

# *Journal of Wildlife Management and Wildlife Society Bulletin*

## **Author Guidelines**

February 2016

Prepared by

PAUL R. KRAUSMAN, *Editor-in-Chief, Journal of Wildlife Management; University of Arizona, Tucson, AZ 85721, USA*

DAVID A. HAUKOS, *Editor-in-Chief, Wildlife Society Bulletin; U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University, Manhattan, KS 66506, USA*

ALLISON S. COX,<sup>1</sup> *Content Editor, Journal of Wildlife Management, Gainesville, FL 32068, USA*

ANNA S. C. KNIPPS,<sup>1</sup> *Editorial Assistant, Journal of Wildlife Management, Golden, CO 80401, USA*

JANET L. WALLACE,<sup>2</sup> *Editorial Assistant, Wildlife Society Bulletin, Lubbock, TX 79416*

TRACY E. BOAL,<sup>2</sup> *Editorial Assistant, Wildlife Society Bulletin, Lubbock, TX 79424*

---

<sup>1</sup> *Journal of Wildlife Management* Editorial Office: [jwm@wildlife.org](mailto:jwm@wildlife.org)

<sup>2</sup> *Wildlife Society Bulletin* Editorial Office: [wsb@wildlife.org](mailto:wsb@wildlife.org)

## Table of Contents

<b>NAVIGATING THE GUIDELINES.....</b>	<b>4</b>
<b>TWS JOURNAL POLICIES .....</b>	<b>5</b>
PREVIOUS PUBLICATION .....	5
SECURING APPROPRIATE APPROVAL(S).....	6
<i>Animal Care and Use</i> .....	6
<i>Human subjects</i> .....	7
COPYRIGHT .....	7
EMBARGO POLICY .....	7
PAGE CHARGES .....	8
<b>SUBJECT MATTER DIFFERENCES BETWEEN JOURNALS.....</b>	<b>9</b>
<i>JOURNAL OF WILDLIFE MANAGEMENT</i> SUBJECT MATTER.....	10
<i>Research Articles and Notes</i> .....	10
<i>Commentary</i> .....	11
<i>Review</i> .....	11
<i>Letter to the Editor</i> .....	11
<i>Invited Paper</i> .....	12
<i>Special Section</i> .....	12
<i>Book Review</i> .....	13
<i>WILDILFE SOCIETY BULLETIN</i> SUBJECT MATTER.....	13
<i>Original Article</i> .....	13
<i>Emerging Issues</i> .....	14
<i>Tools and Technology</i> .....	14
<i>In My Opinion</i> .....	14
<i>From the Field</i> .....	15
<i>Letter to the Editor</i> .....	15
<i>Special Section</i> .....	15
<i>Invited Articles</i> .....	16
<b>FORMAT.....</b>	<b>16</b>
PAGE FORMAT .....	16
TITLE PAGE: RUNNING HEAD, TITLE, AND AUTHORS .....	17
ABSTRACT .....	19
KEY WORDS .....	20
TEXT PAGES .....	20
<i>Headings</i> .....	20
<i>Major Sections of Manuscript</i> .....	21
LITERATURE CITED .....	24
FIGURES AND TABLES .....	25
<i>Figures</i> .....	26
<i>Tables</i> .....	27
APPENDICES .....	29
SUPPLEMENTAL MATERIAL.....	30
<b>STYLE AND USAGE.....</b>	<b>31</b>
NUMBERS AND UNIT NAMES .....	32
TIME AND DATES .....	33

MATHEMATICS AND STATISTICS .....	33
EQUATIONS .....	34
ABBREVIATIONS AND ACRONYMS .....	35
PUNCTUATION.....	36
ENUMERATING SERIES OF ITEMS.....	37
COMMON AND SCIENTIFIC NAMES.....	37
MEASUREMENT UNITS .....	38
CITING LITERATURE IN TEXT.....	39
<i>Citing unpublished sources in text.....</i>	40
<i>Citing equipment and statistical software .....</i>	41
<b>SUBMISSIONS .....</b>	<b>42</b>
COVER LETTER.....	42
REVIEW PROCESS .....	43
<i>Appeal and resubmission.....</i>	44
<i>Accepted manuscripts .....</i>	44
<i>Page proofs.....</i>	44
<b>ACKNOWLEDGMENTS .....</b>	<b>45</b>
<b>APPENDIX A. ONLINE MANUSCRIPT SUBMITTAL .....</b>	<b>46</b>
LOGGING IN TO YOUR SCHOLARONE ACCOUNT .....	46
SUBMIT A NEW MANUSCRIPT .....	46
REVISED MANUSCRIPTS .....	47
<b>APPENDIX B. LITERATURE CITED .....</b>	<b>48</b>
<i>Book.....</i>	48
<i>Court cases .....</i>	49
<i>Foreign language publication .....</i>	49
<i>Government publication .....</i>	49
<i>Journals .....</i>	50
<i>Multiple citations for the same first author .....</i>	51
<i>Newspaper, newsletter, and magazine articles.....</i>	51
<i>Software package.....</i>	52
<i>Symposia and proceedings .....</i>	52
<i>Theses and dissertations.....</i>	53
<i>Web citation.....</i>	53
<b>APPENDIX C. REQUIRED ABBREVIATIONS FOR TABLES, FIGURES, AND PARENTHETIC EXPRESSIONS .....</b>	<b>54</b>
<b>APPENDIX D: FORMAT TEMPLATE .....</b>	<b>57</b>

## NAVIGATING THE GUIDELINES

These Guidelines apply to submissions to *Journal of Wildlife Management* (*JWM*, *The Journal*) and *Wildlife Society Bulletin* (*WSB*, *The Bulletin*), which are published by The Wildlife Society (TWS, *The Society*). These 2 journals have similar styles but different focuses. Therefore, authors should review subject matter guidelines to select the appropriate outlet (see [Subject Matter Differences](#)) before submission ([Appendix A](#)). The Society also publishes *Wildlife Monographs*; guidelines are at [onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1938-5455](https://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1938-5455).

Once you have decided to submit to *JWM* or *WSB*, it may be helpful to use the [template](#) and condensed summary of journal format and style available at the end of this document. You can then refer to the table of contents above to quickly navigate to specific topics on journal policy, procedures, format, or style. All manuscripts submitted to TWS publications must follow the guidelines for authors so their manuscripts are in the **proper style and format, include appropriate subject matter, and are written in proper English**. Those that review your work (i.e., editorial staff, associate editor, referees) are familiar with the guidelines and **expect them to be followed**. Manuscripts that have been written without adherence to the appropriate guidelines are rarely accepted for publication. Thus, the first step to receiving positive reviews of solid data and ideas is to write according to the guidelines. We cannot emphasize this enough and **papers not in the proper format will be returned without review**. If you have questions related to the preparation of your work, send us an email and we will do what we can to assist.

*Journal of Wildlife Management* editorial office: [jwm@wildlife.org](mailto:jwm@wildlife.org)

*Wildlife Society Bulletin* editorial office: [wsb@wildlife.org](mailto:wsb@wildlife.org)

## TWS JOURNAL POLICIES

### PREVIOUS PUBLICATION

Guidelines for previous publication are flexible in certain instances, such as technical analyses of findings published previously for lay audiences. If any portion of the manuscript has been published or reported elsewhere, explain all similarities between information in the manuscript and the other publication, and furnish a citation of such publications or manuscripts.

For all purposes of TWS journals, a paper is considered published if it:

1. Appears in a serial publication abstracted by *Biological Abstracts* or a similar reference volume.
2. Appears in a book (including conference proceedings) printed in >500 copies and widely distributed to libraries.
3. Has been published as part of a numbered series by an agency.
4. Is a symposium proceeding. The Society will consider symposium proceedings on a case-by-case basis. Contact the specific journal for approval before submitting your symposia proceeding.

A manuscript is not considered published if it:

1. Is a thesis or dissertation, but these need to be cited in the manuscript.
2. Is a brief abstract of a talk given at a professional meeting or symposium.
3. Is an unpublished report required by sponsors and not distributed as part of a numbered series or in other ways that might result in accession by libraries.

## SECURING APPROPRIATE APPROVAL(S)

Scientists must ensure their research activities are conducted such that the welfare of animals they are studying (e.g., attaching radio-transmitters, marking animals) or the rights of humans (e.g., sending a survey) are considered. Consequently, all peer-reviewed manuscripts submitted for publication should demonstrate that these concerns have been addressed as required by their institution or organization. Include documentation in the Methods section at the end of the text describing the applicable methods.

---

### *ANIMAL CARE AND USE*

The appropriate documentation that proper animal care and use was applied when using live vertebrate animals for research and applicable protocol numbers should be included in Methods. Examples include an Institutional Animal Care and Use Protocol number (as designated by most U.S. universities), the number of the permit or license issued to hold animals (such as with private breeders), or a statement that procedures were part of a study plan approved by the agency. Authors may also refer to taxon-specific guidelines for the use of wild vertebrates to ensure animals are being treated ethically and humanely. These requirements apply to manuscript reporting results of studies that directly involve vertebrate animals, including observational studies. Manuscripts reporting summaries or analyses of data derived from studies of vertebrate animals conducted by others are expected to include authorial assertion that the original data collection followed protocols and guidelines related to use of vertebrate animals in effect at the time the data were collected.

---

## *HUMAN SUBJECTS*

Appropriate documentation that proper approval was obtained to perform research involving humans (primarily surveys) should be provided. Examples include a Human Subjects Protocol or an Institutional Review Board number as designated by most United States universities or surveys conducted by federal scientists have gone through the federal review process.

## COPYRIGHT

If a manuscript not in the public domain is accepted for publication, authors or their employers must transfer copyright to TWS. If the manuscript is authored by a United States government employee as part of his or her official duties, the manuscript is not copyrightable. Such work is called a “Work of the U.S. Government” and is in the public domain. However, if the manuscript was not part of the employee’s official duties, it may be copyrighted. If the manuscript was jointly written by government and nongovernment employees, the authors understand that they are delegating the right of copyright to the government employee, who must sign the copyright agreement. Manuscript submission implies entrusting copyright (or equivalent trust in public-domain work) to the editors until the manuscript is rejected, withdrawn, or accepted for publication. If the manuscript is accepted, TWS retains copyright.

