

# Instructions to Authors

# Botany

## Scope of Journal

*Botany* is an international refereed, primary research journal that is available in paper and electronic form. Authors are encouraged to submit articles that are hypothesis-based, rather than descriptive. Results of multidisciplinary approaches to scientific questions are of particular interest. Compendious work will not be considered unless it contains substantial, innovative primary research.

## Types of papers

The Journal publishes articles, notes, commentaries, and reviews, in English or French. Manuscripts may be of any length, but must be clearly and concisely written such that the length is commensurate with the amount of new information presented. An **article** reports results of a substantial, completed work. A **note** is a brief report of a small experiment, taxonomic proposal, or unexplained observation. A **commentary** is a statement of considered opinion, a presentation of alternative interpretations about published work, or a discussion of current issues in botany. A **review** presents novel and critical appraisals of specific topics of current interest (these may take the form of a full review or a minireview, the latter being more limited in scope). All contributions are subject to normal reviewing processes.

### R. Larry Peterson or Barry J. Shelp, Editors

*Botany*

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## Page charges

There are **no page charges** for publication in *Botany*.

## Purpose of these instructions

To **facilitate publication**, authors must check symbols, abbreviations, and technical terms for accuracy, consistency, and readability. NRC Research Press maintains the right to preserve the technical quality of the Journal. Authors are requested to refer to a recent issue of the Journal for details of layout, especially for tables and reference lists. **Manuscripts and illustrations must meet the requirements outlined below; otherwise, publication may be delayed.**

## Submission requirements

With each new submission, the corresponding author must include a **cover letter** and **copyright license form** signed by all authors (see also Publication process section, Copyright

license). Copyright license forms can be either sent by fax or scanned and e-mailed.

The cover letter must

- (i) warrant that the manuscript represents original work that is not being considered for publication, in whole or in part, in another journal, book, conference proceedings, or government publication with a substantial circulation,
- (ii) warrant that all previously published work cited in the manuscript has been fully acknowledged (see Publication process section, Permission to reproduce copyright material),
- (iii) include an explanation of any real or perceived conflicts of interest (see Ethics section, Conflict of interest and disclosure),
- (iv) warrant that all of the authors have contributed substantially to the manuscript and approved the final submission,
- (v) state the type of paper being submitted (e.g., article, note, review, etc.) and the preferred subject category for listing the paper in the Table of Contents (Cell and molecular biology, Physiology and biochemistry, Ecology, Genetics, Mycology and plant-microbe interactions, Paleobotany, Phycology, Structure and development, Systematics),
- (vi) include the full name and complete contact information (including e-mail address) for each co-author, and
- (vii) list the names and e-mail addresses of two persons who are qualified to act as referees.

Authors wishing to submit **more than two manuscripts in a group** or a paper that is **substantially longer than 30 manuscript pages** must contact the Editors before submission to ensure that preparations can be made to expedite evaluation of such papers.

Authors **resubmitting** a manuscript after previous rejection or withdrawal must indicate the manuscript number assigned to the previous submission and the Associate Editor who managed its evaluation. Resubmitted manuscripts are treated as new papers. A letter outlining the precise disposition of all points raised during the previous evaluation must be included.

Authors of manuscripts reporting nucleic acid sequences must submit the relevant data to the **GenBank, EMBL, or DDBJ** databases, whichever is most convenient. Details regarding submission can be obtained from the relevant databases. Electronic mail addresses are as follows:

GenBank: gb-sub@ncbi.nlm.nih.gov  
EMBL: datasubs@embl-heidelberg.de  
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The mailing address for GenBank is as follows:  
GenBank Submissions  
National Center for Biotechnology Information  
Bldg. 38A, Room 8N-803  
8600 Rockville Pike  
Bethesda, MD 20894, USA

The accession number of the sequence must be applied for before publication and noted in the manuscript.

