

THE JOURNAL OF PARASITOLOGY POLICY AND GUIDELINES FOR AUTHORS

The *Journal of Parasitology* is the official journal of the American Society of Parasitologists (ASP). The *Journal* is non-profit and dues of the membership support the cost of publication. Manuscripts in English are accepted from investigators in any country regardless of whether they are members of the Society. The *Journal* publishes official business of the ASP and results of new, original research, primarily on parasitic animals.

POLICY

Conditions of acceptance

Manuscripts are received by *Journal of Parasitology* with the understanding that:

- 1) all authors have approved submission;
 - 2) the results or ideas contained therein are original;
 - 3) the work has not been published previously;
 - 4) the paper is not under consideration for publication elsewhere and will not be submitted elsewhere unless rejected by the *Journal of Parasitology* or withdrawn by written notification to the editor of the *Journal of Parasitology*;
 - 5) if accepted for publication and published, the article, or portions thereof, will not be published elsewhere unless consent is obtained in writing from the editor of the *Journal of Parasitology*;
 - 6) reproduction and fair use of articles in the *Journal of Parasitology* are permitted in accordance with the United States Copyright Revision Law (PL94–533), provided the intended use is for nonprofit educational purposes. All other use requires consent and fees where appropriate;
 - 7) the obligation for page charges and redaction fees is accepted by the authors.
- 2) Experiments using animals should be designed and conducted with full consideration given for their relevance to human or animal health, the acquisition of knowledge, or the welfare of society.
 - 3) Animal species selected for experimentation must be appropriate for the results expected, and the number used should be the minimum justified by sound statistical analysis.
 - 4) All experimental and maintenance procedures require the avoidance of creating conditions that would lead to animal discomfort, distress, or pain, consistent with sound scientific practices.
 - 5) If animals are to be subjected to momentary distress or pain, appropriate anesthesia must be employed. Painful experiments must not be conducted on unanesthetized animals that have been paralyzed by chemicals or other procedures.
 - 6) Animals used in experiments that cause chronic pain or distress must be killed as soon as the experiments are concluded.
 - 7) Veterinary care for laboratory animals is essential. Animals maintained in the laboratory must be kept in conditions appropriate for that species and under conditions that contribute to their health and comfort.
 - 8) All persons using laboratory animals should be well trained for the conduct of experiments on living animals.
 - 9) When exceptions to these principles are required, decisions regarding animal use must be made by the appropriate institutional animal care and use committee.
 - 10) The use of animals obtained from natural populations must be in accordance with regulations and policies of appropriate federal or state agencies.

Articles reporting original research, invited reviews, and research notes are evaluated by at least 2 anonymous reviewers selected by an associate editor. Critical comments are reviewed and published on the judgment of the editor. The final decision of whether to publish is made by the editor after reviews and opinions of the editorial board are considered.

Animal care and use

The ASP conforms to the “U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research and Training.” Work involving vertebrate animals reported in any paper submitted to the *Journal of Parasitology* must have been conducted within the following guidelines adapted from a statement by The American Association for Laboratory Animal Science (1989, *Laboratory Animal Science* 39: 267).

- 1) The transportation, care, and use of animals for research and teaching must conform with the appropriate national guidelines (in the U.S.A., the Animal Welfare Act) and other applicable laws, guidelines, and policies. Authors should refer to the Guide for the Care and Use of Laboratory Animals (U.S. DHEW Publication Number [NIH] 86–23, as revised in 1985 or subsequently).

Page charges and redaction fees

The first 3 pages of each published manuscript are without charge. Thereafter, members of the ASP are charged \$45.00 for each additional page; nonmembers are charged \$75.00 per additional page. Nonmembers intending to publish in the *Journal of Parasitology* are encouraged to become members of the Society. The current annual dues are \$75.00 (students \$35.00).

Correction of authors’ errors or revisions, when allowed, made on proofs are billed at \$3.75 each. Authors are reminded that added or removed characters may necessitate other corrections.

Return of materials

Rejected papers: When the decision is made not to publish a paper, the original typescript and illustrations are returned to the author with the author’s copy of the reviews and a cover letter. All other materials are destroyed. Rejected manuscripts are not reconsidered.

Papers returned for revision: Materials necessary for reference or to be revised are returned to the author at the time a revision is requested. If the revision is not received within 6 mo, or if other arrangements have not been made with the ed-

itor, the manuscript is considered to have been withdrawn and the materials are destroyed.

Forms of publication

Articles: The Journal publishes articles reporting original research, primarily on parasitic animals.

