



# MOLECULAR PHYLOGENETICS AND EVOLUTION

## AUTHOR INFORMATION PACK

### TABLE OF CONTENTS

|   |                                 |            |
|---|---------------------------------|------------|
| ● | <b>Description</b>              | <b>p.1</b> |
| ● | <b>Audience</b>                 | <b>p.1</b> |
| ● | <b>Impact Factor</b>            | <b>p.2</b> |
| ● | <b>Abstracting and Indexing</b> | <b>p.2</b> |
| ● | <b>Editorial Board</b>          | <b>p.2</b> |
| ● | <b>Guide for Authors</b>        | <b>p.5</b> |



ISSN: 1055-7903

### DESCRIPTION

*Molecular Phylogenetics and Evolution* is dedicated to bringing Darwin's dream within grasp - to "have fairly true genealogical trees of each great kingdom of Nature." The journal provides a forum for molecular studies that advance our understanding of **phylogeny** and **evolution**, further the development of phylogenetically more accurate **taxonomic classifications**, and ultimately bring a **unified classification** for all the ramifying lines of life. Phylogeographic studies will be considered for publication if they offer EXCEPTIONAL theoretical or empirical advances.

The journal encourages articles that are multidisciplinary, especially in areas, such as bioinformatics, computational biology, molecular biology, and organismic biology, that are of interest to the community of systematic and evolutionary biologists. In addition, presentations of new findings on or insights into evolutionary processes and mechanisms as expressed at the molecular level are welcome, as are those that deal with the methodology of reconstructing evolutionary history from molecular data (such as descriptions of new or more powerful computer algorithms for constructing phylogenetic trees from orthologous nucleotide or amino acid sequences). A deeper understanding of the mechanisms and processes of molecular evolution should lead to more accurate models of molecular evolution, which in turn should facilitate the development of better algorithms for reconstructing evolutionary history from sequence data.

Papers based on few taxa, single molecular markers, or that use codon-based methods to test for positive Darwinian selection, but in the absence of experimental evidence that allegedly selected amino acid changes cause an adaptive phenotypic effect, will not be accepted.

#### Benefits to authors

We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our [author services](#).

Please see our [Guide for Authors](#) for information on article submission. If you require any further information or help, please visit our [Support Center](#)

### AUDIENCE

Evolutionary researchers, geneticists, molecular biologists, biochemists, microbiologists, plant scientists, zoologists

## IMPACT FACTOR

---

2016: 4.419 © Clarivate Analytics Journal Citation Reports 2017

## ABSTRACTING AND INDEXING

---

Scopus  
EMBiology

## EDITORIAL BOARD

---

### *Editor-in-Chief:*

**D. Wildman**, Department of Molecular & Integrative Physiology, 3101 Institute for Genomic Biology, University of Illinois at Urbana-Champaign, 1206 West Gregory Drive, Urbana, Illinois, IL 61801, USA

### *Founding Editor:*

**M. Goodman** †

### *Deputy Editor:*

**E.A. Zimmer**, Smithsonian Institution, Washington, District of Columbia, USA

### *Associate Editors:*

**M.A. Arnedo**, Biodiversity Research Inst. UB, Dept. de Biologia Animal, Universitat de Barcelona, Av. Diagonal 645, E-08028, Barcelona, Spain

**N. Blackstone**, Dept. of Biological Sciences, Northern Illinois University, DeKalb, Illinois, 60115, USA

**E.L. Braun**, Department of Biology, University of Florida, 514 Carr Hall, Gainesville, Florida, 32611-8525, USA

**S. Cameron**, Fac. of Science and Engineering, Earth, Environmental and Mechanical Engineering, Queensland University of Technology, Gardens Point Campus, 2 George Street, Brisbane, 4000, Queensland, Australia

**J.B. Dacks**, Department of Cell Biology, University of Alberta, 5-31 Medical Science Building, Edmonton, Alberta, Canada

