**Hey Sophie,**

**Your paper is great. I liked reading it.**

**I realize some of these suggestions might be old because it’s taken me so long to get back to you. I’d love to see an updated version!**

**Intro**

1. **Your first sentence should start broader instead of starting with the specifics of mechanistic models. Something like: Successful natural resource management requires accurate estimates of population structure and change over time. Or Conservation decision-makers often use models to estimate current and future population structure. The most common models used in conservation are statistical models and mechanistic models, however…[then insert your argument about why mechanistic not used but should be in data poor etc.].**
2. **Line 11. Again, need a broader intro and transition sentence. Something that mentions the fact that** 
   1. **globally, disproportionately high levels biodiversity exist in data poor regions.**
   2. **Or, perhaps even better, something that underscores how understanding factors that lead to increases and declines in population is especially important in regions of the world that rely heavily on sustained harvest for food security and livelihood stability.**
   3. **Then add one more transition sentence such as: One such place where conservationists and resource managers are currently trying to improve management strategies based on a clearer understanding of population structure and change is Madagascar. You might come up with some better wording, but these kinds of sentences will help with the readability and relatability of your work to other places in the world.**
3. **Line 14-15: calculated as a country that would benefit the greatest from marine conservation given its economic reliance on marine harvests and the fact that it is refuge to many marine species.**
4. **Line 16, need the word “globally” because previous sentence is Madagascar specific.**
5. **Line 21, need the caveat that “up to 75% of all fish caught in select villages**
6. **Line 29, new paragraph for all the temp closure logics**
7. **I would introduce the word “reserve” around line 29- temporary closure is correct, but if you use the word reserve here and throughout it aligns more clearly with the broader reserve literature**
8. **Nice coverage of the ecological conditions and fishing dynamics related to O. cyanea.**
9. **Line 75- this implies that they would be thrown back after killing to harvest. The size constraint is only effective at the level of the collector. Even if someone finds a small octopus that they know is under the weight minimum, they’ll harvest it for household consumption.**
10. **Line 95 indicates that this is a novel approach for octopus pop analysis. Put that in the first part of the intro, and make sure it is in the abstract too!**
11. **Figure 6 and 7 are very interesting (well all of them are, but those two seem most directive in terms of conservation measures).**
12. **Figure 7 indicates a minimum of 5 months between closures, but what is the duration of each closure? In SW Madagascar they have ranged from 2-5 months. This information is important to put up front in terms of the assumption of the model.**
13. **Line 199 – yes, overall I agree. While the octopus size limit existing in Madagascar (I believe 300 grams) doesn’t help eliminate the removal of juvenile octopus, for a subset of fishers (e.g. speargun divers who are prioritizing sea cucumbers, but if they come across an octopus might take it if they can sell it) the minimum limit does make a difference. Again this is a small subset of fishers…the most external-market oriented fishers.**
14. **Does figure 3 start in 2006 because the size estimates were conducted 2005/2006? Is there any reason you didn’t bring the graph up to 2023? Perhaps too depressing?**
15. **Important caveats you’ve provided near the end of your discussion.**
16. **Line 200 – again it’s unclear what your default closure time is in this scenario. State it explicitly above and here if possible.**
17. **Add a brief conclusion? I think you could sell your take home finding that temporary closure IS indeed a potentially viable management strategy for O. cyanea, despite the particulars of Mada’s population as of 2006 doesn’t bode well.**
18. **Overall great work, very publishable indeed!!!**

Easton:

Thanks for sending this over. I’ll take a look next week.

One random note: In the limitations paragraph, I would note that future extensions of your work could include two sexes (White and Gerber 2014) as the sexes have prefereences for different areas and have different growth rates. I would also note that future work could include sesaonal dynamics (White and Hastings 2020) based on all the octopus things you know.

Cephalopod juveniles (a key life stage in understanding future population dynamics) often have two seasonal peaks per year, indicating biannual spawning periods (Humber et al., 2006; Katsanevakis & Verriopoulos, 2006). This is related to seasonal fluctuations in temperature, as cephalopod growth is related to environmental temperature (Domain et al., 2000). However, this relationship is subject to a lot of variation (Van Heukelem et al. 1976; Herwig et al. 2012). Further, as Madagascar is a tropical climate, this trend may be different in our region of study, as suggested by Raberinary and Benbow (2012), where all life stages of *O. cyanea* were observed year round, suggesting continuous breeding.

I would also add notes that help setup your chapter 2. You could note that future work could look at SES dynamics and/or spatial dynamics.