

HADROSAURS: GUIDE TO MANUSCRIPT PREPARATION

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MANUSCRIPT REQUIREMENTS

Adherence to this Guide to Manuscript Preparation is mandatory. Manuscripts that do not follow the guidelines provided here will be returned to the author without review. **PAY SPECIAL ATTENTION TO THE INFORMATION ABOUT FIGURES.**

The main text document for all submissions should have its contents arranged in the following order: title page, abstract, body of text, acknowledgments, literature cited, and figure captions. Each table and appendix is a separate file. All typescript pages, including references, figure captions, tables, and appendices, must be double-spaced.

All pages must be numbered. Leave at least 2.5 cm (1 in) margins on all sides of each page. Authors using A4 paper are asked to make the bottom margin wide enough that text and page numbers appear within the US-Letter page length of 28 cm.

Do not use more than one space after periods or colons, to align columns of data, or anywhere else in the manuscript. Type must be no smaller than 12-point font size, and the right margin must not be justified. This combination of double spacing and type size should yield about 26 lines per page.

Use as few auto-formatting features as possible in the word processor. For example, do not use heading styles in Word. Do not use automatic bulleting or numbering in lists. If using EndNote or similar reference manager, make sure that the references are editable as free text in the final submitted copy and are not under the control of the reference manager.

Manuscripts must conform to the mandatory provisions of the Fourth Edition (1999) of the International Code of Zoological Nomenclature (ICZN, available on-line at <http://www.iczn.org/>). The 'PhyloCode' or the rules of the ISPN (International Society for Phylogenetic Nomenclature), and other proposed systems do not take precedence over the ICZN. Sections on systematic paleontology should include, where appropriate, synonymy, holotype or type species, hypodigm, etymology, occurrence or distribution, diagnosis, description, and discussion or remarks. Each of these sections should be started as a tertiary heading (see below). All new taxa must be so designated (e.g., gen. et sp. nov.) and accompanied by an etymology including intended gender of the name and a concise differential diagnosis, written in telegraphic style and specifying the apomorphies of the taxon if known.

Taxon definitions (node-, stem-, or apomorphy-based) are an accepted but not mandatory part of the Systematic Paleontology section. Specific reference should be made to every illustration in text. Cite figure number (e.g., Fig. 3A-C) rather than specimen number to support descriptive statements (the specimen number must be included in the figure caption). Do not cite abbreviations used in figures in in-text figure references (e.g., "Fig. 4D," not "Fig. 4D:cv"). All specimens used in diagnostic descriptions, in illustrations, or in taxonomic discussions must be properly curated and deposited in a recognized public or private, non-profit institution.

Do not hyphenate words at the end of lines. Explain all but the most commonly used abbreviations, either at their first occurrence or in a separate section near the beginning of the manuscript. Abbreviate generic names after their first use in a section, when there is no ambiguity about the genus referred to, but do not begin a sentence with an abbreviated generic name. Avoid capitalizing entire words, including generic and

specific names, except in the title and primary headings. In a series of three or more terms or phrases, a comma should be placed before ‘and.’ All measurements should be given in metric units. Spell out one through nine except with units of measure; numerals should be used for 10 and greater, but a number at the beginning of a sentence should be spelled out. Footnotes are not allowed.

If a manuscript contains or uses data matrices for computer applications, each matrix must be submitted in a digital format that can be analyzed (including all settings) by the reviewers and Editors. This action is mandatory and failure to provide such files will be regarded as grounds for rejection. These matrices, for reasons of space, will be included as Supplementary Data that will be posted on the journal’s website and the final versions of any such matrix should be uploaded with the final version of the paper. In addition, for the sake of transparency and to enhance collaboration, we also recommend uploading the character descriptions and accompanying images to a suitable online repository such as MorphoBank once the manuscript has been accepted for publication, although this is not a mandatory requirement for publication. Similarly, data sets supporting statistical analyses should also be uploaded as Supplementary Data for the benefit of reviewers, editors and readers. Such supplementary files must be submitted and available to the reviewers and editors along with the main manuscript files. If you are not sure about the disposition of particular data sets, contact the editors about whether or not they will be published on a web page.

MANUSCRIPT SUBMISSION AND REVIEW

All manuscripts must be submitted to David Eberth at david.eberth@gov.ab.ca . For large files (over 10 mb) use our FTP site: <http://www.tyrrellmuseumshop.com/ftp/> Contact David Eberth for passwords.

Submit the main document as one file (includes title page, body of manuscript (including abstract), literature cited, and figure captions). Submit each table, appendix, or supplementary data file as a separate Word or RTF file (RTF files preserve essential formatting, including tables, and can be saved and opened by most word processors). Submit each figure as a separate file. Figures should be compressed, flattened, grey-scale (unless color publication is intended) TIFF files (see detailed guidelines below). Upon completion of the submission process, further communication concerning the manuscript will be via email.

Manuscripts are assigned to either David Eberth or David Evans who will manage the review process. We will strive for at least two peer reviews in each case. Please suggest reviewers, or indicate reviewers that you prefer to avoid, and state why.

Possible decisions include Minor Revision, Major Revision, and Reject. **A rejected manuscript is not eligible for revision and resubmission.** A manuscript in need of **Major Revision** may be resubmitted, but only after fundamental changes are made, which may include new data collection, new analysis, extensive changes to text, and new or revised figures. In the case of Major Revision, the manuscript will normally undergo a full review process upon resubmission and there is no guarantee of eventual acceptance; after Minor Revision, the editor may or may not decide to consult with one or more of the original referees. After decisions of Minor Revision and Major Revision, there is a time limit for resubmission, after which a manuscript will be considered

withdrawn. Consult the decision letter from the Editor for details of necessary changes and time limits. If your revision is taking longer than planned, request an extension to the deadline from the Editor. After a manuscript has been accepted, consult the Managing Editor for concerns about publication schedule and corrections in proof.

