Data Paper Review Instructions
Ecology

Note: The guidelines in this document should be used for Data Papers that were submitted through Spring 2026 and prepared in the format outlined in the guidelines for those submissions.

After Spring 2026, new submissions use the updated Data Paper format outlined here.

What are Data Papers?

Data Papers are a unique type of article published in *Ecology*, used to present large or expansive data sets, accompanied by metadata which describe the content, context, quality, and structure of the data.

Parts of a Data Paper

Data

Data files should be logically and consistently formatted. Our primary goal is to ensure that your files will be accessible and legible to every user, on every platform, for the foreseeable future - as such, we avoid posting files in a proprietary format.

Metadata

The Metadata document should fully describe the content, context, quality, and structure of the data. Metadata content must adhere strictly to the metadata content standards described in Michener et al. (1997; *Ecological Applications* 7:330–342) and must use a "Class" system for organizing metadata.

You can find a template example of a Metadata document here.

Instructions for reviewers

Confidentiality

This Data Paper is a privileged communication. Please do not show it to anyone or discuss it, except to solicit assistance with a technical point. If you feel a colleague is more qualified than you to review the Data Paper, do not pass this responsibility on to that person without first

requesting permission to do so from the journal's editorial staff. Your review and your recommendation should also be considered confidential.

Time

In fairness to authors, you should return your review within 3 weeks. If it seems likely that you will be unable to meet this deadline, please contact the journal's editorial staff.

Conflicts of interest

If you feel you might have any difficulty writing an objective review, please contact the journal's editorial staff. If your previous or present connection with the authors, data compilers, or an author's institution might be construed as creating a conflict of interest, but no actual conflict exists, please discuss this issue in the "Confidential Comments to the Editor" field in the review form.

Comments for the authors

What is the major contribution of the Data Paper? What are its major strengths and weaknesses, and its suitability for publication? Please include both general and specific comments bearing on these questions and emphasize your most significant points.

General comments

1. Importance and interest to users and readers.
2. Scientific and technical soundness of the database.
3. Originality.
4. Degree to which metadata fully describe the content, context, quality, and structure of the database.

Specific comments

Support your general comments with specific evidence in "Comments for the Authors". Comment on any of the following matters that significantly affected your judgment of the database:

1. **Metadata presentation**
    a. Are the metadata logically organized and do they adhere to the Metadata Content Standard (see the "Metadata" section above)?
    b. Do the title, abstract, and key words/phrases accurately and consistently reflect the major points of the database?
    c. Is the writing concise, easy to follow, interesting?
2. **Metadata completeness**
    a. Are the metadata complete and sufficient to facilitate interpretation and secondary use of the data?
    b. What portions of the metadata should be expanded, condensed, or deleted?
3. **Data organization**

    a. Are the data logically and consistently organized?
    b. Is the data format consistent with the format defined in the metadata?
4. **Data quality**
    a. Were suitable methods employed to maintain the integrity of the original data and datasets?
    b. Are all data anomalies well-documented?
    c. Are the metadata sufficient to allow a secondary user to determine how outliers were identified and treated?
5. **Data integrity**
    a. Have adequate procedures been employed to allow a secondary user to determine whether errors may have been introduced during data transmission (e.g., checksum techniques, file size)?
6. **Methods**
    a. Are the methods appropriate and current?
    b. Are they described clearly enough so that the work could be repeated by someone else?
7. **Study design**
    a. Is the design appropriate and correct?
    b. Can the reader readily discern which measurements or observations are independent of which other measurements or observations?
    c. Are replicates correctly identified?
    d. Are significance statements justified?
8. **Errors**
    a. Point out any errors in technique, fact, calculation, interpretation, or style.
        i. For style, we follow the "CBE Style Manual, Fifth Edition," and the ASTM Standard E380- 93, "Standard Practice for Use of the International System of Units."
9. **Citations**
    a. Are all pertinent references cited?
    b. Are there any extraneous references that should not be included?

Fairness and objectivity

If the research premise for the database is flawed, criticize the science, not the scientist. Harsh words in a review will cause the reader to doubt your objectivity; as a result, your criticisms will be rejected, even if they are correct. Comments directed to the authors should demonstrate that:

1. You have carefully and thoroughly reviewed the data and metadata.
2. Your criticisms are objective and correct, are not merely differences of opinion, and are intended to help the data originator improve his or her Data Paper.
3. You are qualified to provide an expert opinion about the research that served as the impetus for the Data Paper.

If you fail to win the data originator's respect and appreciation, your efforts will have been wasted.

Anonymity

You may sign your review if you wish. If you choose to remain anonymous, avoid comments to the authors that might serve as clues to your identity.