



Meeting: Conservation Services Programme Technical Working Group

Date: Monday 26th July 2021

Time: 9:30 am – 3:00 pm

Place: Microsoft Teams Meeting

Chair: Karen Middlemiss (kmiddlemiss@doc.govt.nz)

Attendance: Chris Gaskin, Edin Whitehead (NNZST), Sue Maturin (Forest and Bird), Richard Wells (DWG/FINZ), Tom Clark (FINZ), Rosa Edwards, Ben Sharp, Austin Burgess (FNZ), Igor Debski, Karen Middlemiss, Johannes Fischer, Kristina Hillock, Graeme Taylor, Kath Walker, Shannon Weaver, Lyndsey Holland, Graeme Elliot, Tiffany Plencner, Erin Patterson, Katharina Manno, Samhita Bose, Kate Simister, Thomas Emmit, Troy Makan, Claudia Mischler, Kate Simister (DOC), David Middleton (Pisces Research), Tamar Wells (TOKM) Rochelle Constantine (University of Auckland), Elizabeth Bell, Mike Bell, Dave Boyle, Patrick Crowe, Dan Burgin (WMIL), Peter Frost (Science Support Service), Jim Roberts (independent consultant).

Māui dolphin abundance year 2 field report – University of Auckland

DM Was just wanting to check interpretation of percentages here, is this number of groups with calves not individuals?

RC That's correct. Mums with calves tend to group together in nursery groups. Were very centered around the Kariotahi area. Sometimes saw a mum and calf alone which is concerning as may mean social structure is deteriorating.

RW The heading "Calves in Group" should be changed to "Groups with Calves".

RW The spots where animals were sighted, is it possible in the map to have where the survey transects were done? I am interested in how far offshore these go.

RC There is a map here of survey tracks and some do come slightly offshore. Can be up to 2kms offshore.

RW It would be good to have the sightings on the transect lines as where they aren't is also data. I am interested in being able to understand the quantum of habitat sampled and where the sightings lay within that. Null events matter as much as sightings.

DM The 34 biopsy samples seems quite lower than the last few surveys, you talked about avoiding groups surveyed before, was that the main reason for less biopsies? And how many dolphins in a group are you managing to sample?

RC When we come across a group will sample as many individuals as we can, dependent on animals behaviour. On the high sampling day there was a lot of dolphins sighted and they were interacting in a way that allowed us to collect a lot of samples. Don't need to biopsy an animal multiple times. Some are very distinctive therefore easy to know we have already sampled them before.

PF How did search effort vary across the years? Constant or variation?

RC This is covered in the summary slide in the end.

DM Will you be presenting mark-recapture estimate and wondering what methods you will be using?

RC We've done the abundance estimate and provided the report to DOC/MPI. Further analysis underway.

KH We are just reviewing the report internally and will be presenting at a working group meeting end of next month.

BS We are quite keen to look at trend of effective population size so looking at analysing these data as much as possible. These will all be presented at a second working group.

JR If there are any differences in the [environmental] conditions between years?

RC The weirdest year was 2015. Nothing particularly exceptional with 2020/21. We don't look at SST or any other environmental variables.

Discussion around maximum distance between sightings, appearing more localised than usual.
Discussion around female skew in population.

RC Only really notable thing this year was solo mother and calf groups which is of concern.

BCBC2020-04: Chatham and Pitt Island shag spring census – WMIL

RW Understand the difficulty with multiple sites. When this gets reported with tables it could be determined as comparable whereas due to the issues you mentioned in your presentation disclaimers need to accompany these.

MB Agree with that and no chart in report due to that. Table used to just provide a snapshot but can add in further disclaimer there.

PF With the possibility of 2 peaks of breeding in Pitt Island shags, what is the probability of failed first breeders re-laying?

MB Definitely some evidence of predation etc. so could be some re-laying occurring.

GT The shags are potentially breeding right across the year instead of a really defined season like other seabirds we undertake population work on. So really is just a snapshot of the population at a point in time. May have to re-look at how we are conducting this work, e.g. would trail cameras be more beneficial. Low numbers in the past could certainly represent bad timing etc. so report has to emphasise a level of caution in interpretation of data/numbers.

BCBC2020-16-19: Chatham albatross project (Motuhara) Jan-Feb-2021– Toroa Consulting

PF Will you brief DOC staff on Chathams on the painted cairns? As photography needs to be focused on those areas. Providing a detailed map would be beneficial.

MB Have produced a map and will add that in to the final report.

GT With the shiny app they don't seem to cross through the cook strait, really stay on the east coast, does anyone know why this may be?

PF Only seen one or two northern royals on the west coast.

RW Very occasional bycatch on west coast is southern royals.

CG Saw Northern Royals off North Cape this year and would be capable of moving around the top.

ID Observer counts are much lower off the West Coast.