Research notes: This form of publication represents discrete, definitive information (as opposed to preliminary results) that does not lend itself to inclusion in a typical, more comprehensive article. A new or modified technique may be presented as a research note only if the technique is not to be used in ongoing studies. Ordinarily, techniques are incorporated into the materials and methods section of a regular article. The Journal will no longer publish notes that deal with host or location records, except for the most unusual cases; if a prospective author has an exceptional case, he/she should first contact the Editor to determine the paper's potential acceptability.

Review articles: Only invited reviews are published. Unsolicited reviews should not be submitted, but topics may be suggested to the editor or members of the editorial board.

Critical comments: Critical comments are for correcting errors of published fact, providing alternative interpretations of published data, or presenting new theories based on published information.

Book reviews: Books having a broad interest to the membership of the Society are reviewed by invitation.

GUIDELINES FOR AUTHORS

Electronic submission

The *Journal of Parasitology* accepts papers online via our AllenTrack arrangement with Allen Press. Authors are encouraged to submit manuscripts from an Internet-connected computer, with any operating system and any platform, anywhere in the world, day or night. In preparing your manuscript for submission, please use the guidelines printed in the February issue of the *Journal of Parasitology* every other year. The system will allow authors to check the status of their manuscript and add updated files at a later date. The only software required is the Adobe® Acrobat Reader (available for free from www.adobe.com). Authors not wishing to submit via the AllenTrack system may continue to submit hard copies to the editorial office by ordinary mail or courier service.

Like all submissions, access to papers submitted electronically is strictly controlled by login and user privileges, thus assuring authors that their papers are secure and inaccessible to anyone except the editor or his designee.

To submit a paper via the Internet, the following procedure should be used: Go to <http://jparasitology.allentrack.net>.

The first time you use the system you will register for an account. You will use your account login and password when you return to the site to check on the status of your paper.

The first time you log on, you will have 2 choices (1) Submit a Paper, or (2) Author Guidelines. (Please examine the Guidelines carefully—they will save you time and help you make the best use of the system.) After you submit the paper, you will have a third option that links you to information on your submission.

Once your files are uploaded to the database, they are converted as needed to PDF files that can be viewed, downloaded,

and printed. Most word processing files, e.g., Word, WordPerfect, text, Postscript, and rich format, are convertible. Word (MS word) for the text, is what we prefer. Figures can be uploaded in JPEG, TIFF, GIF, EPS, PDF, or Postscript formats. Line art, halftones, and color figures should be scanned as follows: grayscale/halftone images should be scanned at 450 dpi, color figures should be scanned at 300 dpi; and line art should be scanned at 1200 dpi. **PLEASE NOTE** that all figures should be submitted as separate files and **NOT** part of the text. When your ms. has been accepted for publication we may ask that hard copies of your figures be mailed to the Editorial Office. The reason for this request is related to the enormous variation in the quality of printers used in reproducing figures during scanning. With original hard copies in hand, we can ensure quality reproduction.

The system will ask you to confirm that the files have been converted correctly, i.e., check your files to make sure the system converted each element properly. Your paper will be considered as officially submitted only after the system receives your confirmation.

As you go through the steps, watch for red arrows. These tell you that you need to take action on something.

Converting your files should take just a few minutes, but occasionally they will take longer. Conversion time may vary with your connection. In any case, you are no longer required to make multiple copies of your text and figures, or package your manuscript, or ship it via regular mail service to the editorial office. Most importantly, it will be delivered instantaneously!

When the paper is in the system we will assign it a tracking number and an associate editor to whom it will be transferred electronically from our office. Once the associate editor has it, the manuscript will be sent immediately, by electronic means, to appropriate referees.

Hard copy submission

All manuscripts must be prepared and submitted according to the guidelines of this section and those of the subsequent section appropriate for the category of the report.

Paper: Manuscripts are to be typed on one side only of good quality, white paper. Thin onion skin or rice parchment papers are **not** acceptable.

Typing: **All parts of original manuscripts** are to be typed double-spaced (no more than 3 lines/25 mm), with all margins being at least 25 mm wide. Type should be at least 12 point (elite); **photoreduction, even in tables, is not acceptable**. Proportional spacing and hyphenation should not be used, i.e., do not justify right-hand margin. Do not leave extra space between paragraphs in the text. Only a single font should be used; genera and species should be in italics. Authors' names in the literature cited section should be typed with capitals for the initials and first letter of the last name and lowercase for all other letters (despite the fact that these names are printed in large and small capital letters in the Journal).

Submission: For a new manuscript, submit the original and 3 copies prepared according to the Policy and Guidelines contained herein. When a manuscript has been accepted for publication by the editor, specific instructions for preparation of the revision on a diskette will be supplied. Please note that if it is not possible to prepare the revision on a diskette, then 2 hard

copies of the revision prepared according to the Policy and Guidelines statement will be suitable. It remains the responsibility of the author to retain a copy of the manuscript for reference and to protect against loss. Manuscripts should be addressed to: Dr. Gerald W. Esch, Editor, Journal of Parasitology, Department of Biology, Wake Forest University, P.O. Box 7629, Winston-Salem, North Carolina 27109.