### How to submit

Authors must submit all manuscripts via **OSPREY** Online Submission and Peer Review system ([pubs.nrc-cnrc.gc.ca/botany/osprey](http://pubs.nrc-cnrc.gc.ca/botany/osprey)). **OSPREY** is best viewed in Netscape 7.0 or higher or Internet Explorer 6.0 or higher. During registration, authors choose a username/password. The security of manuscripts is protected by the username/password system. Authors may register at any time on the site, but should register only once. Those individuals who have submitted to or reviewed for the Journal in the past will have an existing profile in **OSPREY** and may access it by entering their e-mail address in the "Forgot Your Password" field on the Web site.

For technical support at any point during submission, contact Louis Lafleur (613-998-9432; [OspreySupport.CISTI@nrc-cnrc.gc.ca](mailto:OspreySupport.CISTI@nrc-cnrc.gc.ca)) from 8:00 am to 4:00 pm EST.

A user manual with full instructions is available on the Web site.

Authors must submit at least a cover letter and manuscript; tables and figures may be included in the manuscript file, or may be uploaded separately. **OSPREY** accepts files in most common text and graphics formats (i.e., .cdr, .doc, .eps, .jpg, .gif, .pdf, .ppt, .ps, .psd, .tif, .wpd, and .xls).

Research Press is not currently accepting MS Word 12 documents (.docx extension). Please note that saving .docx documents to other formats (i.e., .doc, .rtf, or .txt) will likely lead to changes to or losses in formatting or other data. Authors saving .docx manuscripts to other formats are requested to check their manuscripts carefully before submission for any losses or other errors.

When first submitting a manuscript for peer review, low-resolution versions of figures should be uploaded to limit file size. When submitting, authors should be working at a computer where all of the relevant files for their paper are available. Submission of a typical manuscript requires about 10 minutes, but upload time depends on the speed of the Internet connection.

All correspondence about manuscripts submitted through **OSPREY** will be sent to the person listed as the corresponding author during submission. Correspondence is by e-mail.

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- (i) Upload figure files separately from the manuscript.
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high-quality high-resolution PostScript or .pdf files are acceptable. Sending files in more than one format is fine; the publisher will use the format that will reproduce the best.

- (iv) Ensure that they are uploading the most recent, correct versions of the files.

**Text** (including tables) should be provided in a word-processing format (any form of WordPerfect, Microsoft Word, or TeX is preferable, Windows or Macintosh platform). TeX macros for preparing papers for submissions are available at [ftp.tex.ac.uk/tex-archive/macros/latex/contrib/nrc/](http://ftp.tex.ac.uk/tex-archive/macros/latex/contrib/nrc/), [ftp.dante.de/tex-archive/macros/latex/contrib/nrc/](http://ftp.dante.de/tex-archive/macros/latex/contrib/nrc/), and [ctan.tug.org/tex-archive/macros/latex/contrib/nrc/](http://ctan.tug.org/tex-archive/macros/latex/contrib/nrc/). For **figures**, see the section Preparation of electronic graphic files.

### Editorial process

**Receipt of each manuscript** is acknowledged by e-mail to the corresponding author within 3 working days. The manuscript is read and examined for conformity to these *Instructions to Authors* by the Editors. Failure to meet the criteria outlined may result in return of the manuscript for correction before evaluation.

Authors, Institutional Directors, and Editorial Managers should note that it is the strict policy of the Journal to correspond only with the authors through the designated corresponding author of a paper. The Editors regard a submitted manuscript as a confidential document and seek to ensure that the authors retain control of the reports obtained during the evaluation process.

The Editors assign management of the peer review process to an Associate Editor responsible for the subject area of the paper. However, the Editors will return unreviewed those manuscripts that do not fall within the Journal's scope or character and those that exceed the Journal's guidelines for prior publication. The Associate Editor selects a minimum of two reviewers chosen for their knowledge of, and their experience in, the subject treated in the manuscript. Authors are required to suggest reviewers who are competent to examine their manuscript, but the Associate Editor is not limited to such suggestions. Reviewers are invited, in confidence, to recommend on the suitability of the submission and provide comments for the authors and the Associate Editor. Reviewers are informed that they have received privileged documents for assessment of scientific merit and are expected to provide reasonable arguments to support their evaluations. Identities of reviewers will not be released to authors without the written consent of the reviewer. The review process is expected to be complete within 8 weeks, but conflicting recommendations and other unpredictable events may cause some delay.