## EMBARGO POLICY

The Wildlife Society reserves the right to halt consideration or publication of a manuscript if the Embargo Policy is broken. The Embargo Policy follows:

- No news coverage of the manuscript may appear anywhere before the article has been published online via Wiley Online Library Early View. Embargoed information is not to be made public in any format including print, television, radio, or via internet before the embargo date. For information on online publication dates, please contact journal staff.
- Please do not participate in news conferences until after online publication.
- Authors with manuscripts in production may speak with the press about their work. However, authors should not give interviews on the work until the week before online publication, and then only if the journalist agrees to abide by the embargo.
- Authors are welcome to present results of their upcoming manuscripts at professional meetings to colleagues.
- Comments to press reporters attending your scheduled session at a professional meeting should be limited to clarifying the specifics of your presentation. In such situations, we ask that you do not expand beyond the content of your talk or give copies of the manuscript, data, overheads, or slides to reporters.

## PAGE CHARGES

Page charges are mandatory and the submitting author is required to acknowledge that she or he accepts responsibility for page charges should the manuscript be accepted for publication. All manuscripts are subject to page charges except Letters to the Editor, Invited Papers, and Book Reviews. Color page fees will be invoiced prior to production of page proofs. Page charges are as follows (as of Jan 2016):

***Journal of Wildlife Management* (online and print journal)**

If any author is a member of The Wildlife Society:

- \$90 per published page for the first 8 pages
- \$150 for every page thereafter
- \$650 per printed color page

If none of the authors is a member of The Wildlife Society:

- \$150 per page
- \$650 per printed color page

***Wildlife Society Bulletin* (online journal)**

- \$50 per published page (no charge for color)

One printed page equals approximately 2.5 typed pages. Page charges will be billed at the time of publication. Color plate charges (*JWM*) will be billed, and must be paid in full, before publication. Visit [The Wildlife Society](#) for membership information and rates.

**SUBJECT MATTER DIFFERENCES BETWEEN JOURNALS**

The Society publishes manuscripts containing information from original research that contributes to the scientific foundations of wildlife management. The Society defines wildlife as invertebrates, fish, amphibians, reptiles, birds, and mammals that are not domesticated; however, we discourage submission of manuscripts focused on fish species to avoid overlap with journals of The American Fisheries Society.

In general, *JWM* focuses on wildlife relationships that can lead to management and

conservation recommendations and *WSB* focuses on evaluations of management actions. See below for a detailed description of acceptable subject matter for each journal. As a general rule, *TWS* is flexible on submission lengths. However, authors should concentrate on succinct and clear writing to improve readability. *Journal* and *Bulletin* articles are typically <50 double-spaced pages including tables and figures.

### *JOURNAL OF WILDLIFE MANAGEMENT* SUBJECT MATTER

Suitable topics include the results and interpretations of investigations into the biology and ecology of wildlife that can be used for management. The link to management of wildlife resources must be clear and concise. Manuscripts in *JWM* also address theoretical and conceptual aspects of wildlife management, including development of new approaches to quantitative analyses, modeling of wildlife populations and habitats, and other topics germane to advancing the science of wildlife management. Submissions to *JWM* fall into 8 main types: Research Article, Note, Commentary, Review, Letter to the Editor, Invited Paper, Special Section, and Book Review.

---

#### *RESEARCH ARTICLES AND NOTES*

Research Articles and Notes focus on aspects of wildlife that can assist management and conservation by providing life-history data, modeling, new analytical and quantitative approaches, theory, and new approaches to understand human dimensions. Notes are shorter than articles and may present new findings based on limited sample sizes or scale. Examples of subjects include 1) investigations into the biology and ecology of wildlife with direct

management implications (e.g., life histories, demography, population ecology, movement, habitat relations), 2) new analytical and quantitative methodological approaches related to wildlife science (e.g., statistical, quantitative), 3) human dimensions related to theory and research (e.g., new approaches to understand human dimension surveys), and 4) economics related to theory and research.

---

*COMMENTARY*

Commentaries are essays that question values, priorities, precepts, and philosophical foundations under which wildlife management operates. These manuscripts can uncover dogma, false assumptions, and misguided policy, or stimulate thought and innovation. Commentaries are in response to an issue, movement, policy, or program that could affect wildlife or its habitat, and subject area can be broad. The manuscript must be well documented and prepared professionally.

---

*REVIEW*

Review articles are an opportunity to provide an in-depth overview of a particular topic. A variety of topics are amenable to reviews including but not limited to analytical approaches, study design, effects of a management practice, effects of a disturbance, and the like. Review articles need not conform to typical format headings and can be flexible to accommodate the topic.

---

*LETTER TO THE EDITOR*

Letters to the Editor (hereafter Letters) are short contributions that address issues relevant to *JWM*. Appropriate topics include comments on recently published manuscripts (and author responses to the comments) or on topics or methods relevant to *JWM* or wildlife management. Letters should be short (~1,000 words) and consist of a short title, author name and address, text, and Literature Cited if necessary. Letters are selected by the Editor-in-Chief (EIC) and are not typically subject to peer-review, but they may be assigned to an Associate Editor for review or a recommendation. Letters are not subject to page charges.

---

#### *INVITED PAPER*

The EIC has the option to solicit Invited Papers that review and synthesize important topics that pertain to the scientific foundations of wildlife management. Invited Papers must include a Management Implications section, are not necessarily subject to peer-review, and are not subject to page charges.

---

#### *SPECIAL SECTION*

Special Sections are an opportunity to present a series of papers focused on a topic that is timely, relevant, and of interest to the readers of *JWM*. Typically, these sections consist of 4–8 papers that provide an in-depth presentation of a particular topic. Submit a brief prospectus outlining the topic and proposed paper titles and authors to the EIC for consideration. All manuscripts submitted as part of a Special Section will undergo the same review process as regular journal articles and must meet journal standards (and page charges will apply).

---

*BOOK REVIEW*

Book Reviews provide a brief synopsis and commentary on a book relevant to some aspect of the field of wildlife science and management. Before submitting a Book Review, please contact the *JWM* Book Review Editor. Book Reviews are not subject to page charges.

*WILDLIFE SOCIETY BULLETIN SUBJECT MATTER*

The *Wildlife Society Bulletin (WSB)* is a journal for wildlife practitioners that effectively integrates cutting-edge science with management and conservation applications. Important policy and human-dimension issues, particularly those that focus on the integration of science, policy, and regulations, are also included. The *WSB* includes articles on contemporary wildlife management and conservation, education, administration, law enforcement, human dimensions, and review articles on the philosophy and history of wildlife management and conservation. Submissions to *WSB* fall into 8 main categories: Original Article, Emerging Issues, Tools and Technology, In My Opinion, From the Field, Letter to the Editor, Special Section, and Invited Articles.

---

*ORIGINAL ARTICLE*

Original Articles are the traditional wildlife science manuscripts published in the *WSB*. These are typically field studies and structured with Introduction, Study Area, Methods, Results, Discussion, and, as appropriate, Management Implications sections. Original Article papers published in the *WSB* bring forward examples of integrating wildlife science and management.

Data in Original Articles should cover multiple years/seasons of collection and be suitable for inference beyond the study site.

---

### *EMERGING ISSUES*

Submissions in the Emerging Issues category address new ways of approaching management actions or propose new conceptual models for understanding the implications of management. Articles in Emerging Issues can include significant pilot studies, single year/season studies, or resource-limited studies that highlight potential issues in wildlife science, conservation, and management. Emerging Issues papers do not have Management Implications sections.

---

### *TOOLS AND TECHNOLOGY*

Tools and Technology papers are typically brief and describe new techniques and technology or modifications of well-known techniques that may be of use to managers. Tools and Technology papers do not have Management Implications sections.

---

### *IN MY OPINION*

In My Opinion articles combine original data with strong opinion regarding inferences from those data. The In My Opinion section allows authors the license to include strong opinions and perhaps even value-laden statements that are not usually found in traditional scientific papers. We believe that this adds value to the *Bulletin* and makes for interesting discussion among wildlife professionals.

---

*FROM THE FIELD*

While in the field collecting data or conducting data analyses, you may have a serendipitous flash of insight about something that is directly or tangentially relates to the project at hand. There might be a smattering of data that hint at a new research direction, or perhaps some outlying values that are actually real and not a function of entering wrong numbers in a spreadsheet. From The Field papers cover situations where you might not have enough data for an Original Article but do have enough information to support and share some new insight. Another aspect of From the Field articles is the introspection by veteran managers and conservationists by sharing insights gained over the course of their careers. We vigorously encourage such submissions.

---

*LETTER TO THE EDITOR*

Letters are short contributions that address issues relevant to *WSB*. Appropriate topics include comments on recently published manuscripts, frequently with responses from the original authors, or on topics or methods relevant to *WSB* or wildlife management. Letters should be short (~1,000 words) and consist of a short title, author name and address, text, and Literature Cited if necessary. Letters are selected by the EIC and are not typically subject to peer-review, but they may be assigned to an Associate Editor for review or a recommendation.

---

*SPECIAL SECTION*

Special Sections consist of articles with a common topic or theme and add value to the *WSB*. Often, but not always, Special Sections are offshoots of sessions held during The Wildlife Society's annual meeting. Persons interested in coordinating a Special Section should contact the editor with a brief synopsis of the proposed topic along with a list of proposed papers and corresponding authors. Do not proceed without agreement by the editor.

---

### *INVITED ARTICLES*

Invited Articles represent an invitation by the editor for experts on a particular topic or issue related to applied wildlife science to publish a review or synthesis article that represents the state-of-the-art knowledge and understanding of the topic or issue. The purpose is to provide wildlife professionals with a foundational article on contemporary techniques that can be used for conservation planning, research initiation, and development of management strategies. Page charges are waived for Invited Articles.

## FORMAT

A manuscript must adhere to TWS guidelines before it will be approved and sent out for review (see [Format Template](#)).

## PAGE FORMAT

Upload files in the following order:

1. Cover letter

2. Text file arranged as follows: manuscript text, Literature Cited, figure captions (not figures), and tables. Society journals will accept only .doc or .docx files for the main document.
3. Figure(s) compiled into one file or submitted in individual files. Label and mount figure parts (e.g., Fig 3A, Fig 3B) together into one figure as they are meant to appear in print. We accept figure files in only the following formats: .tif, .jpg, pdf, .doc, docx, .eps, .xls, and .ppt.

#### General guidelines

1. Double space all text except for the contact information at the top of the first page. Be sure to double space all other sections, including long quotations within text, literature citations, table footnotes, table titles, table bodies, and figure captions.
2. Do not justify the right margin.
3. Use Times New Roman font, 12-point type throughout the manuscript, including title, headings, and tables.
4. Do not use italic or boldface type for emphasis in text, tables, or figures.
5. Maintain margins of 2.5 cm (i.e., 1 inch) on all sides of the page.