Articles

Manuscripts are to be organized in the following format and sequence, with all pages, beginning with that for the running head, numbered consecutively.

Running head: Provide the last names of authors (use et al. for more than 2) and a shortened title. The entire running head may not exceed 60 characters and spaces. Style: RH: JONES ET AL.—LIFE CYCLE OF *H. DIMINUTA*

Title: Immediately after the running head give the title of the article, names of authors, and address of the first author. Include the email address, in italics, of the corresponding author only. The title and authors' names should be in bold type, and the same font size as the text. All other information should be in roman type. Titles should be short and descriptive. Avoid "empty words" such as preliminary studies on . . . and biology or ecology of . . . Do not use author and date citations with scientific names in the title. **In the title only**, numbers less than 11 are spelled out; numbers indicating papers in a series will not be accepted. Present addresses and addresses for remaining authors, if different from that of the first author, are given as footnotes, and are to follow the Figure Legends with one space between the legends and the footnotes. You should also designate who the corresponding author is by using one of the footnote designations. Footnote designations are as follows: *, †, ‡, §, ||, #, ¶, **, ††. (See examples [pp. 241–243] at end of guidelines.)

Abstract: This should follow directly after the author's address with no additional spacing between them. You should provide an abstract of the paper that does not exceed 200 words. The abstract should be factual (as opposed to indicative) and should outline the objective, methods used, conclusions, and significance of the study. The abstract is headed with the word abstract, indented, and typed in bold capital letters, ending with a colon also in bold type. Text is run in after the colon, is not subdivided, and does not contain literature citations.

Introduction: The introduction should follow the abstract and should be un-headed. The introduction should establish the context of the paper by stating the general field of interest, presenting findings of others that will be challenged or developed, and specifying the specific question to be addressed. Accounts of previous work should be limited to the minimum information necessary to give an appropriate perspective. The introduction may not be subdivided and extra spacing between paragraphs is not permitted here or throughout the text.

Materials and methods: This section should give sufficient information to permit repetition of the study by others. Methods and apparatus used should be indicated, but specific brand names and models need to be mentioned only if significant. The source, e.g., city and state, both spelled in full, of special equipment or chemicals should also be given. Previously published or standard techniques are to be referenced, but not detailed. Generic descriptions should be given for unusual compounds used.

The primary heading for this section should be typed in all bold capital letters and started at the left-hand margin of the page. The heading is unnumbered and ends without punctuation. Second-level headings in bold type should be on a separate line beginning at the left-hand margin. The initial letter of the first word is the only capital letter except capitals needed for proper nouns. These headings are unnumbered and end without punctuation. Third-level headings are indented for a paragraph, italicized, and end with a colon, also italicized. The initial letter of the first word is the only capital letter, except capitals needed for proper nouns. Text is run in immediately following this heading. Further subdivision should not be needed. If the materials and methods section is short, it should not be subdivided; it is unnecessary to provide headings, beyond the primary head, for a series of subsections comprising single paragraphs.

Results: This section should contain a concise account of the new information. Tables and figures are to be used as appropriate, but information presented in them should not be repeated in the text. Avoid detailing methods and interpreting results in this section. The results section may be subdivided and headed as for the materials and methods section.

Taxonomic papers have a distinct style that must be adhered to in preparing a manuscript. In **taxonomic papers** the results section is to be replaced by a section headed **DESCRIPTION**, beginning at the left-hand margin. The primary heading is followed by the italicized scientific name in bold type of the taxon studied; it begins at the left-hand margin. Synonyms and reference to figures follow, each as a separate line at the left-hand margin (these are not in bold type or italicized). The text of the description follows as a new paragraph. The description is followed with a **taxonomic summary** section, headed as described for second-level headings in the instructions for the materials and methods section. The taxonomic summary section comprises a listing of the type host, other hosts, site, locality, and specimens deposited. Each of these topics is headed as a third-level heading, e.g., italicized, and indented as described for the materials and methods section. The *Host* subsection must include the full scientific name of the host, the authority's name, and an indication if *Symbiotype* specimens were deposited in a vertebrate museum along with accession numbers. The *Locality* should include map coordinates as well as the name of the locality, e.g., ocean, river, etc., and the geopolitical region. *Prevalence and density* data are included when known. The taxonomic summary is followed by a remarks section, headed as described for second-level headings in the instructions for the materials and methods section. The **remarks** section replaces the discussion of other articles and gives comparisons to similar taxa; it is typed in boldface and begins at the left margin. The first letter is capped and the rest are lowercase. This sequence of subsections is repeated for each taxon. If in taxonomic papers the description section does not comprise all of the results and discussion, the format outlined is to be incorporated into the usual section of results. Museum accession numbers for appropriate type material (new taxa) and for voucher specimens (surveys) are required; if deposited in the U.S. National Parasite Collection at Beltsville, Maryland, the accession number is preceded by the acronym USNPC No. Appropriate photographic material should be deposited for descriptions of coccidia. Frozen tissues must also include accession numbers if deposited in a museum.

