

***L&O* Manuscript Preparation Instructions**

General points

The American Society of Limnology and Oceanography (ASLO) publishes six regular issues of *Limnology and Oceanography (L&O)* (ISSN 0024-3590). In addition, Special Issues that deal with a topic that is both timely and of general interest to the ASLO membership are published occasionally. For further information regarding Special Issues, and the requirements for publishing a Special Issue, [click here](#).

L&O (ISSN 0024-3590) publishes original articles, including scholarly reviews, about all aspects of limnology and oceanography. ([Click here](#) for a description of the various kinds of papers that *L&O* publishes.) The journal's unifying theme is the understanding of aquatic systems. Submissions are judged on the originality of their data, interpretations, and ideas, and on the degree to which they can be generalized beyond the particular aquatic system examined. Laboratory and modeling studies must demonstrate relevance to field environments; typically this means that they are bolstered by "real-world" data. Authors are strongly advised to include theoretical contributions in more complete papers that use the new theory to elucidate important features of actual aquatic systems. Papers that focus on methods should be submitted to *L&O*'s sister journal *Limnology and Oceanography: Methods*. If you are unsure about appropriateness for *L&O*, please contact the Editor-in-chief (lo-editor@aslo.org) before submission.

Submissions to *Reviews in Limnology and Oceanography* should be clearly labeled as such. Originality of data is not required, but originality and generality of interpretations and ideas are of paramount importance. Reviews will not be considered without a statement of why you believe your synthesis to be original and how you expect it to affect interpretation and practice.

Conditions for publication

ASLO holds copyright of any material published in *L&O* or on its website. *L&O* submissions may not contain material published elsewhere (including online publication) or currently under consideration by another journal; see the *L&O* [Editorial Comments](#) web page for a discussion of what constitutes dual publication.

Submissions will not be considered unless results are amenable to independent verification. If a manuscript contains data from a biological strain isolated from nature, originating from the author's laboratory, and not available from a public collection, the author must honor in a reasonable time all bona fide requests for samples of the culture or deposit specimens in a public culture collection. Similar expectations apply to results obtained using new antibodies originating from the author's laboratory. Authors of submissions reporting research that includes new nucleotide or amino acid sequences must submit the sequence information to a

publicly accessible archive (e.g., [GenBank](#) or [EMBL](#)) and provide the accession numbers in the part of the manuscript that describes the research methods. Manuscripts that use existing sequences from GenBank/EMBL must cite accession numbers and original literature references to them (if they exist). Publication of an article in *L&O* implicitly binds authors to these conditions.

Authors are responsible for supplying complete bibliographic information—editors do not perform library research. They do edit for brevity and clarity. The Editorial Office is not liable for editorial or printing errors or errors in the technical content of the manuscript.

Communication with the Editorial Office at all points of the publication process is encouraged. Send correspondence to:

Everett Fee, Editor-in-chief
lo-editor@aslo.org

or

Lucille Doucette, Journals Manager
lo-manager@aslo.org

L&O Editorial Office
343 Lady MacDonald Crescent
Canmore, Alberta T1W 1H5
CANADA
office: (403) 609-2456
fax: (403) 609-2400

Authorship

Every person listed as an author must have: 1) contributed substantially to the study's conception, data acquisition, or analysis; 2) contributed substantially to drafting the manuscript; and 3) approved the final submitted manuscript. All three conditions must be met. Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship.

Publication Charges

Authors are responsible for paying the following publication charges:

Color figures are \$500 for one figure, and \$50 for each subsequent figure to a maximum of 8 figures. If you have more than 8 color figures contact the Editorial Office for a price.

\$50 per typeset page (including web appendices), if either the lead author or the corresponding

author is an ASLO member. If neither lead or corresponding author is an ASLO member, the charge is \$75 per page.

