

Interactive comment on “Hypoxia in mangroves: occurrence and impact on valuable tropical fish habitat” by Alexia Dubuc et al.

Anonymous Referee #2

Received and published: 10 August 2019

Overall, the paper is well written and deals with an important gap in current knowledge around utilization patterns of mangrove habitats by fish species. The material and methods section is really impressive and authors provide sufficient results to support their conclusions. There are only a few clarifications that need to be done.

The methods section is really detailed and informative, but a few questions remains. For example, how could the correlation between DO and Depth affect the RF model? In the results section authors state that different models were created for each variable, but it is still unclear how the model is affected by this correlation.

Also, in results, lunar phase was the second most important variable in explaining species richness, and although it seems to be an important result, there is no further discussion on this.

[Printer-friendly version](#)

[Discussion paper](#)



In results (page 9) and discussion 4.3 section (page 11) authors state that tolerance groups were represented by different groups of species (with reef associated taxa having low tolerance behavior). However, this statement is not further explored. Resident and vagrant fish are likely to differ in the way they use mangrove habitats, so, how DO may affect their patterns of utilization?

The discussion section ends with the following statement “This could explain why relatively few taxa venture inside the forest, and those that do, appear to be highly tolerant to hypoxia” (page 11), but there is no previous information on spatial distribution of fish species between both environments. Moreover, although no differences in DO was found between in forest and edge samples, what about the other environmental variables? Looking at table 1, it seems like water depth may differ between both sites, which could explain the lower species richness.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-178>, 2019.

Printer-friendly version

Discussion paper

