

Interactive comment on “R-Package BIODry: DendroClimatic Modeling from Multilevel Ecological Data Series” by Wilson Lara et al.

Anonymous Referee #1

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This paper by Lara et al. is currently somewhat of an chimaera between a software manual and methods paper for a special case of mixed effects modelling. Unfortunately, both parts are unsatisfactory, which makes a review rather tough.

Judging from its title, this paper is intended to introduce a software package to the community (like the papers introducing dpLR, TRADER, pointRes, treeclim, etc.). This means, this review should not be about the package's functionality or the quality of the code, but rather about the presentation of the package. The functionality and statistical reasoning behind it is described elsewhere (Lara et al. 2013 Agricultural and Forest Meteorology) and its popularity and benefit can thus be assessed independently.

The functions presented with the package are more on the complex side of things, especially since they overload already complex functionality (nlme-functions) with even

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more complexity and paradigms. This calls for a more detailed, example-driven step-by-step guide, where references are made to the appropriate places in the methodological literature, but where the reader is not overwhelmed by statistical reasoning. In this, I very much agree with Reviewer #2. In contrast to Reviewer #2, I could run all example code; but still, I was left somewhat puzzled about what the code actually tries to do. Recommendation: use ecological storylines to tell a story with data, and explain your package alongside. For example, as a reader, the sentence "For instance, `form = 'lmeForm'` can be implemented to detrend normalized aridity indexes." is most probably not helpful when you do not give an example why would want to do that in the first place. Also, as the authors claim their package to be usable for MEDS in general, an application example using other data than dendro data would be convincing.

A few more specific things to consider:

- TRW is usually not "Tree Rings in Wood" but tree-ring width - the authors' concept of detrending is unclear and possibly varying throughout the manuscript - stable isotopes are more of a *tool* for certain research areas in dendro - use lazy data (see Writing R Extensions or `?utils::data`) - don't recommend using `'require()'`

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