

INSTRUCTIONS TO AUTHORS

Revised on June 1, 2020

ZOOLOGICAL SCIENCE publishes contributions, written in English, in the form of (1) **Original Articles**, (2) **Reviews**, and (3) **Essays**. *Reviews* and *Essays* are usually invited by the Editor. Authors should consult with the Editor-in-Chief before submitting unsolicited *Reviews* and *Essays*. We welcome the submission of manuscripts from non-members of the Society. Read the INSTRUCTIONS TO AUTHORS carefully when you prepare a manuscript.

A. SUBMISSION OF MANUSCRIPT

All manuscripts should be submitted using the **ZOOLOGICAL SCIENCE** web-based manuscript submission and handling system (**ScholarOne Manuscripts; S1M**) at the URL below. **ScholarOne Manuscripts (S1M) Online Submission System for Zoological Science**
<http://mc.manuscriptcentral.com/zs>

The following electronic files should be prepared for each electronic submission:

- Main body of the text (**Main Document** file in S1M) containing title page, abstract, text, references, figure legends, and table captions.
- Figures and/or tables (**Illustration** and **Table** files in S1M, respectively).
- Supplementary material (**Supplementary Files** in S1M), to be published online only (this is optional and should be kept to a minimum).

S1M will automatically convert these uploaded files into single PDF and HTML documents so that they can be viewed and printed for peer reviewing. Authors must verify that the PDF and HTML files are satisfactory and complete. It is the authors' responsibility to submit manuscripts that are written in concise, grammatically correct English. Manuscripts that contain excessive errors in grammar or usage will not be accepted for publication.

Contact the S1M Support Desks if you are having trouble accessing the system, or the Zoological Science *Editorial Office* for questions concerning your manuscript. Otherwise, refer to the online instructions and help menus at **S1M** (click the *Help* tab at the top of the page).

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B. NOTES ON PREPARATION OF ELECTRONIC FILES

File formats

Authors should NOT submit PDF file(s) converted from their original document and image files, because the uploaded files will be automatically converted by **S1M** into HTML and PDF documents. The **Main Document** file should be prepared in Microsoft Word. Files prepared in other word-processing packages should be saved in rich text format (RTF). The recommended formats for **Illustration** files are TIF, EPS, PSD (Adobe Photoshop), and AI (Adobe Illustrator). The color mode should be set to CMYK, not RGB, and the resolution should be a minimum of 300 dpi. Although JPG, GIF, and PPT/PPTX (Microsoft Power Point) files are also acceptable, we cannot guarantee the quality of final images online or in print. Please do not submit files in BMP format. The preferred software for **Table** files is Microsoft Excel (save each table in a file with a single worksheet; multi-sheet Excel files are not acceptable). Useful information about digital art is available at <http://cjs.cadmus.com/da/index.jsp>.

Size limit

Please note that the combined size limit for all uploaded files is **20 MB**. If your files exceed this size limit, please submit low-resolution figures for peer-review purposes only, and send high-resolution files only after the manuscript is accepted.

C. PREPARATION OF Main Document FILE

Manuscripts should be prepared using a proportional font such as Times New Roman in 12-point size. The entire text should be double-spaced with appropriate margins. The right margin should NOT be justified. All pages should be numbered consecutively. The use of footnotes to the text should be avoided. Sentences should be separated by a single space. For spelling, American style is preferred; e.g., use homolog, analyze, center, and behavior rather than homologue, analyse, centre, and behaviour. Common Latin abbreviations such as *ibid.*,

etc., e.g., i.e., and 'et al.', and short, commonly used Latin terms such as 'in vitro', 'in vivo', and 'in situ', should NOT be italicized. The preferred organization of the **Main Document** of an original paper is as follows: (1) Title page, (2) Abstract and Key words, (3) Introduction, (4) Materials and Methods, (5) Results, (6) Discussion, (7) Acknowledgments, (8) Competing Interests, (9) Author Contributions, (10) Supplementary Materials, (11) References, and (12) Figure legends and table captions. The **Table** and **Illustration** files should be prepared separately from the **Main Document** file (see Section D, E below). However, authors are not obliged to adhere rigidly to this organization. They may modify the style when such modification makes the presentation clearer and more effective. There is no restriction on the style of review articles.

