



Herpetologica and Herpetological Monographs Instructions for Authors – 2019

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RECENT CHANGES

- Important instructions for authors of any manuscript that proposes new or revised scientific nomenclature (including descriptions of new species) have been added to the “Special Considerations for Taxonomic Papers” section. Following initial acceptance of such manuscripts, authors must follow those instructions (see pg.21 of these Instructions) in order to provide a life science identification (LSID) number that becomes associated with that nomenclature.
- Guidelines for narrative style and format have been updated to follow the Council of Science Editors, 8th edition (2014).

GENERAL INFORMATION

Herpetologica and *Herpetological Monographs* publish original papers dealing largely or exclusively with the biology of amphibians and reptiles. Manuscripts are especially encouraged that quantitatively test important hypotheses, address important theoretical issues, and carefully analyze the diversity, systematics, and evolution of amphibians and reptiles. *Herpetologica* publishes manuscripts that are approximately 45 or fewer pages, including title, text, appendices, tables, figures, and captions. [The total page count of 45 manuscript pages does not include files that will be supplemental online-only files]. *Herpetological Monographs* publishes manuscripts that are longer than 45 manuscript pages.

Herpetologica and *Herpetological Monographs* do not publish notes or short communications, although short manuscripts may be considered for *Herpetologica* by the Editor on a case-by-case basis. Submitted manuscripts will be evaluated for the appropriateness of the topic for the journal and on their scientific merit, including the importance of hypotheses or theories addressed and quality of the experimental design and writing.

Authors are accountable for legal and proper acquisition and use of study animals. Therefore, the corresponding author should indicate in a submitted cover letter that all contributors observed appropriate ethical and legal guidelines and regulations. Applicable guidelines and regulations include: (1) the ASIH-HL-SSAR Guidelines for Use of Live Amphibians and Reptiles in Field Research (Beaupre 2004); (2) state, federal, and international laws concerning the collection and transport of live or preserved specimens; (3) legal acquisition of animals from reputable dealers; and (4) Institutional Animal Care and Use Committee approval for the care of animals and study procedures used (OLAW 2002). All relevant permit and protocol numbers should be cited in both the cover letter and Acknowledgments of the manuscript). Submitted studies that deviate from acceptable practices are subject to rejection.

MANUSCRIPT SUBMISSION AND PROCESSING

Manuscripts must be submitted electronically using the online submission system:

For *Herpetologica*: <http://www.edmgr.com/herpetologica/>

For *Herpetological Monographs*: <http://www.edmgr.com/herpmonographs/>

In preparing the manuscript and graphics, follow the guidelines given below. Manuscripts ready for submission should be uploaded in MSWord (*.doc or *.docx) or rich text format (*.rtf). Manuscripts can also be uploaded as PDF files, but these must be accompanied by the file(s) originally generated with word-processing software. If any figures accompany the manuscript, each must be uploaded as a graphics file separately from the manuscript text file and should be in TIFF, GIF, JPG, Postscript, or EPS format (not as PDF). All figures should be in order and clearly labeled. Captions for any figures should be provided in the manuscript file only. Authors should retain a copy of the original manuscript file and all original artwork and photographs until the review and decision process is complete.

Authors who have attractive or interesting images (such as photographs or photographs overlaid with data figures) that relate to their manuscripts may suggest their use on the cover of the journal. Mention such images in the cover letter accompanying the manuscript submission, or submit images to the Editor for consideration.

We also encourage submission of supporting material associated with a manuscript to an online database or repository; whenever possible, accession or catalog numbers for such materials

should be given in the manuscript. The supporting material should not be essential for inclusion in the manuscript, but should be beneficial to readers. Examples of such materials include more detailed methods, data sets, additional tables or figures (including color images), video and audio files, etc. Allen Press (AP; our publisher) provides an online repository, as do other web sites such as GenBank, Dryad, etc. For additional information about preparing or submitting supplementary information, please contact the Editor.

Pre-publication Verification of Figures

Allen Press offers complimentary access to figure-verification software online—Allen veriFig™ v12.04 allows editors and authors to quickly determine if digital images are correctly prepared for production according to AP publication specifications. Navigate your web application to <http://verifig.allenpress.com> and log in with an email address and password (“figcheck”). There, authors can submit multiple files and receive a report that provides details about the resolution, figure size, fonts, and color mode of the files. For additional information about using veriFig, consult the *Guide to Allen veriFig* in the Education Library on the AP website, or click on the [Contact Help Desk](#) link on the veriFig login page.

Reprints, Proofs, and Revisions

Once accepted manuscripts have been typeset, page proofs are sent to the corresponding author prior to publication. The corresponding author should distribute the proofs to coauthors. Each author should carefully check the proofs against the edited manuscript. The authors assume all responsibility for detecting errors at this stage. Revision of content, wording, or style should not be made in the proofs; all such revisions should be made prior to the proofing stage. Authors will be invoiced for charges resulting from changes in proofs other than correction of printer’s and editor’s errors.

Reprints and high-quality PDF files of articles may be purchased from AP, using information provided to the corresponding author at the time that page proofs are received.

Publication Charges.—Authors who are current members of the Herpetologists' League (HL) are requested to pay page charges of \$25⁰⁰ per printed page up to 15 pages, and \$75⁰⁰ per printed page beyond 15 pages. Authors who are not members of HL are required to pay full page charges of \$75⁰⁰ per page of published article. In the case of multi-authored papers, at least one of the authors must be a member of HL before a manuscript is finally accepted in order to be eligible for the reduced page charges for members. All authors are assessed costs for any special handling that may be required for their illustrations, such as color photographs. The charge is \$450⁰⁰ for each figure containing color content. Color figures may be published online at no charge.