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Contributors receive no royalties. The editors, David Eberth and David Evans, have agreed to donate any royalties to the Society of Vertebrate Paleontology. The Press cannot offer contributors offprints of individual chapters. However, in some circumstances, the Press can provide pdf files in lieu of offprints. Each contributor to edited volumes normally receives one copy of one edition of the book. Editors and contributors may purchase additional copies at a discount of 40 percent. To receive the discount identify yourself as the author (or as a contributor to the volume) when you order the book. The order department can be reached at 1-800-842-6796,

iuporder@indiana.edu, or <http://iupress.indiana.edu>. The fax number for orders is 1-812-855-7931.

TITLE PAGE

Osteology and relationships of the Early Permian pelycosaur *Sphenacodon ferox* Marsh, 1878

- Title of the paper should be in upper and lower case (so-called “Sentence capitalization”), in lightface (not bold), and flush left. The title will be used as is (in Sentence capitalization) for the Table of Contents.
- The name of a new taxon may appear in the title.
- Taxonomic names listed in titles and abstracts will be separated by commas and that the most inclusive taxon name will go first (i.e., Mammalia, Carnivora, Canidae).
- Names of genera and species, or unranked equivalent taxon, must be in italics.
- Avoid titles that include a subtitle set off by a colon, that are constructed as multiple sentences, or that are excessively long. Do not end the title with a period.

MARTHA T. THOMPSON¹ and T. JOHN SMITH*,²

- Author names are all caps and flush left.
- Full first names are preferred (GEORGE G. SIMPSON).
- Denote author address by superscript number: T. JOHN SMITH² (the superscript appears immediately after any punctuation (usually a comma) that follows an author’s name:
GEORGE G. SIMPSON,¹, † ALFRED S. ROMER, *,² and WILLIAM K. GREGORY³
- Clearly denote corresponding author with a superscript asterisk (see above example), and provide “*Corresponding author” as a footnote.
- For current address different from address where work was done, denote with superscript dagger and provide footnote: “†Current address: Department of . . .”
- Provide complete postal address and postal codes for all authors; spell out all; use upper and lower case; flush left; separate addresses with semicolon and new line; provide email address; omit period at end of last address:

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- Use country names for all affiliations (United Kingdom, Russia, Australia); spell out name (exception: use U.S.A.).
- Spell out names of states and provinces.
- Provide a running header, upper and lower case, containing a brief title:

RH: FOSSIL PIGS FROM CHINA

ABSTRACT

ABSTRACT—An informative abstract is required for Articles. Short Communications must not have an abstract in the main text file, but an abstract must be entered separately during web submission because it is used to help reviewers decide whether they are willing to review the manuscript. The abstract for Articles must be formatted as in this example and must begin on a new page. It should summarize the main facts, ideas, and conclusions of the Article, and not simply list the topics discussed, but it **must not exceed 250 words**. Include all new taxonomic names for referencing purposes. Abbreviations that are not listed in the Details of Style for Text (see below) should be avoided. Literature citations in the abstract are not allowed.

ALTERNATE-LANGUAGE SUMMARY

A non-English-language summary may be added to the standard abstract in exceptional cases. Permission to have such a category comes from the Senior Editor. The summary should be an exact translation of the English abstract, placed after the Abstract and before the beginning of the text.

HEADINGS

There are three types of headings (or headers). Primary headings are all caps (**not** large and small caps), lightface (not bold), preceded and followed by a blank line, and centered. Secondary headings are capital and lowercase letters ('Title Capitalization,' not 'Sentence capitalization'), bold, flush left, on a separate line, and preceded by a blank line. Tertiary headings are capital and lowercase letters ('Title Capitalization,' not 'Sentence capitalization'), bold, and indented (use tabs or, preferably, the indentation function of word processor); the following text should be on the same line and separated from the heading by an em dash. Do not cite figures, tables, or anatomical abbreviations within a heading or immediately following the em dash. See the following examples.

PRIMARY HEADING

Text or secondary heading follows after a blank line. Do not write the primary heading in small caps.

Secondary Heading

Text, if any, follows on the next line, indented. A blank line precedes the secondary heading. Use title capitalization (Capitalize the Important Words), not sentence capitalization. Do not cite figures or tables within headings.

Tertiary Heading—Text follows here after an em dash, without spaces. The em dash should not be bold. There is no blank line preceding a tertiary heading. Use title capitalization (Capitalize the Important Words). If you are unable to generate an em dash, use two hyphens.

DETAILS OF STYLE FOR TEXT

Journal-Specific Standards

- Use italics only for generic and specific names; this is the only use of italics in the manuscript.
- Do not use underlining anywhere in the manuscript.
- Use single quotes for select wording and connotations: 'big' versus 'small,' ...it looks like an inverted 'bell' ...it seems to be a form of 'bovid.'
- Use double quotes for actual quotations from the literature: ...as noted by Beard (1942:23), "the skull is twice as long as wide," or for non-monophyletic taxa when used formally as part of a name, "Pelycosauria."
- Always provide the page number for quotations: ...as noted by Beard (1942:23), "the skull is twice as long as wide." There is no space between the colon and the page number or figure reference.
- Do not use a page number in a citation unless you are providing a quotation or unless there is ambiguity with various statements made by an author: The skull was stated as being large (Frank, 1928:35) but later indicated to be relatively small (Frank, 1928:52).
- Do not use the apostrophe with numbers or acronyms: use 1950s not 1950's; NALMAs not NALMA's.
- Use English standards for decimal notation: 1,583,400.21.

