

INSTRUCTIONS FOR CONTRIBUTORS TO *MAMMALIAN SPECIES*

- **PURPOSE.** The objective of *Mammalian Species* is to provide critically compiled, accurate, and concise summaries of the present state of biological knowledge of species of mammals in a standard format that allows easy reference to specific information. Accounts should present specific information or useful summaries, rather than merely citing sources of information or presenting lengthy lists of information without synthesis. Restrictions on number of printed pages means summarizing information and selecting references becomes critical for well-studied species.

Original observations should be published elsewhere as the format of accounts in *Mammalian Species* does not allow for adequate documentation or explanation of new ideas. Original means and ranges of measurements of body and skull dimensions may be included ONLY if published data are not available. Up to 0.5 manuscript pages of unpublished data may be included if necessary. Keep the mammal, not the authors of research papers, as the subject of the account where-ever possible (except in Synonymy and REMARKS sections). Citations usually are placed at the ends of sentences, but keep the citation associated with the specific information being cited. You need not cite every single paper dealing with a species; if not discussed, do not include that paper in the citations. For species with extensive published material, cite recent articles that refer to older articles on the same topic.

- **GENERAL INSTRUCTIONS.** Ideally accounts should be 10 printed pages or less, thus manuscripts should be no longer than 42 typescript pages including Literature Cited, plus the three basic figures (photograph of the mammal, four views of the skull, and a distribution map). Exceptions will be considered; consult with Editor before submitting longer manuscripts. *Mammalian Species* accounts NEVER include tables.

Format

- Except for contact information for the corresponding author on the first page, the entire copy must be double-spaced throughout, including LITERATURE CITED and the transition between sections.
- Corresponding authors, please include fax number and email address with your mailing address and telephone number. Because of the limited amount of time available to deal with page proofs, authors outside the United States and Canada should provide the name of a colleague in the U.S. or Canada willing to read the page proofs.
- Submit four (4) copies on substantial (16-20 pound) paper; size of paper must be 21.5 by 28 cm (8.5 by 11 inches) or 21 by 30 cm (A4).
- Leave 3-cm (1.2 inch) margins on all sides; do not justify the right margin, do not hyphenate words at the right margin, and do not use single-sentence paragraphs.
- Use 12-point type size throughout, preferably Times-Roman.

Style

- Keep the mammal, not the authors of research papers, as the subject of sentences when possible (except in Synonymy and REMARKS sections).
- Italicize only scientific names, statistical parameters (n , SD , SE) and foreign words; do not use bold face type or underlining.
- Abbreviate the genus name except on first usage within a section and at the start of a paragraph.
- Use American spelling conventions in the text, but use exact spelling of titles and journal names in the Literature Cited. Pay special attention to the spelling of behavior.
- Use spaces around operators for statistics e.g., $n = 62$.
- Use the metric system throughout, except in type localities and elevation in synonymies in which English units were used in the original. When converting to metric units, round the converted figures to an appropriate degree of precision (i.e., a nest diameter of 10--12 inches converts to 25--30 cm, not 25.4--30.48 cm, but 3 1/32 inch would equal 7.7 mm).
- Use two hyphens to separate ranges e.g., 4--6, October--December. Otherwise write as from 4 to 6, from October to December.
- Do not mix information with unit symbols or names, e.g., instead of writing 20 ml H₂O/kg or 20 ml of water/kg, write water content is 20 ml/kg (CBE Views, 21:116).
- Examine recent accounts for extensive examples on content and format.

Consult *Guidelines for Manuscripts for Publications of the American Society of Mammalogists* available at the ASM website for formatting questions not addressed in this document. Abbreviations not presented in the *ASM Guidelines* follow the International System of Units (SI; National Bureau of Standards Special Publication, U.S. Department of Commerce).

References in text are to be in alphabetical order with semicolons separating citations. Do not put a comma between the author and year (except in the synonymy) and do not italicize a or b for citations with the same authors and year e.g., (Hamilton 1987, 1988; Hamilton and Van Den Bussche 1998; Hamilton et al. 1994; McBee 1996a, 1996b). Do not place two parenthetical comments next to each other. Instead combine them and separate the material with three hyphens e.g., (parenthetical information---Author 2002).

