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Interactive comment on "Microzooplankton functional responses in the lab and in the field" *by* S. F. Sailley and E. T. Buitenhuis

Anonymous Referee #2

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I must admit I am not familiar with this journal/type of data presentation, so am not clear on the exact purpose of this publication. I am assessing this akin to a journal article (which it clearly is not meant to be), so some of my comments may not be appropriate and my review clouded by not knowing what exactly is to be achieved with this dissemination. My first inclination was that this contribution makes data available for meta-analysis. However, this contribution refers to another data compilation already:

Sailley, Sevrine; Klaas, Christine (2013): Data compilation of dinoflagellates growth rate, grazing rate and gross gowth efficiency from field and labratory experiments. doi:10.1594/PANGAEA.820368

The data in this compilation unfortunately are just that, a collection of data not a pre-

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sentation as a table or something that could be easily analyzed or manipulated. Thus, given that no 'new' data compilation is presented here and the tables and figures only indicate a coarse presentation of information of limited biological interpretability (e.g. Chl a ranges over which experiments were done), I am mystified what this contribution achieves, even if it was presented without the limitations stated below. As is, this strikes me as a redundant presentation of data that has been 1. published in the primary literature, 2. then again in a data compilation (see citation above) and now a 3rd time. This contributes to diluting original content and confusing the literature. I do not recommend this be published as no new analysis is presented. If the authors wish to pursue this, this contribution needs to be thoroughly reworked before it can become a useful addition to the literature.

It seems that the introduction is quite coarse, superficial for the expert, but not up to date to guide those wishing to get into the literature. At least some key papers should be cited.

The methods section is missing. How were data treated? What were the error sources? What type of methods yielded field and lab experiments? Obviously the authors can not reproduce the entirety of the previous publication record, but their methods synthesis should highlight important differences and caveats that affect the interpretability and comparability of the data.

The figures reproduce some very coarse descriptors of the data. What conclusions are to be drawn from these?

I am missing a synthesis sections: the data allow us to conclude these aspects well (e.g. predator prey ratios are typically x with a variance of y). The data are too variable to support conclusions with respect to xyz. These conclusions would guide future analyses.

The authors should bring in well known analyses of functional and numerical responses (and follow standard nomenclature). John Berges and Dave Montagnes and co-authors

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have many good publications on this topic, e.g.

Bissinger JE, Montagnes DJS, Sharples J, Atkinson D (2008) Predicting marine phytoplankton maximum growth rates from temperature: Improving on the Eppley curve using quantile regression. Limnology and Oceanography 53: 487-493

Errors in the citations, for example Strom 1998 should be Strom & Morello 1998

Fundamentals, such as units are missing on the figures (e.g. ESD is presumably in μm?)

Despite presenting units, the meaning of some data ranges is unclear. For example, Figure 3 reports grazing rates between 0 and 60 d-1. This is the natural log of the change in some measure of prey abundance/biomass. A value of 0.5 d-1 is a global average (e.g. Calbet & Landry 2004) and high values are around 2-3. The figure with a data range of 0-60 thus obscures the 'typical' range and includes some values that are very hard to fathom. If these data are real, then they need to be presented on a log scale or some such.

Interactive comment on Earth Syst. Sci. Data Discuss., 7, 149, 2014.