- Mammalian teeth: lower teeth i1, c1, p1–2, dp2, Rm3; upper teeth I1, C1, P1, LDP2, M2–3.
- Use comparative anatomical terminology, not medical anatomical terminology, e.g., ‘dorsal’ rather than ‘superior.’
- Use metric throughout; include Imperial system in parentheses only if absolutely necessary; m, meter; mm, millimeter; km, kilometer; μm , micron (not μ), micron or micrometer if spelled out; mi, mile; ft, feet; in, inch; gal, gallon; l, liter (spell out if without prefix: 3 ml and 1.2 g/ml, but 3 liters and 1.2 g/liter); ml, milliliter; g, gram (not gm); kg, kilogram; mg, milligram. Separate the unit from the numerical quantity by a space (e.g. 3.2 m, 0.5 g).
- If it is necessary to use mathematical symbols (+, -, =, \div), separate with spaces before and after (e.g., $CI = 0.63$).
- Hyphens, en dashes, and em dashes are used in different situations. The hyphen (-) is used between parts of a compound word, as in “re-interpretation” or “the basal-most taxon.” The en dash (–) is used for a range of values, as in “pp. 33–44,” “Figs. 5–7,” “Triassic–Jurassic,” and “2–7 hemal arches.” The em dash (—) is used in running headers and in tertiary headings, such as “**Diagnosis**—Skull large; etc.”, to indicate missing values in tables, and to emphasize parenthetical phrases, as in “The skull—the only element preserved—is extremely wide.” Do not separate any hyphen or dash from the words around it by spaces.
- Spell out ‘Figure’ when part of a sentence; abbreviate as ‘Fig.’ when citing a figure in parentheses.
- Do not cite anatomical abbreviations within the text (e.g., Fig. 3:pt); they should be in the figure caption or in Abbreviations instead.
- Accepted abbreviations are: aff.; ca.; cf.; e.g.; etc.; i.e.; no. for number (not #); Ma not Mya for megannum; M.A.; M.S.; Ph.D., P.O.; viz; vs. (or versus). In a sentence, e.g. and i.e. should be followed by commas, ca. and cf. should not, as in: “Diversity includes ca. nine families, e.g., Mustelidae, Felidae, and Canidae.”
- ‘The sister group’ (but ‘sister-group relationship’); ‘crown group’; ‘ingroup’; ‘outgroup’; ‘stem group’; ‘total group’; ‘anterodorsal’, ‘posteroventral,’ etc. (rather than ‘antero-dorsal’); ‘basal-most’ item; ‘cheek tooth’ not ‘cheektooth’; ‘co-ossified,’ not ‘coossified’; ‘cross-section’ and ‘cross-sectional view’; ‘field work’ rather than ‘fieldwork’; ‘fishes’; ‘forelimb’ but ‘hind limb.’
- Latin phrases are not italicized: a priori; gen. et sp. nov.; incertae sedis; in vivo; in vitro; M. supracoracoideus anterior; nomen dubium; per se; sensu; sensu lato; sensu stricto.
- Avoid single-sentence paragraphs.
- When providing a numbered sequence of items in one sentence, preceded by a colon, do so in the following style: “Explanations for the extinctions include: (1) climate; (2) temperature only (see Graham, 1956); and (3) predation by carnivorans.”
- When citing a reference within a parenthetical phrase, avoid nested brackets by using the following style when the phrase is not complicated: “...there are three centra (four according to Smith, 2006) in the...”.
- When nested brackets are unavoidable, use outer parentheses and inner square brackets, i.e., (text [text]).

Citation of References in Text

(Smith et al., 1973)

(Smith, 1972a, 1972b, 1972c, 1976)

(Smith, 1972:16)

(Smith, 1972; Smith, Jones, and Lee, 1973; Jones and Lee, 1975)

(Smith, Jones, and Lee, 1973; Smith, Lee, and Jones, 1973)

If more than three authors with same first author and same year of publication, then:

(Smith, Jones, et al., 1973; Smith, Lee, et al., 1973)

(Smith, 1972:12–15, 1974)

(Smith, 1972:fig. 1, table 4)

(Smith, 1972:table 3)

(Smith, 1972:pl. 2)

...Smith’s (1972) figure 3...

(pers. comm., April, 2004)

(unpubl.)

(unpubl. data)

(in press)

(pers. obs.)

(Smith in Jones, 1781)

- For three or more authors use ‘et al.’ but spell out all authors if taxonomic authority (use initials if two names with same date).
- For personal communications, author must obtain written permission from person being cited, such as signed copy of page where cited, or email quoting passage and giving permission.
- No space between year/colon and page number or figure, table, and plate designation: “(Smith, 1972:16; Smith, 1974:fig. 1).” Use lower case for ‘fig.’, ‘pl.’, and ‘table’ in citations of other people’s work and in synonymies.
- Order of references cited in parentheses is, first, chronological, in order of first publication by a particular author,

then alphabetical in the case of different authors with first publication in the same year:

(Hibbard, 1947; Albertson, 1953; Hibbard and Taylor, 1965)

(Lund, 1976, 1992, 2003; Lund and Janvier, 1986; Lund and Lund, 1986, 1987; Lund and Youngman, 1994; Lund et al., 1998, 2002).