Associate Editors and reviewers are asked to make one of four recommendations: accept, accept after minor revision, accept after major revision, do not accept. Reviewers may also advise that a paper is more suitable for a specialist or local journal. Except where remarks are professionally inappropriate, all reviewers' comments are sent to authors. The decision to accept a paper is made primarily on scientific content. However, authors should recognize that unclear writing and (or) data presentation often contribute to refusal of manuscripts. The decision to ask for revisions is made in light of the reviewers' comments and recommendations, and after evaluation by the Associate Editor. Authors are allowed 28 days to undertake revisions. Revised manuscripts that do not meet this deadline will be treated as new submissions and may be subject to further review. Papers requiring new exper-

imental work or major rewriting will be rejected, and the authors will be encouraged to submit a new manuscript when the required amendments have been completed. Authors should attempt to meet all the objections raised by reviewers, especially where clarification is sought. Editorial items must be completed as directed.

The final decision on acceptance or rejection is made by the Editors on the advice of the Associate Editor. This decision, together with any relevant reasons, will be communicated by e-mail from the Editors to the corresponding author. One copy of the original submission is retained by the Editors. In the case of papers that are not acceptable or are withdrawn, this manuscript and a copy of all reviews and correspondence are retained, for reference (in case of resubmission), for 1 year after the date of submission.

### Publication process

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### Correspondence with NRC Research Press

Once the paper has been accepted, all correspondence should be with NRC Research Press, National Research Council of Canada, Ottawa, ON K1A 0R6, Canada (fax: 613-952-7656; e-mail: [pubs@nrc-cnrc.gc.ca](mailto:pubs@nrc-cnrc.gc.ca); URL: [pubs.nrc-cnrc.gc.ca](http://pubs.nrc-cnrc.gc.ca)).

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The Editors recognize that authors and peer reviewers may have real or perceived conflicts of interest arising from intellectual, personal, or financial circumstances of their research. Submitted manuscripts should include full disclosure of funding sources for the research and the letter of transmission should include an explanation of any real or perceived conflicts of interest that may arise during the peer review process. Failure to disclose such conflicts may lead to refusal of a submitted manuscript.

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If a person pictured in a photo is identifiable, his or her permission is required to publish the photo. The person will be asked to sign a letter or form allowing NRC Research Press to publish the photo.

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the methods are repeatable and ensures the scientific integrity of the work. The removal of artefacts or any (nonintegral) data held in the image is discouraged.

## The manuscript

### Format and organization of text

The manuscript should be **double-spaced** on 21.5 × 28 cm (8.5 × 11 in.) or ISO A4 paper. Each page and line should be numbered, beginning with the title page. For material that is to be set in italics, use an italic font; do not underline. Use capital letters only when the letters or words should appear in capitals.

All manuscripts should contain a title page (p. 1), an abstract (p. 2), followed by the body of the paper, an Acknowledgements section, plus references, tables, figure captions, and appendices, in that order. (See descriptions of particular manuscript parts, below.) Tables and figure captions should be on separate pages.

Primary **headings** (set in bold font) indicate the major sections of the paper (Introduction, Materials and methods, Results, Discussion, Acknowledgements, References). Secondary headings (set in italic font) indicate major divisions within a primary section. Tertiary headings (underlined) indicate divisions within a secondary heading.

The **title** should be concise and informative, with appropriate words for indexing and information retrieval. In the title, the names of organisms should be either in the vernacular or in Latin without their authority names.

The **title page** should contain the following. (i) The full title of the paper. (ii) Authors listed in the order in which they are to appear at the head of the printed article. (iii) Affiliation and address (including e-mail address) for each author. This should reflect the affiliation and address at the time of the study. Indicate in a footnote current affiliations and addresses (including e-mail addresses) that differ from those in the by-line. (iv) Name, address, telephone and fax numbers, and e-mail address of the author responsible for correspondence.