Tips to successful publication in *L&O*

The most common reasons for manuscript rejection are flawed study design or lack of detail in methods. Rejection is also likely if the writing is unclear, the manuscript is poorly organized, or incomplete. Authors should be aware that *L&O* permits only one major revision of any submission; i.e., if the revision of a paper is still not scientifically acceptable the manuscript will be rejected and resubmission will not be allowed. To prevent reviewers from dwelling on issues of style in the first round of review and overlooking substantive issues that subsequently result in the rejection of the revision, authors are advised to submit only fully polished manuscripts. In rare instances, the editor may invite an author to resubmit a paper for consideration as a new manuscript after, e.g., further research has been done. Such a revision is expected to be so profound that the revision will truly be a new manuscript. Under no circumstances will more than one such resubmission be allowed.

Every year the number of submissions from authors whose first language is not English increases. While we welcome these submissions, a distressing number of them contain serious grammatical errors; such papers are typically given short shrift by our reviewers, which prevents the science that they contain from being fairly assessed. We lack the resources that would be needed to bring such manuscripts up to the *L&O* standard for English grammar. If you cannot get a colleague or friend who is fully competent in English to help you we recommend that you make use of a professional scientific copyediting service (a search on the Web for 'scientific manuscript editing service' will lead you to many commercial services). Also, if you are new to the game or get back reviews saying that your paper is disorganized or difficult to understand you should take a bit of time to learn how to write paragraphs in a scientific paper, as described succinctly on the website <http://lgmacweb.env.uea.ac.uk/lequere/communication/communication.html>.

How to submit a manuscript

Proposals (for *Reviews* only)

Because space is limited and because *Reviews in Limnology and Oceanography* are intended to serve multiple purposes, including education and outreach, we strongly encourage submissions of proposals for reviews. These proposals will be formally reviewed by experts in the field, with the explicit function of providing recommendations for improvement of the eventual review. Proposals should be limited to no more than five double-spaced pages. Each should include the following:

- a provisional title, along with a fuller explanation of material to be covered and excluded;
- a list of authors and roles, including all institutional affiliations (We particularly encourage mentee-mentor collaborations in which a junior researcher who would

find a review most useful engages a senior researcher with recognized perspective on a field.);

- a statement indicating why the review is both timely and needed (e.g., the citation for the most recent review on the same or a closely related topic and a summary of the significant advances after its publication);
- an explanation of the approach to be taken (e.g., a focus on a new piece of theory or a novel interpretation of past results);
- an explanation of the overall novelty of the approach and its likely impact on practice or thought; and,
- a description of the companion materials planned for the ASLO [Teaching Tools](#) web page (e.g., PowerPoint lectures on the review topic or editable vector graphics files of figures for educational use). Such materials are not required but are strongly encouraged as means to enhance the broader impact of the review.

All submissions

Do not submit a revision of a manuscript that was rejected by *L&O* unless you were specifically invited to do so! Uninvited resubmissions of rejected manuscripts will be turned away without review.

Send all submissions, including revisions, to the *L&O* Editorial Office, i.e., *never* send a manuscript directly to an *L&O* Associate Editor because doing so defeats our tracking system and will delay processing.

Be sure that the cover letter contains the corresponding author's surface and E-mail addresses, and telephone and fax numbers.

Manuscripts must be double-spaced throughout (i.e., including references and figure legends) and must be printed on only one side of each page (i.e., single sided). Table captions must be double-spaced, but not the tables themselves. Start each section of the manuscript on a new page, and put these in the following order: title page, acknowledgments, abstract (omitted if the submission is a Comment), text, references, tables (each on a separate page), figure legends, and figures (each on a separate page). If your submission is a Comment, do **not** attempt to mimic the format of this types of paper in the printed journal.

Hard submissions

Include one copy of the cover letter.

Include one copy of the manuscript.

If a customs declaration is required, declare the contents to be "Educational materials, no commercial value" (otherwise the *L&O* office will have to pay a customs brokerage fee, which will be charged back to the author).

Electronic submissions

We encourage authors to submit new manuscripts and revisions electronically. Acceptable electronic formats are Adobe PDF and MS-Word. The manuscript must be in a *single* file that contains all text, tables, and figures.

To ensure that reviewers and editors can print your manuscript, all fonts must be embedded in PDF files, and PDF files must NOT contain security settings. If you are unsure how to create an acceptable PDF file, submit your manuscript as an MS-Word document and let us make the PDF file for you.