#### TITLE PAGE: RUNNING HEAD, TITLE, AND AUTHORS

The following guidelines apply to all text files. Single-space the following information in the upper left corner: date (update with each revision) and the corresponding author's name, address, telephone, and e-mail. Thereafter, double-space all text including authors' addresses, manuscript

title, figure legends, and tables. If the corresponding author's email address changes following submission of the manuscript, update the user profile on the ScholarOne website, and notify the editorial staff.

Type the running head (RH) on the first line following the correspondent's address. The RH is limited to 45 characters (including spaces). Left-justify the RH and capitalize each important word (e.g., *Implanting Transmitters in Snakes*). The RH is preceded by a dot (or raised period) and the last name(s) of  $\leq 2$  authors. For  $\geq 3$  authors, use the name of the first author followed by "et al." (e.g., Foster et al.). For example:

RH: Chamberlain et al. • *Implanting Transmitters in Snakes*

The title follows the RH and is left-justified in bold font with important words capitalized as in the RH. The title identifies manuscript content and may not include abbreviations or acronyms. Titles should not exceed 10 words unless doing so forces awkward construction. Do not use scientific names in the title except for organisms that do not have, or are easily confused by, common names.

Authors' names are left-justified in upper-case letters. Each name is followed by the author's affiliation in italic letters. The affiliation is usually where the author was employed during the study. Indent the second and subsequent lines of an author's address using the hanging indent function. Only use a single address or affiliation for each author. In each address, use available United States Postal Service (USPS) abbreviations, zip codes, and the country (abbreviate USA, but spell out all others). Write out words like Street, Avenue, and Boulevard, but abbreviate directions (e.g., N and NW). Include the address after each author, even if

multiple authors have the same address. Footnotes (not footers) should be used to note the corresponding author's email address, to reference the present address of an author when it differs from the byline address, and to indicate a deceased author. Each footnote for authors starts with a numerical superscript.

## ABSTRACT

Begin with the word **ABSTRACT** (left-justified) in upper-case bold font. The abstract text begins after a regular letter space on the same line and is 1 paragraph not exceeding 1 line per page of manuscript text (3% of length of text), including Literature Cited. Research Note abstracts cannot exceed 1 line per 2 pages, including Literature Cited. The abstract includes:

- 1) Problem studied or hypothesis tested. Identify the problem or hypothesis and explain why it is important. Indicate new data, concepts, or interpretations directly or indirectly used to manage wildlife.
- 2) Pertinent methods. State methods used to achieve the results summarized (keep the methods brief unless a new, greatly improved method is reported). Include the study period and location of the study.
- 3) Results. Emphasize the most important results, whether or not they agree with your hypotheses.
- 4) Utility of results. Explain how, when, where, and by whom data or interpretations can be applied to wildlife problems or contribute to knowledge of wildlife science.

## KEY WORDS

Key words follow the abstract. The phrase **KEY WORDS** (left-justified, upper-case bold font) is followed by a regular space and  $\leq 10$  key words in alphabetical order, ending with a period. Do not include Akaike's Information Criteria (AIC) in the Key Words. Include essential words from the title and others that identify: 1) common and scientific names of principal organisms in the manuscript; 2) the geographic area, usually the state, province, or equivalent, or region if its name is well known; 3) phenomena and entities studied (e.g., behavior, populations, habitat, nutrition, density estimation, reproduction); 4) methods (only if the manuscript describes a new or improved method); and 5) other words not covered above but useful for indexing. For example:

**KEY WORDS** author, format, guidelines, instructions, manuscript, policy, style.

## TEXT PAGES

Using the Header function, insert page numbers and author name(s) (e.g., Smith; Smith and Jones; Smith et al.) on all pages following the title page. Number each line of the text continuously (i.e., do not restart numbering on each page).

---

## *HEADINGS*

Reduce or eliminate the need for subheadings by writing clearly and logically. Avoid writing sections that consist of only one paragraph. Examples of the 3 heading types follow.

## **STUDY AREA**

First-level heading: upper-case lettering, bold type, and flush left. Text follows flush left on the succeeding line.

### **Burrow Availability Hypothesis**

Second-level heading: bold type, flush left, with important words capitalized. Text follows flush left on the succeeding line.

*Assessment of available natural burrows.*— Third-level heading: indented, italicized, and followed by a period and em dash (—). Text follows directly after the heading on the same line.

---

## *MAJOR SECTIONS OF MANUSCRIPT*

The introduction to the manuscript does not include a heading. Articles include the following first-level headings: **ABSTRACT, KEY WORDS, STUDY AREA, METHODS, RESULTS, DISCUSSION, MANAGEMENT IMPLICATIONS** (From the Field, Tools and Technology, and Emerging Issues articles in *WSB* do not include this section), **ACKNOWLEDGMENTS**, and **LITERATURE CITED**. It is not permissible to combine Study Area and Methods or Results and Discussion. Merging these sections leads to superfluous wording, unnecessary discussion, and confusion. Most articles will include all major sections, but some sections may not be appropriate for all articles.

The introduction (no heading) starts below the **KEY WORDS** and contains a concise synthesis of literature specific to the manuscript's main topic. The end of the introduction should state clearly and concisely the objectives of the study and the hypotheses tested. Do not summarize methods or results in the Introduction section.

Use past tense for **STUDY AREA** descriptions (e.g., average annual precipitation was 46 cm, vegetation was primarily grass). Exceptions include geological formations that have been present for centuries (e.g., mountains). **METHODS** should be brief and include dates, sampling schemes, duration, research or experimental design, and data analyses. Cite previously published methods without explanation. Identify new or modified methods and explain them in detail. Methods must be described in adequate detail for a reader to duplicate them if initiating a new study. Include thresholds for significance (e.g.,  $\alpha = 0.05$ ) or specific model selection criteria (e.g.,  $\Delta AIC < 2$ ,  $\sum w_i > 0.9$ ) if applicable. Include animal-welfare and human subjects protocols in the Methods section (not in Acknowledgments). Include protocol numbers parenthetically following the relevant statement.

Present **RESULTS** in a clear, simple, concise, and organized fashion. Avoid overlapping text with information in tables and figures, but highlight the most important results in the text; do not explain analyses that should have been described in the Methods section. Always try to describe the magnitude of the biological effect in addition to the results of statistical analyses. That is, terms such as “fewer” or “smaller” tell us little, and stating that something was “statistically different ( $P < 0.01$ )” without giving the actual difference conveys little meaning to the reader. For example, stating, “A was 25% larger than B ( $P < 0.001$ )” conveys more information than simply stating, “A was significantly larger than B.” Present Results in past tense (e.g., body mass loss occurred during winter). Reserve comments on interpretation of results for the Discussion.

The **DISCUSSION** provides an opportunity for interpreting data and making literature comparisons. Begin the Discussion by synthesizing your results with regard to your objectives and then relate your work to other literature and research. Systematic discussion of every aspect of research leads to unnecessarily long manuscripts; be concise and relate your findings directly to your overall project goal, objectives, and hypotheses as appropriate. Reasonable speculation and new hypotheses to be tested may be included in the Discussion. Do not repeat results in this section, and comment on only the most important results.

The **MANAGEMENT IMPLICATIONS** section should be short (usually about 1 paragraph) and direct but explain issues important to management and conservation that are derived directly from or addressed in your results. Do not restate material from the Results or Discussion sections, and do not make recommendations that are beyond the scope of your study. Address specific management opportunities or problems in this section. From the Field, Emerging Issues, and Tools and Technology articles in *WSB* should not have a Management Implications section.

The **ACKNOWLEDGMENTS** (note preferred spelling) section appears immediately before Literature Cited. This section should be brief and include 2 initials (rather than first names) of individuals cited. Acknowledgments should be straightforward without ornate and qualifying adjectives or personal remarks, and those funding the study should be included at the end. For example: “We thank G. A. Baldassarre, M. S. Boyce, C. E. Braun, H. E. Hodgdon, and R. L. Lee for review comments and contributions to this manuscript. G. C. White assisted with revision of the mathematics and statistics subsection. Portions of this manuscript have been

extracted from Ratti and Ratti (1988) and Gill and Healy (1980) with permission of The Wildlife Society. This is Contribution 836, University of Idaho Forest, Wildlife, and Range Experiment Station. L. M. Smith was supported by the Caesar Kleberg Foundation for Wildlife Conservation.”

## LITERATURE CITED

*Also see: [Citing Literature in Text](#)*

Type the Literature Cited immediately following the Acknowledgments, and do not insert a page break (see [Appendix B](#) for specific examples). Double-space Literature Cited and use hanging indents for second and subsequent lines of a citation. Spell out all words in the Literature Cited (i.e., do not use abbreviations or acronyms). However, the following 3 exceptions are allowed in author and publisher locations: 1) Washington, D.C., 2) U.S. (e.g., U.S. Forest Service), and 3) USA. Spell out all author names for each citation instead of using dashes for authors in multiple citations.

In the Literature Cited, alphabetize by authors' surname(s), regardless of the number of multiple authors for the same publication. Within alphabetical order, the sequence is chronological (see Appendix B “[Multiple Citations for the Same First Author](#)” for an example).

Use title-case (not small caps) for all names in Literature Cited, and place a comma between all names, even if there are only 2 (e.g., Schmidt, B. R., and J. Pellet). Use 2 initials (where appropriate) with one space between each initial. Only reverse the name order of the first author (e.g., Thogmartin, W. E., J. R. Sauer, and M. G. Knutson). For serial publications, show

the issue number only if the pages of each issue are numbered separately. As in the text, spell out ordinal numbers (e.g., Third edition). Do not include words such as Publishing, Inc., or Company. Use the word Thesis to denote Master of Science (M.S.) or Master of Arts (M.A.), and use the word Dissertation for Doctor of Philosophy (Ph.D.). Do not write the total page number of books at the end of the citation. Only include the software in literature cited if you are referencing the software manual. Otherwise, simply cite the product in text following the examples in [Citing Literature in Text](#) section below. For foreign language publications, note the language of publication at the end of the citation in brackets (e.g., [In Spanish.]).

At the end of the Literature Cited section type “*Associate Editor:*” (the name of the Associate Editor will be filled in later).