Use Word 97. Disk copy and hard copy must match exactly. Both should be double spaced, use hanging indents, centering, italics, and a single tab for paragraph indentation. Number pages in the original submission, but remove page numbering on the final revision. Do not use widow/orphan features. Use two spaces at the ends of sentences. Use the following instructions as a guide to the sequence of topics. Headings used in the text of the account are given in upper case letters. Use small caps only for author names in Literature Cited and names of editors at end of document.

- **FORMAT**

Generic Accounts.

An account of each genus will be included with the account of one species in the genus. The Editor will inform authors if they are to include a generic account and will enclose an example. Generic accounts must include a synonymy of the genus name, a content and context for the genus, and a key to species, unless the genus has < 3 species (in this case, list the species in alphabetical order in CONTENT AND CONTEXT).

Generic Synonymy. (see also Guidelines for Writing Mammalian Species Synonymies)

The synonymy of the genus should include, in chronological order, all generic-group synonyms, with authors, dates, type species, and basis for recognition of the type species. **Make sure you see every citation you use for the synonymy.**

[*Generic*] CONTEXT AND CONTENT. Indicate higher levels of taxonomic categories, i.e., order, suborder, tribe, family, subfamily, as appropriate to the genus. Use lower case for taxonomic category (e.g., family), but uppercase for taxon (e.g., Muridae). State the scientific names of species included in the genus. Include brief discussion of convoluted history of generic names applied to the species.

Species Synonymy. (see also Guidelines for Writing Mammalian Species Synonymies)

The synonymy for the species must include, in chronological order, all names proposed for or subsequently used for the species and thus, all names whose type specimens belong to the taxon of the account. It should not include names, name combinations, or uses based on misidentifications, personal opinion, or differences of opinion about allocation of specimens other than types. When a homonym has been replaced, give a reference to the homonym. Use no punctuation between the name of the taxon and the name of the original describer when citing an original description. In other instances, separate name of author from name of taxon by a colon. Include complete references for authors of the scientific names in the LITERATURE CITED section. **Make sure you see every citation used for the synonymy.** If you are uncertain about the synonymy, you may send the Editor the synonymy for review and comment before you submit the manuscript. Please include **complete** reference information for all names.

Give the type locality exactly as in the original description within quotation marks. Follow this with a translation or modern form, if deemed necessary, and any subsequent restrictions or modifications with references in brackets. Annotations, when needed to reduce confusion or ambiguity, should be included in the synonymy if no longer than 4 lines of typescript, or in the REMARKS section if longer. Rules and opinions of the International Commission on Zoological Nomenclature must be

followed, or reason given for not doing so must be presented. Such discussion should be placed in CONTEXT AND CONTENT.

CONTEXT AND CONTENT. If the account includes a generic account, begin with the statement "Content as above." If the account does not include a generic account, indicate higher levels of taxonomic categories. If the species is monotypic, so state. If > 1 subspecies is recognized currently state how many (with appropriate citations) followed by a listing of current subspecies (in alphabetical order). With each subspecies listed, include author, date, and page, followed by exact type locality within quotation marks, and synonyms. Text sources of these names, except synonyms, must be provided in the LITERATURE CITED. Enclose subspecific synonyms in parentheses in alphabetical order and include only the subspecific epithet and name of author, without date or citation. Discussion regarding subspecies may follow the list. For type localities of subspecific names provided in the species synonymy, after the name of the author add ", see above." An example is, *S. g. gracilis* Merriam, 1890:83, see above (*saxatilis* Merriam and *tenuis* Howell are synonyms). If the author of a subspecific name originally put the animal in a different genus put the author's name in parentheses.

DIAGNOSIS. This section should provide readers **only** with information necessary to distinguish the species being discussed from similar or closely related taxa. Characters that singly or collectively distinguish the taxon from other taxa should be presented in a comparative manner. Comparisons should be quantitative and meaningful alone, e.g., "length of maxillary tooththrow at alveolar rim > 15 mm," rather than "teeth larger." Generic or familial characters should not be included in a species diagnosis, except when the genus is monotypic and comparisons are being made between genera.