To submit electronically, attach two files (1: the cover letter, which must include the response to reviews if the submission is a revision; and 2: the manuscript) to an e-mail message addressed to the [Editor-in-chief](#). If you have any difficulties or concerns with submitting by e-mail send a short e-mail message (text only) to the [Editor-in-chief](#), who will send instructions for submitting by FTP to the L&O internet server. If you do not receive an acknowledgment of manuscript receipt within four days please enquire about the status of your submission by sending an e-mail message (text only) to the [Editor-in-chief](#).

Do *not* send hard copy unless specifically instructed to do so by the L&O office.

Original submissions

The cover letter must contain the names and complete addresses (including E-mail) of **four** people who the authors believe to be qualified reviewers for the paper. Suggested reviewers must be free of any potential conflict of interest. Any of the following situations may constitute a conflict of interest, so persons with these potential conflicts should be omitted from your list:

- someone with whom you or a co-author have had a significant and acrimonious disagreement with at any time in the past;
- a co-investigator with either you or a co-author on a current research project;
- a co-author with your or with one of your co-authors on the current manuscript in an article published within the past 5 years;
- a close friend of yours or of a co-author's;
- someone who works at your institution (or that of a co-author); or,
- someone who has seen and commented on the manuscript prior to its submission to L&O.

To provide balance and avoid overworking particular reviewers, L&O will probably go outside the list of reviewers you provide. Thus you may wish to make other potential conflicts known to us.

Clearly indicate in the cover letter whether the submission is intended as an Article, Review, or Comment (the [Editorial Comments website](#) describes how these manuscript types differ). Include a statement that the manuscript contains only original data (i.e., no data in it are already published or currently submitted for review to another journal), and

a statement that [publication charges](#) will be paid if the paper is accepted for publication in *L&O*. Finally, briefly identify the novel contribution of this work and how it will affect interpretation and practice in aquatic sciences.

If any data in the manuscript were previously published or are used in another manuscript presently under consideration elsewhere, describe the extent of the overlap in the cover letter and include copies of the relevant papers. Similarly, it will speed review if you include copies of related manuscripts that are in press, submitted to another journal, or that reviewers are likely to have difficulty locating. We prefer to receive copies of all such manuscripts electronically (as PDF files).

Revisions

The cover letter must contain detailed responses to the Reviewers' and Editor's comments. Describe how you modified the manuscript in response to each comment or outline your reasoning carefully if you disagree with the comment.

Final Submissions

Send **one** complete hard copy of the final manuscript, including figures. You must include a cover letter where you state in detail how the manuscript was changed in response to the editor's letter and reviews (if any).

We also need an electronic copy. The preferred format for the text and references is Microsoft Word. (PDF files are not accepted at this stage.) Tables can be embedded in the file as MS-Word tables, but not as pictures (e.g., .pic, .gif, or .tif formats). If you cannot insert them as Word tables, then send all tables in one MS-Excel file. Send the figures in one PDF file created using the "Press Quality" Acrobat setting unless otherwise instructed.

The cover letter and any extra material (e.g., web appendices) should be in separate files.

The *L&O* Style

As you prepare your paper, refer to a recent issue of *L&O* for examples of the journal's style. The ASLO Journals Manager (lo-manager@aslo.org) will be happy to answer any questions that you cannot resolve in this way or by referring to the detailed *L&O* style specifications below.

The order of the different parts of a submission should be:

- [Title page](#)
- [Acknowledgments page](#)
- [Abstract page](#)
- [Text](#)

- [References](#)
- [Tables](#)
- [Figure Legends](#)
- [Figures](#)
- [Web Appendices](#)

General style:

Use a 12-point font (Times Roman preferred), double-spaced on one side of non-glossy A4 or "letter" (8-1/2x11 inch; 21.6x28 cm) paper throughout the manuscript. Use 1-inch (2.5-cm) margins on all sides.

Number all pages, starting with 1 on the title page. If the software used to prepare the manuscript can do so, number all lines of text (making it easier for reviewers to comment on the manuscript).

Do not justify (i.e., align text) on the right-hand margin.

Do not break (hyphenate) words over lines.