## FIGURES AND TABLES

On a new page following the Literature Cited, compile figure captions (not figures) and tables. Submit figures as a separate file(s). Submit only essential tables and figures. Do not submit tables if the information overlaps with information presented in the text, can be easily printed in the text with less journal space, or presents the same data in another table and a figure. Number tables and figures independently. Reference tables and figures parenthetically (Table 4, Fig. 3) and avoid statements such as, “The results are shown in Tables 1–4.”

Tables and figures must stand alone (i.e., be self-explanatory) and avoid reference to the text or other tables and figures. Accordingly, define relevant abbreviations and acronyms in each table and figure (except items that appear in [Appendix C](#)). When possible, minimize the use of

abbreviations, especially with long lists of variables. The space saved is not worth the tedium for the reader trying to understand the table. Table and figure titles must include the species or subject of the data studied and when and where (region or state and country) the data were collected. In rare cases, titles or footnotes of tables and figures may be cross-referenced to avoid repeating long footnotes or the same data; however, this violates the self-explanatory rule and should be avoided. If a table includes a list of species, order species taxonomically and not alphabetically.

---

## *FIGURES*

Begin figure captions on a new page immediately following the Literature Cited. Figure captions tend to be longer than table titles because figures are not footnoted. The caption may be several sentences and include brief suggestions for interpreting the figure content. Like table titles, figure captions must allow the figure to be self-explanatory (do not include abbreviations without defining them in the caption), describing the variables displayed and where and when data were collected. Do not include statistical results in the caption. Label and mount figure parts (e.g., Fig. 3A, Fig. 3B) together into one figure as they are meant to appear in print.

Upload figures files separately (do not include them in the main document) and use the following guidelines to assure image quality is adequate for printing. Pictures must have sharp focus in the most important parts of the image, have high tonal contrast, and have a reference scale if size is important. Letters, scales, or pointers can be drawn on the prints, but they must be of professional quality. Sets of 2–4 related pictures can be handled as one figure if prints are the

same width and will fit in a space 85 mm × <180 mm when reduced for printing, but please mount them together prior to submitting the figure. All image files must have a resolution of >200 dots per inch (dpi) at final printing size.

Consider whether a drawing can be printed column width (85 mm) or is so detailed that it must be printed page width (180 mm). The difference depends mainly on size of characters and lengths of legends drawn on the figure. If page width is necessary, consider omitting some detail and look for ways to shorten legends. Column-width figures are preferred. Ensure that all characters are  $\geq 1.5$  mm tall after reduction for printing. Hand-drawn lines and lettering and typewriter characters are not acceptable.

Only capitalize the first word and proper nouns on axis labels and keys. Lettering within figures follows the same guidelines as manuscript text. Use italic letters only where they are essential to the meaning, as in mathematical terms and most metric units (see [Mathematics and Statistics](#) section and [Appendix C](#)). Identify arbitrary symbols in a figure key within the figure or in a note that is part of the caption.

---

## *TABLES*

Do not prepare tables for small data sets, those containing many blank spaces, zeros, repetitions of the same number, or those with few or no significant data. Put such data or a summary of them in the text.

Construct tables for column-width ( $\leq 8.5$  cm) printing. If the table will not fit in one column width, construct it for page-width printing ( $\leq 18$  cm). Some extra-wide tables can be

printed vertically, but such tables usually waste space. Extra-long and extra-wide tables require persuasive justification.

Table titles may differ, but we recommend this sequence: 1) name of the characteristic that was measured (e.g., mass, age, density), 2) measurement unit or units in parentheses (e.g., cm, no./ha, M:100 F, or %), 3) name of organism or other entity measured (e.g., of Canada geese), and 4) location(s) and date(s). Each part of the sequence can include >1 item (e.g., Carcass and liver fat [%] and adrenal and kidney weight [mg] of white-tailed deer in Ohio and Michigan, USA, in 1975). Do not include statistics or statements of results (e.g., *P*-values) in the title. Do not use abbreviations in table title (e.g., AIC), except within parentheses after defining the abbreviation. However, use standard abbreviations and symbols ([Appendix C](#)) in the table body and in footnotes.

The lines printed in tables are called rules, and they should be used according to the following standards (see [Appendix D](#) for an example table):

1. None drawn vertically within the table.
2. Each table contains at least 3 rules – below the title, below the column headings, and at the bottom. Insert each as one continuous line. Do not use bold or extra-thick rules.
3. Use rules that straddle subheadings within the column heading.
4. None to show summation; use “Total” or equivalent in the row-heading.
5. Do not use rules to join the means in multiple-range tests. Use Roman upper-case letters instead of rules (e.g., 12.3A<sup>a</sup>, 16.2A, and 19.5B) where the superscript “a” references a footnote (e.g., <sup>a</sup>Means with the same letters are not different [*P* > 0.10]). Upper-case

letters may be used in a similar fashion to reference the relationship of data among columns.

Type main headings flush left, and indent their subheadings. For column- and row-headings, only capitalize the first word and proper nouns (e.g., No. times detected in NV), and do not use bold font. In the data field, do not use dashes (often misused to mean no information) or zeros unless the item was measured, and 0, 0.0, or 0.00 correctly reports the precision (measurement). Similarly, respect digit significance in all numbers, particularly percentages. Do not use percentages where  $n$  is  $<26$ , except for 1 or 2 samples among several others where  $n$  is  $>25$ . Where the number of significant digits varies among data in a column, show each datum at its precision level (i.e., do not exaggerate precision). For  $P$  values only use 3 digits past the decimal, and do not list  $P = 0.000$ ; the correct form is  $P \leq 0.001$ . Do not use naked decimal points in the data field (e.g., use 0.057 instead of .057).

For footnote superscripts use asterisks only for probability levels and lower-case Roman (not italic) letters for other footnotes. Place letters alphabetically in the following sequence: in the title, then left-to-right, and then down. The most common errors in tables are the use of undefined abbreviations (e.g.,  $AIC_c$ ,  $K$ ), single spacing, and incomplete titles.

## APPENDICES

Appendices are different than supplemental materials; they are essential to the manuscript and are typeset with the text. Include appendices in the text file after all figure captions and tables ([Appendix D](#)). Use first-level headings for Appendix titles. Appendices are printed at the end of

the article and are used to add understanding to the manuscript without disrupting the flow of the text.

## SUPPLEMENTAL MATERIAL

Supplemental material is made available online only and is manuscript information that adds depth to the manuscript but is not essential to readers' understanding of the manuscript (e.g., spreadsheets, detailed equations, video or audio files, code, in-depth tables and figures). All supplemental material will be reviewed by the editors and content edited by journal staff.

However, the publisher does not copyedit, typeset, or format supplemental material, thus the material must be ready for publication when the manuscript is submitted for review. Upload supplemental material in Scholar One in a separate file and choose "Supporting Information for review and online publication only" from the "file type" drop-down menu. The file that you upload will be the exact file that readers will be able to download so use a file type that will be accessible to readers.

Reference the supplemental material website parenthetically in your manuscript. For example, "We created a project-cost worksheet to assist other researchers planning monitoring projects (Table S1, available online in Supporting Information)." After the location online has been established, simply refer to the table without the additional text. For *WSB* manuscripts, add a first-level heading after the Associate Editor line (following literature cited) titled SUPPORTING MATERIAL. Under this heading, include the text "Additional supporting material may be found in the online version of this article at the publisher's web-site." Follow

this statement with a brief description of supporting material. For *JWM* manuscripts, authors do not need to include a SUPPORTING MATERIAL section because it will be added during typesetting.

Because supplemental material is published separately from the manuscript, it needs to stand alone. List all references cited in the supplemental material at the end of the supplemental material file. References that only appear in the supplemental material should not be listed in the Literature Cited section of the manuscript. Arrange the supplemental material file as follows:

Supplemental Material

Date

Citation for your manuscript (e.g., Smith, L., and M. Jones. 2016. Southern ground hornbill nest survival. *Journal of Wildlife Management*)

Begin supplemental material text here (table, equations, photo).

Literature Cited

## STYLE AND USAGE

Manuscripts with publishable data may be rejected because of poor writing style (e.g., long and complex sentences, superfluous words, unnecessary information, and poor organization). Most editors are patient with this problem and are willing to offer helpful suggestions. However, reviewers may be less tolerant of poor writing, which may result in negative reviews. Use a direct and concise writing style and minimize repetition among sections of your manuscript. Avoid using 1-sentence paragraphs. Many common problems may be avoided by use of a

carefully prepared outline to guide manuscript writing. Many problems can be corrected by having your manuscript critically reviewed by colleagues before submission for publication.

The most common error in manuscripts is use of passive voice. Use first person and active voice throughout the manuscript to avoid superfluous or unclear wording. For example, instead of writing “false absences were estimated” write, “we estimated false absences.”

## NUMBERS AND UNIT NAMES

Use digits for numbers (e.g., 7 and 45) unless the number is the first word of a sentence or is used as a pronoun (e.g., We conclude one would benefit from...), in which case the number is spelled out. Use numerals for 0 and 1 only when they are connected to a unit of measure, when they are used as an assigned or calculated value, or when they are part of a series or closely linked with numbers other than 0 and 1 (e.g., 0 of 4 subspecies; 2 applications instead of 1 ...). Otherwise, spell out zero and one (e.g., zero-based budgeting, on the one hand, one doctor).

Indicate units after each item unless it is a range with an en dash (e.g., elevations ranged 3,000 m to 5,000 m or elevations ranged 3,000–5,000 m) and use standard abbreviations for measurement units that follow a number (e.g., 75% and 30 kg) unless the number is indefinite (thousands of hectares). Avoid using introductory phrases (e.g., a total of ...). Spell out ordinal numbers (e.g., first, second) in text and Literature Cited, but use digits for cases such as 3-fold and 2-way.

Convert fractions (e.g., 1/4, one-third) to decimals or percentages except where they misrepresent precision.

Hyphenate number-unit phrases used as adjectives (e.g., 3-m<sup>2</sup> plots and 3-yr-old M) but not those used as predicate adjectives (e.g., plots were 3 m<sup>2</sup>, M were 3 yr old). Insert commas in numbers  $\geq 1,000$  (except for pages in books, clock time, or year dates). Do not insert a comma or hyphen between consecutive, separate numbers in a phrase (28 3-m<sup>2</sup> plots). Do not use naked decimals (i.e., use 0.05, not .05). When identifying items by number, use lowercase for names (e.g., plot 1, site 5, day 3).