The following are descriptions of the sections in a **Main Document** file listed above:

1. TITLE PAGE

The first page of the manuscript should contain the title; the authors' names; the authors' affiliations and addresses; an abbreviated title (40 characters or less, including spaces) to be used as the running header; the name and contact information (valid e-mail address mandatory) for the corresponding author; and any title-page footnotes. Where possible, e-mail addresses associated with the author's affiliation should be used (rather than commercial email providers such as gmail or hotmail). Authors with different affiliations should be identified by the use of a numerical superscript linking the name and affiliation. In addition, the authors should select from the following list, and indicate on the first page, the discipline in which they wish the submitted paper to be reviewed and published: Behavioral biology, Biochemistry, Cell biology, Developmental biology, Diversity and evolution, Ecology, Endocrinology, Genetics, Immunology, Molecular biology, Morphology, Neurobiology, Phylogeny, Physiology, Reproductive biology, or Taxonomy.

2. ABSTRACT AND KEY WORDS

All manuscripts must include a brief but informative ABSTRACT, preferably not exceeding 250 words, intelligible without reference to the main text. The abstract should not be divided into multiple paragraphs, and should not include reference citations. Five or more key words should be provided below the ABSTRACT to assist with indexing of the article.

3. INTRODUCTION

This section should provide enough background information to make it clear why the study was undertaken and should clearly describe the objectives of the study. Lengthy literature reviews are discouraged.

4. MATERIALS AND METHODS

This section should provide the reader with all the information necessary to repeat the work. For a modification of published methodology, only the modification needs to be described, with reference to the original source. **Statistical analysis** of the data (where applicable) is mandatory, using appropriate methods, which must be cited.

5. RESULTS

Results should be presented by referring to tables and figures and without discussion. Avoid repeating in the text lists of numerical values that are also presented in tables; however, reference to peak or other noteworthy values is permissible. In taxonomic descriptions of new species, the following order of topics is preferred: species name (centered), reference to relevant figures & tables (centered on next line); synonymies; diagnosis (if used); material examined (holotype, paratype[s], and other material); etymology; description; taxonomic remarks; other information, if any (e.g., natural history, behavior); and, finally, occurrence/distribution.

6. DISCUSSION

This section should at least include a concise summary of the principal findings, a discussion of the validity of the observations, a discussion of how the findings relate to other published works dealing with the same subject, and a discussion of the significance of the work. RESULTS and DISCUSSION sections may be combined as a RESULTS AND DISCUSSION section.

7. ACKNOWLEDGMENTS

In this section, the authors should acknowledge assistance to their study, including, for example, sources of financial and material support, people who assisted in fieldwork, or people who helped improve the manuscript, but not including anonymous reviewers or handling editor assigned to the manuscript.

8. COMPETING INTERESTS

In this section, authors should disclose any relevant financial interests that may influence the interpretation of their results. Examples of relevant financial interest include affiliations with or investments in an organization with a direct financial interest in findings reported in the manuscript.

9. AUTHOR CONTRIBUTIONS

In this section, the authors should indicate which individual authors (denoted by first and last initials, or by first initial and last name when two or more authors share the same initials) contributed to which aspects of the study, such as experimental design, conduct of experiments, interpretation of data, and writing of the manuscript. If authors share the same last name and the same initial of their first names, the first names should also be spelled out.

10. SUPPLEMENTARY MATERIALS

This section should be provided for manuscripts with supplementary materials. Following the beginning statement "Supplementary material(s) for this article is/are available online.", brief titles for each supplementary material should be listed.

11. REFERENCES

References should be cited in the text as follows:

One author: Matsuda (1995) or (Wada, 1994; Matsuda, 1995).

