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.

In this article, the authors had the idea of studying the effect of the sea urchin “Echinocardium cordatum” on the sediment while moving in it during its daily movements and search for food, and to see if it affected the O2, NO3, NO2, NH4, and N2 concentrations found with this reworking of the sediment.

The setting is simple, the experiment was done properly, as well as the data collection and the chemical analyses. So, although the unexpected result is negative in the sense that they found no changes between the untouched area (of urchin displacement, which they isolated correctly) and the area where the urchins move, it is an interesting point to take into consideration when analysing sediment disturbance by invertebrates that move through them. In fact, we always assume that there are disturbances, and the urchin, being somewhat big, the contrary would have been expected, and that is what makes the importance of this finding.

Besides a few style (or orthographic) corrections indicated in the text, I see no problem for the publication of this experiment. The simplicity of the setting and the fact that it is done only once (although with many replicates) and only in one location should encourage more such experiments, or maybe declare that our knowledge is sufficient now to declare that sea urchins do not alter the sediment as previously expected.