## TIME AND DATES

Use the 24-hour system: 0001 hours through 2400 hours (midnight). Date sequence is day month year, without punctuation (e.g., 4 March 2000). Do not use an apostrophe for plural dates (e.g., 1970s). Spell out months except in parentheses, table bodies, and figures, in which 3-letter abbreviations are used with no period (e.g., 31 Mar 1947).

## MATHEMATICS AND STATISTICS

Use italic font for Roman letters used as symbols for quantities (e.g., *n*, *X*, *F*, *t*, *Z*, *P*, and  $\bar{x}$ ; [Appendix C](#)). Report degrees of freedom used in a statistical test as subscripts to the relevant test statistic (e.g.,  $t_2 = 1.45$ ). Insert symbols from the symbol directory in your word processing program as opposed to creating the symbol with keyboard functions (e.g., chi-square should appear as  $\chi^2$  [found in the symbol directory], as opposed to X<sup>2</sup>). Use the minus sign from the symbols menu (−) to indicate minus and negative values instead of using the keyboard hyphen.

Use times ( $\times$ ) to indicate multiplication or dimensions instead of using an asterisk (\*) or a lowercase x. These mathematical symbols may also be copied and pasted from this document.

Insert a space on both sides of symbols used as conjunctions (e.g.,  $P > 0.05$ ) but close the space when symbols are used as adjectives (e.g.,  $>20$  observations). Where possible, report exact probabilities ( $P = 0.057$ , not  $P > 0.05$ ). A subscript precedes a superscript ( $X_i^3$ ) unless the subscript includes  $>3$  characters. Break long equations for column-width printing (85 mm) if they appear in the main body of the manuscript; long equations and matrices can be printed page-width (180 mm) in appendices.

Avoid redundant use of the word “significantly” (e.g., write “the means differed [ $P = 0.016$ ]” instead of “the means differed significantly [ $P = 0.016$ ]”). Report results of statistical tests or central tendency as in the following examples: ( $t_1 = 2.47, P = 0.013$ ), ( $F_{3, 12} = 33.10, P = 0.01$ ), ( $\chi_{10}^2 = 22.1, P = 0.029$ ), or ( $\bar{x} = 7.8, SE = 3.21, n = 46$ ). Present  $P$ -values  $<0.001$  as  $P \leq 0.001$ . Type the names of statistical programs or analytical methods (that are not acronyms) in capital letters (e.g., PROC LIFEREG, POPGEN, Program MARK).

## EQUATIONS

Equations require precise internal spacing and formatting and are correctly constructed using Equation Editor (not saved as an embedded picture). This can be completed in most versions of Word by choosing insert-object and then selecting Microsoft Equation from the menu or using the Equation tool (insert-equation). Simple mathematical expressions, such as symbols with simple subscripts or superscripts and Greek letters can be typed as text, using the symbol

directory. However, care must be taken to be sure that the font and font size are the same wherever the symbol is used, and inconsistencies can arise when text symbols are mixed with symbols generated with an Equation Editor. For example, the Greek letter phi can be represented by both  $\varphi$  and  $\phi$ , which leads to confusion when both appear in the manuscript but are to imply the same symbol. Mathematical symbols for estimators are typically given hats (carets, e.g.,  $\hat{\mu}$ ) and require the use of Equation Editor, as does proper construction of the symbol for an estimated mean ( $\bar{x}$ ). For in-line equations using division, use / instead of stacking above and below a horizontal line, and all symbols in text need to be pulled from the symbols function or Unicode. Use  $\{[()]\}$  in mathematical sentences. Statistical terms that are not to be italics (e.g., ln, E, exp, max, min, lim, SD, SE, CV, and df) can appear in equation boxes as text without italics by changing the style to text while editing the equation box.

## ABBREVIATIONS AND ACRONYMS

The use of numerous abbreviations and acronyms can detract from the flow of a paper. This is particularly the case when used for variables, agencies, and organizations. Use of abbreviations and acronyms should be done judiciously. Some abbreviations and acronyms are well established and may be used in the text without definition: metric units, DNA, and certain measurement units ([Appendix C](#)). Define all other abbreviations or acronyms the first time you use them in the abstract and text (e.g., geographic information system [GIS], analysis of variance [ANOVA], Akaike's Information Criterion [AIC]). Reestablish acronyms in the text that were first established in the abstract. Do not start sentences with acronyms, and do not use an apostrophe

with plural acronyms (e.g., ANOVAs). Abbreviate state names in parentheses except when they appear in the title of an academic institution or agency.

## PUNCTUATION

Use a comma after the next-to-last item in a series of >2 items (e.g., red, black, and blue). Do not use a comma to separate a compound sentence before the conjunction unless the sentence will be confusing otherwise (e.g., “Use an infrared scope at night and use a regular scope during the day,” not “Use an infrared scope at night, and use a regular scope during the day.”). Write clearly enough so that you do not need to put quotation marks around words or phrases unless they are direct quotations. Follow these 3 rules to avoid common hyphenation errors: 1) a phrase containing a participle or an adjective is hyphenated as a compound when it precedes the word modified, and it is written without a hyphen when it follows the word modified (e.g., “a small-mammal study” and “a study of small mammals” are both correct but have a different meaning than “a small mammal study”); 2) a modifier containing a number is usually hyphenated (e.g., 2-km study area, a 6-yr-old mammal); and 3) a 2-word modifier containing an adverb ending in -ly is not hyphenated (e.g., a carefully preserved specimen, spatially explicit model).

Avoid ambiguous use of nouns as modifiers (e.g., wolf researchers, women hunters). Use prepositions to avoid using nouns as adverbs (e.g., nesting by birds, not bird nesting; hunting with dogs, not dog hunting) and to avoid noun strings exceeding 3 words (e.g., radio-telemetry locations of dens in fall, not fall den radio-telemetry locations).

Closing quotation marks are always placed after periods and commas, but they may be placed either before or after other punctuation. Brackets must appear in pairs, but the sequence varies. Use ([ ]) in ordinary sentences, use {[ ( ) ]} in mathematical sentences, and use ( ( ) ) only in special cases such as chemical names. Brackets are used to enclose something not in the original work being quoted (e.g., insertion into a quotation or a translated title).

Do not use a slash (/) to indicate “and” or “or” or to express a range; use only to indicate “divided by” or “per.” Use trademarks (i.e.,™, ®) at the first mention of a product name, where appropriate, and not thereafter (if introduced in the abstract, re-establish the information in the text).

## ENUMERATING SERIES OF ITEMS

A colon must precede a series of numbered items unless the list is preceded by a verb or preposition. For presentation of a simple series, place numbers followed by a closing parenthesis only (see example in [Key Words](#) section) and separate phrases with commas or semicolons.

When enumerating lengthy or complexly punctuated series, place the numbers at the left margin, with periods but no parentheses, and indent run-on lines (see [Measurement Units](#) section).

## COMMON AND SCIENTIFIC NAMES

Do not capitalize common names of species except words that are proper names (e.g., Canada goose [*Branta canadensis*], Swainson’s hawk [*Buteo swainsoni*], and white-tailed deer [*Odocoileus virginianus*]). Scientific names follow the first mention of a common name, except

in the title. If a scientific name is established in the abstract, re-establish it in the text. Place scientific names following common names in parentheses and italic font with the first letter of the genus name capitalized and the species name in lower-case letters. Abbreviate genus names with the first letter when they are repeated within a few paragraphs, provided the meaning is clear and cannot be confused with another genus mentioned in the manuscript with the same first letter; for example, “we studied snow geese (*Chen caerulescens*) and Ross’ geese (*C. rossii*).”

Do not use subspecies names unless essential, and omit taxonomic author names. Use “sp.” (singular; not italicized) or “spp.” (plural) to indicate that the identity of species within a genus was unknown. For example, “The field was bordered by willow (*Salix* sp.) and we trapped several species of mice (*Peromyscus* spp.).” Use the most widely accepted nomenclature for all species mentioned in your manuscript (e.g., American Ornithologists’ Union Check-list [[checklist.aou.org](http://checklist.aou.org)]). Omit scientific names of domesticated animals or cultivated plants unless a plant is endemic or widely escaped from cultivation or is a variety that is not described adequately by its common name.

## MEASUREMENT UNITS

Use Systeme Internationale d’Unites (SI) units and symbols ([Appendix C](#)). Place a space between numbers and units or symbols (e.g., 10 m, 80° C). Do not use hyphens between numbers and units unless you are using a number-unit phrase to modify a noun (e.g., correct usage: 12-mm mesh, 3-yr study, 12 mm in diameter, and 2 mm wide; see section on [Punctuation](#)). Use English units (or, rarely, another type of scientific unit) in parentheses following a converted

metric unit only in cases that may misrepresent the statistical precision of the original measurement or the correct interpretation of the results. However, these non-SI units are permitted:

1. Area: hectare (ha) in lieu of  $10^4 \text{ m}^2$ ;
2. Energy: calorie (cal) in lieu of Joule (J);
3. Temperature: Celsius (C) in lieu of Kelvin (K);
4. Time: minute (min), hour (hr), day, in lieu of seconds (sec);
5. Volume: liter (L) in lieu of  $\text{dm}^3$ .

## CITING LITERATURE IN TEXT

In most cases reference citations parenthetically at the end of a sentence; e.g., “Mallard brood survival was higher in the wettest years (Rotella 1992).” Cite published literature by author and year; e.g., Jones (1980), Jones and White (1981). Use “et al.” for publications with  $\geq 3$  authors; e.g., (Jones et al. 1982). Do not separate the author and date by a comma but use a comma to separate a series of citations. Use chronological order for citations in a series; e.g., (Jones 1980, Hanson 1986). If citations in a series have  $>1$  reference for the same author(s) in the same year, designate the years alphabetically (in italics) and separate citations with semicolons; e.g., (Peek et al. 1968*a, b*; Hanson 1981; White 1985, 1986). If citations have  $>1$  reference for the same author in different years, designate the years chronologically after the author’s name (e.g., Andrews 2001, 2005; Chamberlain 2002; Foster 2006). For citations in a series with the same year, use alphabetical order within chronological order; e.g., (Brown 1991, Monda 1991, Rotella

1991, Allen 1995). Do not give >5 citations in the text to reference a specific issue or scientific finding. For a quotation or paraphrase, cite author, year, colon, and page number(s) (e.g., Krebs 1989:216).

Cite documents that are cataloged in major libraries, including theses and dissertations, as published literature. Published literature includes symposia proceedings and United States Government reports that have been widely distributed. Cite all other documents as unpublished data in the text only.