Two authors: Matsuda and Yamada (1994) or (Wada, 1992; Matsuda and Yamada, 1993)

More than two authors: Matsuda et al. (1990) or (Wada et al., 1986, 1989; Matsuda et al., 1990a, b)

All references cited in the text should be listed in the REFERENCES section in alphabetical order according to the surname of the first author. For two-author papers with the same first author, the order is alphabetical by the second author's name. For three-or-more-author papers with the same first author, the order is chronological. The REFERENCES section should be double-spaced, without a blank line between references.

The following examples illustrate the format to be used for different types of references:

Books:

Campbell RC (1974) *Statistics for Biologists*. 2nd ed, Cambridge University Press, London

Journal articles:

Shima A, Ikenaga M, Nikaido O, Takabe H, Egami N (1981) Photoreactivation of ultraviolet light-induced damage in cultured fish cells as revealed by increased colony forming ability and decreased content of pyrimidinedimers. *Photochem Photobiol* 33: 313–316

Articles in edited volumes:

Nakahara H (1991) Nacre formation in bivalve and gastropod molluscs. In "Mechanisms and Phylogeny of Mineralization in Biological Systems" Ed by S Suga, H Nakahara, Springer Verlag, New York, pp 343–350

Wiersma CAG (1961) Reflexes and the central nervous system. In "The Physiology of Crustacea, Vol 2" Ed by TH Waterman, Academic Press, New York, pp 241–279

Journal names should be abbreviated, without punctuation; lists of standard journal abbreviations are accessible via the World Wide Web (e.g., <http://home.ncifcrf.gov/research/bja/> or <https://www.library.caltech.edu/journal-title-abbreviations>) by searching with the keywords 'scientific journal abbreviations'.

Manuscripts accepted for publication but not yet published should be listed in the Reference section as "in press." The use of "in preparation", "submitted for publication", or "personal communication" is not allowed in the reference list. Instead, the phrases "unpublished data" or "personal communication" should appear parenthetically following the relevant name(s) in the text.

The names and initials of more than six authors should be abbreviated using "et al." for all additional authors.

12. FIGURE LEGENDS AND TABLE CAPTIONS

Figure legends, table captions and footnotes, and captions for supplementary files (if any; see Section I below) should be included in a section entitled FIGURE LEGENDS AND TABLE CAPTIONS following the REFERENCES section within the **Main Document** file. This is to facilitate the editing and proofreading of legends and captions.

D. PREPARATION OF TABLES

Tables can include essential data relevant to important points in the text, or other information (e.g., DNA primers or collecting localities) that would otherwise appear as long lists in the text. Avoid presenting data in both a table and a figure, or repeating in the text all the data presented in a table. All tables should be referred to in the text, and the approximate position of each should be indicated in the margin of the manuscript, if possible. Each table should be prepared in a separate **Table** file prepared with a spread-sheet program, such as Microsoft Excel, and should have an explanatory caption (see Section B above). For editing purposes, table captions and footnotes should also be repeated in the "FIGURE LEGENDS AND TABLE CAPTIONS" section of the **Main Document** file submitted (see Section C-12 above).

E. PREPARATION OF FIGURES

All figures should be appropriately labeled with letters and numbers of a font size that will be at least 1.5 mm high in the final reproduction. Abbreviations should be consistent between figures and the text. All figures should be referred to in the text and numbered consecutively (Fig. 1, Fig. 2, etc.). Multiple parts or panels of a single figure must be labeled by a capital letter (A, B, C, ...) in the upper or lower left corner of each part, with the font size used to label figure panels larger than the labels used in the figure to label structures and other features. See Section B for recommended file formats. Figures that are substandard and require corrections may delay publication. It is costly to publish color figures in the printed version, and these will be published at the author's expense (see Section N. below). There is an option to publish color figures online and black and white (B/W) in print free of charge, where authors should submit both color and B/W figures to confirm that the necessary contents are readable even in the B/W version.