**L. Dávalos**, Dept. of Ecology and Evolution, Stony Brook University, 650 Life Sciences Building, Stony Brook, New York, NY 11794-5245, USA

**A. Dornburg**, North Carolina Museum of Natural Sciences, 11 W. Jones Street, Raleigh, North Carolina, 27601, USA

**S. Edwards**, Dept. of Organismic and Evolutionary Biology, Museum of Comparative Zoology, Harvard University, 457 Northwest Labs, 26 Oxford Street, Cambridge, Massachusetts, MA 02138, USA

**F. Frati**, Dipart. di Biologia Evolutiva, Università degli Studi di Siena, via Pier Andrea Mattioli, n. 4, 53100, Siena, Italy

**J. Gatesy**, Department of Biology, University of California at Riverside, Office 2318 Spieth Hall, Riverside, California, CA 92521, USA

**S.M. Ickert-Bond**, University of Alaska Museum of the North, University of Alaska Fairbanks, 907 Yukon Drive, Fairbanks, Alaska, 99775-6960, USA

**R. Jabaily**, Department of Organismal Biology and Ecology, Colorado College, 14 East Cache la Poudre St., Colorado Springs, Colorado, 80903, USA

**K. Kozak**, Dept. of Fisheries, Wildlife and Conservation Biology, 100 Ecology, University of Minnesota, 1987 Upper Buford Circle, St. Paul, Minnesota, MN 55108, USA

**A. Larson**, Dept. of Biology, Washington University in St. Louis, St. Louis, Missouri, MO 63130, USA

**L. Lohmann**, Instituto de Biociências, Departamento de Botânica, Universidade de São Paulo (USP), Rua do Matão, 277, 05508-090, São Paulo, Brazil

**H. López-Fernández**, Department of Ecology and Evolutionary Biology, University of Toronto, Toronto, Canada

**F. Lutzoni**, Dept. of Biology, Duke University, Box 90338, Durham, North Carolina, NC 27708, USA

**C. Matthee**, Dept. of Botany and Zoology, University of Stellenbosch, Private Bag X1, 7602, Matieland, South Africa

**J.M. Moncalvo**, Dept. of Natural History, Royal Ontario Museum, 100 Queen's Park, Toronto, M5S 2C6, Ontario, Canada

**G. Orti**, Dept. of Biological Sciences, George Washington University, 2023 George Washington St., NW, Washington, District of Columbia, DC 20052, USA

**D. Paraskevis**, National Retrovirus Reference Center, Dept. of Hygiene and Epidemiology, National and Kapodistrian University of Athens, Mikras Asias 75 street (Goudi), , 115 27, Athens, Greece

**M. Perez-Losada**, Computational Biology Institute, Innovation Hall, The George Washington University, 45085 University Drive, Suite 305, Ashburn, Virginia, 20147, USA

**F. Raposo do Amaral**, Universidade Federal de São Paulo, Diadema - SP, Brazil

**A. Reyes-Prieto**, Dept. of Biology, Rutgers University, Fredericton, E3B 5A3, New Brunswick, Canada

**N. Saitou**, Div. of Population Genetics, National Institute of Genetics, 1111 Yata, 411-0801, Mishima, Japan

**B. Schierwater**, ITZ, Ecology and Evolution, TiHo Hannover: Tierärztliche Hochschule, Bünteweg 17D, 30559, Hannover, Germany  
**J. Schulte, II**, Department of Biology, Beloit College, 700 College Street, Center of the Sciences 338, Beloit, Wisconsin, 53511, USA  
**J. Shaw**, Dept. of Biology, Duke University, Box 90338, Durham, North Carolina, NC 27708, USA  
**A. Soejima**, Graduate School of Science and Technology, Kumamoto University, Kurokami 2-39-1, 8650-8555, Kumamoto, Japan  
**J. Strugnell**, College of Science and Engineering, Marine Biology and Aquaculture, James Cook University, Townsville, 4811, Queensland, Australia  
**A.P. Vogler**, South Kensington Campus, Department of Electrical and Electronic Engineering, Imperial College London, Exhibition Road, SW72BT, London, England, UK  
**X.-Q. Wang**, State Key Laboratory of Systematic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences (CAS), 20 Nanxincun, Xiangshan, 100093, Beijing, China  
**S. Wanke**, Institut für Botanik, Technische Universität Dresden, Zellescher Weg 20b, D-01062, Dresden, Germany

