

Review of: "Effects of Sediment Disturbance by the Heart Urchin *Echinocardium Cordatum* on the Sediment–Seawater Solute Exchange: An Exclusion Experiment"

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Potential competing interests: No potential competing interests to declare.

The research topic is very interesting and has current ecological relevance, given the imminent alteration of natural marine aquatic ecosystems, particularly due to human actions, which often cause extinction of species in addition to disturbances in ecosystem flows. Despite the results not indicating significant differences between the trials and the need for improvements to the manuscript, I recommend publication after taking reviewers' suggestions into account.

Initially, I do not think the title is appropriate ("Effects of sediment disturbance"), since possible changes in the composition of the sediment would be the result of the investigation and not the objective. In other words, it is being tested whether the presence or absence of the species interferes with the composition of the sediment, and not whether different sediments (changed in composition of organic matter, contaminants, ...) interfere with the distribution of the species.

Although nowadays the scientific community accepts the use of personal pronouns in drafts, it is recommended that the text be written using impersonal language. For example, 'the urchins were removed' rather than 'we removed urchins'. Besides, unlike a literary text, the language in a scientific text must be as direct as possible. Review all the text with this recommendation in mind. For example, in the topic "Experimental procedures," use "The assay was conducted from May to June 2022 (56 days) with the help of two scuba divers. Eight plastic rings (1 m diameter, 28 cm wide, ~700m² circular area) were placed ~25 cm deep into the sediment ..."

Was there a count of the individuals removed? What happened to them? How many replicates did the experiment have?

I found the experimental design confusing (treatment vs. control, light vs. dark); it should be rewritten more clearly (in a concise and direct way).

The methods used to determine the measured parameters (O₂, NO₃...) also need to be further clarified, and their references cited.

Photographic and video results are presented, but methods were not mentioned (red asterisk). - These must be described in the topic Material and methods.

Present the obtained statistical values when you mention that there was no significant difference.

