

Interactive comment on “Structure of mass and momentum fields over a model aggregation of benthic filter feeders” by J. P. Crimaldi et al.

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This manuscript is an informative, solid contribution to the analysis of active marine suspension feeding in the bottom boundary layer and effectively builds on earlier work that is used and cited appropriately in the text. The authors may wish to include some discussion of the recent paper by Widdows and Navarro (2007, J. Exp. Mar. Biol. Ecol. 343: 44-51) on cockles.

The authors point out that there is some disparity in pumping rates of model clams, with those at the edges of the plates pumping less. It would be useful to know the magnitude of this artifact and to let the reader know that it causes a periodic flow behavior in the downstream direction.

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One immediate question, based on similar questions regarding early studies of skimming flow, is how sensitive the results are to uniformity in siphon heights and uniformity in pumping rates. Real clams occasionally stop pumping and even reverse the flow to expel pseudofeces. I would recommend adding these questions to the discussion as likely targets for future research.

Technical Comments:

I have made numerous editorial suggestions directly on the pdf, mostly from my editorial habit of cutting words wherever possible. Many of the crossed-out words and phrases are not wrong, but they do not appear to be needed. Also, I have tried to take out inconsistency in tense (present vs. past). Switching back and forth is confusing.

Most current editorial practice describes figures in captions, not in the text, and cites figures and tables parenthetically in sentences describing the principal conclusion from each table and figure. Some of the caption material that I struck from the text in my minor edits needs to be moved to the figure captions. I don't know if Europe has anything resembling the ADA (Americans with Disabilities Act), but web materials and increasingly publications are supposed to have figures accompanied by a caption that succinctly summarizes what a non-blind reader can see, further driving migration of information toward the caption.

It would be silly for me to waste readers' and my time by posting these technical corrections/suggestions, so I am sending them directly to the editor and first author.

Interactive comment on Biogeosciences Discuss., 4, 493, 2007.

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