GENERAL CHARACTERS. This section contains characters not strictly diagnostic. A general description in objective and quantitative terms should be included here. Information on color, external (length of head and body, length of tail, length of hind foot, length of ear) and cranial measurements, and sexual and age differences should be included. Please use do not use nouns to modify nouns, e.g. use length of tail instead of tail length, length of forearm rather than forearm length, but body mass is permitted. When presenting quantitative data, do not use contrived acronyms. See previous accounts for presentation of measurements for different groups (subspecies, sexes, geographic regions). Detailed descriptions and illustrations in the literature may be cited.

DISTRIBUTION. State the geographic range in general terms. Refer to the figure illustrating the distribution and cite authorities on which the map is based. A concise statement of altitudinal or other distributional features or limitations is desired. The historic range in addition to reductions, expansions, or introductions is relevant. A map of the distribution should include subspecies boundaries. Do not include information on habitat.

FOSSIL RECORD. Summarize data on fossil record of the taxon. Indicate time (age), space (place), and other noteworthy information. Present dates as "years ago," rather than using abbreviations, such as, "mya" or "B.P." If no fossil record is known, include as the last statement of the DISTRIBUTION section the sentence "No fossils are known."

FORM. Summarize structural or anatomical features of the taxon at all levels of organization from molecular or biochemical through histological to gross anatomy (cite authorities). Include the following biological aspects: integument and derivatives, mammae and milk, skeletal system (including dentition), muscular system, circulatory system, nervous system (from central to peripheral), respiratory system, digestive system, urogenital system, endocrine system, and general anatomy that transcends separate systems. Dental formula should take the form of: i 1/1, c 0/0, p 1/0, m 3/3, total 18. Make sure the total is correct. Teeth should be referred to by a letter followed by a number, uppercase letters for upper teeth (e.g., M2) and lowercase letters for mandibular teeth (e.g., m2). Vertebral formula should take the form of: 7 C, 13 T, 6 L, 2--3 S, and 26--31 Ca, total 55--60. Again, make sure the total is correct.

FUNCTION. Summarize physiological or other dynamic aspects of function here such as metabolic rate, thermoregulation, water balance, energy balance, circannual cycles, hormonal cycles, as well as cardio-vascular, respiratory, reproductive, neuroendocrine, digestive, and renal function. If feasible, arrange information in the order used in the FORM section. This section may be combined with the FORM section, under the heading FORM AND FUNCTION, if limited information is available and if the subjects seem more easily handled together.

ONTOGENY AND REPRODUCTION. Include in utero and postpartum growth and development here. The following aspects should be arranged in a logical and orderly fashion: onset and duration of season of reproduction; estrous cycles; conception and implantation; duration of gestation and prenatal changes; parturition; litter size in utero, at birth, and at weaning; description of neonate; duration of lactation; postnatal or prepubertal changes; weaning; and maturity and conditions or changes during maturation.

ECOLOGY. Information on relationships of the animal to its environment belongs here. Aspects that should be included in a logical and orderly fashion are: habitat, food and diet, population structure and dynamics, migration, mammal associates, interspecies competition, predation by and upon, disease, symbiotic relationships (including parasitism), mortality (including senility and longevity), conservation and control by humans, domestication or breeding in captivity, care or rearing of young, economics (of fur, wool, hide, meat, or other products), economics of sport hunting, pharmaceutical or medical uses, wildlife management practices, and methods of capture, marking, tracking, recording, censusing, sampling, or collecting.

HUSBANDRY. If information is sufficient, include data on captive care of the animal. Include diet, housing, handling, and breeding techniques.

BEHAVIOR. Summarize detailed behavioral studies, in addition to general behavioral knowledge not noted elsewhere. Examples of aspects to include are: interspecific interactions (e.g. honey badgers and their bird guides, not predation); intraspecific interactions (cooperative or agonistic); reproductive behavior (courtship sequences, copulatory patterns); development of behavior (instinctive behaviors, innate patterns, learned behaviors, sequence of behaviors over time); timing of activity during the day and year (sleep/wake cycles, activity budgets, hibernation, aestivation); agonistic behavior (offensive, defensive, submissive, dominant); territorial and home range behavior (marking, latrine use); communication and vocalization (number and types of calls, context for vocalizations, descriptions of sonographs, characteristics of displays); movements (posture and locomotion); specific habits (aquatic, fossorial); feeding and drinking; play; grooming (including dusting, anting, washing); construction or use of den, nest, or burrow; and methods of study.