---

#### *CITING UNPUBLISHED SOURCES IN TEXT*

If references are not easily available or are not widely distributed, cite them in the text only.

Unpublished sources include reports that are not published or widely distributed, manuscripts that have not yet been accepted for publication, and personal communications and observations.

Avoid overusing unpublished information because these citations are not as credible as published literature and will make your text cumbersome. Cite unpublished references in the text as follows:

1. Personal communications: (J. G. Jones, National Park Service, personal communication);
2. Unpublished report: (D. F. Timm and E. J. Jones, North Carolina State University, unpublished report);
3. Unpublished data (including manuscripts in review): (D. F. Brown, Arizona Game and Fish Department, unpublished data).

Always include the affiliation in the first citation, even if citing unpublished data or personal observation of one of the authors, but do not repeat the affiliation in subsequent references (e.g., J. G. Jones, personal communication). Do not list >2 authors for an unpublished source.

A manuscript accepted for publication is cited as a published manuscript in the text using the anticipated publication year. In the Literature Cited section, show the year after the name(s) of the author(s) and “in press” after the volume number. Do not cite manuscripts that are in review; use the unpublished style listed above. Refer to detailed instructions for Literature Cited style ([Appendix B](#)).

---

#### *CITING EQUIPMENT AND STATISTICAL SOFTWARE*

For field equipment, note the manufacturer name and location parenthetically the first time you mention the equipment in the text (e.g., Interface, Missoula, MT, USA). Inclusion of information for purchasing equipment or software is inappropriate and not permitted.

Only include software in Literature Cited if you are referencing the software manual or another publication describing the function of the program (e.g., “...Program MARK (White and Burnham 1999)”), otherwise simply cite the software within the text. In-text citations should include the manufacturer information (manufacturer, city, state [if applicable], and country of manufacture) immediately following the first use of the statistical product name (e.g., SAS Institute, Inc., Cary, NC, USA; Environmental Systems Research Institute, Inc., Redlands, CA, USA). For in-text citations of statistical software packages freely available online, note the

software name, website, and website access date parenthetically the first time you mention the software in the text (e.g., R Version 3.2.3, [www.r-project.org](http://www.r-project.org), accessed 6 Jan 2016).

## SUBMISSIONS

Reviewers and editors judge each manuscript on data originality, concepts, interpretations, accuracy, conciseness, clarity, appropriate subject matter, and contribution to existing literature. Prior publication or concurrent submission to other reviewed journals precludes review or publication in Society journals (see additional information in the [Previous Publication](#) section). Fisheries manuscripts are discouraged unless information is part of an account that mainly concerns animals other than fish.

The Society journals accept only manuscripts submitted electronically via Scholar One Manuscripts (S1M). You can register for an account (which will give you a homepage in S1M), log in to an existing account, submit a manuscript for review, and track the progress of your manuscript at <http://mc.manuscriptcentral.com/jwm/> for *JWM* or <https://mc.manuscriptcentral.com/wsb> for *WSB*. Before submitting a manuscript, see instructions on how to use S1M ([Appendix A](#)).

## COVER LETTER

Each publication is managed by an Editor-in-Chief (EIC). Direct cover letters to the EIC and provide information that bears on ethical and copyright considerations and other information that might facilitate review and editing. Current EIC information can be found on the journal's

webpage (*JWM*: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1937-2817](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1937-2817), *WSB*: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1938-5463a](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1938-5463a)). Cover letters must indicate that your manuscript is submitted for exclusive consideration by the journal. The statement ensures that data and findings have not been published previously or submitted elsewhere for simultaneous consideration.

## REVIEW PROCESS

Upon receipt, editorial staff examines a manuscript for proper style, format, and appropriate subject matter. If style and format are seriously flawed, the manuscript likely will be returned for revision before being sent to reviewers. If subject matter is obviously inappropriate, the EIC will return the manuscript to the author with an explanatory letter.

The editorial staff or EIC selects an Associate Editor (AE) who handles the initial review process. The manuscript is assigned to  $\geq 2$  reviewers. The staff considers expertise, affiliation, geographic location, date of last review, and performance on previous reviews when selecting reviewers. Reviewers' comments are sent to the AE, who may work with the authors before making 1 of 3 recommendations to the EIC: 1) publish without revision (extremely rare), 2) return to author for revision (ranging from minor to major), or 3) rejection.

Several revisions may be necessary before the AE recommends acceptance to the EIC. Typically, manuscripts returned to authors for revision must be resubmitted as a revision in S1M within the time stated in the decision letter (usually 3 or 6 months). Revisions submitted past the deadline without an approved extension will need to be resubmitted as a new manuscript. Final

acceptance or rejection of manuscripts is decided by the EIC. Typically, the EIC follows the AE's recommendation, but this is not guaranteed.

---

#### *APPEAL AND RESUBMISSION*

Authors may email the EIC to question the reasons for rejection or to request a reconsideration of a previously rejected submission. Reconsideration of a rejected manuscript requires a convincing rebuttal letter from the author(s). Author(s) should not revise and resubmit a rejected manuscript without first writing a letter requesting reconsideration, which saves time for the EIC and the author(s).

---

#### *ACCEPTED MANUSCRIPTS*

Accepted manuscripts go through 2 stages before publication: 1) final edit by journal staff and the EIC for content-related issues and general formatting and 2) copyediting and typesetting by the publisher's production staff. Authors are contacted during both stages. Authors will receive a content edited version of their manuscript within approximately 1 month after acceptance.

Authors will have 1 week to upload their final version of the manuscript based on changes directed by the content editor and the EIC. Manuscripts will not be assigned to an issue until the final version has been received. All correspondence is conducted via email, so authors should make sure their email address within the SIM database is current at all times (Note: *JWM* and *WSB* maintain separate databases).

---

#### *PAGE PROOFS*

The final production stages of the TWS publications are handled by Wiley-Blackwell Publishing (Hoboken, NJ). Page proofs of each manuscript are created by Wiley-Blackwell and sent to each corresponding author. During the page proof stage, press deadlines are fast approaching and author corrections to page proofs are urgently needed, preferably within 48 hours of receipt. Authors must clearly communicate their recommended changes, mark proofs clearly, or describe changes in detail. Make only essential changes to page proofs. Journal staff will also review the proofs for corrections.

## ACKNOWLEDGMENTS

These guidelines are a modification of the previous directions for authors prepared by numerous editors and editorial staffs. It is appropriate and courteous to thank the AE and reviewers.

## APPENDIX A. ONLINE MANUSCRIPT SUBMITTAL

Before submitting manuscripts, please review these guidelines and ensure that your manuscript is formatted accordingly. Manuscripts that seriously deviate from the requested format will be returned to authors, which could result in unnecessary delays. Submit manuscripts on either the *JWM* ScholarOne Manuscripts (S1M) website (<http://mc.manuscriptcentral.com/jwm>) or the *WSB* S1M website (<https://mc.manuscriptcentral.com/wsb>).

### LOGGING IN TO YOUR SCHOLARONE ACCOUNT

To create a new S1M account or find out if you already have an account, go to the S1M website, click ‘Register here,’ and provide the requested information. Please note that you do not have to be an author to have an account. If you forget your login name or password, enter your email address into the ‘Password help’ link on the S1M main page, enter the requested information, and S1M will email you your login name and a temporary password. If you do not receive the email within a few hours, please contact the editorial office.

A set of menu options is available from the main navigation menu at the top of the screen. On the login screen enter your username (often your email address) and password and click on the ‘**Log In**’ icon.

### SUBMIT A NEW MANUSCRIPT

To submit a new manuscript, enter your author center, click on the star icon (as shown below), and follow the step-by-step instructions provided in S1M.

- Clicking on the various manuscript status links under "My Manuscripts" will display a list of all the manuscripts in that status at the bottom of the screen.

My Manuscripts	Author Resources
<ul style="list-style-type: none"> <li>1 <a href="#">Unsubmitted Manuscripts</a></li> <li>0 <a href="#">Resubmitted Manuscripts in Draft</a></li> <li>0 <a href="#">Revised Manuscripts in Draft</a></li> <li>0 <a href="#">Submitted Manuscripts</a></li> <li>0 <a href="#">Manuscripts with Decisions</a></li> <li>0 <a href="#">Manuscripts I Have Co-Authored</a></li> <li>1 <a href="#">Withdrawn Manuscripts</a></li> <li>0 <a href="#">Manuscripts Accepted for First Look</a></li> <li>0 <a href="#">Invited Manuscripts</a></li> </ul>	<p data-bbox="850 541 1284 573">★ <a href="#">Click here to submit a new manuscript</a></p> <p data-bbox="829 625 1338 730">This section lists the subjects of the five most recent e-mails that have been sent to you regarding your submission(s). To view an e-mail, click on the link. To delete an e-mail from this list, click the delete link.</p>

## REVISED MANUSCRIPTS

To submit a revision, enter your author center, click on the star icon next to the revision option, and follow the step-by-step instructions provided in S1M.

- Clicking on the various manuscript status links under "My Manuscripts" will display a list of all the manuscripts in that status at the bottom of the screen.

My Manuscripts	Author Resources
<ul style="list-style-type: none"> <li>0 <a href="#">Unsubmitted Manuscripts</a></li> <li>0 <a href="#">Resubmitted Manuscripts in Draft</a></li> <li>0 <a href="#">Revised Manuscripts in Draft</a></li> <li>1 <a href="#">Submitted Manuscripts</a></li> <li>1 <a href="#">Manuscripts with Decisions</a></li> <li>0 <a href="#">Manuscripts I Have Co-Authored</a></li> <li>0 <a href="#">Withdrawn Manuscripts</a></li> <li>0 <a href="#">Manuscripts Accepted for First Look</a></li> <li>0 <a href="#">Invited Manuscripts</a></li> <li>1 <a href="#">Manuscripts Awaiting Revision</a></li> </ul>	<p data-bbox="841 1409 1274 1440">★ <a href="#">Click here to submit a new manuscript</a></p> <p data-bbox="841 1459 1187 1491">★ <a href="#">Click here to submit a revision</a></p> <p data-bbox="823 1549 1325 1661">This section lists the subjects of the five most recent e-mails that have been sent to you regarding your submission(s). To view an e-mail, click on the link. To delete an e-mail from this list, click the delete link.</p> <p data-bbox="855 1713 1325 1793"> <a href="#">Journal of Wildlife Management and Wildlife Monographs - Decision on Manuscript ID JWM-11-0181 [email ref: DL-SW-2-a1]</a> <a href="#">Delete</a> </p>

## APPENDIX B. LITERATURE CITED

A list of example citations follows.

