

## Author interactive comment on “A database of net zooplankton of the Far East seas and adjacent Pacific Ocean waters” by Igor V. Volvenko

Dear Editors,

I would like to thank the Anonymous Referee 2 for many comments and recommendations for improving my manuscript. I shall answer all the comments (hereinafter in quotes) in the order they appear in the review:

1. “It would have been really valuable having access to the raw zooplankton records”

Yes of course. However, I wrote in the manuscript (lines 402-411) that I am not the owner of the raw data, as well as where to go to get it. The copyright holder forbids me to publish raw data, but allows to publish processed data. And this is much better than nothing. The data in these dataset enable evaluation of zooplankton biological resources of the Far Eastern seas and the North-West Pacific and their variability in space and time. The publication of similar processed data on the macrofauna of this region received recognition and even was awarded the prestigious international award in 2015 [https://meetings.pices.int/awards/POMA\\_Award/POMA-recipients/2015-POMA](https://meetings.pices.int/awards/POMA_Award/POMA-recipients/2015-POMA).

2. “This dataset appears to be substantially similar (if not the same) already published by the author in recent years”

In the manuscript (lines 203-214, 381-394) I wrote that earlier dataset was published in the form of five reference books only on paper in a very small circulation, only in Russian and with outdated names of many taxa. Therefore, I digitized all the textual information, translated it into English, corrected taxonomic errors, collected it into a single dataset, supplemented it with cartographic and morphometric information about the regions over which the data were averaged. In addition, in the manuscript, for the first time, I publish generalized information about how exactly all this data was collected and processed. The dataset itself is published in the Zenodo repository (<https://zenodo.org/record/4448646#.YJtUCrUzbGg>) with access open for the review period, which is a prerequisite for the ESSD journal.

3. “The paper of Volvenko lacks of clarity and proper structure”

The manuscript consists of the following sections: Introduction, Materials and Methods, Results, Discussion, Data availability, Conclusions and References (lines 25-35). I believe that using just such a structure is a common practice for scientific articles.

4. “Some paragraphs of the introduction (see lines 49-67) should have been rather included in the methods, as they describes sampling procedures”

I agree and can do so if the journal editors deem it necessary and allow me to submit an improved version of the manuscript. I originally left information about sampling in the Introduction because I wanted to devote Materials and Methods to collecting, storing and processing numerical (digital) data. I leave this issue to the discretion of the ESSD editors.

5. “Fig.4 ... one wonders why this figure would be needed”

Fig. 4 shows the structure of the database from which the published dataset is obtained. If the editors of ESSD consider this information unnecessary, then I will remove this figure from the manuscript and thereby reduce the size of the publication. However, the one who receives the raw data from the copyright holder (see comment 1) will not understand anything about it without this figure. (Its presence is necessary and sufficient for understanding the raw data).

6. “What does “Ind./m<sup>3</sup> sem” or “Mg/m<sup>3</sup> sem” mean?”

SEM is a common abbreviation for Standard Error of Mean, Ind. - number of individuals, Mg. - their biomass in milligrams, m<sup>3</sup> - cubic meter. These standard designations are explained at their first mention on lines 169-174, 215-218. See also the Supplement tables where ‘Average’ represented as ‘mean ± sem’. In the dataset, mean and sem are in separate columns.

7. “What does a “whole time” periodicity mean?”

In the dataset, the first variable “Time period” (column 1) can take on the values of one of four seasons and one of four multi-year periods over which the data is summarized. It also allows you to select the 'whole time' value. Then we will see the results of calculations of the occurrence and abundance of plankton without subdivision into seasons and periods, i.e. throughout the total dataset collected in 1986-2013. This is described on lines 235-253. See also examples in the Supplement tables.

8. “Neither the text in the method session or the figures (i.e. Fig. 2 and Fig.4) clarify whether the original records ... were collected for individual taxa or for total zooplankton, or for both”

The original records were collected for each taxonomic group of animals at each stage of development or size group in each fraction. This is indicated in the text on lines 103-104, 169-171, 218-221. See also Tables 2, 3 and all Supplementary Tables. In Fig. 2, this can be seen from the fifth line of the heading of the form, where it is written: Species, Length and names of three fractions. From the captions to Fig. 4, it can be seen that for each station there is a density and biomass of organisms by fractions (FRCOD), species (COD1), size groups or developmental stages (COD2).

9. “Besides, the procedure adopted to correct individuals’ abundance and weights is very confusing (lines 137-145). The author seems to assume that the average biomass of a defined species would be constant over time (which is not necessarily true as the elemental composition of a species can significantly vary according to the seasonal period and to its physiological stage)”

The used average individual biomass was different for different size groups and developmental stages. Anyone can check this from the dataset. Data on seasonal differences in average weights have been collected in recent years, but it have not yet been verified and processed. When such information becomes available, I can recalculate all tables and publish the updated dataset. I guess this can only be done in the next 2-3 years.

10. “It is mentioned that “the ocean area 11 was left practically understudied”, while based on Fig. 5 this is a region with permanent monitoring, with numerous zooplankton records (in the excel file, 2573 records are available in regions 11)”

I ask everyone to check the dataset and make sure there are 2573 records available for the Bering Sea region 11 and none at all for the Pacific Ocean region 11. This can also be seen by comparing Fig. 3 and Fig. 5.

11. “The data ... possible use from other users other than the author seems unlikely”

Real numbers contradict this assumption of the Referee: in four months, my dataset from Zenodo website was downloaded more than 110 times, the manuscript of the article on the ESSD website, according to Metrix, was read more than 540 times and downloaded as a pdf-file about 160 times. It is understood that some people download the article to read it offline at any time, but no one downloads the data unless intend to use it.

In conclusion, once again, I sincerely thank the Referee for the work and time spent on a detailed critical analysis of my manuscript. I hope that I was able to comprehensively answer all of his comments. In this regard, I would like to know the editor's opinion on whether I need to prepare a revised version of the manuscript, and which of the above corrections are needed and which are not.

Best regards,  
Volvenko I.V.