



**Meeting:** Conservation Services Programme Technical Working Group

**Date:** 25 June 2020

**Time:** 9:00 am – 2:00 pm

**Place:** Microsoft Teams Meeting

**Chair:** Ian Angus ([iangus@doc.govt.nz](mailto:iangus@doc.govt.nz))

**Attendance:** Igor Debski, Karen Middlemiss, Graeme Taylor, Katie Clemens-Seely, Samhita Bose, Shannon Weaver, Trude Hellesland, Claudia Mischler, Kath Walker, Graeme Elliot, Tiffany Plencner, Clinton Duffy (DOC), Austin Burgess, Marco Milardi, William Gibson, Zane Duncan, Lyndsey Holland, Jodi Milne, David Foster, Sonja Austin, Stewart Alderson, David Thompson, Marc Griffiths (FNZ), Tom Clark (FINZ), Chris Gaskin, Kerry Lukies (NNZST), Patrick Crowe (WMIL), Graham Parker, Kalinka Rexer-Huber (Parker Conservation), Edward Abraham, Laura Tremblay-Boyer, Katrin Berkenbusch (Dragonfly), Jane, Neil, Penny, Kate Walsh (SenateSHJ), Peter Frost (Science Support Service), Paul Taylor (Statfishtics), Aimee van der Reis (Student, University of Auckland)

**Apologies:** Richard Wells (DWG)

#### **POP2018-04: Flesh-footed shearwater population monitoring - WMIL**

**PF** Are there any sex-related differences in the foraging patterns during the various stages of the breeding cycle?

**PC** We didn't really look into any possible difference there

**PF** Were they consistent in foraging inshore and offshore?

**PC** Yes

**PF** Are there any shifts from inshore to pelagic foraging (or vice versa) as chicks get older and their nutritional demands change?

**PC** We didn't really look at that but certainly over the season the foraging trips did get longer, more self-provisioning trips later on, further offshore

**KRH** Any idea on what was behind the 10% burrow shift?

**PC** That's the most we have observed and its usually not that high, 2-3% usually. On Lady Alice island the burrows are pretty highly concentrated and lots of fighting over burrows so that may have something to do with it- competition over burrows but not entirely sure

**KRH** I wonder if that was a one-year blip in competition or not

**GT** There is a lot of competition btw GFP and FFSW

#### **BCBC2019-03: Campbell Island seabird research – Parker Conservation/ Peter Frost / Claudia Mischler**

**GT** Royals are biennial breeders so would be interesting to see what occurs the following year

**GP** Given the number of marked birds could do mark recapture work down there also

Discussion around low numbers of banded birds

**KM** 600 banded birds leftover so am quite surprised by the lack of birds resighted (13)

Discussion around weather impacts on breeding success

**GP** Southern royals such an abundant feeder on the Patagonian shelf and we know there is a huge jigging fleet in that area and that they are targeted in that fishery

**POP2017-04: Auckland Island seabird research – Parker Conservation**

**PF** Could the widening ratio of males to females be attributable to the much lower survival of females in 2006 and 2008 (which would be the same group of nesting birds in this biennially nesting species). That is, it 'built in' a disparity in numbers. And are there any thoughts on why female survival in 2006 and 2008 was so low?

**GP** Yes, there was an expansion of Japanese fishery into the Tasman area during that time

**GE** They may not have been the same group of birds in '06 and '08 as high breeding failure

**GP** Yes true

**PF** I would agree that we need that additional demographic data you have highlighted in your recommendations. Is there any evidence of younger birds breeding earlier due to reduce adult survival?

**GP** We are seeing younger birds breeding earlier, so recruiting earlier

**KRH** and they certainly do seem less competent with high nesting failure

**GP** Has been other albatross studies that have shown those younger birds are less competent also

**GE** At Antipodes we are seeing the opposite with first breeding being put off to later

**PF** Anything that can be done to gather more information such as trail cameras will provide more information

**GE** I think for both Gibson's and Antipodean there is a wealth of data there that we could better examine

**GP** Agreed

**KM** Agree Peter. We are looking at putting trail cameras on Snares Island next summer to monitor Southern Buller's

**GT** With the landslide, have you got any idea around time of year it occurred?

**GP** It happened at some point around September with the make-up of species killed in the slip. We didn't want to spend much time in the area due to H&S concerns

**GT** These land-based events can be quite major perturbations on populations

**GP** Definitely a big chunk of the study area

**BCBC2019-07a: Recreational fishing bycatch programme: Database assessment of recreational fishing bycatch of all marine protected species and review of reporting tools-Dragonfly**

**PF** I may have missed it, but how is 'effort' quantified: number of hours out on the water; number of hours lines/nets in the water; number of lines or hooks; or is it just the number of fishers and boats in a region or FMA?

**EA** Hours by fishing method

**BCBC2019-05: Understanding potential interactions and indirect effects between commercial fishing and NZ king shag populations - Statfishtics**

**AB** Could this be a result of fishers leaving the industry or being bought out by larger companies?

**MG** Result in the change of form type, used to have to report on a daily basis but then changed to every tow or set. Is this all fishing types?

**PT** This is all fishing types

**MG** I'm not sure that commercial data will give you a good indication of king shag prey, you have excluded pelagic species though we do know they feed on pilchards. Also, opalfish and triplefins are not caught commercially though these are known prey items. Flounder populations would also be highly variable as a prey source as this is what we see in the fishery. I really think we need more diet studies on king shag before doing this type of analysis

**PT** Yes a diet study is underway alongside this but is facing some delays

**GT** We are funding a DNA study on diet and also a study looking at pellet samples to identify bones and otoliths and size classes

Discussion around age classes of prey species included in this study

**PF** The initial stimulus of this was to try and get a better understanding- an exploration of any possible patterns

**MG** My worry is that by not getting the species composition right it might be masking any pattern

**GT** We should have a more definitive king shag prey list within 3 months. This component was delayed due to COVID stopping lab work

Discussion around needing diet study over time if comparing to fishing over time

**GT** Very limited past data but at the moment we are getting samples collected from as many colonies as possible over seasons

Discussion around past studies showing high variability in main prey species

**MG** Relative abundance of witch and sand flounder varies greatly one year to the next so this will also vary in king shag diet

**GT** We might be able to get a couple years of data if the funding continues to be available

**PF** Very rare species so does provide limitations on our ability to understand a lot about it

***End of meeting***