Abbreviations

One might have separate ‘Institutional Abbreviations’ and ‘Anatomical Abbreviations,’ each beginning with a tertiary heading. The list should be ordered alphabetically by abbreviation. Note that the abbreviation is in bold but the punctuation is not. Examples:

Institutional Abbreviations—**AMNH**, American Museum of Natural History, New York; **MCZ**, Museum of Comparative Zoology, Harvard University.

Anatomical Abbreviations—**a**, articular; **prz**, prezygapophysis; **z**, zygantrium. List anatomical abbreviations either in a separate section as in this example, especially when captions are used in multiple figures, or else in the figure captions, but not in both places. If listing them in figure captions, include all abbreviations for a given figure within its caption; do not refer the reader to another caption.

COMMON ERRORS TO AVOID

- Names of higher taxa are plural for purposes of grammar, as in “The Squamata *are* a taxon that includes snakes and lizards.” Contrast this to the following: “The taxon Squamata *includes* snakes and lizards.” Here, the subject of the sentence is the word ‘taxon,’ and the associated verb is singular.
- Names of taxa should not be used as modifiers or adjectives; e.g., “*Lemmiscus* species” [incorrect] versus “species of *Lemmiscus*” [correct].
- Terms such as ‘available’ and ‘valid’ have particular meanings under ICZN and should be avoided unless the specific meaning is intended.
- A comma separates the name of a taxonomic authority from the date of publication, and commas surround the date when a taxonomic authority is used in a sentence, as in, “...the species *Esox lucius* Linnaeus, 1758, is the...”
- Never cite a reference in brackets immediately after the name of a species unless you intend it as a taxonomic authority: “*Hensodon spinosus* (Hennig, 1907)” means that Hennig named this species in a different genus.
- A citation in brackets is acceptable after a generic or other higher taxonomic name because a taxonomic authority for a genus or higher taxon is never in brackets: contrast “...as in *Esox* Linnaeus, 1758” [authority] with “...as in *Esox* (Schmidt, 1875) [ordinary citation].
- ‘Upper’ and ‘lower’ refer to rock or time-stratigraphic units; ‘late’ and ‘early’ refer to time. Use lower case when the age constraints are not known, generalizations are made, or when no formal subdivision exists. Use upper case only where mandated by current USGS recommendations—‘Early/Lower Cretaceous,’ ‘Middle Devonian’ (for periods/systems and epochs/series), but ‘late/upper Miocene,’ ‘middle Eocene,’ ‘early Paleozoic,’ ‘early/lower Albian,’ and ‘early/lower Tortonian’ (for stage/age/informal subdivision of stage/age/epoch/series).
- ‘Runs’ implies motion; use ‘extends,’ ‘connects,’ ‘projects’: ‘the lamina extends between the two...’.
- Avoid overuse of weak words such as ‘suggests,’ ‘appears,’ ‘appears to be,’ ‘probably,’ ‘may be.’ Use stronger words: ‘indicates,’ ‘implies,’ ‘shows,’ ‘illustrates,’ ‘proposes.’ If you know something to be true, then state it.
- ‘Show’ is often overused: ‘The occipital condyle shows damage...’; write instead ‘...the occipital condyle is damaged.’
- Avoid words that incorrectly imply ‘time’ such as: ‘since,’ ‘while,’ ‘frequently’; instead use ‘because,’ ‘whereas,’ ‘many.’
- Don’t use ‘oval-shaped,’ ‘square-shaped,’ ‘triangular-shaped,’ etc., when ‘oval,’ ‘square,’ or ‘triangular’ is meant.
- Use ‘farther’ when the meaning involves physical distance, ‘further’ to indicate a greater degree or additional point.
- “The crest on the bone is well developed” (note the correct absence of the hyphen), but, “The bone has a well-developed crest” (hyphen required); “...the small, water-worn tooth...” but “the thin, laterally expanded arch.”
- Rocks do not ‘outcrop’; rocks do ‘crop out.’
- Capitalization with multiple proper names: ‘Mississippi River’ vs ‘Mississippi and Missouri rivers’; also counties, formations, oceans, states, etc.
- Comma and period inside closing quotation marks, as in “...is long and thin,” and “...is short and thick.” Colon and semicolon outside quotation marks: “...include the following ‘orders’: Rodentia and Lagomorpha...” and “...the so-called ‘palatine’; however, it...”
- ‘As’ implies a comparison: red as a rose. ‘Because’ implies the result of some action. “The skull is unknown as it is missing”; should be “The skull is unknown because it is missing.”
- Use “the blade of the scapula...” or “the scapular blade...” rather than “the scapula’s blade...” because inanimate objects cannot possess.
- ‘Which’ is used to describe, and its phrase is normally set off by commas, whereas ‘that’ defines a situation and is

normally used without surrounding commas: "...the basiptyergoid process, which is small, is rugose..." versus "...the events that affected dinosaur communities were many...."

- 'However' is often over-used. Avoid the common error of linking two independent/principal clauses by 'however' or 'therefore' without the required semicolon or period. "The pelvis is large, however, the ilium is small" [incorrect] should be "The pelvis is large; however, the ilium is small." or, "The pelvis is large. However, the ilium is small."

