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Ocean Science
Discussions

Interactive comment on "Low salinity as a biosecurity tool for minimizing biofouling in ships sea-chests" *by* Maria Cecilia T. Castro et al.

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Authors' answer to the anonymous reviewer's comments

Thank you very much for your constructive and technical comments.

Our aim is to show how effective low salinity is in killing biofouling from ships sea-chest. Although the use of freshwater has been proposed before, in our case we are proposing low salinity treatments for a short period of time is what makes it feasible for this to be used as a biosecurity tool to minimize biofouling from ships sea-chests.

Growcott et al. (2017) reviewed advantages and limitations of reactive systems to remove or treat biofouling in sea chests and internal pipework, and described a limitation for freshwater treatments is that they need a long exposure time and that biofouling

may remain attached to surfaces. This reference is certainly an important one and will be included in the manuscript. In our study, using a sea-chest model, we showed that just a couple of hours of exposure to low salinity waters killed macrobenthos that then became detached after one week.

As suggested by the reviewer we can remove the cluster analysis to simplify the manuscript.

As for ship board tests, logistics prevented us to from carrying out these experimental trials on-board and with a view to increasing replication for our tests we opted for a model sea chest. We also did not have budget for divers to carry out these tests on the merchant fleet.

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