Discussion: An interpretation and explanation of the relationship of the results to existing knowledge should appear in the discussion section. Emphasis should be placed on the important new findings, and new hypotheses should be identified clearly. Conclusions must be supported by fact or data. All letters in **DISCUSSION** are boldfaced, capped, and started at the left-hand margin. The primary heading and subdivisions, if needed, in this section are as described for the materials and methods section.

Acknowledgments: These should be concise. Ethics require that colleagues be consulted before being acknowledged for their assistance in the study. The heading for this section is as for the primary head described for the materials and methods section. Subdivisions are not used in this section.

Literature cited: Citations are arranged alphabetically. All references cited in the text must appear in the literature cited section, and all items in this section must be cited in the text. Citation of unpublished studies or reports is not permitted, i.e., a volume and page number must be available for serials and a publisher, city, state, and full pagination for books. Abstracts not subjected to peer review may not be cited. Work may be cited as “in press” only if proof has been produced. If absolutely necessary, a statement may be documented in the text of the paper by “pers. comm.,” providing a copy of that page signed by the person cited accompanies the manuscript. In those cases, the citation is indicated in the style: (X. Y. Smith, pers. comm.).

Personal communications do not appear in the literature cited section. Do not indent anything; Allen Press has a computer program that will handle all citations and indent as appropriate.

Style in the text:

- (Allen, 1989)
- (Allen and Smith, 1989)
- (Allen et al., 1989)
- (Jones, 1987; Allen, 1989)—chronological
- (Jones 1987; Allen, 1989; Smith, 1989)—chronological and alphabetical within year
- (Jones, 1987, 1988a, 1988b, 1989)
- Multiple authors with the same year of publication should be (Smith, Jones et al., 1988; Smith, Walker, and Jones, 1988), **not** (Smith et al., 1988a, 1988b)

Style in the literature cited section (note that indentations are no longer required):

Journal article, 1 author

- Nollen, P. M. 1990. Chemosensitivity of *Philophthalmus megalurus* (Trematoda) miracidia. *Journal of Parasitology* **76**: 439–440.

Journal article, 2 authors

- Edwards, D. D., and A. O. Bush. 1989. Helminth communities in avocets: Importance of the compound community. *Journal of Parasitology* **75**: 225–238.

Book

- Schmidt G. D., and L. S. Roberts. 1989. Foundations of parasitology, 4th ed. Times Mirror/Mosby College Publishing Company, St. Louis, Missouri, 750 p.

Chapter in edited book

- Nesheim, M. C. 1989. Ascariasis and human nutrition. In Ascariasis and its prevention and control, D. W. T. Crompton,

M. C. Nesbemi, and Z. S. Pawlowski (eds.). Taylor and Francis, London, U.K., p. 87–100.

Thesis or dissertation

- Monks, W. S. 1987. Relationship between the density of *Moniliformis moniliformis* and distribution within the definitive host population. M.S. Thesis. University of Nebraska-Lincoln, Lincoln, Nebraska, 64 p.

Note that abbreviations are not used for titles or serial publications and that spaces appear between initials.

The literature cited section has a primary heading as described for materials and methods.

Footnotes: Footnotes are used only for the title page of regular articles to indicate authors' addresses and to whom correspondence should be sent. Those for tables are typed directly under the table to which they pertain. Footnotes appear at the end of the manuscript directly after the Figure Legends (see example at end of guidelines).

Tables: Tables are used only to present data that cannot be incorporated conveniently into the text. Ordinarily values from statistical tests are not published as tables; tests employed and probability accepted for significance can be stated in the materials and methods section with significant differences indicated in tables by footnotes or in the text by a statement.

Tables must be designed to fit in 1 or 2 columns. Only rarely may they be designed to fit the height of a printed page. Generally, if the width does not fit the height of a typed page, the table is too wide. Tables may be continued on following pages to accommodate length, but pages may not be taped together, photoreduced, single-spaced, oversized, or otherwise modified to contain more material.

