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Robert Howarth

Editor-in-Chief

*Limnology & Oceanography*

Dear Drs. Howarth and Melack,

We have completed a revision of our manuscript “Seasonal changes in the biomas, distribution, and patchiness of zooplankton and fish in four lakes in the Sierra Nevada, California” (LO-17-0018). We thank you and the anonymous reviewer for your helpful comments, and have attempted to address the concerns you raised.

The reviewer’s main concern, about the limited extent of our net sampling, is reasonable. While it is too late to add additional net tows, we have added text in the discussion section pointing out this source of uncertainty more explicitly. We have also added text emphasizing the snapshot nature of the single surveys in Independence Lake and Lake Tahoe.

Variogram analyses of the horizontal transects were included in the original submission. We read the reviewer’s remark on on them as an approving comment, rather than a request for additional analyses. Following the reviewer’s suggestion, we have re-run the analysis after excluding rotifers and considering only crustacean zooplankton. Changes to the results were minimal.

The acoustic methods in this paper have not seen much use in fresh water, but can’t be considered truly novel. The sound-scattering models and multi-frequency techniques we used are standard practice for larger acoustic surveys. The use of the high-frequency 710 kHz echosounder to observe small lake zooplankton has already been described in *Limnology & Oceanography: Methods* (Warren et al. 2016). While our results are primarily descriptive, we believe they still have value, both by establishing an ecological baseline in several sensitive and/or little-studied lakes, and by revealing the presence of spatial heterogeneity, which we hope stimulates further research on the causes of patchiness in small lakes. For these reasons, we believe this paper is a better fit for *Limnology & Oceanography*.

Finally, since we suspect your difficulties in finding reviewers may be partly due to the aforementioned dearth of freshwater acousticians, we have compiled a list of other potential reviewers. Though they work primarily in marine systems, they are all well qualified to review papers involving acoustical observations of fish or zooplankton.

Our responses to specific edits are summarized on the next page.

Thank you again for your time and comments.

Sincerely,

Joseph D. Warren

l. 41: This reference has been removed.

l. 42: This sentence has been rewritten to make it clearer that Masson et al.’s study is an exception to our statement, i.e. one of the few to examine fish and zooplankton at similarly high resolution in a high-altitude lake.

l. 87: Typo corrected, text changed as suggested.

l. 106: Corrected.

l. 138: Inserted the year.

l. 142: Reference to Figure 1 added.

l. 197: Extra period deleted.

l. 259: Rotifers have been removed from the analysis and the results.

l. 260: Rewritten to emphasize that sampling was repeated in Cherry and Eleanor.

l. 268: Inserted “2014”

l. 270: Corrected “April” to “June”

l. 275: Corrected “-111” to “-113”

l. 281: These fish TS values have been corrected.

l. 322: “similar to the previous autumn” has been deleted.

l. 344: Value has been corrected.

l. 347: Changed to “October.”

l. 358: Changed to “September.”

l. 388: Typo corrected.

l. 488: Inserted period.

l. 529: Our bibliography software alphabetized “De Robertis” under “R” instead of “D.” It has been moved up.

ll. 545, 577, 587, 605, 637: Italicized species names.

Table 1 (now Table 3): Sampling dates have been added.

Figure 3: This figure is now table 2. The names of all genera are now italicized.

Additional reviewers with expertise in acoustics are listed below. An asterisk indicates those with whom we (JDW and SSU) have collaborated in the past 5 years.

Stephane Conti

Alex De Robertis

Patrick Ressler

Kelly Benoit-Bird

Nils Olav Handegard

Elliott Hazen

Amanda Kaltenberg

Gareth Lawson

Andone Lavery

Lars Rudstam

Tim Stanton

John Horne

Sandra Parker-Stetter