Authors may opt to purchase “Open Access” for their article. For HL members, the price for open access is \$2,000⁰⁰ per article. For non-members, the price is \$2,500⁰⁰ for open access. Open access fees are paid in lieu of page charges; that is, authors will pay either open access fees or page charges, but not both.

Herpetologica and *Herpetological Monographs* do not follow a published style manual. For specific guidance on preparing the manuscript, follow the instructions given here. For additional examples of appropriate formatting and style, see recent (2015) issues of *Herpetologica* or *Herpetological Monographs*, or contact the Editor.

Overall Document Format

All manuscripts must use American English spelling and grammar conventions. Use active voice consistently throughout the manuscript. Submit the manuscript as a Word (*.doc or *.docx) or rich text format (*.rtf) document, having the following format:

- North American letter page size (8.5 by 11 inches; 21.6 by 27.9 cm).
- Portrait page orientation unless landscape orientation is needed to accommodate wide tables or figures.
- 1 inch (2.5 cm) margins on all sides.
- 12 point font size.
- Double-spacing throughout entire manuscript (including literature cited, table and figure captions, and table contents).
- Each paragraph indented 0.5 inch (1.25 cm).
- Continuous line numbers.
- Left-justification.
- No additional spaces or line breaks between paragraphs.
- No automatic hyphenation.
- All pages, including tables and figure captions, labeled in the upper right-hand corner with the author's name and page number (e.g., using the header function in word-processing application).
- If an author submits a supplemental file that will be posted online only, the file must be in final format. Neither the editorial staff nor AP will make any changes to the content or format of the supplemental file. If the article is accepted, the supplemental file will be posted online "as is."

MANUSCRIPT SECTIONS AND FORMATTING

Manuscripts are usually arranged in the following order: title page, abstract and key words, narrative text (usually with sections described below), literature cited, appendices, tables, figure captions (figures are submitted as separate files, discussed below).

Title Page.—Include the title, author's name(s), and author's address(es), and a right running head; no periods at the end of any line.

- Title centered, bold-faced, in title format (no full-caps); title should be brief and informative (ideally ≤ 15 words)
 - If included, genus and species names should be italicized and standard common names should be treated as plural proper nouns (i.e., capitalized).
- Author names are centered, in small caps and title case (i.e., first letter of each name in large cap, remaining letters in small caps), with commas appearing outside any superscripts (if used).

- Multiple author names should be matched to addresses by superscript numbers, with no space between author name and superscript number or between superscript numbers.
- Email address of corresponding author and any address changes noted by superscript number.
- Addresses are centered, with major words capitalized and postal codes used for states; country names are used; no periods in state and country abbreviations.
- Footnotes are used to designate present address and correspondence email address.
 - Indented, with space between superscripted number and first word of footnote
 - Small caps, no underline or hyperlink, no hyphen in “email”
- The right running head (RRH) should provide the author name(s), an en-dash, and an abbreviated title for the manuscript; the total length of the RRH should not exceed 80 characters, including spaces.
 - Skip a line after address/footnotes and begin indented line with “RRH:” followed by the text for the running head in small caps and title case (i.e., first letter of each major word in large cap, remaining in small caps). Character limit = 75 (including spaces).
- Sample title page:

Effects of Population Density on Patterns of Movement and Behavior of Gopher

Tortoises (*Gopherus polyphemus*)

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6924 Tremont Road, Dixon, CA 95687, USA

RRH: GUYER ET AL.—BEHAVIORAL ECOLOGY IN *GOPHERUS*

Abstract.—The abstract follows the author’s name and address, and is limited to 400 words. Present the Abstract as a single paragraph that starts at the top of page 1. It should state the major points of the paper as clearly and concisely as possible without referencing the text, and without in-text citations or detailed statistical results. The abstract heading should be indented and in small caps, followed by a colon—e.g., “ABSTRACT: Patterns of habitat selection ...”). A second abstract in any modern language may be included after the Acknowledgments section.

Key words.—Key words separate the abstract from the introduction. They are used for indexing the article, and hence should identify the major aspects of the manuscript, such as the study location, organism, subfield, important methods or variables, or theory addressed. Close attention should be given to choosing key words because they will be used to index the article in online databases that are used by potential readers to find the article. Key words should not include any words or phrases appearing in the manuscript title.

- The phrase “**Key words:**” is indented and set in bold (including the colon); key words are listed in alphabetical order, and each word or phrase is separated by a semicolon; only the initial word in each phrase is capitalized.
- Example: “**Key words:** Density dependence; Home range; Overlap; Reproductive costs”

Body of the manuscript.—The text should begin after the key words. The text usually includes sections for the introduction (without a heading), materials and methods, results, discussion, and acknowledgments. However, some manuscripts work best with a different arrangement of sections (e.g., separate headings for multiple experiments if they use substantially different methods from one another); authors should use their best judgment in this matter.

- Introduction: No heading used for this section; first word in large and small caps; if first word is short then also use small caps for second word (e.g., DEFENSIVE behaviors ..., ENERGY use ..., VIPERID snakes ..., A METHOD for ..., THE THEORY that ..., ONE CONCEPTUAL framework ..., etc.).
- Headings: Three levels of headings are allowed.
 - Primary: Centered, in small caps and title case (i.e., each major word begins with a capital letter and all other letters are small caps—e.g., “MATERIALS AND METHODS”)
 - Secondary: Centered, in title case (i.e., each major word capitalized—e.g., “Genetic Divergence and Monophyly Tests”)
 - Tertiary: Indented, bold-faced, sentence case (i.e., only first word begins with a capital letter), followed by a period and em dash—e.g., “**Mountain area.**—This site is...”)
- Sample headings:

MATERIALS AND METHODS

Experimental Condition 1: *Anaxyrus americanus*

Collection and maintenance.—We collected 50 adults of ...