SYSTEMATIC PALEONTOLOGY EXAMPLES

There now are three different ways to provide your hierarchy: a traditional Linnean ranked hierarchy, an unranked classification with ranked lower levels, and an unranked monophyletic hierarchy. Examples of each type are:

Ranked Hierarchy

SYSTEMATIC PALEONTOLOGY

Order PYCNODONTIFORMES Berg, 1937

Family COCCODONTIDAE Berg, 1937

HENSODON SPINOSUS (Hennig, 1907)

(Figs. 2–4)

Mesodon spinosum Hennig, 1907:364, fig. 3 (original description).

Mesodon spinosus Hennig, 1907: Steinmann, 1928:56, fig. 14 (emended spelling).

Hensodon spinosus (Hennig, 1907): Kriwet, 2004:526, figs. 1–3, 5–9 (new combination).

Diagnosis—Diagnosis should be differential. Apomorphies of taxon specified if known. Telegraphic style (no verbs, no articles) strongly encouraged in diagnoses. Example—Apomorphies of taxon: orbit large, longer than deep; mandible shallow, flared posteriorly; mental foramen opening below second premolar. Differing from *Alphus brevis* in: incisors spatulate; diastema between I1 and C1.

- Note in the above that ranks are provided, in upper and lower case.
- All taxonomic names are written in all capital letters and centered (do not use large and small caps).
- Unranked taxa may be inserted between ranked taxa in the hierarchy.
- Generic and specific names are in italics and all caps.
- There is no comma between the taxon and the author but there is a comma between the author and the year of publication.
- All cited taxonomic authorities must be in the Literature Cited, including those in the synonymy. Follow guidelines in ICZN (1999) for citation of taxonomic authorities.
- The synonymy should be formatted as in the above example (left justified, with hanging indent if an entry continues on a new line). Leave vertical space above and below the synonymy to set it off from the taxonomic headings and the following text.
- The punctuation within the synonymy is important. The first line illustrates a first use of a taxonomic name (original description). In the second and third lines of the synonymy, the colon is used to set off the taxonomic name used, with appropriate authority, from a citation of the author who used it in this way. Spell out multiple authors, rather than using ‘et al.’ Cite only the first page establishing the usage, but list all figures.
- If diagnosing a new, monotypic genus, with separate listings for the genus and the species, the generic diagnosis should be, “As for type and only species.” The full diagnosis is then provided for the new species. An alternative is a combined description of both taxa (“gen. et sp. nov.”) as in the following examples, which would require just one diagnosis.

Unranked Hierarchy

REPTILIA

SQUAMATA Oppell, 1811

TEIIDAE Gray, 1827

BISCUSPIDON NUMEROSUS, gen. et sp. nov.

(Figs. 2–4)

Monophyletic Hierarchy

SYSTEMATIC PALEONTOLOGY

REPTILIA sensu Gauthier, Estes, and de Queiroz, 1988

SQUAMATA sensu Estes, de Queiroz, and Gauthier, 1988

SCLEROGLOSSA sensu Estes, de Queiroz, and Gauthier, 1988

TEIIDAE Estes, de Queiroz, and Gauthier, 1988

BISCUSPIDON NUMEROSUS, gen. et sp. nov.

(Figs. 2–4)

- You may add ‘sensu Author, date’ if there is a particular phylogenetic definition of a traditional Linnean name.
- The binomen is equivalent to the genus and species for purposes of conformity with ICZN and must be italicized. Both the genus and species must be declared as new when applicable. Family-group and binomial names are regulated by the ICZN and must be correctly formed. Do not use regulated endings (-oidea, -idae, -inae, -ini, -ina) for new, unranked taxa.

ACKNOWLEDGMENTS

Format the acknowledgments—note the spelling of this title with no ‘E’ after the ‘G’. Avoid long and unnecessarily flowery acknowledgments. Use initials, not full names, for all individuals being thanked, except to begin a sentence; avoid using titles such as Dr. or Prof.; use initials to distinguish among authors of the manuscript, and abbreviations for institutions listed in the manuscript text. Consider thanking the reviewers, including those remaining anonymous, and the Editor who handled the manuscript. Avoid phrases such as “We would like to thank...”. Instead, use active voice and concise language, as in this example: “I/We thank A. Able, B. Baker, and C. Charles for capable field assistance, and D. Delta for assisting EFG during a study visit to the AMNH. Editor B. Careful and reviewers A. Positive and O. Negative made constructive suggestions for improvement of the manuscript. NSF grant 12345 to HIJ supported this research.”

LITERATURE CITED

General Rules

- Double-space all entries; make first line flush left, then use hanging indent for remainder of citation:

Sues, H.-D., E. Frey, D. M. Martill, and D. M. Scott. 2002. *Irritator challengeri*, a spinosaurid (Dinosauria: Theropoda) from the Lower Cretaceous of Brazil. *Journal of Vertebrate Paleontology* 22:535–547.

- Last name first only for the first author, then typical style of first-name initial, middle-name initial, then last name; note use of comma before ‘and’; see above example.

- Personal communications, submitted manuscripts, manuscripts in preparation, manuscripts under review, and field notes are NOT permitted in the Literature Cited; instead, cite these in text; e.g., ‘(pers. comm.)’ or, if it is the author’s own work, ‘(pers. obs.)’ or ‘(unpubl. data)’; ‘(field notes of G. G. Simpson, 1933, AMNH).’

- All citations and taxonomic authorities, including those in figure captions, or within figures and tables, must be included in the Literature Cited. References cited only in on-line supplementary data should not be in the Literature Cited.

- Primary order is by first author and by date. Secondary sort is by number of co-authors (two-authored references, then three-authored references, then four, and so forth. Within that sort, ordering is by alphabetization of junior authors, then by date (oldest first):

Lund, R. 1984.