**Editorial Board:**

**R. Adkins**, Le Bonheur Children's Medical Center, University of Tennessee, Children's Foundation Research Ctr, Memphis, Tennessee, TN 38103, USA  
**F.J. Ayala**, Dept. of Ecology and Evolutionary Biology, University of California at Irvine, 321 Steinhaus Hall, Irvine, California, CA 92717-2525, USA  
**R.J. Baker**, Dept. of Biological Sciences, Texas Tech University, Lubbock, Texas, TX 79409-3131, USA  
**M.L. Berbee**, Dept. of Botany, University of British Columbia, 6270 University Boulevard, Vancouver, V6T 1Z4, British Columbia, Canada  
**F.T. Burbrink**, Dept. of Biology, College of Staten Island (CUNY), 2800 Victory Blvd., New York, New York, NY 10314, USA  
**G. Cacccone**, Molecular Systematics & Conversation Genetics Lab., YIBS, Yale University, 21 Sachem St, New Haven, Connecticut, CT 06520-8106, USA  
**J.L. Cracraft**, Dept. of Ornithology, American Museum of Natural History, Central Park West at 79th Street, New York, New York, NY 10024, USA  
**M.P. Cummings**, Center for Bioinformatics and Computational Biology, Biomolecular Sciences Building #296, University of Maryland, College Park, Maryland, MD 20742, USA  
**P. Deininger**, Tulane Cancer Center, Tulane University, 1430 Tulane Avenue, New Orleans, Louisiana, LA 70112-2699, USA  
**R. DeSalle**, Dept. of Entomology, American Museum of Natural History, 79th Central Dr, Great Neck, New York, NY 11024, USA  
**J.J. Doyle**, L.H. Bailey Hortorium, Cornell University, 467 Mann Library, Ithaca, New York, NY 14853, USA  
**D.H.A. Fitch**, Dept. of Biology, New York University, 100 Washington Sq E, New York, New York, NY 10003, USA  
**J.R. Garey**, Dept. of Cell Biology, Microbiology and Molecular Biology, University of South Florida, 4202 East Fowler Ave ISA2015, Tampa, Florida, FL 33620, USA  
**B.S. Gaut**, Dept. of Ecology and Evolutionary Biology, University of California at Irvine, 321 Steinhaus Hall, Irvine, California, CA 92717-2525, USA  
**M. George**, Dept. of Biochemistry and Molecular Biology, College of Medicine, Howard University, 520 W Street, N.W., Washington, District of Columbia, DC 20059, USA  
**M.T. Ghiselin**, Dept. of Invertebrate Pathology and Zoology, California Academy of Sciences, Center for the History and Philosophy of Science, San Francisco, California, CA 94118-9961, USA  
**G. Giribet**, Dept. of Organismic & Evolutionary Biology, Harvard University, 16 Divinity Ave., Cambridge, Massachusetts, 02138, USA  
**X. Gu**, Dept. of Zoology and Genetics, Iowa State University, 322 Science II, Ames, Iowa, IA 50011, USA  
**S. Hackett**, Dept. of Zoology / Bird Div., Field Museum of Natural History, 1400 South Lake Shore Drive, Chicago, Illinois, IL 60605, USA  
**M. Hasegawa**, Institute of Statistical Mathematics, 4-6-7 Minamiazabu, 106-0047, Minato-Ku, Japan  
**D. Hewett-Emmett**, School of Public Health, University of Texas at Houston, 5323 Harry Hines Blvd V8 112, Dallas, Texas, TX 75309-9128, USA  
**D.S. Hibbett**, Department of Biology, Clark University, 950 Main Street, Worcester, Massachusetts, MA 01610-1477, USA  
**D. Hillis**, School of Biological Sciences, University of Texas at Austin, Section of Integrative Biology, Austin, Texas, TX 78712, USA  
**R.L. Honeycutt**, Dept. of Biology, Div. of Natural Science, Pepperdine University, 24255 Pacific Coast Highway, Malibu, California, CA 90263, USA  
**D.M. Irwin**, Dept. of Lab. Medicine and Pathobiology, University of Toronto, 100 College Street, Toronto, M5G 1L5, Ontario, Canada  
**R.A. Jenner**, Dept. of Zoology, 709 Darwin Centre 1, Natural History Museum, Cromwell Road, SW7 5BD, London, UK  
**W. Jetz**, Ecology and Evolutionary Biology, Yale University, 165 Prospect Street, New Haven, Connecticut, 06511, USA