- Acknowledgments: The narrative ends with the acknowledgments.
 - Use a tertiary heading and be as concise as possible
 - Use initials instead of first names for individuals
 - Example: “**Acknowledgments.**—We thank K. Wadsworth...” not “*Acknowledgements.*—We would like to thank Katherine N. Wadsworth....”)

In-text citations and the Literature Cited section.—The Literature Cited section follows the acknowledgments. All in-text citations, including those of taxonomic authorities, must be provided in the Literature Cited section, and all references in the Literature Cited section must be cited somewhere in the manuscript. Confirm that dates and spelling of in-text citations correspond with the Literature Cited entries. Authors should adhere to the entire set of guidelines that follows.

- Guidelines for in-text citations
 - Limit citation strings to three or four key references.
 - Whenever possible, place citations at the end of the sentence rather than interspersed between phrases.
 - Do not use formatted text (no bold, italics, etc.).
 - Cite references in chronological order, using a semicolon to separate citations by different authors—e.g., “(Smith 1975; Jones 1987).” Use a comma only to separate multiple citations by the same author—e.g., “(Wallace 1858a,b; Mayr 1985, 1993).”
 - Provide surnames for up to two authors—e.g., “(Gould and Vrba 1982).” For three or more authors, provide the surname of the first author, followed by “et al.”—e.g., “(Williams et al. 1963).” Note that et al. is not italicized.
 - Papers accepted for publication should be cited as “(Smith, in press)” and placed in the Literature Cited.
 - Do not cite “unpublished data.” Instead, observations, data, or manuscripts that have not been accepted or published should be cited as personal observations—e.g., “(A.B. Clark, personal observation)”—and should not appear in the Literature Cited.
 - Non peer-reviewed sources such as meeting abstracts and most web sites should be avoided. Dissertations and theses should be cited, unless the information has also been published in a peer-reviewed source.
 - For all commercial software mentioned in the text, specify the version and publisher/source—e.g., “SPSS (v13.0, SPSS Inc., Chicago, IL).” Where appropriate, provide a citation in the text—e.g., in the case of Program MARK “(White and Burnham 1999)”—and give the full reference in the Literature Cited section.
 - For commercial equipment provide the model and manufacturer—e.g., “Thermochron iButton DS1921 Kit (Maxim Integrated).” Do not include these references in the Literature Cited section.
 - Peer-reviewed electronic resources should be cited in the same manner as paper-based ones.
 - For web sites not subject to peer review, use WebCite® (a free service) to archive the web site first: Enter the URL you want to cite at www.webcitation.org. The system generates a “snapshot” of the webpage for future access. Then, cite as you would other sources. See below for how to format the reference in the Literature Cited section.

- If taxonomic authorities are cited, be careful to use parentheses around the name or just the year as needed, because parentheses around the author and year indicate that the species was originally described as part of a different genus.
- Guidelines for the Literature Cited section

This section is a frequent source of errors in formatting. Follow all format instructions and examples below, and confirm that all included entries are cited within the body of the manuscript, or a table/figure/appendix. Check a recent issue (2015) or contact the Editor if anything remains unclear.

 - Do not use bold, underlined, or italicized text other than for scientific names.
 - Do not use manual line breaks or tabs. Instead, use the ruler in a word-processing application to create hanging indents.
 - Reference entries are ordered alphabetically by 1st author's surname. When multiple papers have the same 1st author, list single-author references first in chronological order, two-author references next in alphabetical order, and then references with three or more authors in chronological order regardless of the number of authors.
 - An in-text citation of "(Smith 2001a,b)" should be listed in the Literature Cited in the same order, with "a" and "b" following the year. Because Smith 2001a is cited prior to Smith 2001b, that dictates the order listed in the Literature Cited section.
 - Author names should be presented as "Smith, A.B." Spell out all author surnames, even if they are repeated from a previous reference. For all references with more than two authors, the last author's name should be preceded by "and" (no comma).
 - If an author name includes a generational title (e.g., Jr., III, etc.) those suffixes should be included in Literature Cited entries only (not in-text citations)—e.g., "Brodie, E.D., III and E.D. Brodie, Jr. 1999. Costs of exploiting poisonous prey:..."
 - If more than 10 authors appear in a single entry, then use an ellipsis between the surname of the 3rd author and the name of the last author, omitting others—e.g., "Gibbons, J.W., D.E. Scott, T.J. Ryan, ... C.T. Winne. 2000. The global decline of reptiles, ..."
 - Follow author names with the year of publication—e.g., "Darwin, C. 1859." If you cite a reprinted version, indicate this by listing both years, giving the reprint date within brackets—e.g., "Gates, D.M. 1980 [reprinted 2003]." For articles that are accepted, state "In press" in place of the year and provide the journal name after the article title—e.g., "Smith, A.B. In press. How green is your frog? Herpetological Miscellanea."
- Formatting for most common types of references
 - Article in a print journal
 - Provide the names of journals in full. Do not include issue numbers. Separate page numbers with an en-dash, not a hyphen.

