

Data Paper

Kunio T. Takahashi, and Tsuneo Odate. Zooplankton monitoring using a twin NORPAC net during the 59th Japanese Antarctic Research Expedition in austral summer 2017–2018. *Polar Data Journal*. 2020, 4, p. 61-71.

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1st submission

Editor Start Date: 1/7/2020

Editor Stop Date: 2/11/2020

Reviewer #1 (1/15/2020–1/29/2020)

Reviewer #2 (1/15/2020–2/9/2020)

Reviewer #1: Fukuchi Mitsuo

I believe the JARE NORPAC zooplankton data had been published as one of JARE Data Reports since the JARE 7 expedition. It seems that the publishing style of those data reports has been revised and re-formed into the *Polar Data Journal* since the JARE 58th expedition. And the original data itself has been registered and compiled in “Arctic and Antarctic Data Archive.” Plankton sampling every year has been continued since the JARE-7 expedition as one of JARE monitoring programs. Accumulation of data obtained from these sampling is offered for analysis of long-term change. And the final goal of monitoring program would be to find some year by year change etc. And many outstanding findings have been published. Title of the present submission might be adopted in the previous expedition of JARE 58 and some continuity of title itself must be considered. However, the title of article is a kind of face of book and the title impresses and reminds you what will be written in this article. The current title might mislead you what is presented in this article. Therefore, I have tried some suggestion on title in the text, which is represented below;

“Zooplankton data from a twin NORPAC net sampling, collected as a part of monitoring program during the 59th Japanese Antarctic Research Expedition in austral summer 2017-2018”

You might consider my suggestion on title, if the circumstances allow you.

This sort of publication will continue in future and the style and contents of *Polar Data Journal* will not change greatly in future. I would recommend to add some descriptions on why zooplankton sampling is a key component of monitoring program (you may cite some publications from SCAR, JARE headquarters, scientific journals, etc.), and also some references based on the JARE achievements.

There are many ways of English expressions and usage and I added some comments on your wordings in your text. I have added such comments as an attached PDF.

Corrected as needed according to the above comments.

Reviewer #2: Hosie Graham

I fully support publication of this manuscript. It continues a series of previous publications of JARE NORPAC data since 1972. It is essential that the data continue to be published and made available for other researchers in order to understand the long-term zooplankton trends. This is essential to understand any changes in the Antarctic marine ecosystem. It is well written and well compiled.

My only comment is in relation to the statement “The JARE NORPAC monitoring is the only ongoing long-term zooplankton study within the Antarctic regions ...” It is not the only long-term zooplankton study or monitoring programme as there is also the CPR programme. It is fair to say though that “The JARE NORPAC monitoring is the longest ongoing long-term zooplankton study within the Antarctic region ...” as it has been going longer than the CPR.

I have made corrections to the English with track changes. Only pages 1 and 2 required changes, the rest are OK. Consequently, I have only saved those pages.

Corrected as needed according to the above comments.

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2nd submission

Editor Start Date: 3/4/2020

Editor Stop Date: 3/22/2020

Reviewer #1 (3/9/2020–3/19/2020)

Reviewer #2 (3/9/2020–3/14/2020)

Reviewer #1: Fukuchi Mitsuo

I would acknowledge the authors to send me your revised manuscript and to give me another opportunity to read your revision. I also acknowledge to #2 reviewer to clarify some important issues.

I have commented on your original manuscript in minor revision and my major comments were summarized in the following three points;

1. This is a continuing series of data journal and it is necessary to keep some continuity. And I think my comments are more or less on technical aspects and are not on some essential discussion aspects. Therefore, I commented I will not need to review again and the authors may easily find their way to revise your manuscript.

2. My suggestion was to add some key references in an area of plankton monitoring program and/or key findings from those programs. I do believe some Japanese scientists have published outstanding papers based on the JARE zooplankton data. Also, the US-LTER monitoring program is producing many papers. There are 21 papers referred in the revised manuscript and they are all on the previous data reports and some methodological references. I do not think there is any scientific papers cited which I have suggested in my previous. The present paper does not seem to be a so-called original scientific article and this kind of paper does not need any deep discussion but it would be a good idea to include and introduce some key papers in the section of "1. Background and Summary." This was my major suggestion.

