

Guidelines for reviewers

We very much appreciate your agreement to act as peer reviewer for an article submitted to *Geological Magazine*. These guidelines are intended to summarise the requirements of peer review for the journal. However, if you have any further questions about the review process, please don't hesitate to contact the article's assigned Editor.

Peer review is extremely important for *Geological Magazine* as it ensures that only the best research is published in the journal. This will maintain the high quality of the research submitted to and published in the journal. The Editors are committed to maintaining high standards in the journal and the journal's reputation depends in large part on the peer-review process.

As an author of scientific publications yourself, you will be aware of the importance of prompt, fair and informative review process. These guidelines are intended to provide you with the information you need to conduct an informative and time-efficient review.

In summary:

- Does the article lie in your field of expertise, are you available at the specified time, and will you be able to meet the deadline?
- Are there any conflicts of interests if you review the paper? If yes, please declare them.
- Does the research meet the standard set by the journal, and does it fit within the journal's scope?
- Does the article describe novel research that adds to existing knowledge and contributes a significant understanding of the subject area?
- Is the experimental design appropriate to answer the research question? Have suitable methodologies been used and have they been adequately described? Are the interpretations valid and do they take into account previous research?
- Is the article clearly laid out, comprehensible and written in good English?
- Is there evidence of plagiarism, duplication or fraud? Are there any potential ethical issues or third-party copyright issues that should be considered?
- Present your feedback in a short, constructive report, justifying all your criticisms, giving specific details about any revisions required, and making a clear recommendation to the Editor if possible.

Initial inspection of manuscript

Area of expertise

If you are offered an original article for review, please conduct an initial assessment of the paper and, if you feel that the paper doesn't truly match your area of expertise, please indicate this to the Editor. The Editor is not a subject specialist in all areas covered by the scope of the journal, and reviewers are occasionally invited to review articles that don't fall exactly within their range of expertise.

If you are offered the opportunity to review a review article, it is more likely that the review article will lie outside your subject specialism.

Availability for review

Please make an initial assessment about how long it will take to review the manuscript and decide whether you will be able to meet the deadline stipulated by the Editor. The time taken to review an article varies from field to field, but an average article could be expected to take 4–5 hours.

If you don't have sufficient time available to meet the deadline, please indicate this to the Editor immediately. The Editor would prefer to appoint a new reviewer straight away rather than for the peer review process to suffer a delay because of a late review. If possible, please suggest some names of alternative reviewers to the Editor.

Conflict of interest

If there are any potential conflicts of interest, please communicate these to the Editor. A conflict of interest will not necessarily prevent you from reviewing the article, but full disclosure will enable the Editor to make an informed decision about your eligibility to review. For example, if you have co-authored a paper with one of the authors or if you work in the same department as one of the authors, these facts should be disclosed as conflicts of interest.

Abstract

Read the abstract first to establish whether what the authors are stating makes logical sense, and if it is written in a way that is comprehensible. Some manuscripts involve excellent work and interesting observations, but they are so poorly written that it is difficult to understand what the author is saying. This is a relatively common problem with authors whose native language is not English.

Evaluation of the article

You should try to set aside a few hours to focus on the evaluation and the review in one sitting rather than dipping in and out of the review. The review must be conducted confidentially and neither the article nor the information contained in the article may be disclosed to a third party. If you feel it would be useful to ask advice or opinions from colleagues, please check this with the Editor before approaching colleagues. Any recommendations you make or advice that you give will contribute to the Editor's final decision. Any communication with the author should be done via your written report, which will be returned to the author at the end of the review process. Please do not contact the author directly.

Please evaluate the article using the following criteria:

Originality and quality of research

- Does the article add significantly to the existing knowledge in the subject area?
- Is the research question that is asked an important one?
- Is the article interesting enough and novel enough to deserve publication and to be citable? Does it describe a significant new discovery or methodology?
- Does the article contribute to understanding of process? Is it fundamental to understanding?
- How does the originality and quality of the paper rate in comparison to other papers in this field?

- If you think the research seems familiar, you could do a quick literature search using online databases to establish whether the same or similar research has been published previously. Please pass on any pertinent references to the Editor.
- Are the references cited in the reference list relevant and from a variety of research labs?

Scope and audience

Geological Magazine is an international journal that covers petrology, geochemistry, palaeontology, sedimentology, stratigraphy, structural geology, geophysics, and geomorphology, and it includes contributions on volcanology, marine geology, glaciology, palaeoclimatology, palaeoceanography, geochronology, biostratigraphy, geohazards and Earth history.

Geological Magazine has a particular strength in providing a niche for interdisciplinary papers on regional geology and Earth history that would be of interest to geologists from many different specialities. Papers of any length are considered, provided that the length is justifiable.

- Does the article fit into the journal's scope?
- Is the article of more than just local significance?
- Do regional studies provide a benchmark for research in this topic?

Language

If an article is badly written and features a large number of grammatical errors and misspelt words, please advise the Editor of this in your report. You do not need to correct the English yourself. If the work reported in the manuscript looks interesting and/or valuable but the quality of the language is poor or ambiguous, please send back the manuscript and advise the Editor that it needs editing by a native English speaker before the article can progress further through peer review.

General appearance of manuscript

- Is the article clearly laid out?
- Is the manuscript concise and well organised?
- Is the manuscript full of typographical errors and/or mistakes in references that imply lack of care in preparation of the manuscript?