Lund, R. 1985a.

Lund, R. 1985b.

Lund, R., and P. Janvier. 1986.

Lund, R., and C. Poplin. 1985.

Lund, R., and C. Poplin. 1986.

Lund, R., and R. Zangerl. 1984.

Lund, R., C. Poplin, and E. Grogan. 1995.

Lund, R., E. Grogan, C. Poplin, and R. Zangerl. 1985.

- Authors must verify that all references cited in the text (including taxonomic authorities) appear in the Literature Cited section, and that all citations in the Literature Cited section are cited in the text and/or table/figure captions.

Author Styles

- Thompson, W. A., III

- Smith, L. L., Jr.

- Sues, H.-D.

- Use commas between all authors, and separate authors’ initials by a space.

- Repeat author names, as shown above with the examples of ‘Lund’ [3 em dash no longer used].

- Do not use full names, just last names and initials.

Journal Article Examples

Author, I. 2002. Article title in sentence capitalization: subtitle, if any, beginning in lower case after colon or em dash. Always Spell Out Journal Name 25:152–159. [No spaces between colon, numbers, or en dash; no comma after journal name.]

Damiani, R. 2004. Cranial anatomy and relationships of *Microposaurus casei*, a temnospondyl from the Middle Triassic of South Africa. *Journal of Vertebrate Paleontology* 24:533–541.

- Use issue number only if each issue begins with page one: 25(6):1–23.
- Avoid including the leading article of journal names such as ‘The’: ~~The~~ Journal of Ecology.
- Use italics for genus or species in titles.

Hou, L. 2002. [A late Pleistocene lizard from Inner Mongolia]. *Vertebrata Palasiatica* 50:88–95. [Chinese]

Chen, G. 1991. A new genus of Caprini (Bovidae, Artiodactyla) from upper Pliocene of Yushe, Shansi. *Vertebrata Palasiatica* 29:230–239. [Chinese 230–236; English 237–239]

- The square brackets indicate that the article is solely or primarily in a non-English language, Chinese in this example.
- Some journals publish a full-text English translation following the article in its original language; if both languages are used, provide both citations.

Henkel, S., and B. Krebs. 1969. Zwei Säugetier-Unterkiefer aus der Unteren Kreide von Uña (Prov. Cuenca, Spanien). *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte* 1969:449–463.

Geraads, D. 1994. Les gisements de Mammifères du Miocène supérieur de Kemiklitepe, Turquie: 4. Rhinocerotidae. *Bulletin du Muséum national d'Histoire naturelle*, 4^{ème} sér., C 16:81–95.

- For foreign-language titles and names of institutions or journals in non-English-speaking countries, use the accents and capitalization conventions of the foreign language where possible, as in the above examples.
- Titles and journal names presented in their original language do not require identification of the language in square brackets.

Books, Dissertations, and Theses

Vrba, E. S., and G. B. Schaller (eds.). 2000. *Antelopes, Deer, and Relatives: Fossil Record, Behavioral Ecology, Systematics, and Conservation*. Yale University Press, New Haven, Connecticut, 341 pp.

Schatzinger, R. A. 1975. Later Eocene (Uintan) lizards from the greater San Diego area, California. M.S. thesis, San Diego State University, San Diego, California, 212 pp.

Saysette, J. E. 1999. Postcranial estimators of body mass in pecorans with emphasis on *Capromeryx* (Mammalia: Artiodactyla). Ph.D. dissertation, Colorado State University, Fort Collins, Colorado, 192 pp.

- Book titles are title capitalized, but thesis titles are sentence capitalized.
- Spell out everything except given names, ‘eds.’ and ‘pp.’
- Repeat the city or country if the name is a part of the publisher or university:
The University of Chicago Press, Chicago, Illinois.
- Spell out cities, states, countries (except for U.S.A. and U.K.):
Australian Museum, Sydney, New South Wales, Australia.
- Use ‘thesis’ for bachelors’ or masters’ degrees and ‘dissertation’ for doctoral degrees.

Articles in Books or Large Works

Emry, R. J., P. R. Bjork, and L. S. Russell. 1987. The Chadronian, Orellan, and Whitneyan North American Land Mammal Ages; pp. 118–152 in M. O. Woodburne (ed.), *Cenozoic Mammals of North America*. University of California Press, Berkeley, California.

Emslie, S. D., and N. J. Czaplewski. 1999. Two new fossil eagles from the late Pliocene (late Blancan) of Florida and Arizona and their biogeographic implications; pp. 185–198 in S. L. Olson (ed.), *Avian Paleontology at the Close of the 20th Century: Proceedings of the 4th International Meeting of the Society of Avian Paleontology and Evolution*, Washington, D.C., 4–7 June 1996. *Smithsonian Contributions to Paleobiology* 89.

Volumes in Edited Series

Stahl, B. J. 1999. Chondrichthyes III: Holocephali; in H.-P. Schultze (ed.), *Handbook of Paleichthyology*, Volume 4. Verlag Dr. Friedrich Pfeil, München, 164 pp.

Articles In Press

Zhang, J.-Y. In press. New fossil osteoglossomorph from Ningxia, China. *Journal of Vertebrate Paleontology*.

- For in-press book or article in edited book or series, see examples above.

Articles as Abstracts in Symposium or Conference Proceedings

Nydam, R. L. 2002. Advances in our understanding of the polyglyphanodontine lizards of North America. *Journal of Vertebrate Paleontology* 22(3, Supplement):93A.

