

Peer Review Report

Review Report on Fossil diatoms reveal natural and anthropogenic history of Jackson Lake (Wyoming, USA)

Original Research, Earth Sci. Syst. Soc.

Reviewer: Denise Bicudo

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EVALUATION

Q 1 Please summarize the main findings of the study.

The manuscript describes some really interesting shifts in fossil diatom assemblages due to the impact of human engineering (dam installation) on Jackson Lake. Results are original and clearly show two equilibrium states. The findings are useful to management practices of this important as well as of other great lakes.

Q 2 Please highlight the limitations and strengths.

The mechanism suggested by the authors to explain the changes and the proposition of two equilibrium states are alright. However, besides nutrient availability, other driving forces need to be considered throughout the manuscript, mainly hydrological conditions and warming after LIA (detailed in my review report). The manuscript provides an important retrospective environmental assessment by presenting the strength of the paleolimnological approach to disentangle the impacts of human engineering on natural lakes.

Q 3 Please comment on the methods, results and data interpretation. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Methods and results are fine. However, interpretation and conclusion need revision as presented in my detailed review.

Q 4 Check List

Is the English language of sufficient quality?

Yes.

Is the quality of the figures and tables satisfactory?

Yes.

Does the reference list cover the relevant literature adequately and in an unbiased manner?

Yes.

Are the statistical methods valid and correctly applied? (e.g. sample size, choice of test)

Yes.

If relevant, are the methods sufficiently documented to allow replication studies?

Yes.

Are the data underlying the study available in either the article, supplement, or deposited in a repository? (Sequence/expression data, protein/molecule characterizations, annotations, and taxonomy data are required to be deposited in public repositories prior to publication)

Yes.

Does the study adhere to ethical standards including ethics committee approval and consent procedure?

Yes.

If relevant, have standard biosecurity and institutional safety procedures been adhered to?

Yes.

Q 5 Please provide your detailed review report to the editor and authors (including any comments on the Q4 Check List):

No answer given.

QUALITY ASSESSMENT

Q 6 Originality	<input checked="" type="checkbox"/>				
Q 7 Rigor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q 8 Significance to the field	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Q 9 Interest to a general audience	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Q 10 Quality of the writing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q 11 Overall quality of the study	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>