

Peer Review

Review of: "Association of Franciscana (*Pontoporia blainvillei*) Occurrence with the Doce River Plume"

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The paper is very interesting, aiming to explore the occurrence of a particularly isolated genetic population of an endangered species in a region impacted by one of the most devastating environmental disasters in the Brazilian coastal environment. The use of a UAS for survey efforts is innovative and has resulted in remarkable and novel approaches to studying cetaceans in the field. In this case, it provided a unique opportunity to investigate the local presence of a small and elusive species that is challenging to observe during boat surveys, even under favorable environmental conditions. Significant effort was invested in this study, generating high expectations for its findings. However, some considerations should be addressed to better organize and present the material.

In the Introduction, I noticed that information about the plume is a bit sparse. It would help to include details about its extent, what is known about it, and how it poses a threat to the surrounding environment. Since your aim is to investigate the habitat use of *Franciscanas* in relation to this plume, it would be valuable to provide this context. Are there any cetacean studies globally that have investigated similar scenarios? If so, including such examples is highly recommended.

Additionally, in the Introduction, you referenced two studies that highlight how habitat use and biodiversity were affected. I suggest providing specific examples to illustrate these impacts. This would help readers understand the challenges biodiversity is facing and underscore the significance of your investigation into *Pontoporia blainvillei* in the same area.

Finally, ensure that all references follow the journal's formatting guidelines. Regarding your aim, your methods allowed you to investigate the occurrence of *P. blainvillei* along the plume edge rather than examining a broader relationship between the species and the plume.

In the Methods section, some important details are missing. It would be helpful to include a table summarizing the total survey effort (e.g., total flight distance, duration of flights including minimum, maximum, mean, and standard deviation). Were you able to cover the entire study area during each survey effort?

It is also worth describing the environmental conditions in which flights were conducted. Were there specific criteria for aborting a flight (e.g., wind speed, rain, Beaufort sea state)?

Instead of using the term “sampling/launch point,” it would be more appropriate to refer to it as the “takeoff point.” Also, make sure to state in the Methods section or in the final declarations whether you obtained the necessary flight authorizations.

A map would greatly improve the reader’s understanding of your study area. Including flight tracks and encounter points would enhance this information. You can download these data from your data log.

Additionally, consider including two figures (e.g., video frames) showing moments when *P. blainvillei* was observed within and outside the plume. This would not only enhance the visualization of your results but also demonstrate that the plume was not sufficient to “hide” individuals, even when surfacing. To better compare your results in a more standardized way, using encounters per kilometer (encounters/km) would be more appropriate.

For the Discussion, referencing studies on *P. blainvillei* habitat use in the same area would help strengthen your interpretation of the findings. Moreover, incorporating additional references that examine processes involving river plumes (e.g., Xie et al. 2024 on humpback dolphins' foraging behavior) or similar phenomena would allow for a more robust and comprehensive discussion.

Declarations

Potential competing interests: No potential competing interests to declare.