

Interactive comment on “Impacts of hypoxia on the structure and processes in the pelagic community (zooplankton, macro-invertebrates and fish)” by W. Ekau et al.

Anonymous Referee #1

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This is a review paper of the impacts of hypoxia on plankton and nekton. The authors summarized the physiological background of hypoxia tolerance, reactions of organisms to hypoxic condition, and proposed some potential scenarios of the response of organisms and food-web to low oxygen condition.

In spite of large body of references, appropriate literatures were not referred in many sentences. I was surprised with the 1st sentence of the ms of “Oxygen has come into the focus of science only recently as an environmental factor impacting”. Impact of low oxygen on marine organisms in the pelagic ecosystem is not the issue recently emerged, as the authors referred Longhurst (1967). The number of “ASFA hit” is not

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Interactive Discussion

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the measure of the proceeding of the study on the issue. On line 5 page 5076, the authors referred a paper and affirmed “no discrete sampling of the pelagic community of the water column as related to oxygen level”, but there are many studies did it, e.g., Longfurst (1967), and it is easy to find the literatures using ASFA and other search engines. The authors showed some examples of oxygen tolerability from line 21-29 page 5075, but did not refer the literatures. This is one of examples missing references to be cited to verify the scientific background of the description

The authors showed many examples of the response of plankton and nekton to low oxygen in Section 3 without summarizing the characteristics or sensitivity or tolerability of each category of organisms. At least in this status, it is hard to understand the general impact of low oxygen to each taxonomical group and to compare the impact between taxonomical groups. These descriptions are just listing of the past studies without any summary or new concept which we expect from a review paper. If these examples are summarized in table(s), or summarized in figures to show the relationship of oxygen concentration with e.g., survival rate, hatching rate, index of behavior, etc, it would be more useful for future studies.

In the last section, the authors represented some scenarios. In order to express a scientific scenario, it is requested firm scientific evidences to reach the establishment of the scenario. These are still lists of past studies or just speculations without firm scientific evidences which are inappropriate to pose in scientific journal.

I do not follow many sentences due to poor English. There is some possibility that this problem affected my ability to understand what the authors were saying. Spoken language used in the ms is inappropriate for scientific paper. I would be better that authors have native English speaker go through the ms.

By these reasons, I rate this ms does not reach the standard of Biogeoscience and do not recommend to publish in Biogeoscience.