An **abstract** is required for every contribution and should contain accurate descriptive words that will draw the reader to the content. This is particularly important because contemporary alerting services and search engines will search this text. It should not be more than 200 words and should appear on a separate page. The concise abstract should present the paper content accurately and should supplement, not duplicate, the title in this respect. Authors able to submit abstracts in both fluent English and French are encouraged to do so. Abstracts submitted in one language will be translated into the other official language by the journal translator. References should not be cited in the abstract unless they are absolutely essential, in which case full bibliographic information must be provided. Between three and six **key words** should be provided and placed directly below the abstract.

The **text** should be written and arranged to ensure that the observations reported may be reproduced and (or) evaluated by readers. Sources of biological materials, experimental methods, geographical locations, and statistical methods (see the section Statistical analyses) should be described. Precise locations of rare and endangered organisms should not be divulged. Sources of commercially available laboratory or field equipment and fine chemicals should be indicated in parentheses; list the company name, city, and country. Material

taken from research theses must be thoroughly edited for brevity and must conform to these *Instructions to Authors*.

In the text, authors are encouraged to include uniform resource locators (**URLs**) and digital object identifiers (**DOIs**) to enable readers to find material on the World Wide Web. URLs and DOIs for references cited should be placed after the reference in the reference list; other URLs and DOIs should be placed in context in the text.

**Footnotes** to material in the text should not be used unless they are unavoidable, but their use is encouraged in tables. Where used in the text, footnotes should be cited in the manuscript by superscript Arabic numbers (except in the tables, see below) and should be numbered serially beginning with any that appear on the title page. Each footnote should be typed on the manuscript page upon which the reference is made; **footnotes should not be included in the list of references.**

**Equations** should be clearly typed; triple-spacing should be used if superscripts and (or) subscripts are involved. Superscripts and subscripts should be legible and carefully placed. Distinguish between lowercase *l* and the numeral *one*, and between capital *O* and the numeral zero. A letter or symbol should represent only one entity and be used consistently throughout the paper. Each variable must be defined in the text or in a **List of symbols** to appear after the reference list. Variables representing vectors, matrices, vector matrices, and tensors must be clearly identified. Numbers identifying equations must be in square brackets and placed flush with the **left margin**. In numbering, no distinction is made between mathematical and chemical equations.

### References

The author is responsible for verifying each reference against the original article. Each reference must be cited in the text using the surnames of the authors and the year, for example, (Walpole 1985) or Green and Brown (1990). Depending on the sentence construction, the names may or may not be in parentheses, but the year always is. If there are three or more authors, the citation should give the name of the first author followed by et al. (e.g., Green et al. 1991). If references occur that are not uniquely identified by the authors' names and year, use *a*, *b*, *c*, etc., after the year, for example, Green 1983a, 1983b; Green and Brown 1988a, 1988b, for the text citation and in the reference list. In the text, groups of references should be ordered chronologically and then alphabetically for those published in the same year.

Private communications and papers submitted but not yet accepted are not included in the reference list but instead should be included as footnotes or in parentheses in the text, giving all authors' names with initials; for a private communication, year of communication should also be given (e.g., J.S. Jones (personal communication, 1999)). If an unpublished book or article has been accepted for publication, include it in the reference list followed by the notation *In press*. References to **nonrefereed documents** (e.g., environmental impact statements, contract reports) must include the address where they can be obtained.

The **reference list** must be double-spaced and placed at the end of the text. References must be listed in alphabetical order according to the name of the first author and not numbered. References with the same first author are listed in the following order. (i) Papers with **one author only** are listed first in chronological order, beginning with the earliest paper. (ii) Papers with **dual authorship** follow and are listed in alpha-

betical order by the last name of the second author. (iii) Papers with **three or more authors** appear after the dual-authored papers and are arranged chronologically.

References should follow the form used in current issues of the Journal. The names of serials are abbreviated in the form given in *Chemical Abstracts Service Source Index (CASSI)* (Chemical Abstracts Service, 2540 Olentangy River Road, P.O. Box 3012, Columbus, OH 43210-0012, USA). In doubtful cases, authors should write the name of the serial in full.