Tables are numbered with Roman numerals in a continuous series and so referenced, in sequence, in the text. Captions are typed above the data on the same page. Species names are spelled out in full (and italicized) the first time used in each caption. All columns in a table must have headings, with the first letter of the first word and proper nouns capitalized, e.g., Number sampled, % Recaptured.

Horizontal lines should be avoided in the body of the table; vertical lines are not permitted. If such symbols are necessary, the table must be prepared as a line drawing and treated as a figure. Use of letters and numbers as superscripts or subscripts is not permitted. Table designations must be used in the obligate sequence that follows: *, †, ‡, §, ||, #, ¶, **, ††.

Figures: All figure captions are to appear consecutively, in sequence, directly after the literature cited section. Do not place figure captions on the same page as the figures. Each figure or plate of figures must have a caption. The caption is written in paragraph style, beginning with the word “FIGURE.” Captions are typed in roman, except when italic type is required, e.g., a genus and species. For plates, a summary statement should precede the specific explanation of each figure. Avoid repeating information for each figure that can be placed in the summary statement. Species names are spelled out in full the first time used in each caption. The caption must contain an explanation of all abbreviations used on the figures and indicate the value of lines or bars used to show size (unless the value is shown directly on the figure). Size should not be indicated by magnification in the caption because the figure might not be printed at the size calculated.

Figures are numbered consecutively in the sequence mentioned in the text. Nonparenthetical references to figures in the text are not abbreviated, i.e., Figure 1; Figures 1, 2; Figures 1–3; references to figures in parentheses in the text are abbreviated, i.e., Fig. 1, Figs. 1, 2; Figs. 1–3. All symbols used in a figure must be defined when possible by a key within the body of the figure. Style, including the form of abbreviation, must be that used in the *Journal*. When symbols are set in the caption, the following are available:

○, □, △, ▽, ◇, ⊖, ⊕, ⊗, ●, ○, ●, ■, ▲, ▼, ◀, ▶, ◆.

Others require artwork and the additional expense may be billed to the author. Freehand labeling of figures is not acceptable.

Figures may be used singly or grouped in a plate. In either case, the originals must be mounted on illustration board with a margin of at least 25 mm on all sides. Photographs and line drawings may not be combined in a single plate. If such a composition is necessary, the additional expense may be billed to the author. All figures are to be identified on the back by author name and figure number with the top indicated. Single figures are not numbered on the front, but each figure in a plate must include a number or letter, applied directly to the figure and, when possible, without an added background. Figures arranged to form a plate are to be abutted tightly without space or masking between.

Figures and plates are printed in 1 (88 mm wide) or 2 (182 mm wide) columns. Length may be up to 229 mm, but in practice it should be shorter to allow room beneath for the caption as published in the *Journal*. Publication may be delayed if the caption cannot be included on the same page as the figure(s). All figures and plates should be prepared in a space proportional to the printed dimensions and must stand reduction to them.

Originals of line drawings are not required for review purposes; provide instead a clear, sharp, offset print or photograph for printing and good photocopies (3) or photographs for review. Photocopies of photographs or other halftones are not acceptable, even for review. If figures provided for review are not mounted, they should be printed or photocopied on 8 1/2 x 11-inch paper. The quality of review copies must be adequate to permit evaluation of the work and judging of the suitability for publication. An author's excuse that the original shows detail not seen in the review copy will seldom lead to reconsideration. Original line drawings are preferable for publication purposes.

Research notes

Manuscripts are to be organized in the following format and sequence with all pages, numbered consecutively.

Title page: Research Notes do not have a running head, but should be identified as such on the title page. On first page, give the title of the note in bold type and capitalize only the first letter of all principal words. On a separate line, give the names of the authors, also in bold type, and capitalize only the authors' initials and first letter of the last name. On a third line (and following lines, if necessary) give addresses of the authors in roman type, joined by semicolons, matched to authors other than the first one by symbols like those used for tables. Begin all 3 lines at the left-hand margin. Also designate to whom

correspondence from the editor and proofs from the printer should be sent with an acceptable symbol.

Abstract: An abstract is to be provided as described for articles.

Text: The text of a research note is written without sections and without extra spacing between paragraphs. Acknowledgments may be given, without heading, as the last paragraph. Literature is cited in the text as described for articles.

Literature cited, tables, figure captions, and figures: These items are in the form and sequence described for articles.

Review articles

Invited review articles are in the form described for articles, except that other sections may be used in place of the materials and methods, results, and discussion sections. Headings should be restricted to major headings and no more than 2 sublevels. Extra spacing between paragraphs is not permitted. Use of tabular data or figures from the work of others must be consistent with copyright law, and it is the responsibility of the author to supply appropriate permissions when the manuscript is submitted.

Critical comments

Manuscripts are to be organized in the following format and sequence with all pages, beginning with the title page, numbered consecutively.

