

Interactive comment on “First-order estimate of the planktic foraminifer biomass in the modern global oceans” by R. Schiebel and A. Movellan

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We are grateful to Fabien Lombard for his detailed and helpful review on our paper on ‘First-order estimate of the planktic foraminifer biomass in the modern global oceans’. We have taken all of the reviewer’s comments into consideration, and reply to them in the following.

By including data on the planktic foraminifer standing stock from literature, one of the strength of our manuscript mentioned by the reviewer, i.e., the coherency of the data set consisting entirely of own data, would be lost. However, we have carefully chosen the literature data to be of similar sampling strategy (i.e., gear and depth intervals, size range $>125\ \mu\text{m}$) and storing method (buffered formaldehyde) as our data. In addition, live specimens would have needed to be distinguished from dead specimens and anal-

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ysed quantitatively. All of those criteria could be applied to the data of Kuroyanagi and Kawahata (2004), which are now included in our biomass estimate. Field (2004) and Watkins et al. (1996, 1998) used different sizes classes ($>120 \mu\text{m}$ and $>150 \mu\text{m}$, respectively), and Field (2004) did not quantitatively distinguish between live and dead individuals, and hence those data were not included in our estimate. In turn, data published by Ortiz et al. (1995) are similar to our data, and are now included in our paper. The literature data are mentioned in the abstract, and we have added a brief discussion to the 'Quality control' chapter (incl. figure 3).

We have reviewed the wording on biomass stock (biomass, protein-biomass, carbon-biomass) and biomass production, and which we hope is more clear to the reader now. We have added a line to the paragraph on calcite-carbon [page 253] to make clear that calcite-carbon is not included in the following biomass data. The equal amount of protein- and carbon-biomass is now mentioned in the introduction, and explained in the chapter on 'Biomass conversion factors'.

The use of references and way of citation is entirely up to the journal. However, Movellan et al. (2012) is now available online at Biogeosciences Discussions. All data sets presented in the manuscript are available via PANGAEA. Figures are prepared after templates, which are similar for all MAREDAT contributions, and are not to be changed in a single contribution, i.e., the present paper. In turn, we have changed figure 3 according to the reviewer's comments.

Finally, the data set on species-specific individual planktic foraminifer biomass will be discussed in an addition paper, and will be made available online via PANGAEA.

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