Each figure should be accompanied by an explanatory legend. The legends for all figures should be typed consecutively together, double-spaced, on one or more pages in a section of the submitted **Main Document** file under the heading "FIGURE LEGENDS AND TABLE CAPTIONS" (see Section C-12 above). Sufficient detail should be given in each legend to make it intelligible without reference to the text. However, avoid repeating in figure legends long, detailed explanations of methodology that are also presented in Materials and Methods.

Maps included as figures should include appropriately labeled lines indicating latitude and longitude, and should have major geological features, country names, and place names also labeled to help orient the reader.

F. ABBREVIATIONS

Abbreviations of obscure or specialized measurement units, quantity units, chemical names, and other technical terms in the body of the paper should be used only after these have been defined clearly in the place they first appear in the text. However, abbreviations that would be recognized by scientists outside the author's field may be used without definition, such as PCR, P, SD, SE, DNA, RNA, ATP, ADP, AMP, EDTA, UV, and CoA. The metric system should be used for all measurements, and standard metric abbreviations should, in general, be expressed without periods. Units of measurement not preceded by a number should not be abbreviated, e.g., "all units are given in millimeters". There should be a space between a value and its unit, e.g., 20 mM, 42 µl. However, °C and % have no space, e.g., 10°C, 85%. Mathematical symbols such as =, ±, >, <, etc. should be preceded and followed by a space, e.g., "length = 5 mm" rather than "length=5 mm".

Authors should ensure that the nomenclature, abbreviations, and conventions of italicization and capitalization are correct for the names of genes and proteins appearing in their manuscript. Conventions differ among different groups of organisms.

G. NUCLEOTIDE SEQUENCE SUBMISSION

New nucleotide data must be submitted and deposited in the DDBJ/ENA/GenBank databases and accession numbers must be obtained before submission. Submission to any one of the three collaborating databanks is sufficient to ensure data entry in all. Accession numbers should be included in the manuscript, either in the text, in a table, or as a title-page footnote in the form [Note: Nucleotide sequence data reported are available in the DDBJ/ENA/GenBank databases under accession number(s) —]. If requested, the database will withhold the release of data until publication.

The most convenient method for submitting sequence data is by the World Wide Web:

DDBJ: <http://www.ddbj.nig.ac.jp>

ENA: <http://www.ebi.ac.uk/ena>

GenBank: <http://www.ncbi.nlm.nih.gov/genbank>

H. ZOOBANK REGISTRATION

The Editorial Office will register accepted manuscripts with nomenclatural acts in ZooBank before publication; the LSID will appear on the first page of each published paper. Authors do not have to register their publications and nomenclatural acts in ZooBank.

I. SUPPLEMENTARY MATERIALS

Zoological Science does not permit the inclusion of Appendices in the published version. Texts, data tables or figures relevant but peripheral to the main text may be submitted as supplementary materials (**supplementary files** in S1M), for online publishing only (this is optional and should be kept to a minimum). Movie clips or other data files also can be published as supplementary materials. All supplementary materials must be peer-reviewed and approved by the Editors in order to be published online. Brief titles for each supplementary material should be indicated in the SUPPLEMENTARY MATERIALS section (see Section C-10 above). Once an issue is available online, the supplementary material automatically becomes available to the readership. For review and posting purposes, each submission of supplementary material must include both the data and a corresponding caption. Supplementary files should be labeled, in order, "Supplementary Text S1, S2, ..." for texts, "Supplementary Figure S1, S2, ..." for figures, "Supplementary Table S1, S2, ..." for tables, "Supplementary Movie S1, S2, ..." for movie clips, or "Supplementary File S1, S2 ..." for other files. References to supplementary files should be in the form: (see Supplementary Figure S1), (see Supplementary Table S1), etc. For editing purposes, the captions of supplementary materials should be included in the FIGURE LEGENDS AND TABLE CAPTIONS section of the submitted manuscript (see Section C-12 above).