Indent the first line of each paragraph. Do not put a blank line between paragraphs.

The only allowable footnotes are for author addresses on the [title page](#) or when they are unavoidable in tables.

L&O does not publish printed appendices. We do, however, publish electronic appendices on the L&O website. Such appendices may contain materials that cannot be printed in L&O (e.g., videos) or tables that would take up too much space in the printed journal. The reviewers and editor must agree that this material is essential to understanding the associated L&O paper; i.e., L&O Web Appendices are not intended to be used to archive raw data. Submit material intended for publication on the *L&O* website as separate electronic files and refer to the material as "see the Web Appendix". The first reference to each such appendix must include the URL; e.g., see Web Appendix: www.aslo.org/lo/toc/vol_xx/issue_x/xxxxa1.pdf

Do not number or letter sections of the manuscript.

Use an italic font for lower case Greek letters; but use a regular font (i.e., not italic) for upper case Greek letters.

Thoroughly proofread and spell-check the manuscript with a computer program.

Use a single serifed font (Times New Roman preferred); if special mathematical or Greek symbols not available in that font are needed, use the Symbol font. Note: superscripts, subscripts, italic, boldface, underline, and changes of font size are not considered to be different fonts.

Cite all figures and tables in the text and number them in the order that they appear in

the text.

Do not use punctuation (commas or periods) in numbered equations.

Cite literature in the text in chronological, followed by alphabetical, order and formatted like these examples: "Campbell (1983, 1987b)," "(Smith et al. 1984; Karl and Craven 1988; Korobi 1997, 1998)." In the *References* section, list citations in alphabetical, followed by chronological, order.

Manuscripts must be written in English. Before submission, the manuscript should be proofread by a person fluent in English.

Order the manuscript as: title page, acknowledgments page, abstract page (not required for a Comment), manuscript body, references, tables, figure legends, and figures. All papers should be formatted in this way, i.e., do NOT place author names at the end of the manuscript, which is how Comments are formatted in the journal.

Use only SI units (metric and Celsius; for detailed SI specifications, [click here](#)). The following are required formats for situations that are commonly formatted incorrectly:

- Use exponents to indicate multiplication or division in units (slashes are not allowed).
- Use mol L⁻¹ for molar concentrations ('M' is not acceptable).
- Use mol quanta for photosynthetically available radiation (PAR) (Einsteins is not acceptable).
- Use × for multiplication (* is not acceptable).
- To indicate a power of 10, write, e.g., 5×10⁻⁸ (5E-8 is not acceptable).

Do not italicize common Latin terms and abbreviations such as i.e., e.g., in situ, in vivo, and et al.

The Title page:

Capitalize only the first word, proper nouns, and acronyms in the title. I.e., *Do not* capitalize all words nor use all capitals for the entire title.

Do not use abbreviations in the title (e.g., use 'iron', not 'Fe'; and 'southeast', not 'SE').

List the names of all authors in a single continuous character string below the title. Use footnotes to indicate the corresponding author (if different than the first author listed) and author addresses; these addresses should be those where the authors resided *at the time that the work presented in the paper was done* (use separate footnotes for current addresses, if different). Spell out state or province names in full. Double-space all footnotes on the title page.

For Articles, provide a condensed *running head* of no more than 40 characters

(including spaces) at the bottom of the page.

The Acknowledgments page:

Include brief statements about granting agencies, important aid received from institutions, and any potential conflicts of interest (as detailed in the [L&O Ethics statement section 3.4 and 3.4.1](#)).

Thank anyone who made a substantial contribution to the work (e.g., data collection, analysis, or writing or editing assistance) but who did not fulfill the [authorship criteria](#), along with their specific contributions.

You are responsible for ensuring that all persons named in the Acknowledgments section know and agree to being identified there (since it may be interpreted as endorsement of the data or conclusions).