- Example:
May, P.G., and T.M. Farrell. 2012. Growth patterns of Dusky Pygmy Rattlesnakes (*Sistrurus miliarius barbouri*) from central Florida. *Herpetological Monographs* 26:58–79.
 - Article in an online-only journal
 - Follow the format above, but also provide the digital object identifier (DOI) for the article.
 - Example:
Linkem, C.W., and R.M. Brown. 2013. Systematic revision of the *Parvosцинus decipiens* (Boulenger, 1894) complex of Philippine forest skinks (Squamata: Scincidae: Lygosominae) with descriptions of seven new species. *Zootaxa* 3700:501–533. DOI: <http://dx.doi.org/10.11646/zootaxa.3700.4.1>
 - Chapter in a book
 - After chapter title (sentence case), list pages, book title (title case), and then the editor(s); provide the publisher and publication country, but not the city or state.
 - Example:
McDiarmid, R.W., and R. Altig. 2010. Morphology of amphibian larvae. Pp. 39–53 in *Amphibian Ecology and Conservation: A Handbook of Techniques* (C.K. Dodd, Jr., ed.). Oxford University Press, UK.
 - Books
 - Provide complete title (title case), publisher, the publication country, but not the city or state.
 - Edited book example:
Gans, C., A.d'A. Bellairs and T.S. Parsons (eds.). 1969. *Biology of the Reptilia, Volume 1, Morphology A*. Academic Press, USA.
 - Book example:
Stebbins, R.C., and N.W. Cohen. 1995. *A Natural History of Amphibians*. Princeton University Press, USA.
 - Thesis or dissertation
 - Indicate the degree and university; include state only when needed to distinguish university from others with similar names.
 - Example:

Magnusson, W.E. 1978. Nesting Ecology of *Crocodylus porosus* Schneider, in
Arnhem Land, Australia. Ph.D. dissertation, University of Sydney, Australia.

- Software
 - Provide a named citation to the definitive description of the software, if given in the text.
 - Example:
White, G.C., and K.P. Burnham. 1999. Program MARK: Survival estimation from populations of marked animals. *Bird Study* 46(Supplement):120–138.
- Cite non peer-reviewed technical reports only when unavoidable.
 - Example:
Reed, R.N., and G.H. Rodda. 2009. Giant Constrictors: Biological and Management Profiles and an Establishment Risk Assessment for Nine Large Species of Pythons, Anacondas, and the Boa Constrictor. Open-File Report 2009–1202. U.S. Geological Survey, USA.
- Cite non peer-reviewed print media only when unavoidable.
 - Example:
Guam Economic Review. 1998. Statistical highlights. *Guam Economic Review* 20:11–32.
- For citations of web sites, use WebCite® (www.webcitation.org) to archive the web site. Provide the citation, followed by the archival site provided by the service.
 - Example:
Frost, D.R. 2016. Amphibian species of the world: An online reference. American Museum of Natural History, USA. Available at <http://research.amnh.org/herpetology/amphibia/index.html>. Archived by WebCite at <http://www.webcitation.org/6hbbBaoGf> on 18 May 2016.
- If using a citation management software application when incorporating literature into your manuscript (e.g., EndNote, ProCite, etc.), be certain to remove the field codes that these applications often generate within the manuscript file.

- Additional sample references (more examples can be found at end of this document):

AmphibiaWeb. 2014. AmphibiaWeb: Information on amphibian biology and conservation. University of California, USA. Available at <http://amphibiaweb.org/>. Archived by WebCite at <http://www.webcitation.org/6Q3XzbHVB> on 3 June 2014.

Baird, T.A. 2004a. Reproductive coloration in female collared lizards, *Crotaphytus collaris*, stimulates courtship by males. *Herpetologica* 60:337–348.

Baird, T.A. 2004b. Natural history notes: *Crotaphytus collaris* (homing after displacement). *Herpetological Review* 35:167.

Corn, P.S., and R.B. Bury. 1990. Sampling methods for terrestrial amphibians and reptiles. USDA Forest Service Pacific Northwest Research Station, General Technical Report PNW-GTR-256. United States Department of Agriculture, USA.

Gans, C., A.d'A. Bellairs and T.S. Parsons (eds.). 1969. *Biology of the Reptilia, Volume 1, Morphology A*. Academic Press, USA.

Greene, H.W. 1997. *Snakes: The Evolution of Mystery in Nature*. University of California Press, USA.

Peterson, J.C., J.C. Adamski, R.W. Bell, J.V. Davis, S.R. Femmer, D.A. Freiwald and R.L. Joseph. 1998. Water Quality in the Ozark Plateaus, Arkansas, Kansas, Missouri, and Oklahoma: 1992–95. Circular 1158. United States Geological Survey, USA.

Savitzky, A.H. 1974. The Relationships of the Xenodontine Colubrid Snakes Related to *Ninia*. M.S. thesis. University of Kansas, USA.

Shine, R. 1993. Sexual dimorphism in snakes. Pp. 49–86 in *Snakes: Ecology and Behavior* (R.A. Seigel and J.T. Collins, eds.). McGraw-Hill, USA.

Shine, R., and D.J. Slip. 1990. Biological aspects of the adaptive radiation of Australasian pythons (Serpentes: Boidae). *Herpetologica* 46:283–290.

Appendices.—Detailed information not essential to the text should be placed in appendices, which follow the Literature Cited section. When used, APPENDIX (with Roman numerals I, II, III, only when needing more than one) is set as a primary heading. A secondary heading such as “Specimens Examined” may follow the primary heading.

Citing Tables and Figures in the Text

In addition to the guidelines below, see examples of published tables and figures in a recent issue of *Herpetologica* or *Herpetological Monographs*.

- Capitalize but do not abbreviate the word “Table”.
- Capitalize and abbreviate the word “figure”—e.g., “(Fig. 1)”; except spell out at the beginning of a sentence.
- When two figures or tables are referenced, use a comma to separate numbers—e.g., “(Tables 2, 3; Figs. 6, 7).”
- When a range of figures or tables are referenced, use an en dash—e.g., “(Tables 2–4; Figs. 6–9).”

Tables.—Each table should be double-spaced and start on a new page. The table caption should follow the table number and should be on the same page as the table. Captions should not be indented, and should begin with the table number in small caps, followed by a period and an em dash (see example below).