**M.D. Kane**, Div. of Molecular and Cellular Biosciences, National Science Foundation, 4201 Wilson Blvd, Arlington, Virginia, VA 22306, USA

**B.F. Koop**, Dept. of Biology, Centre for Biomedical Research, University of Victoria, PO Box 3020 STN CSC, Victoria, V8W 3N5, British Columbia, Canada

**F. Lang**, Dept. of Biochemistry, Université de Montréal, C.P. 6128, Succ. Centre-ville, Québec, H3C 3J7, Quebec, Canada

**D.T.J. Littlewood**, Dept. of Zoology, 709 Darwin Centre 1, Natural History Museum, Cromwell Road, SW7 5BD, London, UK

**D.P. Mindell**, California Academy of Sciences, 55 Music Concourse Drive, San Francisco, California, CA 94118, USA

**N.A. Moran**, Section of Integrative Biology, University of Texas at Austin, 2506 Speedway, A5000, Austin, Texas, 78712, USA

**G.J. Nelson**, School of Botany, University of Melbourne, Parkville, VIC 3010, Victoria, Australia

**P.M. O'Grady**, Dept. of Environmental Science, Policy and Management (ESPM), University of California at Berkeley, 130 Mulford Hall, Berkeley, California, CA 94720, USA

**N. Okada**, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, 4259 Nagatsuta-cho, Midori-ku, 226-8501, Yokohama, Japan

**S. Pääbo**, Max Planck Institute (MPI) for Evolutionary Biology, Inselstrasse 22, D-04103, Leipzig, Germany

**R.D.M. Page**, DEEB, IBLS, University of Glasgow, Graham Kerr Building, G12 8QQ, Glasgow, UK

**J.D. Palmer**, Dept. of Biochemistry, Indiana University, Bloomington, Indiana, IN 47405, USA

**D. Penny**, Inst. of Molecular Biosciences, Massey University, Palmerston North, New Zealand

**C. Porter**, Dept. of Biology, Xavier University of Louisiana, 1 Drexel Drive, New Orleans, Louisiana, LA 70125, USA

**J.R. Powell**, Dept. of Ecology and Evolutionary Biology, Yale University, 165 Prospect Street, New Haven, Connecticut, CT 06511, USA

**C. Saccone**, Dipart. di Biochimica e Biologia Molecolare, Università degli Studi di Bari Aldo Moro, Via E. Orabona 4, I-70126, Bari, Italy

**D. Sankoff**, Centre de Recherche des Transports, Université de Montréal, Station Centre-Ville' Po Box 6128 - PO Box 6128 Su, Montréal, H3C 3J7, Canada

