Earth Syst. Sci. Data Discuss.,
doi:10.5194/essd-2016-30-RC2, 2016

Open Access Earth System Science Data Discussions

Interactive comment on "A trait database for marine copepods" *by* Philipp Brun et al.

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Received and published: 16 November 2016

The authors present a comprehensive database of both qualitative and quantitative morphological, physiological and behavioural characteristics of copepod species, as well as critical information on their life-cycle strategies. They reviewed the existing literature, and asked experts in the field as well, to gather an impressive and unprecedented amount of information that they organized under the theoretical and practical framework of "trait-based ecology". This approach is well established and has proven its worth in terrestrial plant ecology, and its gaining momentum in marine ecology as well for obvious reasons of efficiency and flexibility. I think their work is timely, sound, very useful and well presented. I really appreciated the conciseness of the paper, given the daunting task that had to be accomplished. I hope though that the authors will agree with me that their work would benefit from the few suggestion listed below (Line numbers refer to the PDF).

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Specific comments

L31-35: I appreciate the concise definition of a trait provided here, even though what a “trait” exactly is is still open for debate (the authors acknowledge that in their discussion). L58: one such “trait” that I would question is specifically the number of generations per year. I understand the motivation for that (fast growing vs slow growing species, R vs K strategies, potential for invasiveness, etc.) but this supposedly quantitative trait is extremely dependant on the environmental conditions (temperature, first, but also food conditions – quantity, quality, etc.). I would argue that it almost contradicts the very definition of a trait given above in the introduction. Moreover, I was surprised not to find development rate as a trait! I think this is absolutely key to any aspects of copepods ecology. Actually, the main trait this study focuses on, body size, results essentially from the trade-off between growth (accumulation of matter) and development (differentiation of tissues) according to the abundant and insightful work of some of the authors. And the number of generation is also essentially the expression of the development speed of the species. I would like very much the authors to explain why they decided to leave out development in their thorough compilation of copepod traits.

L117: About units. Unless I’m mistaken, units are not indicated in the spreadsheet. This should be corrected since it could lead to some errors by future users of the database.

L225: here specifically and elsewhere in the Results section, it would be interesting to note whether the taxon with the most variability is also the one with the most observations reported. Calanus species for instance are undoubtedly the most studied group, and hence it comes at no surprise that a wide range of values have been reported for a wide range of experimental and environmental conditions, thus certainly increasing the interquartile range (and maybe the mean).

L247: this is a surprisingly low value... the large C. hyperboreus can definitely produce clutches of > 100 eggs during peak production. It’s really just a remark since this

database will evolve and be complete in time... Actually, it shows that this work could also be useful to gauge whether a simple unpublished dataset could be worth the "trouble" of publishing! If the authors have thought of an outlet to publish verified but unpublished copepod-related data, it would be great to know...

L337: This is a suggestion: I think this impressive work granted the authors the right to share with the research community their thoughts on the "best practices" that should be adopted sooner than later by data-producing marine ecologists. How shameful it is to realize that such obvious information as development stage is rarely available within publications! It would be extremely valuable to include a paragraph, in the form of a few guidelines (minimum metadata to include, format of spreadsheets, of supplementary material, etc.), to enhance our ability to complement rapidly and efficiently this database.

Finally, apologies for the late review...

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