Length

Please give an overall assessment of the length of the manuscript. Is it unjustifiably long, given the data and conclusions? If so, please indicate which sections could be condensed or cut, including figures. Whilst *Geological Magazine* has no formal page limit, we seek to make papers as concise as possible.

Structure

- Are all the key elements present: title, abstract, keywords, introduction, methods, results, discussion, conclusion, references?

Consider each part of the paper in turn:

Title

- Does the title clearly reflect what is discussed in the article?

Abstract

- Does the abstract accurately reflect the content of the article?
- Is it written as a specific précis of the results and conclusions of the article?

Keywords

- Are the keywords relevant; would you have used them to search for a paper on this subject?

Introduction

The brief introduction should provide context by summarising relevant research and explaining what previous findings are being challenged or extended.

- Does the introduction accurately describe the authors' aims?
- Does it clearly state the problem being investigated?

Experimental sections

The experimental sections should describe the practical research, hypothesis, and general methodology or experimental design.

- Is the design of the experiment appropriate to answer the question posed?
- Is the methodology appropriate?
- Does the article adequately explain the procedures used? If the methods are new, have they been explained in enough detail?
- Have any equipment and materials been described adequately?
- Has enough explanation been given about what type of data were recorded and how they were collected?
- Has the author been precise in describing measurements?
- Was the sampling appropriate?
- Have sufficient details been included for you to replicate the research?

Results

This should be a factual account in which the authors explain what they discovered in the research. Any interpretation should not be included in this section.

- Are the results clearly laid out and in a logical sequence?
- Has the appropriate analysis been conducted?
- Are the statistics or other assessment methodologies correct? If you are not confident with the way that the results have been analysed, please advise the Editor when you submit your report.

Conclusion

In this section, the authors should provide an interpretation of their results.

- Does the conclusion make sense and are the authors' conclusions supported by their results?
- Do their conclusions seem reasonable?
- Have the authors indicated how their results relate to their initial expectations and to earlier research in the field?
- Have the authors' discussed in what ways the article supports or contradicts previous theories?
- Does the conclusion explain how the research has moved the body of scientific knowledge forward?
- Do you suspect any consistent errors in the hypothesis, methods or analysis of data?

Figures and tables

- Do the figures and tables inform the reader?
- Do the figures accurately represent the data?
- Do the figures accurately represent what is written in the text?
- Are the figures consistent?
- Are the legends and captions clear?
- Are maps clearly presented and easily understood?

Related Research

- Does the article reference any previous research appropriately?
- Have any important pieces of related research been omitted?
- Are the references appropriate and accurate?
- Is the reference list varied? Or is it biased towards papers written by the authors and their colleagues?

Ethical Issues

Conflicts of interests

Do you know of any potential conflicts of interest, either declared or not declared by the authors?

Plagiarism / duplication

Please let the Editor know if you suspect that an article is a substantial copy of previous work or contains text from previous publications, either by the same authors or different authors. Please provide the relevant references for the previous research and/or associated publications.

Third-party copyright

Please advise the Editor about any content that you suspect to be copyrighted material for which the author would need to obtain permission for reproduction from a third party, for example, a published map, if the author has not identified this in the manuscript. Please provide the relevant references.

Fraud

If you suspect that the results described in an article are untrue, please advise the Editor about this, explaining the reasons why you believe the results to be fraudulent.

Other ethical concerns

Please alert the Editor to any other ethical concerns you may have.

Writing up your report for the Editor

If at this stage you think you might miss your deadline, please let the Editor know.

In your report you should include a summary of the key elements of your review. It might be helpful to provide a quick summary of the article at the beginning of your report.

You should be courteous and constructive in your comments, and your report should not include any personal remarks. You should clearly indicate whether your comments are reflected by data or if they are based on your own opinion. Don't be afraid to be critical.

It is important to provide details about any deficiencies in the content of the article. Justify all criticisms using specific references to the text of the paper or to published literature to explain your reasoning and support your opinions so that the Editor and the authors are able to understand the basis of your comments. Be specific. Refer to line numbers in the paper or to exact sections of the article in which you would like changes to occur, and provide clear details of the required changes.

Give a clear recommendation to the Editor unless you are really unsure about your decision. The journal aims to publish only those articles that fall in the top 25% of papers in this field in terms of originality and quality. When you make a recommendation, it is worth considering the categories an Editor will use for classifying the article.

- Reject (because of poor quality or because it is out of the journal's scope)
- Accept without revision
- Accept but needs revision (either major or minor revision)

If you consider that the article needs to be revised, please indicate this in your report to the Editor, clearly identifying what revision is required and whether this should be considered a major or minor revision. It would be helpful if you could also indicate whether or not you would be happy to review the revised article.

You may feel that the article is good enough for publication, but either falls outside the scope of *Geological Magazine*, or does not quite reach the top 25% of papers in this field. In either case, could you suggest an alternative journal that may be more relevant for the author to consider.

Reviewing is done on an anonymous basis and your name will not be disclosed to the author of the article. Be careful not to identify yourself by your comments or by the 'author name' of your report if you submit it as a Word file. If you would prefer to let the author know that it was you that conducted the review, please feel free to include your name on the report and write a note to the Editor informing them that you would be happy for the author to know who you are.

(14th October 2010)