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.

Ref: Reef fish in the Vitória-Trindade seamount chain of the Southwestern Atlantic: biogeographical corridors and impact of fishing. (ID WJTM48).

The study aimed at describing the fish communities covering 9°S latitude degrees along the Brazilian coast and at inferring the impact of the commercial fishery (mainly artisanal handlining and longlining). Overall, I think that the authors have a pretty nice dataset that can be used to reconstruct a historical baseline for the fish assemblage composition in the region. Conversely, I do not think that the size structure of the entire catch in this case can be used to say something definitive about the impact of the commercial fishery operating in the area, given that the assemblages differ among areas. Maybe something can be inferred through using a data subset, but definitively not by using the entire dataset as it was presented in the MS.

I would change the title (as the overall take-home message of the paper). Something like “Carnivorous or top predator reef fishes in the… biogeographical corridors and historical impact of fishing.” seems more adequate, as the sampling method used (longlining) only attracts predatory fishes, and due to the time frame in which fish communities were sampled (1996-1998). It has passed almost 30 years since the surveys, and the situation nowadays might be quite different. I am well aware of the value of the baseline presented here, but I think it can be too speculative to extrapolate the results to the current situation. Anyway, see my comments below on the validity of the fishing impact analysis.

In addition, I suggest adding a map showing the location of the stations occupied in the four surveys.

The relationship between the size structure of the entire catch and fishing intensity is tedious. Why would the authors expect similar size structures for the three areas when fish communities are different? Different species have different size distributions. Even the authors recognize this in the text: “It is not possible to infer the impact of fishing because of the large faunal differences.” Maybe this comparison should be done on a reduced set of species, taking only those present in the three areas.

Some comments of minor concern:

Introduction:

...about structure of communities, change to “about the structure of fish communities.”

This study revealed…, change to “these studies revealed…”

To Caribbean region, change to “to the Caribbean region.”

…underwater diving, which restricts sampling to a reduced depth range. Up to how many meters depth? 30 m?

…because their abundance is greatly reduced in coastal areas due to commercial fishing. I have one question:

recreational fishing does not play any role in abundance depletion along the coastal areas?

(family Serranidae and Lutjanidae), change to “(families Serranidae and Lutjanidae)”.

The recent diagnosis of a large growth of the longline fishing fleet indicated in the introduction, for which time period was verified?

M&M:

The mean inclination of the continental slope is from 8 to 10 degrees…, change to “The mean inclination of the continental slope ranges between 8 and 10 degrees…”

Data analysis: the second sentence (In order to compare…) needs rephrasing. I do not understand what the authors want to say. The second paragraph (Index of total catch…) should begin with a capital letter.

Logarithmized CPUE. Did the authors use ln[(number of fish+1)/1000 hooks]? Please clarify this.

Besides, if this was so, why did the authors have to add 1 if fishes that were not caught in all stations were excluded from the analysis (see exclusion criteria #1: species that did not occur at least once in all stations)? By looking at Table 1, where some fishes had occurrences lower than 10 (mainly groupers, Carangidae, and Sparidae species), and also Table 2, it appears that something is wrong with exclusion criteria #1 as provided. Maybe it should be: species that did not occur at least once in all surveys?