Software, Maps, Web Sites, and Web-based Articles

Swofford, D. A. 2003. PAUP* 4.0. Sinauer Associates, Sunderland, Massachusetts.

Izett, G. A., and J. G. Honey. 1995. Geologic map of the Irish Flats NE Quadrangle, Meade County, Kansas, U.S. 1:24,000. U. S. Geological Survey. Geological Survey Miscellaneous Investigations Series Map I-2498.

Scotese, C. R. Plate tectonic maps and continental drift animations: Late Permian. Paleomap Project, Department of Geology, University of Texas at Arlington. Available at www.scotese.com. Accessed November 8, 2004.

Janvier, P. 1997. Craniata. Tree of Life Web Project. Available at www.tolweb.org/Craniata/14826. Accessed November 30, 2006.

Manuscript Submission and Acceptance

- Submitted/accepted line in Roman type appears as the very last line of the article immediately after the Literature Cited (flush left):

Submitted August 12, 2006; accepted Month DD, YYYY. [dates left blank, to be completed by the editors]

FIGURES

General Requirements

Figures must be submitted electronically and must be of sufficient resolution to print without obvious pixelation or anti-aliasing (see below for minimum resolution). Hard-copy figures are no longer accepted. All figures must be fully compiled (a single file for each figure), and prepared for final publication size; neither the editor nor the publisher is responsible for compiling artwork. Print out each figure at its final size before submission to confirm size and quality of each figure and legibility of lettering. The author must indicate the final printed size of each figure (see below under Figure Captions). High-quality color illustrations can be printed, but the full cost for color illustrations must be borne by the author.

Figures must all be cited in the text and they must be numbered in the sequence that they are cited in the text. The figure with its caption should be comprehensible without reference to the text; for example, identify the taxon in the caption even if all figures concern the same taxon. The parts of a composite figure are identified by capital letters in a non-serif font such as Helvetica or Arial (usually approximately 3 mm high when published). Typewritten or hand-written lettering on illustrations is not acceptable. Do not write figure numbers, author names, or captions into your image files.

Submit only photos that are sharp and in focus. It is extremely important to crop to remove non-printing borders because this saves journal space and optimizes the information within the figure. Adjust contrast and grey levels to use the full range of greys: using the Levels command (e.g., in Photoshop), adjust the grey levels for the specimen itself, not the lettering and background; check that the lettering and background are pure black and white, respectively; failure to do this is one of the most commonly encountered flaws in submitted figures. Do not leave excessive space between parts of a compound figure: plan carefully to maximize efficient use of the journal page. Background on photographic or similar figures must be white, because jet-black reproduction is seldom achieved and causes suboptimal reproduction of the informative parts of the figure; therefore, **avoid black backgrounds**, using them only with the editor's approval.

The journal encourages the use of color figures where this enhances the clarity of the paper. Authors wishing to use color figures in the print version of their articles should consult the Senior Editors regarding the need for color images and their number, for which there may be page charges (a list of such charges, and how they impact the cost of reprints, can be obtained from the Business Officer). However, the journal is able to print color versions of figures free of charge in the .pdf version of an article, although these figures need to be prepared in such a way that the gray-scale version of the same figure is of acceptable quality to appear in the print version of the journal.

Figure Size

The illustrations must be prepared so that the figure will fit precisely the whole page width (183 mm or 7.2 in), 2/3 of a whole page width (122 mm or 4.8 in), or the column width (90 mm or 3.54 in), and must be no longer than the maximum page height (233 mm or 9.17 in). Check the figure size, e.g., in the Image Size area of Photoshop. Never submit an oversized figure. Surrounding white space is included in figure size and must be minimized or completely eliminated. Final size of lettering must be taken into consideration: letters should not be reduced to smaller than 6 points (1.6 mm) and not larger than 14 points (4 mm). Figure labels and lettering should be of consistent size, not varying within a figure and of similar size in every comparable figure. Therefore, plan ahead for the intended size of publication. Do not use hairline widths in line art. Illustrations in which magnification is of consequence must include scale bars, which must be oriented consistently in all figures (either all horizontal or all vertical). Lengths of scale bars may be either included in the figure or given in the caption; listing of magnifications/reductions in the captions is unacceptable. Measurements must be in metric units.

Stereophotographs should be created for reproduction at an interocular width of 65 mm at final size.

File Format and Resolution

On Initial Submission—Figures of sufficient resolution for assessment by reviewers are needed so that reviewers can examine them easily (300 dpi minimum, please); the online system will automatically generate a combined pdf file. Name each figure file with author and figure number (e.g., SmithetalFig2.tif).

On Submission of a Revised Article—After review and minor revision, production-quality high-resolution TIFF images are required when the paper is resubmitted: for all figures, including photographs and line art, files for production must be in TIFF at 600 dpi (236 pixels/cm) or better in grey scale.

Thus, a grey-scale figure prepared for full-page width (183 mm) at 600 dpi should be 4320 pixels wide. A one-column figure (90 mm) at 600 dpi should be 2124 pixels wide. Remove color depth from grey-scale images unless intending to pay for color printing, combine (flatten) layers, and compress TIFFs using LZW compression (e.g., when saving the file in Photoshop) to reduce file size without loss of quality. The resulting file should be between 0.5 MB and 10 MB in size, depending on contents and dimensions of the figure.

Figure Captions

These should begin with ‘FIGURE’ in all caps. There is a period after the figure number. Follow the example below.