The sections on ONTOGENY AND REPRODUCTION, ECOLOGY, and BEHAVIOR may be combined under the heading ECOLOGY if limited information is available *and* if the subjects seem more easily handled together.

GENETICS. Information on heredity and interactions between heredity and the environment belong here. The following should be included: chromosomes, allelic systems and population genetics, mutant forms (e.g., albino, melanistic, or other genetic anomalies), genotypic and phenotypic expressions, and hybridization.

CONSERVATION STATUS. If the species is of "special concern," indicate its status in this section. Exclude opinions not supported by literature. Published assessments of the status of the species (e.g., rare, endangered, threatened, status undetermined) should be presented. Likely publication sources will include state, national, or international governmental agencies or recognized non-governmental organizations (e.g., World Conservation Union, World Wildlife Fund).

REMARKS. Include any information that does not fit into the previously discussed sections. The following should be included: significant differences of published opinions, matters of nomenclature or history not clear from the synonymy, variations in the vernacular name, and etymological origin of the generic and specific names. Acknowledgments should appear as the final paragraph.

LITERATURE CITED. Center the heading. Consult *Guidelines for Manuscripts for Publications of the American Society of Mammalogists* at the ASM website regarding format and order of citations. Final and job completion reports, unpublished manuscripts, and in-house agency reports are not considered legitimate publications in *Mammalian Species* accounts. Theses and dissertations may be cited; include number of pages. In the very rare instances that, despite your extensive efforts, a

publication is not available and is cited in the text from a secondary source, place in parentheses after the correct citation, the following statement "(not seen, cited in [your bibliographic source, including page number])." Make sure the source is cited in the LITERATURE CITED. Small amounts of unpublished material may be included in text as either (pers. comm.) for information obtained orally or (in litt.) for information obtained in writing (e.g., letter, unpublished manuscript, internal agency report).

- Order references strictly alphabetically by author (do not group by number of authors and then alphabetize). Do not use 'ibid' or a 'long dash' for repetition of authors.
- For articles in a book, do not put a comma after Pp. xx--xx and do not italicize 'in'.
- No comma between journal title and volume. Spell out journal titles as usual.
- Total pagination for books is not needed unless the work is part of a series or volume; then use: 3:1--367, not Vol 3, 567 pp.
- Total pagination is required for dissertations and theses.
- Use two hyphens to separate page ranges.
- Use two spaces to separate items of the citation, e.g., authors, year, title, journal.
- Use D.C. not District of Columbia.
- For all books not published in the US, indicate city and country of publication. For all US books, indicate city and full name of state of publication.

At the end of the literature cited section identify the associate editors and editor for the account as well as the authors' names and addresses as follows.

Associate editors were _____. Editor was _____."

Author 1, address; author 2, address; and author 3, address.

• FIGURES

Three figures are included in *Mammalian Species* accounts: a photograph of a live animal (or a good quality illustration or photograph of a prepared specimen, in that order of declining acceptability), a skull plate, and a distribution map. The photograph of the animal should be the first figure referred to in the text, the skull plate the second figure, and the distribution map the third. All figures will be published 1 column (8 cm) in width, so prepare your figures accordingly.

PHOTOGRAPH OF LIVE ANIMAL. Color or black and white photographs, color slides, or TIFF files (600 dpi, CMYK color, include a hard copy of the image) are permitted. Include in figure caption name of taxon, where and when animal was photographed, age and sex of animal, name of photographer, and statement of permission for use of the photograph if taken by other than one of the authors of the account.