The Journal encourages the inclusion of issue numbers, which should be placed in parentheses after the volume number. Uniform resource locators (URLs) or digital object identifiers (DOIs) are useful in locating references on the World Wide Web, and authors are encouraged to include these; they should be added to the reference in the reference list. Online-only citations are indicated as such by including "[online]" after the title. The following bibliographic citations illustrate the punctuation, style, and abbreviations for references.

*Examples of references types, including electronic references*

**Journal article with DOI:**

Ritland, K., Meagher, L.D., Edwards, D.G.W., and El-Kasaby, Y.A. 2005. Isozyme variation and the conservation genetics of Garry oak. *Can. J. Bot.* **83**(11): 1478–1487. doi:10.1139/b05-114.

**Journal article with URL:**

Newbury, M.G., and Ashworth, A.C. 2004. A fossil record of colonization and response of lacustrine fish populations to climate change. *Can. J. Fish. Aquat. Sci.* **61**(10): 1807–1816. Available from [pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2\\_abst\\_e?cjfas\\_f04-113\\_61\\_ns\\_nf](http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_abst_e?cjfas_f04-113_61_ns_nf) [accessed 28 October 2005].

**Journal article available online only (with DOI):**

van der Sanden, J.J., and Hoekman, D.H. 2005. Review of relationships between grey-tone co-occurrence, semivariance, and autocorrelation based image texture analysis approaches [online]. *Can. J. Remote Sens.* **31**(3): 207–213. doi:10.1139/rs03-011.

**Entire issue of journal:**

Gordon, D.C., Jr., and Hourston, A.S. (*Editors*). 1983. Proceedings of the Symposium on the Dynamics of Turbid Coastal Environments. *Can. J. Fish. Aquat. Sci.* **40**(Suppl. 1).

**Report:**

Sanders, W.W., Jr., and Elleby, H.A. 1970. Distribution of wheel loads in highway bridges. National Cooperative Highway Research Program Report 83, Transportation Research Board, National Research Council, Washington, D.C.

**Book:**

Parsons, T.R., Maita, Y., and Lalli, C.M. 1984. A manual of chemical and biological methods for seawater analysis. Pergamon Press, Toronto.

**Book in a series:**

Scott, W.B., and Crossman, E.J. 1973. Freshwater fishes of Canada. *Bull. Fish. Res. Board Can.* No. 184.

**Part of book:**

Simonet, P., Normand, P., Hirsch, A.M., and Akkermans, A.D.L. 1990. The genetics of *Frankia*-actinorhizal symbiosis. In *Molecular biology of symbiotic nitrogen fixation*. Edited by P.M. Gresshoff. CRC Press, Inc., Boca Raton, Fla. pp. 77–109.

**Paper in conference proceedings:**

Taylor, I.E.P., and Wallace, J.C. 1989. The structural association between cellulose and xyloglucan in the primary cell wall of beans (*Phaseolus vulgaris* L.). In *Cellulose and wood: chemistry and technology*. Proceedings of the 10th Cellulose Conference, Syracuse, N.Y., 29 May – 2 June 1988. Edited by C. Schuerch. John Wiley & Sons, New York. pp. 273–282.

**Institutional publications and pamphlets:**

Dzikowski, P.A., Kirby, G., Read, G., and Richards, W.G. 1984. The climate for agriculture in Atlantic Canada. Available from the Atlantic Advisory Committee on Agrometeorology, Halifax, N.S. Publ. ACA 84-2-500. Agdex No. 070.

**Corporate author:**

American Public Health Association, American Water Works Association, and Water Pollution Control Federation. 1975. Standard methods for the examination of water and wastewater. 14th ed. American Public Health Association, American Water Works Association, and Water Pollution Control Federation, Washington, D.C.

**Thesis:**

Keller, C.P. 1987. The role of polysaccharidases in acid wall loosening of epidermal tissue from young *Phaseolus vulgaris* L. hypocotyls. M.Sc. thesis, Department of Botany, The University of British Columbia, Vancouver, B.C.

