Overall this was an interesting comparison of lionfish growth parameters across the invaded range, with the addition of sites on the Yucatan Peninsula. I think that this ms should be published after some revisions. It provides a useful review of parameters, especially ones not often reported in a consistent way. There are a few areas that need further clarification and description, especially around the expected/observed analysis before this should be published.

**Title**

While the title describes accurately what is in the manuscript, it is very long. I would suggest shortening it to something like, “Region wide variation of allometric growth parameters for invasive lionfish, *Pterois volitans* (Actinopterygii, Scorpaenidae)”. Instead of just describing what is in the paper, it provides information on some of the interesting findings. It also brings the scope of inference to the region instead of focusing on the Central Mexican Caribbean.

**Abstract**

“don” to done

Be consistent in the paper, use either “length—weight” or “length-at-weight.”

Please double check the format of the journal, if you can write in the active voice instead of the passive voice. Writing in this tense makes it more clear what was done and is often more concise.

**Keywords**

With the suggestion of the shortened titled, you can move some of those words such as Weight-at-length and Central Mexican Caribbean

**Introduction**

In the sentence, “Invasive species may also threaten native species through competition (DAVIS, 2003) or predation.“ it is odd to have a reference after “competition” but not “predation”. Please add a reference, consider Davis et al. 2011. Don’t judge a species by its origins. Nature

Only use “significant” when referring to a specific statistical test, otherwise, use “substantial”

Carefully check in-text citations for formatting (use of parentheses and capitalization)

Please double check spelling throughout, there are some misspelled words

**Methods**

Instead of the map of the Yucatan Peninsula, I suggest using a larger Caribbean wide map, and then a zoomed in portion of your sites. Because this study shows information from across the region it would be appropriate to have a map of the region with the locations of the other studies indicated as well as the zoomed in location of this study.

Please specified how lionfish were euthanized.

Were measurements of TL and TW taken before or after euthanization and freezing? The others state that catching lionfish with nets helps to reduce effects of weight, but if measurements were taken after euthanization (especially if pithing was employed) and freezing this could affect weight, and should be stated.

It is not clear what posterior analysis was, please specify

How was the expected weight calculated from the 13 length-weight relationships? Because this could be affected by the sample size of each did you used a weighted average technique? Harmonic mean? Please provide more detail.

**Results**

Unless the p-value < 0.001, please provide the exact p-value.

In Figure 4 it appears that there are three groups, could you indicate if there are any similarities in geographic location, depth, or other environmental characteristics for these sites? Is there any potential explanation for the differences among these three groups?

In Figure 5 it is not clear why most groups have a higher predicted value than observed allometric parameters. From the way it is written, it appears there was one prediction based on an average of all parameters. If this is the case, then one would expect roughly equal amounts to be greater than and less than 1, however, this is not the case. It is unclear how the predicted/expected values were calculated. Was there one basin wide prediction? Separate based on habitat? Depth? Or for each site? If it is for each site, as opposed to a region-wide prediction, it is not described in the methods. Please provide more information.

Also in Figure 5, please state with the data is, as written it is the allometric parameters, but it looks like all the data. Is it the difference between each observed lionfish length-weight, or a region-wide prediction compared to the length-weight model from each study? If so, how did you choose the size range to use for each prediction vs. observed? It should be scaled to the TL size range of each study to be conservative and not extrapolate outside each studies data.

Also in the methods, you use the term expected not predicted, please use one term for consistency and clarity for the reader.

**Discussion**

“These differences can have major implications for management, especially when estimating biomass available for harvest or predicting effects on local ecosystems, or evaluating the effectiveness of removal programs.” While this is true, the differences in the value for lionfish was not evaluated and show to have a large effect on biomass. Would the differences in parameters lead to large differences that would have “major” implications? The authors would need to show examples to provide a large significant difference in the biomass calculations, which is not present in the manuscript. Either add this analysis or remove the strong language. It would be an interesting analysis to add and then discuss.

While I agree that there should be a standard way to report studies such as these. I believe points 1 and 2 are unnecessary and a bit condescending towards previous authors. In the interest of collegiality consider rephrasing or removing.