In the table content, only the initial letter of the first word is capitalized (e.g., “Grand mean”). Use horizontal lines only above and below the column headers (1st row) and at the end of the table, to isolate column labels if needed, and where subgroups of columns require additional clarification. Do not use vertical lines within the table or place a plot frame around its content. Footnotes (indicated by superscripted symbols or numbers) may follow table content when detailed information is needed; the footnotes are placed below the table and are indented.

- Sample table:

TABLE 1.—Number of female and male first authors publishing in three of the subdisciplines covered by North American herpetological journals. *P*-values are based on Chi-square comparisons between genders within time periods. [Note the formatting details, such as use of horizontal lines, indented footnote, etc.].

Subdiscipline	Time period	Gender ^a		<i>P</i>
		Females	Males	
Systematics	1973–1982	30	482	0.07
	1983–1993	52	541	< 0.01
Ecology and evolution	1973–1982	90	1007	0.80
	1983–1993	226	978	< 0.01
Anatomy and physiology	1973–1982	33	289	0.22
	1983–1993	53	308	0.84

^a Data adapted from Wilson (1998).

Figures.—Figure captions should appear on a separate page following the tables. An electronic file of each figure should be submitted along with the manuscript. Figures should not be pasted as images into the Word file. In preparing graphics, follow the guidelines from Allen Press (summarized below). Before submission, authors should print figures and inspect them for clarity and size.

- **Figure captions**

- Grouped together on separate page following the tables, indented, double spaced, with two lines of space between captions
- The word “FIG.” is abbreviated in small caps, followed by number, period, em dash with no spaces, and then the rest of the legend—e.g., “FIG. 1.—Mean weekly temperatures...”
- Caption content: Be brief, but provide enough content to allow the interpretation of the figure independent of the manuscript narrative.

- **Figure graphics**

- In preparing graphics, Allen Press can provide you with a list of guidelines. Please [contact the Allen Press Managing Editor](#) for a PDF copy of the digital art guidelines. Use [VeriFig application](#) to confirm suitability.
 - Key specifications: grayscale or color images at 300 dpi, line art at 1200 dpi, combination of both at 600 dpi, CMYK color (RGB files are accepted but will be converted to CMYK and may undergo color shifts), TIFF or EPS format or native files for several common applications (e.g., Acrobat, Illustrator, Photoshop, Corel Draw, and others). Be certain to check colors carefully because changing color mode can alter their appearance.
- If a figure includes more than one image or panel, then the images should be arranged together in one electronic file, with adjacent images butted together, and each image identified by a letter (A, B, C). Each image or panel should be identified clearly in the figure caption.
- Figures should be planned to fit the width of one or two columns in *Herpetologica* or *Herpetological Monographs*. Authors should ensure that lines are one point thick, fonts and symbols are 1.5–2.0 mm high, and decimals are visible after reduction. Overlapping symbols should be counter-shaded (i.e., surround each overlapping solid black symbol with a 1 point thick white line).
- Plot frames should not surround any type of figure except a map, which should always be surrounded by a frame having indications of latitude and longitude. If a legend to symbols or shading is included within a figure, then it can be set within a small frame.
- Include a scale to indicate distance or size when appropriate.
- All axes of graphs should be labeled, with a larger font size used for major labels than for minor labels or quantitative values.
- Abbreviations on figures should follow the conventions given in these instructions, such as for measurement units and statistical abbreviations (detailed below).

Footnotes.—Footnotes are used only to denote present address of an author, email address for correspondence, and to clarify content of tables. Other footnotes should be avoided.

GENERAL STYLE AND USAGE GUIDELINES

This section provides general guidance for common word usage, style, punctuation, the use of numbers and mathematical symbols, abbreviations, etc. Authors are encouraged to review examples provided in Toft and Jaeger (1998) for appropriate narrative style.

Scientific and Standard Names

Standard English names are given as proper plural nouns (de Quieroz 2011) and should follow the nomenclature of Crother (2017). Scientific names that are valid under the International Code of Zoological Nomenclature (<http://www.iczn.org>) may be used as needed for each paper. In formatting scientific names, the genus is capitalized and italicized; the specific epithet is lower case and italicized (e.g., *Drymobius margaritiferus*). Unless the binomial is used at the start of a sentence, the genus can be abbreviated after first use (e.g., *D. margaritiferus*) unless another genus is mentioned that starts with the same letter.

Avoid Common Errors in Word Usage

- **Affect vs. effect:** “Affect” is usually used as a verb and means “to influence, or have an effect on” whereas “effect” is usually used as a noun that means an outcome or result.
- **Because vs. since vs. due to:** “Because” usually means “for the reason that,” whereas “since” usually means “from a time in the past,” whereas “due to” implies something that is owed.
- **Data:** The word “data” is plural; “datum” is singular—e.g., “The data are presented; the data showed that...”; not “The data is...”
- **Different from vs. different than:** “Different from” is usually preferable, as that usage is consistent with how the word “differ” is typically used (e.g., Item A differs from Item B).
- **Farther vs. further:** “Farther” indicates a physical or measurable distance; “further” indicates a figurative distance, such as in advancing, elaborating, or developing an explanation or argument.
- **Indicate vs. suggest:** Data or results “indicate” whereas authors “suggest.”
- **Infer vs. imply:** “Infer” means to deduce or conclude; “imply” means to hint or suggest.
- **May vs. might:** When not meaning the fifth month of the year, “may” implies permission whereas “might” implies a probability of occurrence.
- **That vs. which:** Usually, “that” is used with restrictive clauses, and “which” is used with nonrestrictive clauses—e.g., “The snakes that we captured had all eaten frogs, which were common in the area.”
- **Therefore vs. thus:** “Therefore” usually means “as a consequence” or “for these reasons” whereas “thus” usually means “in this way” or “in that way.”
- **While vs. although:** “While” usually means “at the same time” whereas “although” usually means “in spite of the fact that” or “even though.”