Title: Starting at the left-hand margin, give the title of the article in bold type and capitalized. Immediately following title, give the name of the author(s) in bold type.

Text: The text is written without subdivision and without extra spacing between paragraphs. Literature citations are made as for articles. Acknowledgments may be included as an unheaded final paragraph.

Literature cited: If citations have been used in the text, the literature cited section is as described for articles.

Names and addresses of authors: These follow the title. The style is as described for research notes.

Tables, figure captions, and figures: When present, these are as described for articles.

Book reviews

Manuscripts are organized in the following format and sequence with all pages, beginning with that for the title, numbered consecutively.

Title: Give the title of the book being reviewed in the following style:

Toxoplasmosis of Animals and Man, by J. P. Dubey and C. P. Beattie. CRC Press, Boca Raton, Florida. 1988. 220 p. Hardcover \$124.95.

Note that, unlike in literature cited sections, the first letter of principal words is capitalized and that no comma is used between authors when there are only 2. The words "edited by" are substituted for "by" when appropriate. The book title, etc., should begin at the left-hand margin.

Text: The text usually is not subdivided and extra spacing between paragraphs is not permitted. If literature must be cited, a headed literature cited section follows the text in the style described for articles. Figures and tables should not be used. Begin as a new paragraph immediately following the book title.

Name and address of author: This information follows the text or, if present, the literature cited section. The reviewer's name should be in bold type.

General points of style

Scientific names: The full binomen is written out at the first use of a species name. At subsequent use, the generic component is abbreviated by use of the first letter, except at the beginning of a sentence where it is written out. Genera and species should be italicized, not underlined, throughout the manuscript. Author and date citations for scientific names need not be used in nonsystematic papers. In systematic papers, author and date citations are used the first time a taxon is mentioned in the abstract and the text, but not subsequently except as described for tables and figures. Use must be according to the International Code of Zoological Nomenclature and should be consistent, i.e., for all parasite and host species mentioned. Author and date citations used only as authorities for scientific names do not appear in the literature cited section.

Authors are reminded that names of taxa are not names of organisms, e.g., *Fasciola* is the name of a genus (a group of related species) and as such it does not lay eggs, ingest cells, possess a sucker, etc. These are properties of organisms.

Ecological terms: The terms prevalence, incidence, intensity, mean intensity, density, relative density, abundance, infrapopulation, suprapopulation, site, niche, and habitat are to be used as recommended by the ASP Ad Hoc Committee on the Use of Ecological Terms in Parasitology (1982, *Journal of Parasitology* **68**: 131–133). Also, see Bush et al. (1997, *Journal of Parasitology* **83**: 575–583) for an expanded and updated treatment of ecological terminology.

Mathematical and chemical notations: Authors should attempt to write mathematical equations so that they can be set in 1 line of type. When 1 unit appears in a denominator, use the solidus, e.g., g/m²; for 2 or more units in a denominator, use negative exponents, e.g., g·m⁻²·day⁻¹. Manuscripts submitted to the *Journal of Parasitology* should conform to the same conventions as those used for chemical and biochemical/molecular nomenclature.

All chemical structures not accommodated by a single line of type must be drafted and reproduced as figures.

Use of numbers: In the text numbers should be Arabic numerals except when beginning a sentence. Naked decimals are not permitted in the text, tables, legends, or on figures, i.e., 0.1, **not** .1. Numbers greater than 999 must have commas. Metric units are to be used in all articles. The 24-hour system is used to indicate time, e.g., 1500 hr.

Acronyms and abbreviations: At first use, acronyms are placed in parentheses following the name written out in full. At subsequent use, the acronym alone is used. An acronym may begin a sentence. Sentences may not begin with an abbreviation, and abbreviations are as recommended in the Council of Biology Editors (CBE) style manual. The *Journal* uses all International System of Measurement (SI) metric unit abbreviations. Common CBE and SI abbreviations include the following (the same abbreviation is used for plural form):

wk (week)
hr (hour; use 0–2400 hr for time)
sec (second)
min (minute)

mo (month)
day (not abbreviated)
n. sp. (new species)
n. gen. (new genus)
L (liter; but ml for milliliter)
g (gravity; not × g)
RH (relative humidity)
p.o. (per os)
s.c. (subcutaneous)
i.pl. (intrapleural)
i.p. (intraperitoneal)
PI (postinoculation)
p. (page)
ad lib. (ad libitum)
U.S.A. (as a noun)
U.S. (as an adjective)
sp. gr. (specific gravity)
t-test
U-test
P (probability)
 \bar{x} (arithmetic mean)
r (correlation coefficient)
n (sample size)
SD (standard deviation of the mean)
SE (standard error of the mean)
df (degrees of freedom)
NS (not significant)