Northern royal albatross aerial population census, Chatham Islands – Peter Frost

EP The problem with flights is that the plane doesn't have comms in it so can't communicate anything with them once they are in the air.

PF That difficulty has been highlighted before, have suggested using a whiteboard to discuss flight path prior.

EP Acknowledge we can tighten up on this, thanks.

GT There is a difference in the breeding timetable, GP will have a lot of pairs together in that August time, but by September should be down to single birds. That may well be why there is a difference.

PF These single counts are quite difficult to interpret as Richard highlighted with Māui dolphins.

Discussion around airspeed and height of plane from island.

RW What is the minimum height allowed above the island and why?

PF I think it has to be up to the pilots discretion around how close they fly to the island.

GT Subantarctic islands have a limit on distance to island whereas on these private islands its more up to the pilot.

Discussion around reviewing the methodology of this research.

EP I am very keen to improve the quality of these photos in future surveys and perhaps we should talk more about how to do this offline. Keen to get some context added to the briefing we have been using for staff (and pilots) e.g. ideal flights paths, speed etc.

KM Outside the scope of this presentation but we will take up this discussion outside of the working group.

Discussion around storm in 1993/94 that resulted in major egg loss which could explain the low population numbers.

PF I did look into that storm and it occurred after the counts were taken.

Discussion around DOC using AI for seabird population research.

Discussions around drone use for seabird population research.

RW It may be useful for sharing of experiences between the people that do this work to reduce judgement bias.

GT I think one of the benefits of the trail cameras will mean we will get some information on what is happening before counts occur either in person or by air.

RW Perhaps the various researchers could swap pics and see how many they count as egg layers.

BCBC-Antipodean albatross: update on albatross tracking projects – DOC

RW This is surface longline effort only correct?

ID Yes, this is just pelagic longline as past years we have looked at other methods and found very little overlap.

PF How many birds were common across both years?

ID I think they were completely different birds being biennial breeders.

Discussion around the difference between bird occurrence in the northwest pacific across the years.

RW The flag state of the vessels is interesting, might be interested in plotting by ownership country also? Also interested if fishing effort data includes target? As I have always considered swordfish fishing a greater threat to these birds due to the shallower setting of hooks.

ID Indeed ownership is another interesting aspect and Southern Seabirds is doing some more work into these aspects. The target fishery is interesting but isn't discernable from global fishing watch. Would require countries to be willing to provide data.

RW I suspect landings data would provide a crude indication of target fishery.

ID For this report we will mention target fishery and look to progress further as a separate analysis.

RW Is there overlap with squid jig fishing effort in the eastern Pacific, given risk of intentional targeting?

ID We have not assessed the overlap yet, but will do. In 2019 there was only very marginal overlap.

**Northern giant and white-chinned petrel study, Antipodes Island – Albatross Research/
Live Ocean**

RW Does the figure of 60% [burrow occupancy] match other white-chinned petrel studies?
Does it surprise you?

GE No it doesn't surprise me, will be getting onto why shortly.

RW Are there any studies that suggest that some years are just 'good' years?

GE There is a lot of variability between years, only repetition will help refine population estimates.

RW It is hard to imagine why there would be that kind of population increase.

GE Best time to count northern giants would be August when they are on eggs but no one is heading down there at that time, summer trips only. Small colonies that move around slightly each year.

BCBC2020-25: Flesh-footed shearwater population studies, Mercury Islands – DOC

Background discussion on flesh-footed shearwaters on the islands.

CG Sooty shearwaters on Korapuki and Double islands.

RW Are there sooty shearwaters on the islands most favoured by flesh-foots?

PC Sooty shearwaters are present in the same colonies on the FFS islands we work on (Ohinau and Lady Alice) but very few, probably maximum 100 pairs on each island.

BCBC2020-06: Westland petrels population work – DOC

JF Is the 20m² area 20 x 20 or actually 20m²? 40 burrows in a 4 x 5 m area (20 m²) seems a very high density?

KS 20 x 20, so 400m², 40 burrows within that.

SM Have you considered using PIT tags?

KS The problem with PIT tags is the price. Would be ideal to have individual PIT tags and readers at burrow entrances but this is more of a rougher trial at present.

GT Are those breeding sites chosen because they had a breeding pair in them or access?

KS They are traditional monitoring areas, the one I have chosen is the most recent study area. New study areas are attempting to be more random in positioning.

GT This is very early days, lots of work done on adults but a lack of work on broader community. The sex ratio coming through is a bit of concern to me with higher male numbers, but do need to keep building up the data on that.

KS That male bias is coming through consistently in those areas and across data.

PF We are dealing with long-lived, slow producing species so they may skip breeding years. May be prioritising long term survival vs. short term reproduction due to stressors. Have to consider life histories more for species like these.

KS Monitored pairs with 10+ years data have not been found to breed or not breed in any pattern, does not appear to be related to body condition or stress hormone levels in bloods, data suggests poorer survival of females, needs further investigation.

End of meeting