

Review of: "Reef Fish in the Vitória-Trindade Seamount Chain of the Southwestern Atlantic: Biogeographical Corridors and Impact of Fishing"

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Potential competing interests: No potential competing interests to declare.

Dear authors,

Congratulations on this initiative. This is an important contribution to the state of knowledge of the Southwestern Atlantic fish fauna, and I believe that it will be of great importance for future studies as well as for conservation of the area. Please find below some considerations that I made aiming to improve your work. Feel free to consider or not.

-The results presented here, regarding the distribution patterns of different assemblages, seem to be sound and are in partial accordance with those presented in recent studies discussing the different faunal composition of the Southwestern Atlantic. Such studies highlight the Vitória Trindade Chain (VTC) as a different assemblage from coastal areas, both north and south of the VTC. The interesting point is that the North and South areas considered in the present study present different assemblages one from another, which is not in accordance with a recent study that recognized both areas as a single sub-province (see Pinheiro et al. 2018). Moreover, another recent study considers the fish fauna of the Davis Seamount (which belongs to the VTC) more similar to the southern reefs of Espírito Santo State (South Area in the present study) than those of the Abrolhos region (see Guabiroba et al. 2022). Although the above-mentioned literature uses different methods, sampling designs, and databases from the present study, there are some similar and different patterns that should be explored and discussed by the authors in order to continuously shed some light over the biogeographic patterns of the South Atlantic Ocean.

-Authors discuss the impacts of fishing based on the mode of size distribution, using all caught species in the size frequency graphics. This can hide the role of small-size species such as *Cephalopholis fulva*, *Holocentrus adscensionis*, and *Haemulon plumieri* (mostly caught in the Abrolhos-Trindade Complex) against bigger species like *Gymnothorax sp.*, *Mycteroperca bonaci*, and *Lutjanus jocu* (mostly caught in the North area) in shaping the size frequency distribution. Thus, investigation of fishing impacts through size distribution alone does not provide strong evidence of impact. Instead, CPUE could bring some more robust information on impact.

-As another reviewer already posted (and I fully agree), references should be updated. There is some valuable recent literature regarding the study area that could be incorporated and considered in the discussion and conclusions.

Cited literature:

Guabiroba, H.C., Rocha, L.A., Joyeux, J.C., Pimentel, C.R., Teixeira, J.B., Macieira, R.M., Gasparini, J.L., Francini-Filho,

R.B., Andrades, R., Mazzei, E., Simon, T., Sissini, M., Costa, T.J.F., Pinheiro, H.T., 2022. Coralline Hills: high complexity reef habitats on seamount summits of the Vitória-Trindade Chain. *Coral Reefs* 41, 1075–1086. <https://doi.org/10.1007/s00338-022-02269-0>

Pinheiro, H.T., Rocha, L.A., Macieira, R.M., Carvalho-Filho, A., Anderson, A.B., Bender, M.G., Di Dario, F., Ferreira, C.E.L., Figueiredo-Filho, J., Francini-Filho, R., Gasparini, J.L., Joyeux, J.-C., Luiz, O.J., Mincarone, M.M., Moura, R.L., Nunes, J. de A.C.C., Quimbayo, J.P., Rosa, R.S., Sampaio, C.L.S., Sazima, I., Simon, T., Vila-Nova, D.A., Floeter, S.R., 2018. South-western Atlantic reef fishes: Zoogeographical patterns and ecological drivers reveal a secondary biodiversity centre in the Atlantic Ocean. *Divers. Distrib.* 24, 951–965. <https://doi.org/10.1111/ddi.12729>