The Abstract:

A single paragraph of no more than 250 words (15 to 17 lines of text in a 12-point, Times New Roman font, where the line width is 17 cm [=6.5 in]). State what you did and what you found; omit 'introductory' statements that summarize previous work and avoid statements that do not identify actual findings (e.g., "The implications of these results are investigated with a dynamic model.") Summarize rather than advertise important findings and their significance. (In the jargon of scientific writing, L&O abstracts must be informative rather than indicative. *See* http://www.southernct.edu/~brownm/inform_ab.html for further explanation of these terms.) Because the abstract must stand on its own, it cannot include references. Comments have no abstracts.

Text:

Follow all directions given in the [General style](#) section above. Articles must be structured in the conventional format (Introduction => Methods => Results => Discussion). There should be no "Conclusions" section at the end of the Discussion; this type of summary information belongs in the Abstract.

Describe statistical methods in enough detail to enable a knowledgeable reader with access to the original data to verify the reported results. Give degrees of freedom for *F*-tests as subscripts (e.g., $F_{3,4}$); for other statistics, report degrees of freedom as "df=*n*" following the test result (e.g., $t=3.4$, df=20). Use italics for symbols representing a statistic: *p* for probability level, *n* for the sample size, *r* for the correlation coefficient, R^2 to denote the coefficient of determination. ($r^2 = R^2$ only for a linear regression.)

Use the same font for the same mathematical symbol regardless of where it appears in the manuscript (text, displayed equations, tables, figures, or figure legends).

Use periods after all abbreviations except for metric measures, compass directions, and time (s, min, h, d, yr; do not abbreviate 'week' or 'month'). Use hh:mm h or hh:mm:ss h

for time of day. Do not use a.m. or p.m. E.g., 09:30 h, 18:24:44 h.

Provide the full expansion of all acronyms on first use (even common ones like DNA).

Format dates like "15 June 1999" throughout the text, figures, and tables. If it is necessary to conserve space, abbreviate month names to the first 3 letters of the month name (no period) and the year to the last two digits.

Do not abbreviate names of states, provinces, or cities. Abbreviate names of countries only after defining on first use, e.g., United Kingdom (U.K.), United States of America (U.S.A.)

References:

The ratio of pages of references to pages of text must be less than 1:4.unpubl. (See the [editorial commentary Web page](#) for reasons.) For Reviews only, the ratio of references to text may be relaxed at the discretion of the editor. Nevertheless, Reviews should limit citations to prior reviews and key papers published since the last review or omitted from prior reviews. Exhaustive bibliographies (annotated or not) may be useful and can be submitted to the ASLO [Teaching Tools](#) web page.

All references cited in the text must appear in the *References*, and vice versa.

No more than 3 references can be cited to support any statement. (See the [editorial commentary Web page](#) for reasons.)

Double check the spelling of author names and years of publication. All author names must be given--even if there are more than eight (the copyeditor will abbreviate the list to 'and others' if appropriate).

Manuscripts in preparation, submitted, unpublished theses, or other inaccessible sources should be cited in text by giving the author(s) initial(s), last name(s), and 'pers. comm.' or 'unpubl.' For example, (A. B. Jones unpubl.) Such materials must **NOT** appear in the *References*.

References to manuscripts that are available via an online discussion forum (e.g., the EGU *Discussions* journals) must be referred to as 'pers. comm.' These manuscripts must **NOT** appear in the *References*.

Verify all references against original sources; check especially journal titles, accents, diacritical marks, and spelling in languages other than English.

Make sure that each citation is complete, according to the following examples:

Article:

Fenchel, T. 1986. Protozoan filter feeding. *Prog. Protistol.* **1**: 65-113.

Articles with a Digital Object Identifier (DOI):

Many older papers that were originally published with page numbers have been

retroactively assigned DOI's while some newer electronic journals assign article identifiers instead of page numbers (HTML being the primary form of publication). Thus, a paper with a DOI may contain page numbers, an article identifier, or both, and at least one of these is needed to complete the reference. De Pol-Holz, R., O. Ulloa, L. Dezileau, J. Kaiser, F. Lamy, and D. Hebbeln. 2006. Melting of the patagonian ice sheet and deglacial perturbations of the nitrogen cycle in the eastern South Pacific. *Geophys. Res. Lett.* **33**: L04704, doi:10.1029/2005GL024477

If there are page numbers, the last part would be **33**: 15-32, doi:10.1029/2005GL024477

If there are both page numbers and an article identifier, the last part would be **33**: 15-32, L04704, doi:10.1029/2005GL024477

Check that every DOI that you cite is correct via the [doi system website](#). Note that references with a doi *do not* have a period at the end; this facilitates electronic lookup (doi's terminated with a period fail when sent to doi resolver websites).