---

### *BOOK: GENERAL FORMAT*

*Note:* If the state appears in the publisher or agency name, do not repeat it after the city.

Kleinbaum, D. G., L. L. Kupper, A. Nizam, and K. E. Muller. 2008. Applied regression analysis and other multivariable methods. Fourth edition. Duxbury, Belmont, California, USA.

Miller, K. V., and L. Marchinton. 1995. Quality whitetails: the why and how of quality deer management. Stackpole, Mechanicsburg, Pennsylvania, USA.

---

### *BOOK: MORE THAN ONE PUBLISHER*

Gutiérrez, R. J., A. B. Franklin, and W. S. LaHaye. 1995. Spotted owl (*Strix occidentalis*).

Account 179 in A. Poole and F. Gill, editors. The birds of North America. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C., USA.

Sowls, L. K. 1955. Prairie ducks: a study of their behavior, ecology, and management. Stackpole, Harrisburg, Pennsylvania, and Wildlife Management Institute, Washington, D.C., USA.

---

### *BOOK: MORE THAN ONE VOLUME*

Palmer, R. S. 1976. Handbook of North American birds. Volume 2. Yale University Press, New Haven, Connecticut, USA.

---

### *BOOK: EDITOR AS AUTHOR*

Temple, S. A., editor. 1978. Endangered birds: management techniques for preserving threatened species. University of Wisconsin Press, Madison, USA.

---

*BOOK: REPRINT*

Leopold, A. 1933. Game management. 1946, Reprint. Charles Scribner's Sons, New York, New York, USA.

---

*BOOK: CHAPTER*

Zeleny, L. 1978. Nesting box programs for bluebirds and other passerines. Pages 55–60 in S. A. Temple, editor. Endangered birds: management techniques for preserving threatened species. University of Wisconsin Press, Madison, USA.

---

*COURT CASES*

Cite complete title and year of case in text only.

---

*FOREIGN LANGUAGE PUBLICATION*

Angulo, E. 2003. Factores que afectan a la distribución y abundancia del conejo en Andalucía. Dissertation, Complutense University, Madrid, Spain. [In Spanish.]

---

*GOVERNMENT PUBLICATION*

Lull, H. W. 1968. A forest atlas of the Northeast. U.S. Forest Service, Northeast Forest and Experiment Station, Upper Darby, Pennsylvania, USA.

---

*GOVERNMENT PUBLICATION: PART OF A NUMBERED SERIES*

Anderson, D. R. 1975. Population ecology of the mallard: V. Temporal and geographic estimates of survival, recovery, and harvest rates. U.S. Fish and Wildlife Service Resource Publication 125, Washington, D.C., USA.

---

*GOVERNMENT PUBLICATION: AGENCY AS AUTHOR*

National Research Council. 1977. Nutrient requirements of poultry. Seventh edition. National Academy of Science, Washington, D.C., USA.

*Note:* Cite in text as National Research Council (1977) or parenthetically as (National Research Council 1977).

---

*JOURNALS: GENERAL FORMAT*

*Note:* Issue numbers are included only if the pages of each issue are numbered separately.

Bélisle, M., and A. Desrochers. 2002. Gap-crossing decisions by forest birds: an empirical basis for parameterizing spatially-explicit, individual-based models. *Landscape Ecology* 17:219–231.

Cox, W. A., F. R. Thompson III, B. Root, and J. Faaborg. 2012. Declining brown-headed cowbird (*Molothrus ater*) populations are associated with landscape-specific reductions in brood parasitism and increases in songbird productivity. *PLoS ONE* 7(10):e47591.

Miller, M. R. 1986. Molt chronology of northern pintails in California. *Journal of Wildlife Management* 50:57–64.

---

*JOURNALS IN PRESS: YEAR AND VOLUME KNOWN*

J. S. Polasik, M. A. Murphy, T. Abbott, and K. Vincent. 2016. Factors limiting early life stage survival and growth during endangered Wyoming toad reintroductions. *Journal of Wildlife Management* 80:in press. doi:10.1002/jwmg.1031

---

*JOURNALS IN PRESS: YEAR AND VOLUME UNKNOWN*

*Note:* Manuscripts in review may not be included in the Literature Cited.

Giudice, J. H., and J. T. Ratti. In press. Biodiversity of wetland ecosystems: review of status and knowledge gaps. *Bioscience*.

---

*MULTIPLE CITATIONS FOR THE SAME FIRST AUTHOR*

*Note:* List in alphabetical order by second author (then third, fourth, ...), then chronological for identical authorship. Order *a* and *b* as they appear in the literature cited not the order they appear in text.

Peek, J. M. 1970. A review of wildlife management. Prentice-Hall, Englewood Cliffs, New Jersey, USA.

Peek, J. M., and A. L. Lovaas. 1968. Differential distribution of elk by sex and age on the Gallatin winter range, Montana. *Journal of Wildlife Management* 32:553–557.

Peek, J. M., A. L. Lovaas, and R. A. Rouse. 1968*a*. Population changes within the Gallatin elk herd, 1932–1965. *Journal of Wildlife Management* 31:304–316.

Peek, J. M., and R. A. Rouse. 1966. Preliminary report on population changes within the Gallatin elk herd. *Wildlife Science* 82:1298–1316.

Peek, J. M., R. A. Rouse, and R. L. Smith. 1968*b*. Elk survival in a fragmented landscape. *Journal of Wildlife Management* 31:1–5.

---

*NEWSPAPER, NEWSLETTER, AND MAGAZINE ARTICLES*

Associated Press. 1997. Feathers could fly over dove hunting. *Columbus Dispatch*. 28 December 1997; section E:15.

Eisler, P. 1996. Voters to get a shot at hunting laws. *USA Today*. 25 April 1996; section A:4.

Hogan, M. 1997. Political season as important as hunting season. *Safari Times* 9(8):18.

Jones-Jolma, D. 1993. The fight to reform trapping in Arizona. *Animals' Agenda*. March–April:20–24.

*Note:* Citing from newspapers, newsletters, and magazines is discouraged and is only acceptable in certain rare circumstance (e.g., in manuscripts dealing with public perceptions).

---

*SOFTWARE PACKAGE*

SAS Institute. 2001. Version 8.02 user manual. SAS Institute, Cary, North Carolina, USA.

*Note:* For statistical software packages, include the software in Literature Cited only if you are referencing the software manual. If you are only referencing the software program, please see [Citing Equipment and Statistical Software](#).

---

*SYMPOSIA AND PROCEEDINGS: COMPLETE VOLUME*

DeGraaff, R. M., technical coordinator. 1978. Proceedings of workshop on management of southern forests for nongame birds. U.S. Forest Service General Technical Report SE-14, Washington, D.C., USA.

---

*SYMPOSIA AND PROCEEDINGS: INDIVIDUAL ARTICLE*

Dickson, J. G. 1978. Forest bird communities of the bottomland hardwoods. Pages 66–73 in Proceedings of workshop on management of southern forests for nongame birds. R. M. DeGraaf, technical coordinator. U.S. Forest Service General Technical Report SE-14, Washington, D.C., USA.

---

*SYMPOSIA AND PROCEEDINGS: PART OF A NUMBERED SERIES*

Palmer, T. K. 1976. Pest bird control in cattle feedlots: the integrated system approach. Proceedings of Vertebrate Pest Conference 7:17–21.

---

*SYMPOSIA AND PROCEEDINGS: COMPLETE VOLUME (NOT PART OF A NUMBERED SERIES)*

McAninch, J. B. 1995. Urban deer: a manageable resource? Proceedings of the symposium of the 55th Midwest Fish and Wildlife Conference. North Central Section of The Wildlife Society, 12–14 December 1993, St. Louis, Missouri, USA.

---

*SYMPOSIA AND PROCEEDINGS: INDIVIDUAL ARTICLE (NOT PART OF A NUMBERED SERIES)*

Stout, S. L., and R. Lawrence. 1996. Deer in Allegheny Plateau forests: learning the lessons of scale. Pages 92–98 in Proceedings of the 1995 Foresters Convention. Society of American Foresters, 28 October–1 November 1995, Portland, Maine, USA.

---

*THESES AND DISSERTATIONS*

Breitwisch, R. J. 1977. The ecology and behavior of the red-bellied woodpecker, *Centurus carolinus* (Linnaeus; Aves: Picidae), in south Florida. Thesis, University of Miami, Coral Gables, Florida, USA.

Tacha, T. C. 1981. Behavior and taxonomy of sandhill cranes from mid-continental North America. Dissertation, Oklahoma State University, Stillwater, USA.

---

*WEB CITATION*

Council of Biology Editors [CBE]. 1999. CBE homepage. <<http://www.councilscienceeditors.org>>. Accessed 7 Oct 1999.

National Oceanic and Atmospheric Administration [NOAA]. 2005. National Weather Service internet services team. Monthly precipitation for Reno, Nevada. <[http://www.wrh.noaa.gov/rev/hydrology/monthly\\_precip.php](http://www.wrh.noaa.gov/rev/hydrology/monthly_precip.php)>. Accessed 23 Aug 2005.

## APPENDIX C. REQUIRED ABBREVIATIONS FOR TABLES, FIGURES, AND PARENTHETIC EXPRESSIONS

Abbreviate the following terms when used within parentheses, table bodies, and figures (not table titles and figure captions unless used parenthetically). Abbreviate all standard measurement units (indicated with an asterisk) in the text when they appear after a number, but do not abbreviate other listed terms in regular text. Do not define terms listed in this table; however, all additional abbreviations must be defined the first time they appear in the text.