SKULL PLATE. Illustrations of the cranium (dorsal, ventral, and lateral views) and lateral view of the mandible must be included. These either can be good quality

photographs or line drawings. Do not include a scale bar. In the figure legend, indicate age and sex of specimen, the collection locality, full name of museum where specimen is on deposit, catalog number of specimen, **and greatest length of skull** or a similar measure. A statement including the origin of the photographs or name of illustrator (if other than the authors) and permission for use must be included. **All views must be to the same scale** so that they can be exactly aligned with each other. Skull images should be 8- to 18-cm wide as the Editor will mount the skull photographs on a 21.5 by 28 cm sheet. Do not mount photographs. TIFF files may be submitted (600 dpi, black/white), but include hard copies of the images. Guidelines for making a digital skull plate in Appendix 1.

DISTRIBUTION MAP. Carefully indicate on a sufficiently detailed map, the distribution of the taxon. Be sure the distribution corresponds to the description in text. Differentiate subspecies in some convenient manner, numbering them on the map. List subspecies alphabetically in the figure legend and indicate their numbers. Type localities and fossil sites may be included. Consult previous accounts for general style and format. Cite authorities in figure caption to document distribution of the taxon. Changes in geographic range during historic times may be shown and must be documented.

A border, latitude, and longitude, and a scale bar in kilometers (km) must be included. The meridian in the center of the map should be vertical. If the map represents a limited (i.e., small portion of a continent) geographic range, use an insert of a larger scale map to illustrate where in the world the map represents. Be sure that width of lines and shading used to demarcate distributions of subspecies will be clear when reduced to an 8-cm width (3.125 in) in publication. Reduce the map and carefully examine it for clarity before submission of the manuscript. TIFF files may be submitted (600 dpi, black/white) but include a hard copy of the image.

- **SAMPLE FIGURE CAPTIONS (please use this format)**

Fig. 1. Photograph of an adult female *Phenacomys albipes* from 1 mile S Summit, Benton Co., Oregon (KU [University of Kansas, Museum of Natural History] 145695). Used with permission of the photographer B. J. Verts.

Fig. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of an adult male *Phenacomys albipes* (OSUFW [Oregon State University Department of Fisheries and Wildlife mammal collection] 7360) from 6 miles W Blue River, T16S, R3E, Sec. 22, Lane Co., Oregon. Occipitonasal length is 25.73 mm.

Fig. 3. Geographic distribution of *Sciurus griseus*. Subspecies are: 1, *S. g. anthonyi*; 2, *S. g. griseus*; 3, *S. g. nigripes*. Map redrawn from Hall (1981) with modifications.

- **MISCELLANEOUS COMMENTS**

Use simple English, minimize jargon, and use American spelling (e.g., behavior, recognize, gray, color). We are not writing just for professional mammalogists; more than 50% of *Mammalian Species* accounts are purchased by nonprofessionals. To avoid ambiguous statements, do not use freight-train modifiers, i.e., > 2 modifiers of the same word. Use numerals for all numbers (6 days, 1 deer, 7 mice, 5-fold) and ordinals (1st mouse, 6th palatal ridge, 3rd ed.), except as the first word of a sentence. Use the abbreviation "ca." instead of approximately or about before numbers (e.g., ca. 10 mounds/ha) and a percent sign after numbers (e.g., 7%, 16.5%). For ranges of values, use a dash (2 hyphens) between numbers (e.g., 100--200 mm), but use "to" with "from" as in from 3 to 6 ova.

Format the first page of the manuscript as indicated on the appended example (Appendix 2).

Leslie Carraway (1999)
modified by Virginia Hayssen (2002), Gail Michener (2003)