Dashes and Hyphenation

- “Non” words are not hyphenated—e.g., “nonparametric.” Also not used in “email.”
- Other common prefixes such as neo-, co-, and re- are not hyphenated except where necessary to prevent misreading or ambiguity (e.g., co-occur).
- Avoid using long hyphenated phrases as adjectives.
- Use hyphen (dash) for modifiers and two-word phrases used as an adjective—e.g., 20-mL syringe, 24-h clock, *t*-test results, or life-history strategy.
- Use the longer en dash in the place of the minus sign; to replace the word “to” in ranges of numbers or years, as in snout–vent length and 15–20 g; and, in hyphenated phrases in which both words are equal in importance rather than one word modifying the other (e.g., true–false, presence–absence, product–moment correlation).
- Use the long em dash to separate independent clauses for emphasis within a sentence, as in “The town—more of a village—was the nearest encroachment to the sampled transect.” Also use an em dash to separate a tertiary heading from the initial text, and as part of table and figure captions.

Italics

- Used italics only for names of genera and species, and for common statistical abbreviations (e.g., $n = 10$, $P < 0.05$).
- Common foreign words are not italicized (e.g., “sensu” or “et al.”).

Numbers

- Always spell out a number used at the beginning of a sentence (e.g., “Twenty species...”).
- Spell out all whole numbers less than 10, except as noted below.
- Use Arabic numerals:
 - for numbers of 10 or greater
 - when the number is followed by a unit of measurement (e.g., 9 mm; 30°C)
 - when the number is a designator (e.g., “Experiment 2”)
 - when the number is separated by a dash, as in a range of values (e.g., “2–3 scutes”)
 - when numbers of 10 or more are compared to numbers less than 10 within a sentence (e.g., “We collected 7 frogs, 9 salamanders, and 20 lizards...”)
 - for decimal values; if decimal value is less than one, always use a leading zero (e.g., “0.5”)
- Include commas for values having four or more digits (e.g., “1,280”).
- Numbers or letters in a list should be fully enclosed in parentheses—e.g., “(1)..., (2)..., (3)...”
- Subscripts are useful for reporting sample sizes upon which a statistic is based—e.g., “Males have longer tails than females ($t_{35,66} = 2.55$, $P < 0.001$).” Note that reporting the statistic and probability allows you to omit the phrase “statistically significant”—i.e., do not write “Size differences between the sexes were statistically significant.”
- Geographic coordinates can be in any standard format (e.g., decimal degrees, or degrees minutes seconds), without spaces between numbers (e.g., 38.965667°N, 95.226639°W; datum = WGS84).
- The datum must be specified for geographic coordinates because the same coordinates can have different locations when they are based on different geodetic networks.

Punctuation for Mathematical Symbols

- Mathematical operators are separated by spaces (e.g., “ $\alpha = 0.05$; $P < 0.025$ ”).
- A plus sign or minus sign (en dash) is separated from text by spaces when used to indicate mathematical operation (e.g., “ $1 + 1 = 2$ ”); no space is used when the symbol indicates positive or negative values (e.g., “...a value of +2”).
- A plus-or-minus sign (\pm) is separated from text by spaces when used to indicate a mean \pm a measure of variation (e.g., “ 12 ± 0.02 ”).
- Symbols for “similar to” or “nearly equal to” are not followed by space (e.g., “ ~ 12 , ≈ 24 ”).

Measurement Units and Abbreviations

- Follow the International System of Units (SI) and use SI abbreviations in the text, tables, and figures for units of measured variables or data. Common measurement units and their abbreviations include:
 - Millimeters = mm
 - Centimeters = cm
 - Meters = m
 - Kilometers = km
 - Milliliters = mL
 - Liters = L
 - Grams = g
 - Seconds = s
 - Minutes = min
 - Hours = h
 - Days = d (or day)
 - Week = wk
 - Month = mo
 - Years = yr
 - Time of day: use 24-hour clock (e.g., “1300 h”)
 - Dates: use Day Month Year with no commas (e.g., “7 May 2006”)
 - Temperatures: Celsius, with a degree symbol and no spaces (e.g., “30°C”)
- Statistical abbreviations
 - n = sample size; lower case and italicized
 - \bar{X} = mean; capitalized and italicized; or use the word "mean"
 - SD = standard deviation, SE = standard error; often indicated as ± 1 SD, ± 3 SE, etc., not italicized
 - r or r^2 (Pearson product–moment correlation), R^2 (coefficient of determination from regression analysis), F , t (from t -test), U , W = statistical symbols; all italicized
 - Greek letters are not italicized—e.g., “ ϕ , χ^2 ”
 - df = degrees of freedom; not italicized
 - P = probability; capitalized and italicized
 - NS (not significant); capitalized, not italicized, no periods between letters
- Other common abbreviations
 - ca. = "circa" (meaning “around”); lower case, not italicized, followed by period
 - cf. = "compare with"; lower case, not italicized, followed by period
 - e.g., = "for example"; lower case, not italicized, period after each letter, followed by comma
 - i.e., = "that is"; lower case, not italicized, period after each letter, followed by comma
 - N = chromosome number; capitalized, not italicized
 - no. = number; lower case, not italicized, followed by period
 - Ph.D., M.A., M.S., M.Sc., A&M
 - sp. nov. and gen. nov. = "new species" and "new genus"; lower case, no comma before these terms
 - SVL = snout–vent length; define this and similar abbreviations at first usage
 - vs. = "versus"; can be abbreviated in lower case without italics, or can be spelled out

- Do not abbreviate “male” or “female,” “personal communication,” “personal observation,” dates, or undefined terms.
- States are usually abbreviated using standard postal abbreviations, but can be spelled out; use must be consistent throughout manuscript.