**Web site citation:**

Quinion, M.B. 1998. Citing online sources: advice on online citation formats [online]. Available from [www.worldwidewords.org/articles/citation.htm](http://www.worldwidewords.org/articles/citation.htm) [accessed 20 October 2005].

**Translation:**

Koike, A., and Ogura, B. 1977. Selectivity of meshes and entrances of shrimp traps and crab traps. *J. Tokyo Univ. Fish.* **64**: 1–11. [Translated from Japanese by Can. Transl. Fish. Aquat. Sci. 4950, 1983.]

**Tables**

Tables must on separate pages, placed after the list of references, and numbered with Arabic numerals in the order cited in the text. The title of the table should be a concise description of the content, no longer than one sentence, that allows the table to be understood without detailed reference to the text. Column headings should be brief, but may be amplified by footnotes. Vertical rules should not be used. Use the table function from the drop-down menu in your word processing program to create your table. A copy of the Journal should be consulted to see how tables are set up and where the lines in them are placed. Footnotes in tables should be designated by symbols (in the order \*, †, ‡, §, ||, ¶, #) or superscript lowercase italic letters. Descriptive material not designated by a footnote may be placed under a table as a **Note**. Numerous small tables should be avoided, and the number of tables should be kept to a minimum.

### Figure captions

Figure captions should be listed on a **separate page** and placed after the tables. The caption should informatively describe the content of the figure, without need for detailed reference to the text. Experimental conditions should not be included, but should be adequately covered in the methods. For graphs, captions should not repeat axis labels, but should describe what the data show. A single caption can be provided for multipart (composite) figures, with necessary details on the separate parts, identified by their individual labels. If the separate parts require enough information to warrant separate captions, then the composite should be separated into individual figures.

### Appendices

An appendix should be able to stand alone, as a separate, self-contained document. Figures and tables used in an appendix should be numbered sequentially but separately from those used in the main body of the paper, for example, Fig. A1, Table A1, etc. If references are cited in an appendix, they must be listed in an appendix reference list, separate from the reference list for the article.

### Supplementary material

Supplementary material (or data) consists of extra tables, figures (maps), detailed calculations, and data sets produced by the authors as part of their research, but not essential for understanding or evaluating the paper, and not published with the article in the print edition of the journal. This material is never edited, converted, or scanned, and therefore will appear exactly as submitted. This is to prevent any errors from being inadvertently introduced during file manipulation or printing. Tables and figures should be numbered in sequence separate from those published with the paper (e.g., Fig. S1, Table S1), and all supplementary material should be referred to in the manuscript by footnotes.

Supplementary material must be submitted with the article, in electronic format. During Web submission (**OSPREY**), relevant files should be attached under "Supplementary data".

The electronic copy will be made available in its native file format on the Journal Web site at no cost to readers. A copy of the electronic file(s) will also be deposited in the Depository of Unpublished Data, CISTI, National Research Council of Canada, Ottawa, ON K1A 0R6. Copies of the material from the depository may be purchased by readers or subscribers.

### Illustrations

Each figure or group of figures should be planned to fit, after appropriate reduction, into the area of either one or two columns of text. The maximum finished size of a one-column illustration is 8.6 cm × 23.7 cm (3.4 in. × 9.3 in.) and that of a two-column illustration is 18.2 cm × 23.7 cm (7.2 in. × 9.3 in.). The figures (including halftones) must be numbered consecutively in Arabic numerals, and each one must be referred to in the text and must be self-explanatory. All terms, abbreviations, and symbols must correspond with those in the text. Only essential labelling should be used, with detailed information given in the caption. If various degrees of grey shading are used, ensure that they are varied enough to differentiate among them or you may need to also insert patterns over the greys (e.g., stippling, hatching). Submission of noncontinuous (screened) photographs and scanned illustra-

tions is not acceptable, as moirés develop; a moiré is a noticeable, unwanted pattern generated by rescanning or rescreening an illustration that already contains a dot pattern.