3. I am not an English speaking reviewer but I have commented some English refinement. And I recommended to have some English consultation and I think the revised manuscript has been polished up well. I find the first line under "5.1 Zooplankton identification" is "Zooplankton were identified to lowest practical--." I wonder this would be "Zooplankton were identified to the lowest practical--." If the authors are willing to do so, I would strongly encourage them to continue their English practice and refinement in their future development.

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Authors Response:

Thank you very much for your e-mail concerning our manuscript with the comments from the one reviewer. We have made some minor changes, according to referee's comments.

Response to reviewer #1;

I would acknowledge the authors to send me your revised manuscript and to give me another opportunity to read your revision. I also acknowledge to #2 reviewer to clarify some important issues.

I have commented on your original manuscript in minor revision and my major comments were summarized in the following three points;

1. This is a continuing series of data journal and it is necessary to keep some continuity. And I think my comments are more or less on technical aspects and are not on some essential discussion aspects. Therefore, I commented I will

not need to review again and the authors may easily find their way to revise your manuscript.

Thank you for your comments concerning this manuscript. We have considered all of your comments and have made necessary changes.

2. My suggestion was to add some key references in an area of plankton monitoring program and/or key findings from those programs. I do believe some Japanese scientists have published outstanding papers based on the JARE zooplankton data. Also, the US-LTER monitoring program is producing many papers. There are 21 papers referred in the revised manuscript and they are all on the previous data reports and some methodological references. I do not think there is any scientific papers cited which I have suggested in my previous. The present paper does not seem to be a so-called original scientific article and this kind of paper does not need any deep discussion but it would be a good idea to include and introduce some key papers in the section of "1. Background and Summary." This was my major suggestion.

#### Background & Summary

-We have added four new papers in this paragraph as your suggestion. These are mainly reports on long-term variability analysis of zooplankton in the Southern Ocean.

1. Reid, P.C., Colebrook, J.M., Matthews, J.B.L., Aiken, J., Continuous Plankton Recorder Team. The Continuous Plankton Recorder: concepts and history, from Plankton Indicator to undulating recorders. *Progress in Oceanography*. 2003, 58, 117-173.
2. Hosie, G.W., Fukuchi, M., Kawaguchi, S. Development of the Southern Ocean Continuous Plankton Recorder Survey. *Progress in Oceanography*. 2003, 58 (2-4), 263-283.
3. Takahashi, K., Tanimura, A., Fukuchi, M. Long-term observation of zooplankton biomass in the Indian Ocean sector of the Southern Ocean. In: *Proceedings of the International Symposium on Environmental Research in Antarctica. Memoirs of the National Institute of Polar Research. Special Issue*. 1998, 52, 209-219.
4. Ross, R.R., Quetin, L.B., Martinson, D.G., Iannuzzi, R.A., Stammerjohn, S.E., Smith, R.C. Palmer LTER: Patterns of distribution of five dominant zooplankton species in the epipelagic zone west of the Antarctic Peninsula, 1993-2004. *Deep-Sea Research II*. 2008, 55, 2086-2105.

3. I am not an English speaking reviewer but I have commented some English refinement. And I recommended to have some English consultation and I think the revised manuscript has been polished up well. I find the first line under "5.1 Zooplankton identification" is "Zooplankton were identified to lowest practical..." I wonder this would be "Zooplankton were identified to the lowest practical..." If the authors are willing to do so, I would strongly encourage them to continue their English practice and refinement in their future development.

5-1. Zooplankton identification

Line 1 -change "lowest" to "the lowest"

We hope that our revisions will improve the manuscript to your agreement.

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3rd submission

Editor Start Date: 3/30/2020

Editor Stop Date: 4/2/2020

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Original Data

Takahashi, K., T. Odate. Zooplankton monitoring using a twin NORPAC net during the 59th Japanese Antarctic Research Expedition in austral summer 2017-2018, 1.00, Arctic Data archive System (ADS), Japan, 2019.

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