Book:

Stumm, W., and J. Morgan. 1981. *Aquatic chemistry*, 2nd ed. Wiley.

Chapter:

Codispoti, L. A. 1983. Nitrogen in upwelling systems, p. 513-564. *In* E. J. Carpenter and D. G. Capone [eds.], *Nitrogen in the marine environment*. Academic.

Thesis:

Kimmance, S. A. 2001. The interactive effect of temperature and food concentration on plankton grazing and growth rates. Ph.D. thesis. Univ. of Liverpool.

Papers which are unconditionally accepted for publication but for which exact publication data are not yet available should be formatted according to the above examples but with the phrase "In press" appearing instead of the year of publication.

Use mixed case (upper and lower case OR caps and small caps) for all text in the *References* section. In particular, do not use all capital letters for author names because doing so makes it impossible to for the copyeditor to properly typeset names like "MacKenzie".

For abbreviations of journal names refer to [Chemical Abstracts Service Source Index \(CASSI\)](#) or [Biosis](#).

Do not include part (issue) numbers after volume numbers unless each part of the volume is paginated separately.

Websites. A websites may be referred to only if it is sponsored by an organization that is committed to maintaining it in perpetuity. Personal or university-based websites are *not*

allowed in L&O because such websites are prone to disappear when the scientist who created them moves or loses interest in material. Websites are referred to only in the text and are not included in the list of references.

Tables:

Start each table on a new page.

Format tables so that they will fit on the printed page: A 1-column table can be up to 60 characters wide, and a 2-column table up to 130.

Type table legends as double-spaced paragraphs at the top of each table.

Figure Legends:

Group figure legends together on the page(s) preceding the figures; one paragraph per figure.

Explain all panels in each figure (A), (B), ...

Symbols used in the figure (e.g., circles, squares, ...) must be explained on the figure itself (i.e., not in the figure legend). No special symbols are allowed in the figure legend.

Figures:

Do not put figure legends on the figures. Put only "Fig. #." on the figure.

Number figures with Arabic numerals in the order of their citation in the text. If panels of a figure are labeled (A, B, ...) use the same case when referring to these panels in the text (A, B, ..., not a, b,...).

If a figure consists of multiple panels, put all panels on one page and repeat axes titles on each panel only if they are different.

Put scale bars on the figure, NOT in the figure legend.

Use the Times New Roman font for all text and numerals on figures. Font sizes size should be from 9 to 11 points. If mathematical or Greek symbols are not available in Times New Roman, use the Symbol font.

Page layout: See [page layout diagram](#).

Submit figures at the intended print size. The *L&scientific manuscript editing service* column width is 8.9 cm (3.5 in) and full page width is 18.4 cm (7.25 in). The maximum size for a figure is 18.4 x 23.2 cm (7.25 x 9.125 in).

Make figures as simple as possible. For example, avoid grid lines and boxes around symbol definitions.

Maps must include latitude and longitude, an indication of compass direction, and a thin line as a border. All markings must be legible.

Color figures:

See [detailed instructions](#).

Web Appendices:

L&O has never published appendices in the journal itself. But in 2003 (Volume 45, Issue 1) we began publishing electronic appendices. These are reviewed as rigorously as the paper they support and are copyrighted by ASLO. Their purpose is to make available material that cannot be printed (e.g., videos) or essential data such as a table that would take up too much space in the journal. The reviewers and the Associate Editor must agree that the material in a Web Appendix is essential to understanding the associated *L&O* paper; i.e., Web Appendices are not intended to be a way to archive raw data or to make an *L&O* article shorter. Since there are many people who still read the printed journal, we try to minimize the need to go the Web to obtain essential information. We therefore have a strict policy of not allowing Web Appendices to be used for materials such as simple graphs or short tables that could be printed in the journal.