Basic SI units

Meter	m
Kilogram	kg
Second	sec
Ampere	A
Volt	V
Mole	mol

Prefixes for SI units

Factor	Prefix	Symbol
10 ⁻¹	deci	d
10 ⁻²	centi	c
10 ⁻³	milli	m
10 ⁻⁶	micro	μm
10 ⁻⁹	nano	n
10 ⁻¹²	pico	p
10 ¹	deca	da
10 ²	hecto	h
10 ³	kilo	k
10 ⁶	mega	M
10 ⁹	giga	G
10 ¹²	tera	T

Miscellaneous: Unless stated otherwise, U.S.A. is understood for locations, including addresses of authors, and is not stated.

Words and abbreviations in Latin and other non-English languages, except for genus and species names, are not italicized. American spelling supersedes English spelling.

No and none are treated as singular, e.g., no worm was found. If this form is not satisfactory, avoid use of the words.

The suffix -like is hyphenated only in combination with a name in italic type or to avoid a triple l.

Studies involving sacrifice of animals are outside the scope of the journal; however, many appropriate studies involve killing of animals.

Because manuscripts are accepted only with the understanding that the work was conducted in compliance with all relevant laws and within the ASP policy on animal care and use, a separate statement regarding animal care and use is not printed as

a part of each paper. Likewise, use of the word euthanasia is redundant.

Papers are not dedicated to individuals. Dedication is only at the direction of the ASP Council, and it is in the form of an entire issue.

Revising manuscripts (hard copy submission)

When manuscripts are returned for revision, a cover letter from the editor provides directions that must be followed carefully. When submitting the revised manuscript, include a cover letter giving the manuscript number and describing how the manuscript has been revised. A point-by-point statement of what has been revised and a brief rebuttal of those criticisms not addressed should be provided. All suggestions of the reviewers and the editor must be addressed individually. Reviewers are assigned numbers to simplify this process. The revised manuscript and the author's comments usually are reviewed again.

Submit 2 hard copies of the revision that include 2 sets of tables and figures; these hard copies should be printed from the final revision as it appears on the diskette (3.5" HD/ DD disc). The diskette should include the text, literature cited, and figure legends. Do **not** place the tables or the figures on the diskette, as these should be submitted separately as hard copies. Complete instructions for preparation of the diskette will accompany the letter of acceptance and reviews. Retain a complete and exact copy of the manuscript, tables, and figures for reference and to protect against loss.

Correcting proof and ordering reprints

Authors are responsible for the accuracy of their proofs and, therefore, what ultimately is printed in the *Journal*. **Corrected**

proofs must be returned to the editor promptly, ideally on the same day as received. Receipt of proof is not acknowledged; authors are notified when proof is not received. Proofs are to be corrected, not revised. Additions usually are disallowed except to correct errors made in typesetting and by the editor. Correction of errors made by the author may be billed to the author at the rate of \$3.75 each. Queries on the proof are to be answered by "yes" or "no"; do not use "ok" or "stet."

A form for ordering reprints accompanies the proof. Only the author designated to receive correspondence receives proof and reprint order forms. It is the responsibility of this author to clear the proof with other authors and to provide the opportunity for them to order reprints. **Reprint orders are to be returned to Allen Press** at the address on the form. Orders received after printing of the issue containing the article cannot be filled.

SCHEDULE FOR PRINTING INSTRUCTIONS

These instructions, or a revision, will be printed in the February issue of the *Journal* every 2 years. Reprints are available from the editor, or they can be found online at: <http://asp.unl.edu>.

ACKNOWLEDGMENTS

These instructions are a revision of policies and practices formulated by previous editors. The staff at Allen Press, especially Annielaurie Seifert, contributed ideas and advice for the revision.

Gerald W. Esch, Department of Biology, Wake Forest University, P.O. Box 7629, Winston-Salem, North Carolina 27109.

EXAMPLE FOR FULL-SIZED ARTICLE

The following presents a sample layout of the way in which the file on your diskette should appear for a full-sized article.

Running Head: NADLER ET AL.- GENETICS OF GEOGRAPHIC VARIATION IN *A. SUUM* (not to exceed 60 characters and spaces)

GENETIC STRUCTURE OF MIDWESTERN *ASCARIS SUUM* POPULATIONS:**A COMPARISON OF ISOZYME AND RAPD MARKERS**

Steven A. Nadler, Rachel L. Lindquist*, and Thomas J. Near

Department of Biological Sciences, Northern Illinois University, DeKalb, Illinois 60115. *e-mail: snadler@ucdavis.edu*

(the e-mail address is of the corresponding author **ONLY**)

(**NOTE:** no extra space here.)