Term	Abbreviation or symbol
Amount	amt
Approximately	~
Calorie	cal*
Celsius	C*
Chi-square	$\chi^2$
Coefficient	coeff.
Confidence interval	CI
Confidence limit	CL
Correlation, simple	$r$
Determination, multiple	$R^2$
Determination, simple	$r^2$
Degrees of freedom	df
Diameter	diam
Diameter, breast height	dbh
Directions	N, S, E, W, NE, NW, etc.
Equation(s)	eq(s)
Female	F
Fewer than, less than	<*
$F$ ratio	$F$
Gram	g*
Gravity	$G$
Hectare	ha*
Height	ht

Hotelling's $T^2$	$T^2$
Hour(s)	hr
Joule	J*
Kilocalorie	kcal*
Lethal concentration, 50%	LC <sub>50</sub>
Lethal dose, median	LD <sub>50</sub>
Liter	L*
Logarithm, base $e$	ln or log <sub><math>e</math></sub>
Logarithm, base 10	log <sub>10</sub>
Male	M
Maximum	max.
Meter	m*
Metric Ton	t
Minimum	min.
Minute	min
Month names	Jan, Feb, etc.
More than, greater than	>*
Multiple correlation	$R^2$
Number (of items)	no.
Parts per billion	ppb*
Parts per million	ppm*
Percent	%*
Population size	$N$
Probability <sup>a</sup>	$P$
Sample size	$n$
Sample mean (of $x$ )	$\bar{x}$
Second	sec
Spearman rank correlation	$r_s$
Standard deviation(s)	SD
Standard error(s)	SE
Student's $t$	$t$
Temperature	temp
Variation	CV
Versus	vs.
Volt	V*
Volume: liquid, book	vol, Vol.

Weight	wt
Wilcoxon test	<i>T</i>
Year(s)	yr
Z-statistic	<i>Z</i>

---

<sup>a</sup> Use *P* to indicate a specific probability value (e.g.,  $P < 0.001$ ) but not in more broad definitions in column-headings or axis labels [e.g., Probability that a juv survives first yr].

## APPENDIX D: FORMAT TEMPLATE

- 1 Date  
2 Name of corresponding author  
3 Affiliation  
4 Address  
5 Phone 000/000-0000  
6 email address  
7  
8 RH: Last Name et al. • Running Head Capitalized (limit to 45 characters including spaces)  
9 **Manuscript Title Capitalized (limit to 10 words)**  
10 AUTHOR NAME,<sup>1</sup> *affiliation, address text text*  
11 *text text text*  
12 AUTHOR NAME,<sup>2</sup> *affiliation, address text text*  
13 *text text text*  
14 **ABSTRACT** Begin abstract text here. Limit to 1 paragraph not exceeding 1 line per page of  
15 manuscript text (3% of length of text), including Literature Cited.  
16 **KEY WORDS** keyword or phrase 1, keyword or phrase 2, ... keyword or phrase 8.  
17 Begin the introduction text immediately after key words with no heading. It should contain a  
18 concise synthesis of literature specific to the manuscript's main topic. In the latter part of this  
19 section, state clearly and concisely the objectives of the study and the hypotheses tested (if  
20 applicable). Do not summarize methods or results in the Introduction section. Use chronological

---

<sup>1</sup> *Email: correspondingauthor@institution.edu*

<sup>2</sup> *Current affiliation: Department of Wildlife Ecology and Conservation, University of Florida, PO Box 110430, Gainesville, FL 32611-0430, USA*

21 order for citations in a series; e.g., (Jones 1980, Wolf and Kendrick 1986, Merrill et al. 2002).

## 22 **STUDY AREA**

23 Begin left-justified text here. Include (as relevant to the study) location, climate, elevation, land  
24 use, seasons, other species, topography, and major vegetation. Use past tense for Study Area  
25 descriptions (e.g., average annual precipitation was 46 cm, vegetation was primarily grass).

26 Exceptions include geological formations that have been present for centuries (e.g., mountains).

## 27 **METHODS**

28 Methods should be brief and include dates, sampling schemes, duration, research or experimental  
29 design, and data analyses. Include in the methods your specific model selection criteria (e.g.,  
30  $\Delta\text{AIC} < 2$ ,  $\sum w_i > 0.9$ ) or significance threshold ( $\alpha$  value). Methods must be described in  
31 adequate detail for a reader to duplicate them if initiating a new study, but cite previously  
32 published methods without explanation. Include animal-welfare protocols or human subjects  
33 protocols in the Methods section (not in Acknowledgments), including protocol numbers  
34 parenthetically following the relevant statement. Avoid using acronyms for species names or  
35 variables measured (e.g., use “canopy” rather than “CAN\_COV”).

### 36 **Second-Level Heading** (capitalize all important words in heading)

37 Reduce or eliminate the need for subheadings by writing clearly and logically. Avoid writing  
38 sections that consist of only 1 paragraph.

39 *Third-level heading.*—If third-level headings are necessary, indent and punctuate as  
40 shown and only capitalize the first word.

## 41 **RESULTS**

42 *JWM* and *WSB* requires that authors describe the magnitude of the biological effect in addition to  
43 the results of statistical analyses. For example, stating, “*A* was 25% larger than *B* ( $P < 0.001$ )”  
44 conveys more information than simply stating, “*A* was significantly larger than *B*.” Present  
45 Results in past tense (e.g., body mass loss occurred during winter). Reserve comments on  
46 interpretation of results for the Discussion.

#### 47 **DISCUSSION**

48 Begin the Discussion by synthesizing your results with regard to your objectives and then relate  
49 your work to other literature and research. Systematic discussion of every aspect of research  
50 leads to unnecessarily long manuscripts; be concise and relate your findings directly to your  
51 overall project goal, objectives, and hypotheses as appropriate. Reasonable speculation and new  
52 hypotheses to be tested may be included in the Discussion. Do not repeat results in this section,  
53 and comment on only the most important results.

#### 54 **MANAGEMENT IMPLICATIONS**

55 The Management Implications section should be short (usually 1 paragraph) and direct but  
56 explain issues important to management and conservation that are derived directly from or  
57 addressed in your Results. Do not restate material from the Results or Discussion sections, and  
58 do not make recommendations that are beyond the scope of your study. Address specific  
59 management opportunities or problems in this section. From the Field, Emerging Issues, and  
60 Tools and Technology articles in *WSB* should not have a Management Implications section.

#### 61 **ACKNOWLEDGMENTS**

62 This section should be brief and include initials (rather than first names) of individuals thanked.

63 **LITERATURE CITED**

64 Burnham, K. P., and D. R. Anderson. 1998. Model selection and inference: a practical  
65 information-theoretic approach. Springer-Verlag, New York, New York, USA. (book;  
66 note space between author initials for all entries)

67 Mosby, H. S. 1967. Population dynamics. Pages 113–136 in O. H. Hewitt, editor. The wild  
68 turkey and its management. The Wildlife Society, Washington, D.C., USA. (book chapter)

69 Pulliam, H. R. 1988. Sources, sinks, and population regulation. *American Naturalist* 132:52–61.  
70 (journal article)

71 Stout, S. L., and R. Lawrence. 1996. Deer in Allegheny Plateau forests: learning the lessons of  
72 scale. Pages 92–98 in *Proceedings of the 1995 Foresters Convention*. Society of  
73 American Foresters, 28 October–1 November 1995, Portland, Maine, USA. (proceedings)

74 Tacha, T. C. 1981. Behavior and taxonomy of sandhill cranes from mid-continental North  
75 America. Dissertation, Oklahoma State University, Stillwater, USA. (use Thesis to denote  
76 Master of Science or Master of Arts)

77 U.S. Fish and Wildlife Service [USFWS]. 1999. Endangered species database.  
78 <<http://www.fws.gov/endangered/>>. Accessed 7 Oct 1999. (website)

79 *Associate Editor:*

80

81 Figure Captions (Begin figure captions on a new page. Please note that figure files must be  
82 submitted in a separate document and may not be included in the text file.)

83 Figure 1. Table headings and figure captions must allow the figure to be self-explanatory,  
84 describing the variables displayed, species studied, and the date(s) and location(s) at which the  
85 data presented were gathered. Define acronyms in tables and figures even if they have already  
86 been defined in the text.

87

88 Figure 2. Take special care to format figures according to these guidelines because the content  
89 editor will not alter these files. Only capitalize the first word and proper nouns on axes labels and  
90 legends (e.g., Daily nest survival, Black bear, Study area). Please double check figures to assure  
91 that the minimum height for letters, numbers, and other characters will be  $\geq 1.5$  mm tall after  
92 reduction for printing (to 85 mm in width for most figures and 180 mm in width for large  
93 figures) and resolution is  $>200$  dots per inch (dpi) at final printing size.

94

95 Start on a new page using the Table function in Word (not an embedded picture) immediately  
 96 following the table title.

97 Table 1. When possible, minimize the use of abbreviations, especially with long lists of variables  
 98 (e.g., use tree density rather than TR\_DEN). Don't forget to define abbreviations and terms in  
 99 each table title or as footnotes (e.g.,  $AIC_c$ ,  $K$ , ANOVA). Table titles should describe the variables  
 100 displayed, species studied, and the date(s) and location(s) at which the data presented were  
 101 gathered.

102

Site <sup>a</sup>	Animal group			
	Avian		Mammalian	
	Insectivorous	Carnivorous	Insectivorous	Carnivorous
Xeric	5	3	2	5
Mesic	7	5	1	3
Hydric	8	7	5	8

103 <sup>a</sup>For footnotes, use lower-case, Roman letters.

104 \*Use asterisks for probability levels.

105

106 **APPENDIX A. TITLE OF THE APPENDIX**

107 The appendix will appear at the end of the typeset article. Do not include online only  
108 supplemental material in the main document file (see section on [Supplemental Materials](#)).

109 Included in this appendix are references that may be helpful to authors.

110 Andersen, D. E. 2015. Reporting animal care and use authorization in manuscripts published in  
111 journals of The Wildlife Society. *Journal of Wildlife Management* 79:869–871.

112 Block, B. 2012. Journal tweaks and pet peeves. *Journal of Wildlife Management* 76:223.

113 Brennan, L. A. 2012. Editorial guidance and wildlife science: the roles of *Wildlife Society*

114 *Bulletin* authors, Associate Editors, and reviewers. *Wildlife Society Bulletin* 36:392–398.

115 Guthery, F. S. 2011. Opinions on management implications. *Wildlife Society Bulletin* 35:519–  
116 522.

117 Merrill, E. 2015. Are management implications for the *Journal* ceremonial? *Journal of Wildlife*  
118 *Management* 79:1–2.

119 Merrill, E. 2015. A word about supplemental materials. *Journal of Wildlife Management*  
120 79:1039–1040.

121 Merrill, E., and A. Knipps. 2014. What’s in a title? *Journal of Wildlife Management* 78:761–762.

122 Plotnik, A. 1982. *The elements of editing, a modern guide for editors and journalists*. MacMillan,  
123 New York, New York, USA.

124 Strunk, W. Jr, and E. B. White. 2000. *The elements of style*. Fourth edition. Pearson Education,  
125 Upper Saddle River, New Jersey, USA.