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All lines must be sufficiently thick (0.5 points minimum) to reproduce well, and all symbols, superscripts, subscripts, and decimal points must be in good proportion to the rest of the drawing and large enough to allow for any necessary reduction without loss of detail. Avoid small open symbols; these tend to fill in upon reproduction. **Lettering produced by dot matrix printers or typewriters, or by hand, is not acceptable.** The same font style and lettering sizes should be used for all figures of similar size in any one paper. Original recorder tracings of **NMR, IR, ESR spectra**, etc., are not acceptable for reproduction; they must be redrawn.

### Maps

Maps must have very **clear, bold patterns** and must show longitudes and latitudes (or UTM coordinates) and a scale, to ensure proper identification of study locations. On **maps of Quebec**, the official name of municipalities must be used (e.g., Québec, Montréal, Clarke City) and physical features must be in French (e.g., Lac Bienville) except for those that are considered of pan-Canadian significance (see list below). Areas of pan-Canadian significance have an official form in English and French (e.g., Atlantic Ocean and Océan Atlantique) and should appear in the language of the paper. Quebec (the province) must also appear in the language of the paper. Names that should be presented in the language of the paper on a map of Quebec are as follows:

Lake Abitibi / Lac Abitibi  
 Anticosti Island / Île d'Anticosti  
 Atlantic Ocean / Océan Atlantique  
 Chaleur Bay / Baie des Chaleurs  
 Hudson Strait / Détroit d'Hudson  
 James Bay / Baie James  
 Laurentian Mountains / Les Laurentides  
 Ottawa River / Rivière des Outaouais  
 Quebec (province) / Québec  
 Restigouche River / Rivière Restigouche  
 Saguenay River / Rivière Saguenay  
 Saint John River / Rivière Saint-Jean  
 St. Lawrence River / Fleuve Saint-Laurent  
 Gulf of St. Lawrence / Golfe du Saint-Laurent  
 Lake Timiskaming / Lac Témiscamingue  
 Ungava Bay / Baie d'Ungava

### Photographs

Photographs should be continuous tone, of high quality, and with strong contrast. Only essential features should be shown. A photograph, or group of them, should be planned to fit into the area of either one or two columns of text **with no further reduction**. Electron micrographs or photomicrographs must include a scale bar directly on the illustration. Please do not use magnification. The best results will be obtained if the authors match the contrast and density of all figures arranged as a single plate.

### Colour illustrations

Colour illustrations will be at the author's expense. Further

details on prices are available from Cecily Pearson, Managing Editor of the Journal (613-993-9099; fax: 613-952-7656; e-mail: cecily.pearson@nrc-cnrc.gc.ca).

Upon acceptance of a manuscript, a hard copy of each colour illustration must be sent to Jane Dorman, Publication Officer, Botany, NRC Research Press, Building M55, 1200 Montreal Road, Ottawa, ON K1A 0R6. The colour and quality of this copy must be representative of what is expected to be produced in print. **When sending hard copies, please ensure that electronic files match the hard copies (i.e., figure number and figure content).**

Use contrasting colours rather than colours very close in hue or differentiate similar colours by inserting patterns over the colours (e.g., stippling, hatching). See also instructions for electronic colour files below.

### Preparation of electronic graphic files

**The preferred graphic application of NRC Research Press is CorelDraw!** For other applications that can be used, see the electronic graphics list at [pubs.nrc-cnrc.gc.ca/eng/journals/graphics.html](http://pubs.nrc-cnrc.gc.ca/eng/journals/graphics.html).

Windows or Macintosh versions of True Type or Type 1 fonts should be used. **Do not use bitmap or nonstandard fonts.**

All figures should be submitted at the desired published size. For figures with several parts (e.g., *a*, *b*, *c*, *d*, etc.) created using the same software application, assemble them into one file rather than sending several files.

**Remember** that the more complex your artwork becomes, the greater the possibility for problems at output time. Avoid complicated textures and shadings, especially in vector illustration programs; this increases the chance for a poor-quality final product.

