

Ocean Sci. Discuss., referee comment RC1
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Comment on os-2021-39

Laura Prieto (Referee)

Referee comment on "Drifting dynamics of the bluebottle (*Physalia physalis*)" by Daniel Lee et al., Ocean Sci. Discuss., <https://doi.org/10.5194/os-2021-39-RC1>, 2021

General Comments:

The work presented in this manuscript is a step forward in the theory physical mechanics of how the colonies of the hydrozoan *Physalia physalis* are affected by the surface currents and surface winds. The authors performed a well written study, taking into account the main references regarding these organisms and comparing the parameters values obtained in this study with other studies (more experimental) The good part is that both in the analysis and in the discussion of their results, they are aware of the big differences in hydrodynamics due to the simple effect of the size (much larger) of the Atlantic Portuguese Man of War compare to the Indo-Pacific Bluebottle (the focus of this paper).

Another fact that I was missing while I was reading the manuscript, but that the authors finally mentioned at the end of the text, is which should be the next step in their study that is to perform some real experiments to verify the parameters obtained in the theory model developed with the Bluebottle. Without these experiments, this manuscript will be just a nice theory model, without validation for these small colonies. Regarding the habitat, of course it would be very interesting to know more about it, and it could be connected with the point just mentioned.

Small Comments:

Line 21: correct to pneumatophore.

Lines 325-329: several times, correct to Bluebottle (to be coherent to the rest of the text).