SPECIAL CONSIDERATIONS FOR TAXONOMIC PAPERS

Consult the International Code of Zoological Nomenclature (<http://www.iczn.org>) for rules regarding formation, conservation, and application of zoological names. The information below is intended to standardize the overall style and format of taxonomic descriptions appearing in *Herpetologica* and *Herpetological Monographs*. In some cases, it might be preferable or necessary to diverge from this format.

Taxonomic papers in *Herpetologica* and *Herpetological Monographs* generally follow the standard sequence of sections (Introduction, Materials and Methods, Results, and Discussion). In the Materials and Methods section, authors should include a version of the following statement: “We use the museum acronyms of Sabaj-Perez (2016)” and only define any museum acronyms that are absent from that source. In the Results section, describe the results of analyses (e.g., morphometric, morphological, molecular) that support the proposed taxonomy. The formal description(s) may be included in the Results section, instead of a Results section, or may follow the Discussion as a separate section entitled Species Account(s) or Systematic Accounts for describing higher taxa. As with the Results section, the Discussion section of taxonomic papers may be used, or in some cases might not be appropriate.

Many systematists prefer telegraphic style for diagnoses and descriptions. Text in telegraphic style should be devoid of articles and verbs. Ordinarily, one or more modifying terms follow a noun—e.g., “ventrals 167–189” (not “167–189 ventrals”). Commas are used to separate modifiers and semicolons to separate nouns plus their modifiers. Periods are only used at the end of paragraphs. For example, “...head wider than long, round in dorsal and lateral aspects; canthus rostralis sharp; ...” In this style, paragraphs are used to organize descriptive information about regions of the organism. For example, the first paragraph might describe the head, the second might describe the body, etc. A change in style from telegraphic style to standard narrative necessitates the addition of parentheses, a new section, or a new paragraph.

In studies where the discovery and description of the new species is based on a broad review of molecular or morphological variation in a group (e.g., revision of a species complex or analysis of variation in widespread species), it is preferable for such a review to be presented in the manuscript prior to the presentation of the formal species description(s), in which case the analysis of variation can serve as a justification for the recognition of new species.

- *Herpetologica* and *Herpetological Monographs* use two formatting conventions to identify new names. The new name(s) should be in bold and followed by the designator sp. nov., gen. nov., fam. nov., unranked clade, or similar. The designators should follow the new name only at the beginning of the taxon’s formal description. These designators may also be used if the new name(s) appears in the key words, but they should not appear anywhere else in the manuscript, including captions and illustrations.
- An example of the heading format for a new taxon appears below.

SPECIES DESCRIPTION

Uraeotyphlus gansi sp. nov.

(Figs. 1–4, Tables 1, 2)

Uraeotyphlus malabaricus (Beddome 1870): Boulenger (1882:92), in part; Taylor (1968:697–700), in part; Pillai and Ravichandran (1999:64–66, Fig. 31, map VII), in part.

Uraeotyphlus malbarica (Beddome 1870): Jones (2015:29), in part. [misspelling and unjustified emendation].

Uraeotyphlus oxyurus (Duméril and Bibron 1841): Pillai and Ravichandran (1999:74–77, map IX), in part.

Holotype.—This brief section identifies the holotype and provides the specimen’s sex, museum number, and basic locality information: “An adult male (museum catalog number and original field number, if available) collected at locality on date by collector (Fig. #).”

Paratypes.—The list of paratypes may be organized by sex or geographical locality, whichever is most concise and clear. See recent journal issues for examples using relevant taxa.

Referred specimens.—List nontype specimens examined here if the list is brief or in an Appendix if the list is lengthy.

Diagnosis.—State clearly and concisely those characters that distinguish the new taxon from others within the same clade (e.g., species complex or genus).

Comparisons.—Make comparisons to any species with which the new species might be confused—e.g., “Unlike species B (characters in parentheses), the new species has a wider head (narrower), 167–178 ventrals (180–199), ...”

Description.—A general description of the type series or a description of the holotype should follow the comparisons. This section should provide concise descriptions of as many characteristics as needed to give a clear mental picture of the organism. The description may also be given in telegraphic style.

Description of holotype.—An explicit description of all aspects of the type specimen, following the general style and format of other recent, important literature on related species. Include here (as per style for taxon under study): measurements of the holotype, color in preservative, and other aspects of the holotype deemed important.

Variation.—A summary of evident variation among the holotype, paratypes, and other referred specimens, including reference to sexual dimorphism, geographic variation, or ontogenetic changes.

Coloration.—Most authors divide this section into separate paragraphs, reporting color in life and in preservative.

Etymology.—A brief description of the derivation and meaning of the new name and, perhaps, the rationale for choosing it. The etymology section should explicitly state the gender of the new name and whether it is a noun in apposition, a patronym, or an adjective. A suggested name in English or the author's native language may be included, but is not necessary.

Distribution.—Relevant summary of and commentary on the distribution, habits, habitats, life history, and ecology of the new taxon. Alternate heading names may be used, such as "Distribution and ecology" or "Natural history," or such headings may be used in addition to one for distribution.

Larva.—Description of the tadpole or larval stage of a new species of amphibian, following recent style and format for the group being described.

Remarks.—Concise discussion of any additional aspects of the new taxon that are deemed important, such as synonyms and phylogenetic relationships.

Appendices.—Appendices should be used for listing specimens examined when numerous. Include locality data (but not date of collection) and museum numbers of all specimens used in the study. When multiple species are examined, start a new paragraph for each species in the appendix.