**M.L. Sogin**, Marine Biological Lab., Josephine Bay Paul Center for Comparative Marine Biology and Evolution, 7 MBL Street, Woods Hole, Massachusetts, MA 02543-1015, USA

**C. Stepien**, Lake Erie Center, University of Toledo, 6200 Bayshore Rd., Toledo, Ohio, OH 43618, USA

**C.-B. Stewart**, Dept. of Biological Sciences, University at Albany, SUNY, 1400 Washington Avenue, New York, New York, NY 12222, USA

**A. Templeton**, Dept. of Biology, Washington University in St. Louis, St. Louis, Missouri, MO 63130, USA

**M. Whiting**, Dept. of Zoology, Brigham Young University, Provo, Utah, UT 84602, USA

**C.-I. Wu**, Dept. of Ecology and Evolution, University of Chicago, 1101 East 57th Street, Chicago, Illinois, IL 60637-1573, USA

**A.D. Yoder**, Department of Biology, Duke University, 128 Biological Science Bldg, Durham, North Carolina, 27708, USA

## GUIDE FOR AUTHORS

---

### INTRODUCTION

*Molecular Phylogenetics and Evolution* is dedicated to bringing Darwin's dream within grasp - to "have fairly true genealogical trees of each great kingdom of Nature." The journal provides a forum for molecular studies that advance our understanding of phylogeny and evolution, further the development of phylogenetically more accurate taxonomic classifications, and ultimately bring a unified classification for all the ramifying lines of life. Phylogeographic studies will be considered for publication if they offer EXCEPTIONAL theoretical or empirical advances.

The journal encourages articles that are multidisciplinary, especially in areas, such as bioinformatics, computational biology, molecular biology, and organismic biology, that are of interest to the community of systematic and evolutionary biologists. In addition, presentations of new findings on or insights into evolutionary processes and mechanisms as expressed at the molecular level are welcome, as are those that deal with the methodology of reconstructing evolutionary history from molecular data (such as descriptions of new or more powerful computer algorithms for constructing phylogenetic trees from orthologous nucleotide or amino acid sequences). A deeper understanding of the mechanisms and processes of molecular evolution should lead to more accurate models of molecular evolution, which in turn should facilitate the development of better algorithms for reconstructing evolutionary history from sequence data.

Papers based on few taxa, single molecular markers, or that use codon-based methods to test for positive Darwinian selection, but in the absence of experimental evidence that allegedly selected amino acid changes cause an adaptive phenotypic effect, will not be accepted.

In addition to regular articles, *Review* papers are also accepted. Review papers do not necessarily contain new data; rather, they are a status report of a specific field within molecular phylogenetics. There are no page limits to regular articles or Review papers.

Authors should relate molecular phylogeny to a broader audience by linking taxonomic group/names to common names so papers will have more general appeal.

*Short communications* of approximately 3000 words are also accepted. These papers should contain no more than two figures, two tables, and thirty references. A short abstract of fewer than 200 words is acceptable.

*Letters to the editor* should consist of about 1000 words and contain no tables, no figures, and no new data. Manuscripts should be prepared according to the following style rules. Deviation from these rules causes publication delays.

### Submission checklist

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

#### Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded:

*Manuscript:*

- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

*Graphical Abstracts / Highlights files* (where applicable)

*Supplemental files* (where applicable)

Further considerations

- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our [Support Center](#).

## BEFORE YOU BEGIN

### *Ethics in publishing*

Please see our information pages on [Ethics in publishing](#) and [Ethical guidelines for journal publication](#).

### *Declaration of interest*

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. [More information](#).

### *Submission declaration and verification*

Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see '[Multiple, redundant or concurrent publication](#)' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service [Crossref Similarity Check](#).

### *Preprints*

Please note that [preprints](#) can be shared anywhere at any time, in line with Elsevier's [sharing policy](#). Sharing your preprints e.g. on a preprint server will not count as prior publication (see '[Multiple, redundant or concurrent publication](#)' for more information).