ABSTRACT: Isozyme and random amplified polymorphic DNA (RAPD) markers were used to characterize the genetics of geographic variation among population samples of *Ascaris suum*. . . .

Molecular markers are of great potential utility for revealing intraspecific variation among parasite populations. (**Note:** This was the first sentence of the Introduction, that it is not preceded by a title, and that a space does not separate the Abstract and the Introduction). By studying the genotypes or haplotypes of individuals. . . .

MATERIALS AND METHODS

Ascaris suum adults were collected from the intestines of pigs at a local meat processing plant. . . .

RESULTS**Isozyme data**

Six of the 13 loci surveyed showed evidence of polymorphism; however, only 3 of the 6 variable loci showed sufficient enzymatic activity and resolution on gels to score. . . .

RAPD data and comparative analysis of markers

Of the 29 RAPD primers surveyed, 9 yielded amplification products that met both subjective. . . .

DISCUSSION**Isozyme data**

Geographic variation: Relatively few studies have focused on the genetics of geographic variation among populations of parasitic helminths. In part, this is due to. . . .

Polymorphisms: A paradigm of parasite population structure is that parasitic organisms are characterized by small populations with high levels of inbreeding. . . .

Genetic drift

Genetic drift among *A. suum* infrapopulations may be promoted by their small effective population size and founder effects. The overall sex ratio. . . .

ACKNOWLEDGMENTS

We are grateful to Mr. Don Temperly for assistance at FDL. . . .

LITERATURE CITED

- Anderson, R. M., and R. M. May. 1978. Regulation and stability of host-parasite population interactions. I. Regulatory process. *Journal of Animal Ecology* **47**: 219–247.
- Anderson, T. J. C., M. E. Romero-Abal, and J. Jaenike. 1993. Genetic structure and epidemiology of *Ascaris* populations: Patterns and host affiliation in Guatemala. *Parasitology* **107**: 319–334.
- , ———, and J. James. 1995. Botulism. *Journal of Parasitology* **81**: 1–10.
- Monks, W. S. 1987. Relationship between the mean density of *Moniliformis moniliformis* and distribution within the definitive host population. M. S. Thesis. University of Nebraska-Lincoln, Lincoln, Nebraska, 64 p.
- Nesheim, M. C. 1989. Ascariasis and human nutrition. In *Ascariasis and its prevention and control*, D. W. T. Crompton, M. C. Mescheim, and Z. S. Pawlowski (eds.). Taylor and Francis, London, U.K., p. 87–100.
- Schmidt, G. D., and L. S. Roberts. 1989. *Foundations of parasitology*, 4th ed. Times Mirror/Mosby Publishing Company, St. Louis, Missouri, 750 p.

FIGURE 1. Random amplified polymorphic DNA fingerprints for 11 *Ascaris suum* individuals. . . .

FIGURES 2–4. (1) Gels showing the genetic make-up of. . . . (2) Comparison of 4 infrapopulations. . . . (3) Isozymes from *Ascaris suum*. . . .

*Department of Biology, Southeast Missouri State University, Cape Girardeau, Missouri 63701.

EXAMPLE FOR RESEARCH NOTE

The following represents a sample layout of the manner in which the file on your diskette should appear for a RESEARCH NOTE.

Running Head: RESEARCH NOTE

HEPATIC SARCOCYSTOSIS IN A HORSE

C. R. Davis, B. C. Barr*, J. R. Pascoe†, H. J. Olander‡, and J. P. Dubey§, Department of Anatomy, Physiology and Cell Biology, University of California, Davis, California 95616; *University of California, California Veterinary Diagnostic Laboratory, Davis, California 95616; †Department of Surgical and Radiological Sciences, University of California, Davis, California 95616; ‡Department of Pathology, Microbiology and Immunology, University of California, Davis, California 95616; and §Parasite Biology and Epidemiology Laboratory, Livestock and Poultry Sciences Institute, Agriculture Research Service, United States Department of Agriculture, Beltsville, Maryland 20705-2350. *e-mail: jdu-bey@anri.barc.usda.gov* (the e-mail address is of the corresponding author ONLY)

ABSTRACT: This report examines the phylogenetic relationships of *Tetrabothrium* spp. . . .

The various species of *Tetrabothrium* are examined within an evolutionary context (this constitutes the first sentence of the text).

If you wish to acknowledge, add without a title as an indented sentence immediately following the last paragraph of the RESEARCH NOTE.

LITERATURE CITED

(See **EXAMPLE** for full-sized article.)

Figure legends will follow after leaving one space.

All tables and figures will be included separately as 2 hard copies; tables must be double-spaced. If submitting electronically, then each plate and each table should be added as separate files.