of Courrejolles Peninsula), and issues such as vegetation changes in the eastern areas is affecting data collection. Additionally, the decline of grey-headed albatross populations has occurred since the 1940s, and predates the operation of major commercial fisheries in the Southern Ocean. British research at South Georgia has indicated high losses in juvenile and immature birds, impacting recruitment despite stable adult survival rates observed during monitoring.

RW It would be useful if the MPI PSC website segregates Campbell albatross.

BSM Looking at the PSC database. There have been no observed captures of grey-headed albatross in the time series from large trawlers (20+ years).

RW Grey-headed forage southwards in the high seas

Light-mantled sooty albatross

GT There seems to be an ongoing decline in the light-mantled sooty albatross population on Campbell, but hard to quantify; there used to be quite a few nesting pairs on Beeman Hill but very few since 2019.

CM They are highly unproductive birds, and might only breed once every three or four years.

JF Seems to be quite a defined limit to how far south the light-mantled sooty albatross are going (from the tracking data presented), could be interesting to factor in timing with regards to sea ice formation and thawing.

General comments

KRH There needs to be consideration of potential influence of regular tourists over time, particular in Col area e.g. using nest cameras to look at differences in frequency of attendance.

CM Nest camera footage currently being reviewed.

RW This work is great and comprehensive, and the report is just as good as I have seen for a field trip. Very clear and detailed so thank you author(s).

KR Acknowledge vast amount of work that has been done by field team and support crew, committed to carrying this critical work on.

PF Great work from Claudia and the field team.

Any additional comments should be provided to csp@doc.govt.nz by 5pm, 28th June 2024.
Close of Meeting @ 11:45 am