FIGURE 5. Theropod skull bones in lateral view. **A**, dentary of *Allosaurus fragilis* (after Madsen, 1976); **B**, maxilla of same; **C**, dentary of *Carcharodontosaurus*, AMNH 1956. **Abbreviations:** **a**, articular; **af**, ascending facet; **rt**, recurved teeth. Scale bar equals 5 cm. [planned for column/page width]

- Note what is in bold (the punctuation is not).
- Follow the punctuation conventions exactly.
- Spell out ‘equals.’
- Note that the items in the abbreviations are listed alphabetically based on the abbreviation.
- Include a notation in square brackets at the end of each caption specifying the planned printed size of the figure “[planned for column width] or [planned for page width].” In case the figure contains a stereo pair and requires a different size than page or column width, mention this within the square brackets [stereo pair; print exact size].

TABLES

All tables must be cited in the text and the tables must be numbered in the sequence that they are cited in the text, even if there is only one table (i.e., Table 1). Tables with their captions generally should be comprehensible without reference to the text. Foldouts are not acceptable, but tables and charts can be reproduced to cover facing pages. The heading/caption for the table should appear in the table file, above the table, not in a list at the end of the manuscript document. Use ‘TABLE’ (all caps), flush left, in the table heading, with a period after the table number, as in this example: “TABLE 2. This is the caption of the table.” If a table continues on a second page, begin the next page with “TABLE 1. (Continued)”. Do not use vertical lines in any table. Use only those few, black, horizontal lines (usually three) found in recently published examples in JVP. Use of bold face in tables is strongly discouraged.

Never use spaces for aligning numbers or text; use of tabs for aligning columns is discouraged; instead, use the table function of the word processor. A small matrix of phylogenetic data may be included as a table using a mono-spaced font for alignment. A large matrix must be formatted as an Appendix (see example below under Appendix 2). Double-space everything even if this means that a table extends to more than one manuscript page. Submit each table as a separate file (labeled, e.g., ‘Author.Table1.doc’).

APPENDICES

Material for an appendix should be double-spaced on separate pages (for review and editorial assessment) and submitted as a separate file or files. An appendix or appendices (use Arabic numbers, beginning with 1) must be referred to in the text and/or in the tables/figures.

Use 'APPENDIX' (all caps), flush left, in the appendix heading, with a period after the appendix number, as in: "APPENDIX 1. Description of characters used in phylogenetic analyses." If an appendix continues on a second page, begin the next page with "APPENDIX 1. (Continued)". Examples follow.

APPENDIX 1. Description of characters used in phylogenetic analyses. Characters are polarized with respect to *Purgatorius* as the outgroup. All characters are treated as unordered.

Format appendix as follows, using telegraphic style for lists of characters and states (no verbs, no articles):

- (1) Length of basipterygoid process: short (0); long (1).
- (2) Overlap between maxilla and premaxilla: absent (0); present, with curved contact (1).
- (3) Cranial ornamentation: absent (0); present, consisting of raised nodes on nasals (1); present, consisting of transverse ridges on frontals (2).

APPENDIX 2. Character-taxon matrix used for phylogenetic analysis (use either the table function of the word processor or else use a mono-spaced font, e.g., *Courier*, for the tabular portion). For shorter and longer taxonomic names, vary the number of trailing spaces so that all data vectors begin in the same column. Use a standard en dash (–) for a missing value; do not use hyphens, because double hyphens might be translated to single dashes by the typesetter. For polymorphic states, use letter symbols explained in the caption (e.g., **A**, (0,1); **B**, (1,2)), so that columns align. Do not enclose polymorphisms in parentheses within the table, because they cause alignment problems.

Taxon	10	20	30	40	50	55
<i>Genus species</i>	0001010100	0001011111	1001010101	0101010A01	0100110101	01001
<i>Genus sp.</i>	1011010101	0100010110	1010101010	101110B010	1010101101	01011
<i>Murinae</i>	0101000100	101A110110	0001111111	1100001001	1001010101	00110

SUPPLEMENTARY DATA

Supplementary material (on-line only content) is supporting material that cannot be included in the printed version for reasons of space and is not essential for inclusion in the full text of the manuscript but would nevertheless benefit the reader. As a new policy, JVP will be requiring that all data files needed to replicate phylogenetic or statistical analyses published in the journal should be made accessible via the JVP website as online supplementary material. This will enable others to replicate the research without the need to obtain such files directly from the author and will improve the accessibility and stewardship of information as well as transparency.

Material for on-line publication on the journal web site as Supplementary Data should be submitted as one single-spaced (Word) file, including any tables or figures. This combined file, after editing, will be converted to a single pdf file by the editors, prior to being sent to the publisher. Therefore, it must be able to stand alone and must refer to the article that it supports. The only exception to this is a file that is intended as input for computer analysis (e.g., *Theropoda.nex*), which should be submitted as is.

Format the supplementary data file similarly to the published article, including title page with title, authors, and "Journal of Vertebrate Paleontology," and on following pages use text headings, figures, tables, and appendices as necessary. Each such file should be self-contained; if literature is cited within the supplementary data, the file must contain its own literature-cited section; the published article must not contain references that are cited only in the supplementary data. If a supplementary file contains tables, figures, or appendices, use Table 1S, 2S, Figure 1S, 2S, Appendix 1S, etc., to prevent confusion with tables or figures in the main article. Each supplementary data file must be cited at the appropriate place in the text of the main manuscript (e.g., Supplementary Data 1) and be

submitted as a separate file with the same name (e.g., 'supplementary_data_1.doc').