From: McChesney, Gerry
To: Pete Warzybok
Subject: Re: [EXTERNAL] RE: Draft LHSP restoration proposal
Date: Tuesday, September 7, 2021 3:37:35 PM
Attachments: image002.png

Pete,
This is great. Thanks for getting to it so quickly. If you and Nadav have time to come with something more refined, great. If not, then I think this will do for the proposal. If it gets funded, then we can refine. But, having something better now could be used not just for this proposal but for looking at the overall Leach's situation on the island. It has not received the attention it deserves. Thats not meant to be a criticism but reflects our priorities and the difficulty studying them.

Let me know if you come up with something else.

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From: Pete Warzybok <pwarzybok@pointblue.org>
Sent: Tuesday, September 7, 2021 3:24 PM
To: McChesney, Gerry <gerry_mcchesney@fws.gov>
Subject: [EXTERNAL] RE: Draft LHSP restoration proposal

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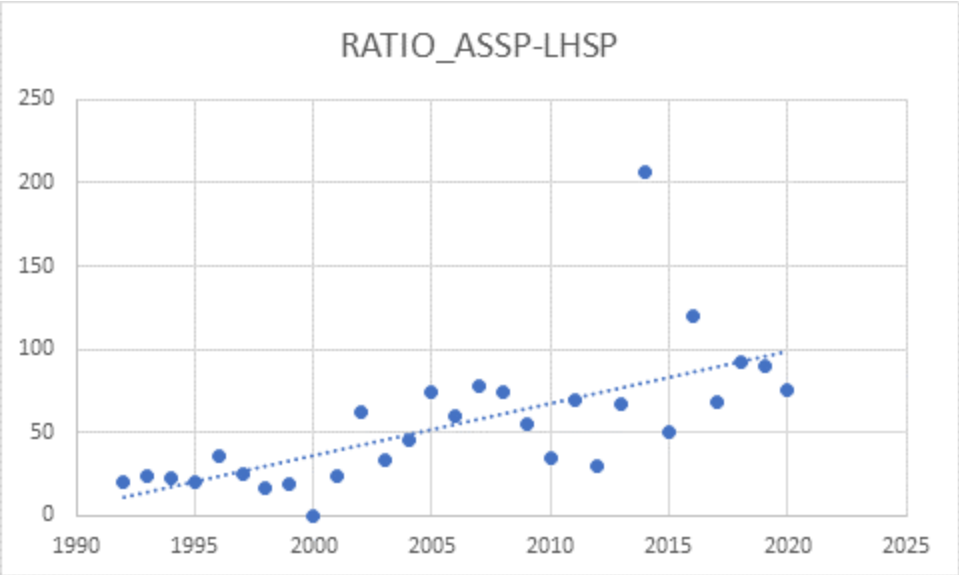
Hey Gerry,

I'll look this over. Not sure if we can use raw numbers since the average number of birds captured in a given year would be influenced heavily by netting effort, which is itself influenced by weather conditions. It would likely be better to look at the ratio of ASSP : LHSP in each year. I did a quick and dirty analysis on the ratio or ASSP to LHSP in netting data from 1992 to 2020 (period of standard netting effort). Just ran a pivot table so it would need to be refined but I came up with an average ratio of 57 ASSP for every LHSP captured. There was a lot of variation between years with the ratio ranging between 17:1 in 1998 to 207:1 in 2014 (we caught 414 ASSP but only 2 LHSP). I threw in a figure below. Even if you throw out that 2014 value there appears to be a trend. So maybe that tells you something.



If you look at the period from 68-73 the average ratio was approximately 7 ASSP for every LHSP. It is unclear if this is a result of the methods or a real change. They used to keep the nets open until they caught 10 birds of each species so that might skew things. But likely there are fewer LHSP relative to the number of ASSP on the island. Considering we have strong evidence that the ASSP population has declined significantly over time, that would strongly suggest that LHSP have also declined, and by a greater rate.

It would probably be better to look at the ratio in the storm-petrel capture index as defined in Nur et al. (i.e. ln CPUE corrected for date and moon) than at raw numbers. I will discuss with Nadav, but that will take a bit more analysis. We can also talk about how to come up with a population estimate.

As for a budget, what you propose sounds great. Especially if you could get 100k for netting and 100k for nest monitoring. I estimated about 12k/year to do both mist netting and nest monitoring efforts for the NFWF proposal. That is based on the estimated number of hours we spend on those specific activities given that we are already on the island and already have the basic equipment needed (e.g. camera, nets, etc.). That would be a total of 84k over 7 years to just collect the minimum data. 200k would support the minimal monitoring effort along with the additional or replacement equipment, data management, analysis, and reporting,

Pete

From: McChesney, Gerry <gerry_mcchesney@fws.gov>
Sent: Tuesday, September 7, 2021 2:46 PM
To: Pete Warzybok <pwarzybok@pointblue.org>
Subject: Draft LHSP restoration proposal

Hi Pete,
Meant to send you this last week. Sorry.

As you'll see highlighted in the Background section, I'm hoping we can provide "numbers of ashy storm-petrels captured annually during the period 19XX-2020 averaged XXX (range XXX-XXX birds), while captures for Leach's storm-petrels averaged only XX birds (range XXX-XXX birds)." My thought is to use this ratio as some gauge to the current population, comparing with population estimates of 1,400 Leach's : 4,000 Ashys in the early 1970s (per Ainley and Lewis 1974). I'm open to other ways to present this but thought this would be the easiest without doing a bunch of unfunded analyses.

We've also been asked to provide a Leach's population estimate; a range is ok. They'll need that to calculate how many more birds the project will provide. Think about that some more and we can chat about it.

For the budget, I put in rough placeholders of $100,000 for each method (mist-netting, audio, nest monitoring) for seven years of monitoring, including 2 years pre- and 5 yrs post-eradication. This includes equipment/supplies purchases, staff time, annual reports, and a final report. If you're able to come up with something better for mist-netting and nest monitoring, that would be great. Matthew McKown is putting together a more refined budget for audio monitoring.

I need to get a final proposal submitted by the end of September.

Thanks for any help you can provide.

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