Appendix 1: Making a Digital Skull Figure

C Schennum, April 2003

- View order is top to bottom: dorsal, ventral, lateral of skull, lateral of mandible.
Orientation of mandible view in relation to lateral skull view should be the most biologically sound.
 - All views face the same direction, ideally towards the interior of the manuscript.
 - All views should be aligned horizontally and vertically.
 - All views must be to the same scale so their anterior and posterior margins line up.
If a view is of a different length, it should be resized to match the others. The only exception is when two or more skulls are used.
 - Spacing between views should be constant and as small as is aesthetically pleasing.
 - Background should be solid black and free of any texturing, light-colored flecks, hairs, etc.
If necessary, brightness and contrast of the picture can be adjusted to accomplish this, or flecks or hairs can be painted over with the same color as the background. Each view must have the same relative levels of brightness and contrast.
 - The width of the completed figure should be set to 8 centimeters [one column width in printed form].
 - The figure must be a black and white (grayscale), 600 dpi TIFF file.
If the views were originally photographed in color, they should be changed to grayscale.
 - Ideally, the file itself should be no greater than 3 megabytes in size, so that it can be easily sent through e-mail. Larger files can be sent by mail (post) on a CD.
If the views are photographed with a digital camera, the quality/size of pictures that the camera captures should be set to a low-to-medium level. This will allow for the file size of the final figure to be small.
 - The file name should include the genus and species of the animal, the author's last name, and the figure number. An example would be "GorillagorillaSchennumFig2.tif"
 - A sample figure is provided on the following page.
- * The editor reserves the right to make adjustments to the figure as necessary, e.g. cropping, brightness, and adjustment of contrast.

Sample skull and mandible plate (manuscript Figure 2) illustrating sequence of skull and mandible views as well as alignment of anterior and posterior margins of skull. Image by C. Schennum.



Appendix 2: Example of page 1 format

Send proof to: **Single space contact information for proof author**
 Name
 Address in North America
 Telephone, Fax
 Email

Double space text of manuscript
 MAMMALIAN SPECIES No. , pp. 1--, 3 figs.

Peromyscus sejugis. By Sergio Ticul Alvarez-Castañeda. **Not italicized**

Published by the American Society of Mammalogists

Peromyscus sejugis Burt 1932

Santa Cruz Island Mouse

Peromyscus sejugis Burt, 1932:171. Type locality "Santa Cruz Island (latitude 25° 17' N., longitude 110° 43' W), Gulf of California, Lower California [Baja California Sur], Mexico."

CONTEXT AND CONTENT. Order Rodentia, suborder Sciurognathi, family Muridae, subfamily Sigmodontinae, genus *Peromyscus* (Musser and Carleton 1992), subgenus *Peromyscus*. *Peromyscus sejugis* is monotypic (Hall 1981).

DIAGNOSIS. *Peromyscus sejugis* (Fig. 1) is a large insular mouse. Upper parts are grayish washed with avellaneous, giving a dull color. Underparts are white. Tail is distinctly bicolored with narrow, dorsal stripe (ca. 1.5 mm wide in dry skin). Ears are dusky with fur inside. Face is yellow-brown. Eyes have black ring. Skull is arched anteroposteriorly (Fig. 2). Rostrum is strong. Nasals are broad.

To wit:

1. Verbs HAS to agree with their subjects.
2. Prepositions are not words to end sentences with.
3. And don't start a sentence with a conjunction.
4. It is wrong to ever split an infinitive.
5. Avoid clichés like the plague. (They're old hat.)
6. Also, always avoid annoying alliteration.
7. Be more or less specific.
8. Parenthetical remarks (however relevant) are (usually) unnecessary.
9. Also too, never, ever use repetitive redundancies.
10. No sentence fragments.
11. Contractions aren't necessary and shouldn't be used.
12. Foreign words and phrases are not apropos.
13. Do not be redundant; do not use more words than necessary - it's highly superfluous.
14. One should NEVER generalize.
15. Comparisons are as bad as clichés.
16. Eschew ampersands & abbreviations, etc.
17. One-word sentences? Eliminate.
18. Analogies in writing are like feathers on a snake.
19. The passive voice is to be ignored.
20. Eliminate commas, that are, not necessary. Parenthetical words however should be enclosed in commas.
21. Never use a big word when a diminutive one would suffice.
22. Use words correctly, irregardless of how others use them.
23. Understatement is always the absolute best way to put forth earth-shaking ideas.
24. Eliminate quotations. As Ralph Waldo Emerson said, "I hate quotations. Tell me what you know."
25. If you've heard it once, you've heard it a thousand times: Resist hyperbole; not one writer in a million can use it correctly.
26. Puns are for children, not groan readers.
27. Go around the barn at high noon to avoid colloquialisms.
28. Even IF a mixed metaphor sings, it should be derailed.
29. Who needs rhetorical questions?
30. Exaggeration is a billion times worse than understatement. And the last one...
31. Proofread carefully to see if you any words out.

(an unattributed cyber mailing)