



Meeting: Conservation Services Programme Technical Working Group

Date: 27 July 2017

Time: 9:30 am – 2:30 pm

Place: Conservation House, 18-32 Manners Street, Wellington

Chair: Kris Ramm (DOC)

Apologies: Mike Legge (Otago University)

Attendance: Chris Gaskin (northern NZ Seabird Trust), Trudi Webster (Yellow-eyed penguin trust), Dave Goad (Vita Maris), Peter Frost (Science Support Service), Janice Molloy, Jill Gower (SSST), Johannes Fischer (VUW), Mel Young (Otago University, Mike Bell (WMIL), Karen Baird (Forest & Bird), Nathan Walker, Jen Matthews, Dominique Vallieres (MPI), Richard Wells (DWG, FINZ, Resourcewise Ltd), Igor Debski, Kris Ramm, Freya Hjorvarsdottir, Graeme Taylor (DOC).

POP2015-02: Flesh-footed shearwater: various locations population project – Mike Bell (WMIL)

Demographic work update

- **PW** Did you use a specific criterion when selecting the study burrows?
 - **MB** It was a selection of area, not characteristics. We also select burrows that we believe will be stable over time, too shallow burrows are not used as they might not be stable.
- **JM** What is expected for shearwater breeding success?
 - **MB** Closer to 75% than the 50% here.
- **DG** Have you looked at the egg laying dates in the years before? From what I've heard is that a lot of species had late egg laying dates this year. Would you expect this time to drift around from year to year?
 - **MB** This is the first time for the species in New Zealand that the egg laying season has been followed in detail. We haven't seen any significant drifting of timing at Ohinau.
 - **GT** Fits well with what I've seen at Bethells Beach.
 - **DG** Reports from fishers that everything fishery related is starting later this year.
- **PF** Important to know to what extent the shift of egg laying is from year to year, do we know what the Australian date shows?
 - **MB** We haven't looked at that, but I don't think that there is a lot of data available from year to year
- **ID** Did the banding start in 2000?
 - **MB** It started in 1999, but not many birds were banded then.
- **KB** Do you know which would have had the greater effect between grey-faced petrel competition and cyclone Debbie?
 - **MB** I think Debbie, probably flooding that affects the survival of chicks. Grey petrels might have a greater effect later in the season.
 - **GT** Have seen some very beaten up chicks from grey petrels. I talked to the locals on Bethells about cyclone Debbie, but there was a lot less rain on the West

Coast so less burrow flooding.

- **PF** Have to keep in mind that this is only one season, we need a longer-term monitoring. A single year factor might not be significant in the long-term run.
 - **GT** That's the reason why we are banding a large number of birds, to look at the long-term.
- **RW** What is the reason for the competition over burrows?
 - **MB** Much more energy efficient to throw a bird out of their burrow and steal it instead of digging a new one.
- **PF** There is about 10% difference between the results from the study burrows and the burrow scoped ones, any reason for that?
 - **MB** No.
- **ID** Were the burrow scoping burrows only the ones that were suitable to burrow scoping or were they representative?
 - **MB** They were supposed to be representative. Some of them were burrows that couldn't be made study burrows but could be scoped. We didn't use shallow burrows for scoping either.
- **PF** Need to make sure that there isn't a bias from the selection of study and scoping burrows, maybe the breeding success in the shallow burrows is even lower.
 - **MB** Many of the shallow burrows are still very good burrows, with lots of roots supporting them etc. But for us to be poking a hole through them might make them much more unstable and potentially cause breeding failure.

Middle Island

- **ID** Was your effort across the three habitats on Middle Island representative of the whole island? It looks like the effort in one of the areas is pretty small compared to the part of the island that is the same habitat type.
 - **GT** There is a limited track network on the island. Ideally a randomized transect methodology would be great, but they are very strict about staying on the tracks.
- **ID** Do you think there would be different densities on different sites of the island?
 - **MB** No the densities appeared similar.
- **JM** Are you proposing that the population of flesh-footed shearwaters has increased over time?
 - **GT** No I don't think so, they may have just been underestimated
 - **MB** We had much higher effort than the last study
- **KB** For what islands do you think the estimates are poor?
 - **MB** All of them, compared to the islands that we have been to
- **NW** Could there have been a delayed breeding season this year, noting Lord Howe was delayed by 4-6 weeks
 - **MB** We don't know any trends in the timing of the breeding season for the past years. But at least for one of the colonies, the timing we were there was perfect.
- **KB** What's the time period for when you should go back and do another population estimate?
 - **MB** I recommend 10 years, it's a very fragile island. We tried to be as careful as we could, but there is always some damage.
- Discussion on the high density of burrows on the island and the possibility of getting an extended network of tracks to be able to analyse the population size more accurately.