### *Changes to authorship*

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

### *Article transfer service*

This journal is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal. [More information](#).

## Copyright

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see [more information](#) on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. [Permission](#) of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has [preprinted forms](#) for use by authors in these cases.

For open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' ([more information](#)). Permitted third party reuse of open access articles is determined by the author's choice of [user license](#).

## Author rights

As an author you (or your employer or institution) have certain rights to reuse your work. [More information](#).

*Elsevier supports responsible sharing*

Find out how you can [share your research](#) published in Elsevier journals.

## Role of the funding source

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

*Funding body agreements and policies*

Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the Open Access Publication Fee. Details of [existing agreements](#) are available online.

## Open access

This journal offers authors a choice in publishing their research:

### Subscription

- Articles are made available to subscribers as well as developing countries and patient groups through our [universal access programs](#).
- No open access publication fee payable by authors.

### Open access

- Articles are freely available to both subscribers and the wider public with permitted reuse.
- An open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For open access articles, permitted third party (re)use is defined by the following [Creative Commons user licenses](#):

*Creative Commons Attribution (CC BY)*

Lets others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

### *Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)*

For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The open access publication fee for this journal is **USD 4050**, excluding taxes. Learn more about Elsevier's pricing policy: <https://www.elsevier.com/openaccesspricing>.

### *Green open access*

Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our [green open access page](#) for further information. Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. [Find out more](#).

This journal has an embargo period of 12 months.

### *Elsevier Researcher Academy*

[Researcher Academy](#) is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

### *Language (usage and editing services)*

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the [English Language Editing service](#) available from Elsevier's WebShop.

### **Submission**

Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

### *Additional information*

#### **Preparation of supplementary material**

Supplementary files offer the author additional possibilities to publish supporting applications, movies, animation sequences, high-resolution images, background datasets, sound clips, and more. Supplementary files supplied will be published online alongside the electronic version of the article in Elsevier Web products, including ScienceDirect: <http://www.sciencedirect.com>. To ensure that submitted material is directly usable, please provide data in one of our recommended file formats. Submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. For more detailed instructions, please visit our artwork instruction pages at <http://www.elsevier.com/artworkinstructions>.

## **PREPARATION**

### **Peer review**

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. [More information on types of peer review](#).

### *Use of word processing software*

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word



processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the [Guide to Publishing with Elsevier](#)). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

## **Article structure**

### *Subdivision - numbered sections*

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

### *Introduction*

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

### *Material and methods*

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

### *Theory/calculation*

A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

### *Results*

Results should be clear and concise.

### *Discussion*

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

### *Conclusions*

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

### *Glossary*

Please supply, as a separate list, the definitions of field-specific terms used in your article.

### *Appendices*

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

## **Essential title page information**

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

• **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

• **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

#### *Graphical abstract*

A graphical abstract is mandatory for this journal. It should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the article. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view [Example Graphical Abstracts](#) on our information site.

Authors can make use of Elsevier's [Illustration Services](#) to ensure the best presentation of their images also in accordance with all technical requirements.

#### *Highlights*

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view [example Highlights](#) on our information site.

#### **Keywords**

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

#### *Abbreviations*

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

#### *Acknowledgements*

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

#### *Formatting of funding sources*

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

#### *Units*

Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

### *Math formulae*

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

### *Footnotes*

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

## **Artwork**

### *Electronic artwork*

#### *General points*

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.

A detailed [guide on electronic artwork](#) is available.

**You are urged to visit this site; some excerpts from the detailed information are given here.**

#### *Formats*

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings, embed all used fonts.

TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.

TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.

TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

#### **Please do not:**

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

#### *Color artwork*

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or online only. [Further information on the preparation of electronic artwork.](#)

#### *Illustration services*

[Elsevier's WebShop](#) offers Illustration Services to authors preparing to submit a manuscript but concerned about the quality of the images accompanying their article. Elsevier's expert illustrators can produce scientific, technical and medical-style images, as well as a full range of charts, tables and graphs. Image 'polishing' is also available, where our illustrators take your image(s) and improve them to a professional standard. Please visit the website to find out more.