J. CONDITIONS OF PUBLICATION AND COPY RIGHTS

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K. AUTHORSHIP

Authorship should be restricted to those who have made a substantial intellectual contribution to the work and are prepared to accept accountability for it. All authors should approve the version of the manuscript to be submitted and the final version to be published. Requests for changes in authorship after submission are only allowed under exceptional circumstances. Such requests will be handled according to the COPE flowcharts (see https://publicationethics.org/files/u7140/Authorship%20A_0.pdf and <https://publicationethics.org/files/Authorship%20B.pdf>). The corresponding author should take responsibility for the manuscript as it moves through the journal's submission process. The publisher will communicate only with the corresponding author, who is therefore responsible for liaising with the other co-authors. Joint first authorship is permitted. Joint corresponding authorship may be permitted, but a single corresponding author must be responsible for all correspondence regarding the manuscript, while any additional corresponding author should be involved in post-publication correspondence only. The joint authors should be indicated by superscript identifiers and a footnote in the title page.

L. ISSUE-IN-PROGRESS

Peer-reviewed, copy-edited, corrected articles without continuous page numbers will be published in the Issue-in-Progress workflow ahead of the official issue publication date. The Issue-in-Progress workflow makes it possible to publish articles on BioOne Complete as soon as the editorial process is completed, rather than waiting for the completion of an entire issue of the journal. This workflow helps to speed up the acceptance-to-publication timeline.

M. PROOFS AND REPRINTS

A galley proof and a reprint order form will be sent to the corresponding author via e-mail. The first proofreading is the author's responsibility, and the proof should be returned within two working days from the date of receipt. Please e-mail the Zoological Science Proofreaders for help in proof editing (see Section A above).

No free reprints are available for regular papers; authors who wish to purchase reprints must complete and submit the reprint order form. The minimum quantity for a reprint order is 50. Authors may purchase the PDF file of their Article in lieu of the conventional reprints. The PDF file will be e-mailed to purchasers after it has been published online. Authors of *Invited Reviews* and *Invited Essays* can receive 50 gratis reprints.

N. PAGE CHARGES

Original Articles and unsolicited *Reviews* and *Essays* of up to eight printed pages or *Invited Reviews* and *Invited Essays* of up to 15 printed pages are published free of charge. For pages over these limits, the charge is JPY 5,000 per page. All authors, except those of *Invited Reviews* and *Invited Essays*, will be charged for color figures (JPY 10,000 per page). There is also an option to publish color figures online and B/W in print free of charge (see Section E above).

O. OPEN ACCESS

The following articles are to be published as Open Access: *Invited Reviews*, *Invited Essays*, those awarded a Zoological Science Award, those for which the author(s) choose the Open Access option for JPY 100,000 (per article) of Article Processing Charge, and those specifically approved by the Editorial Board.

Appendix

Key points from International Standards

For Authors

- The research being reported should have been conducted in an ethical and responsible manner and should comply with all relevant legislation.
- Researchers should present their results clearly, honestly, and without fabrication, falsification or inappropriate data manipulation.
- Researchers should strive to describe their methods clearly and unambiguously so that their findings can be confirmed by others.
- Researchers should adhere to publication requirements that submitted work is original, is not plagiarized, and has not been published elsewhere.
- Authors should take collective responsibility for submitted and published work.
- The authorship of research publications should accurately reflect individuals' contributions to the work and its reporting.
- Funding sources and relevant conflicts of interest should be disclosed.

For Editors

- Editors are accountable and should take responsibility for everything they publish.
- Editors should make fair and unbiased decisions independent of commercial consideration and ensure a fair and appropriate peer review process.
- Editors should adopt editorial policies that encourage maximum transparency and complete, honest reporting.
- Editors should protect the integrity of the published record by issuing corrections and retractions when needed and pursuing suspected or alleged research or publication misconduct.
- Editors should pursue reviewer and editorial misconduct.
- Editors should critically assess the ethical conduct of studies in humans and animals.
- Peer reviewers and authors should be told what is expected of them.
- Editors should have appropriate policies in place for handling editorial conflicts of interest.