**Bitmap (raster) files** are image files produced using a grid format in which each square (or pixel) is set to one level of black, colour, or grey. A bitmap (rasterized) file is broken down into the number of pixels or picture elements per inch (ppi). Pixels per inch is sometimes referred to as dots per inch (dpi). The higher the resolution of an image, the larger the number of pixels contained within the rectangular grid. The proper resolution should be used when submitting bitmap artwork. **The minimum requirements for resolution** are 600 dpi for line art, 1200 dpi for finelines (line art with fine lines or shading), 300 dpi for halftones and colour, and 600 dpi for combinations (halftones with lettering outside the photo area).

All **colour** files submitted must be as CMYK (cyan, magenta, yellow, and black). These colours are used in full-colour commercial printing. RGB graphics (red, green, and blue; colours specifically used to produce an image on a monitor) will not print correctly.

**Vector files** are image files produced using elements such as lines and shapes. Typically these files are used for line drawings.

Bitmaps can be imported into vector/draw applications only for the purpose of adding and overlaying information, lines, text, etc. Bitmaps should not be resized, cropped, rotated, or otherwise manipulated after importing.

**Multimedia formats** — Audio and video clips in the major multimedia formats are now accepted for NRC Research Press journals published in full-text HTML. For accepted formats, see the Electronic Graphic List published on the journal Web site.

## Style guidelines

### Nomenclature

As a general **guide for biological terms**, *The CSE Manual for Authors, Editors, and Publishers: Scientific Style and Format* (7th ed., 2006) published by the Council of Science Editors, Reston, VA 20190, USA, is recommended. For **enzyme nomenclature**, *Enzyme Nomenclature (1992): Recommendations of the Nomenclature Committee of the International Union of Biochemistry and Molecular Biology* (Academic Press, San Diego, Calif.) should be followed.

For **botanical nomenclature**, the *International Code of Botanical Nomenclature* (International Association for Plant Taxonomy) should be followed. Note that the first occurrence of a species name in a manuscript is presented with the genus written in full and the authority name(s) included (e.g., *Populus angustifolia* James). In subsequent mentions of the same species, the genus is abbreviated to the first letter and no authority name(s) is listed (e.g., *P. angustifolia*). To avoid confusion, when different genera share the same first letter, the genera are written in full throughout the manuscript. Genera are always written in full at the beginning of a sentence.

### Spelling

Spelling should follow *Webster's Third New International Dictionary* or the *Oxford English Dictionary*. Authors are responsible for consistency in spelling.

### Abbreviations and acronyms

**Abbreviations and acronyms** should be defined when they are first mentioned in the abstract and text.

### Units of measure

For units of measure, SI units (Système international d'unités) should be used or SI equivalents should be given. This system is explained and other useful information is given in the *Metric Practice Guide* (2000) published by CSA International (5060 Spectrum Way, Suite 100, Mississauga, ON M9W 1R3, Canada). For practical reasons, some exceptions to SI units are allowed.

### Symbols

Symbols and unusual or **Greek** characters should be identified clearly. Superscripts and subscripts should be legible and correctly placed.

### Statistical analyses

The assumptions and (or) the model underlying any statistical analysis should be clearly stated. Symbols such as \* and \*\*, denoting levels of significance, should **not** be used except in conjunction with the actual values of the associated test statistic; actual *p* values are preferred. **Note:** For biological systems it is commonly accepted that a 5% level of significance is sufficient for most purposes, and that it is not necessary to indicate that some samples are significant at higher levels.

### **Numbers**

In **long numbers** the digits should be separated into groups of three, counted from the decimal marker to the left and right. The separator should be a space and not a comma, period, or any other mark, for example, 25 562 987 and not 25,562,987. In English text, the **decimal marker** should be a point, for example, 0.1 mL and not 0,1 mL. The decimal

point in all numbers between 1 and  $-1$ , except 0, must be preceded by a 0. The sign  $\times$  should be used to indicate multiplication, for example,  $3 \times 10^6$  and not  $3 \cdot 10^6$ .

### **Dates**

Dates should be written in the sequence day–month–year without internal punctuation (e.g., “On 9 October 1983 the...”).