### *Figure captions*

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

### **Tables**

Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

### **References**

#### *Citation in text*

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

#### *Reference links*

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is encouraged.

A DOI can be used to cite and link to electronic articles where an article is in-press and full citation details are not yet known, but the article is available online. A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. *Journal of Geophysical Research*, <https://doi.org/10.1029/2001JB000884>. Please note the format of such citations should be in the same style as all other references in the paper.

#### *Web references*

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

#### *Data references*

This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

#### *References in a special issue*

Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

#### *Reference management software*

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support [Citation Style Language styles](#), such as [Mendeley](#) and [Zotero](#), as well as [EndNote](#). Using the word processor plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:

<http://open.mendeley.com/use-citation-style/molecular-phylogenetics-and-evolution>

When preparing your manuscript, you will then be able to select this style using the Mendeley plugins for Microsoft Word or LibreOffice.

#### *Reference formatting*

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

#### *Reference style*

*Text:* All citations in the text should refer to:

1. *Single author:* the author's name (without initials, unless there is ambiguity) and the year of publication;
2. *Two authors:* both authors' names and the year of publication;
3. *Three or more authors:* first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999). Kramer et al. (2010) have recently shown ....'

*List:* References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

#### *Examples:*

Reference to a journal publication:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2010. The art of writing a scientific article. *J. Sci. Commun.* 163, 51–59.

Reference to a book:

Strunk Jr, W., White, E.B., 2000. *The Elements of Style*, fourth ed. Longman, New York.

Reference to a chapter in an edited book:

Mettam, G.R., Adams, L.B., 2009. How to prepare an electronic version of your article, in: Jones, B.S., Smith, R.Z. (Eds.), *Introduction to the Electronic Age*. E-Publishing Inc., New York, pp. 281–304.

Reference to a website:

Cancer Research UK, 1975. Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> (accessed 13 March 2003).

Reference to a dataset:

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T., 2015. Mortality data for Japanese oak wilt disease and surrounding forest compositions. *Mendeley Data*, v1. <https://doi.org/10.17632/xwj98nb39r.1>.

#### *Journal abbreviations source*

Journal names should be abbreviated according to the [List of Title Word Abbreviations](#).

#### **Video**

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including [ScienceDirect](#). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For

more detailed instructions please visit our [video instruction pages](#). Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

### **AudioSlides**

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. [More information and examples are available](#). Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

### **Data visualization**

Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions [here](#) to find out about available data visualization options and how to include them with your article.

### **Supplementary material**

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

### **Research data**

This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the [research data](#) page.

#### *Data linking*

If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the [database linking page](#).

For [supported data repositories](#) a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

#### *Mendeley Data*

This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to *Mendeley Data*. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the [Mendeley Data for journals page](#).

#### *Data in Brief*

You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for *Data in Brief* as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to *Data in Brief* where it will be editorially reviewed and published in the open access data journal, *Data in Brief*. Please note an open access fee of 500 USD is payable for publication in *Data in Brief*. Full details can be found on the [Data in Brief website](#). Please use [this template](#) to write your Data in Brief.

#### *Data statement*

To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the [Data Statement page](#).

### **AFTER ACCEPTANCE**

#### **Online proof correction**

Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

#### **Offprints**

The corresponding author will, at no cost, receive a customized [Share Link](#) providing 50 days free access to the final published version of the article on [ScienceDirect](#). The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's [Webshop](#). Corresponding authors who have published their article open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

### **AUTHOR INQUIRIES**

Visit the [Elsevier Support Center](#) to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also [check the status of your submitted article](#) or find out [when your accepted article will be published](#).

© Copyright 2018 Elsevier | <https://www.elsevier.com>