

September 15th, 2020

Dear Professor Dr. Camila dos Santos de Barros,
Editor-in-Chief of *Oecologia Australis*,

Please find attached our manuscript entitled “**Capture and handling stress in incidentally captured rays from small-scale fishing: a physiological approach**”, to be considered for publication as a *Short Communication* in *Oecologia Australis*.

In this study, we evaluated secondary stress response (plasma lactate and glucose) of four ray species (cownose ray, Brazilian cownose ray, spotted eagle ray and longnose stingray) captured as non-target bycatch by beach seine fishing, to understand how this small-scale fishing and handling for research affects rays with different lifestyles. To our knowledge there are no published studies considering the impacts of capture and handling stress on the physiological alterations of these species. Our results revealed a similar physiological stress response in captured rays and that handling can increase the stress, suggesting some caution on handling for research. Importantly, our results suggested that these species are resilient to capture using the beach seine fishing.

Considering recorded population declines for many elasmobranchs, understanding how rays respond to fisheries interactions and handling may elucidate patterns of vulnerability and resilience to fishing and non-lethal research, given that they are routinely captured and released or discarded as non-targeted bycatch in ground fishing operations.

It describes original work, intellectual property of the authors; all authors have seen and approved the submitted manuscript. The manuscript has not been published and has not been submitted simultaneously in other journal. All authors agree that the article will only be published upon payment of the cost of the manuscript according to the amount indicated on the *Oecologia australis* page.

We would like to suggest the name of five highly qualified professionals that could provide useful comments on the current version of the manuscript as referees. These people were selected based on their expertise and their theoretical and empirical contributions to the main topic of our manuscript:


- **Profa. Dra. Carolina Freire** - osmolab98@gmail.com (Universidade Federal do Paraná)
- **Prof. Dr. Otto Gadig** - otto.gadig@unesp.br (Universidade Estadual Paulista)
- **Prof. Dr. Fabio Hissa Hazin** - fvhazin@gmail.com (Universidade Federal de Pernambuco)
- **Dr. Hugo Bornatowski** - anequim.bio@gmail.com (Universidade Federal do Paraná)
- **Prof. Dr. Jorge Luiz Silva Nunes** - silvanunes@yahoo.com (Universidade Federal do Maranhão).

We thank you in advance for considering our manuscript.

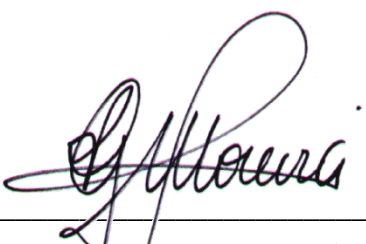
Sincerely,

Bianca de Sousa Rangel

Bianca de Sousa Rangel



Alexandre Rodrigues



Renata Guimarães Moreira