

Interactive comment on “Short-term post-mortality predation and scavenging and longer-term recovery after anoxia in the northern Adriatic Sea” by M. Blasnig et al.

Anonymous Referee #1

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This paper tracks the fate of two 0.25m² areas following anoxia, focusing on the activities of scavenging and predatory mobile epibenthos. Some very interesting natural history observations are provided. However, I found the work to be of limited relevance to understanding ecosystem response to large-scale anoxia for the following reasons.

(1) The scale of the experiments is extremely small (0.25m²). The areas subject to mortality are surrounded by communities and organisms that were not affected. Hypoxia and anoxia typically act on much larger areas. The authors argue that at larger scales the sequence of post anoxia events would occur more slowly but would be similar. What evidence exists to support this contention? (2) There are only 2 study plots

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(more or less replicates). The sequence of events in each plot is clearly context dependent. The authors indicate that one plot near an anchor with mussels was exposed to high numbers of gastropods, altering the response patterns observed in one study plot. What other heterogeneity exists that affects responses to anoxia? (3) The paper reads as a play-by-play description of events; much of this can be gleaned from scrutiny of the figures. While the natural history is a valuable contribution, there should be more conceptual content. (4) The research as presented lacks hypotheses, does not test any underlying theory, and does not attempt to establish a novel conceptual framework. (5) There is no discussion of mobile species interactions. Do the crabs, fish and gastropods exhibit avoidance? Negative or positive interactions? co-occurrence? These can be tested statistically.

Other general technical comments and questions. Title – What is the difference between post-mortality predation and scavenging? This isn't immediately obvious so the title sounds a bit redundant.

The study focuses on 7 species. What fraction of the total number of species observed is this?

Should scavenger densities be given as a function of number of prey items?

Do the scavengers function as disturbance agents?

What is known about post anoxia scavenging in the Gulf of Mexico or other systems?

Is there visual evidence of trawling at the study site?

Table 1 could be summarized in the text.

Fig. 3 Can you generate day vs night statistics from these data?

I would encourage the authors to rework this paper into one with a broader, more general conceptual framework (with hypotheses), and to consider ways to test the ideas that emerge from this study in the future. The question of scale-specific responses

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requires careful consideration.

Interactive comment on Biogeosciences Discuss., 10, 4367, 2013.

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