To minimize risks of taxonomic piracy, authors of manuscripts that propose new or revised scientific nomenclature are required to complete the following steps. Do so only after the Editor returns the original draft with a request for revisions:

- Register the new name(s) with ZooBank.org (follow instructions available at that website). As a result, the author will be issued a life science identification (LSID) number for the manuscript that contains the proposed name(s). When completing this step, only a single LSID should be obtained for each article, even if multiple names are proposed therein.
- At the time that the LSID number is issued, the author must designate the manuscript as being accepted, but unpublished. The issued LSID number is static, and does not change even as the manuscript transitions to being a published article.
- As soon as you receive the LSID number for your manuscript, please add that information as part of the requested revisions, in the following manner...
 - : insert a hard return after the last entry in the Literature Cited section, then add two lines of text as follows:
 - ZooBank.org registration LSID: ### [replace # symbols with the LSID number for the publication, not the LSIDs of each new name]
 - Published on XX Month 20XX
- The author is responsible for updating the entry with ZooBank throughout the publication process. Once a publication date is known, the Managing Editor will send that date to the author(s) so that it can be added to the ZooBank entry to correspond with the LSID number.

Researchers should seek to minimize any adverse effects of their research. In conducting research, they should comply with all applicable standards, rules, and laws enacted to protect researchers or study organisms. This includes obtaining institutional Animal Care & Use Committee (IACUC) permits, collection permits, export and import permits, etc. Authors using human, animal or fetal tissue in their experiments should refer to their university/institution's policies on those subjects. If the research involves people, medical records, or human tissues, the researchers should receive documented review and approval from their Institutional Review Board.

For Authors

All manuscripts (ms) will be submitted for peer-review to the Editor, who will assign them to an Associate Editor and, subsequently, independent outside reviewers.

Each author should:

1. Take responsibility for at least one component of the work.
2. Have access to the raw data and figure files for his/her component of the work.
3. Be able to identify who is responsible for other components.
4. Be confident in their co-authors' ability and integrity.

Authors' names cannot be added or removed without their agreement. No author can be named on a ms unless s/he has approved the final version of the ms. One author, usually the corresponding author, must be thoroughly familiar with the original data for the entire study and be responsible for the integrity of the entire work. If the paper or any portion of it is found to be faulty or fraudulent, however, all co-authors share that responsibility. The corresponding author understands that s/he signs the cover letter that accompanies the submitted ms on behalf of the other authors.

The institutional affiliations of all authors must be disclosed in the by-line of the ms. All funding sources supporting the work and in the ms, and information on any conflicts of interest (personal or financial) must be noted by the author(s) in the Acknowledgments section of the ms.

Duplicate or Prior Publication, Plagiarism, and Fraud

When submitting an article, the corresponding author should disclose in the cover letter any related ms that have been submitted to, or are in press with, another journal.

The following are **not** permitted under any circumstances...

- the taking of material from another's work and submitting it as one's own (plagiarism).
- the taking of material, including tables, figures, or data from the authors' own prior publication(s) (self-plagiarism).
- fabricating a report of research (fraud).
- suppressing or falsifying data to agree with one's conclusions (fraud — this includes altering graphical depictions of data so as to obscure, move, or introduce information).

Important exceptions...

- reuse of control data in experimental studies might not be considered duplicate

- publication providing that the methodology is identical.
- doctoral dissertations and Master's theses that are made available in institutional repositories are not considered prior publication.
 - republishing data to make a direct, illustrative comparison with new findings might be appropriate when the purpose of republication is to provide explicit comparisons with the new information.

If an author reuses images, tables or a significant amount of material from another author or previously published ms, permission from the copyright holder is required at the time of submission.

To avoid taxonomic piracy, any author of a ms concerning a taxonomic revision(s) or description(s) of new species will not have online versions of their work made available ahead of publication; nor should those author(s) submit the ms to a preprint server. Authors with further questions on this issue should consult the International Code of Zoological Nomenclature.

For Editors and Reviewers

The Editor, AE, and reviewers will treat manuscripts under review as confidential, recognizing them as the intellectual property of the author(s). Editors and reviewers will not make decisions on papers for which they might have any conflict of interest.

Reviewers may not purposefully delay publication of another person's manuscript to gain advantage over that person. Reviewers have a responsibility to report any suspected misconduct (including fraud or inappropriate animal care) to the Editor.

Any concerns about scientific misconduct raised during the review process will be investigated by the Editor. If the misconduct is confirmed, the Editor will reject the paper and write a letter to the author explaining why the paper was not suitable for publication.

Misconduct Discovered in a Published Article

If the Herpetologists' League (HL) or any member of the editorial staff receives a complaint about misconduct in a published article, the Editor will notify the author(s) and investigate the allegation in an impartial manner. If it appears there has been scientific misconduct, the Editor will notify the HL Board of Trustees.

After deliberation, the HL Board of Trustees will determine what action should be taken:

1. A society representative might be authorized to send the author a letter of reprimand.
2. If the infraction is severe enough, the appropriate official at the author's institution(s) will be notified. A Notice of Retraction will be published in the next available issue of the appropriate journal, and will be linked to the article in the online version.
3. If, through the author's actions, the society has violated the copyright of another journal, the Editor and HL President will send a joint letter of apology to the other journal.
4. The HL Board of Trustees might decide to ban the author(s) from future submissions to any of its journals &/or revoke membership to the society.

References

This policy is adapted from several sources, including:

Council of Science Editors:

<http://www.councilscienceeditors.org/i4a/pages/index.cfm?pageid=3331>

Herpetologists' League: <http://www.herpetologistsleague.org/en/ethics.php>

International Commission on Zoological Nomenclature: <http://iczn.org/code>

Office of Research Integrity: <http://ori.dhhs.gov/>

Society for the Study of Amphibians and Reptiles: <http://www.ssarherps.org/pages/ethics.php>

US Federal Policy on Research Misconduct:

<http://www.aps.org/policy/statements/federalpolicy.cfm>

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