Tracking work

- **GT** This was originally supposed to be done on Coppermine wasn't it?
 - **MB** Yes, we were looking at doing the work on Coppermine but after the first trip to Lady Alice, we talked to Graeme Taylor about shifting the work there. It's easier to get on to Lady Alice and easier to live on. Also, the number of birds around the hut was quite high and easier access to them. Easier to monitor the

burrows to recover the devices as well.

- **JM** How many years do you need to do to get more accurate survivorship estimates?
 - **GT & MB** At least 2 years, and therefore this goes outside the term of the project. But based on that we will be able to more robustly design a longer-term study.
- **ID** You used the saltwater contact as the definition of foraging behaviour, many international studies use the flight pattern for this. Why did you choose to go with water emersion?
 - **MB** It's quicker to calculate. We are working on analysing the flight path as well to have a comparison in the final report, these are just preliminary results.
- **KB** Flesh-footed shearwaters are highly bycaught in recreational fisheries. Could DOC send out a notice about the banding to recreational fishers to return the birds/bands if they are caught?
 - **KR** Yes, we can definitely discuss this with the media team.

POP2016-05: Yellow-eyed penguin foraging – Mel Young (Otago University)

- **RW** On the interchange between sub-ants and mainland, or the lack of interchange, did the sub-Antarctic population populate the mainland?
 - **MY** Yes, a very long time ago, interchange between these two places hasn't happened for many years.
 - **RW** But that still suggests that it's possible.
 - **GT** There is no evidence of it happening for a very long time based on genetic evidence.
- Discussion around the vectors and causes of diphtheria.
- **JM** Is there some historic diet data from the Stewart Island birds?
 - **MY** Yes, some from Codfish from 1984.
- Discussion around the differences for dive depths between this work and the previous work by Peter Moore and if there are any causal factors for this or if it is simply a sampling artefact. It appears the penguins are now diving deeper than previously.
- **GT** the large river mouths in south Canterbury bight area may favour certain potential prey, such as salmon smelt, which might account for the juvenile foraging occurring there.
- **RW** On the fishing side of it, how do you intend to map out how the fleet has been foraging for the last 50 years?
 - **MY** This will form part of the next phase of the project.
 - **RW** Will you bring the methodology to the industry to review before you start?
 - **ID** We are still in discussions for the second half of the project, but it will be discussed at a working group.
- **GT** Have you looked at the dive profiles to investigate dive behaviour yet?
 - **MY** There's a lot of data and I just haven't been through it yet.
- **GT** Interesting observation that these chicks might be starting out their life with feeding on pelagic species and then moving back over to the other species as they get older. You said they were very specialized, could they move back to these smelts when they are adults?
 - **MY** We are only speculating about this and it requires more evidence.
- Further discussion around the prey drivers which may be influencing juvenile dispersion.

MIT2015-02 Seabird mitigation: small longline vessel – hookpod trials – Dave Goad (Vita Maris)

- **JM** What is the distance between the weights and hooks?

- DG Roughly a meter, which reflects ACAP best practice
- KB are they setting at night for both fisheries?
 - DG Yes.
- JM Where are the light sticks in relation to the pods?
 - DG Just above them.
- GT Was the white-capped albatross caught before the hook was released or after?
 - DG Not sure. Both is possible, but since it was caught by the bill, I think it might have taken the bait after the hookpod released the hook. It's good discussing this, however, everything is just speculations because we genuinely don't know.
- JM What's the weight of the hook pods, do they sink by themselves?
 - DG They are around 12g in the water (50g out of water), so yes, they do sink, and cause the snood to sink faster than unweighted gear.
- JM What species of birds did the vessel catch over the long term trial?
 - DG Don't know. There's a lot of stuff we want done, and only so much we can ask the skipper to do, as he is volunteering to use this for us and report back on a few things. We will attempt to cross reference with the non-fish bycatch returns.
- JM How were the black petrels caught on the pod branchlines?
 - DG I don't know. The only thing I can tell you is that one of the black petrels was tangled above the pod, it's really not possible to say what exactly happened.
- KB Does the distance of the glow sticks in relation to the hooks matter?
 - DG In relation to fishing, they don't seem to mind where they are located.
- KB Why is there a 5 second gap before you start recording the sink rate?
 - DB The data is there, I've just removed it from the graph because there is a pressure wave from the back of the boat which causes significant noise in the first 5 seconds.
- KB Feedback from Japan is that they are setting at speeds much greater than in New Zealand, so they don't like using the hookpods
 - DG Yes that is true, but like you say, they're fishing method is very different and they are setting much faster. Fishers here don't seem to find it too disruptive to use the hookpods.

MIT2015-01 Seabird Liaison – Surface longline fleet – Richard Wells (Resourcewise Ltd.)

- GT Are you told if new vessels join the fleet?
 - RW I do talk about this in the report, but this is a major weak point, both new vessels that are not reported new as well as new skippers. However, sometimes skippers from other vessels let us know about new entries and sometimes MPI does. The crews don't want a new vessel coming in and doing some severe mistakes.

End of meeting