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<input type="checkbox"/>	All <u>citations</u> mentioned in text are listed under "Literature Cited"; all publications listed in "Literature Cited" are referred to within text or table/figure captions.
<input type="checkbox"/>	All entries in " Literature Cited " are in the format similar to that of the <i>Journal of Wildlife Management</i> (see detailed examples)
<input type="checkbox"/>	<u>Figures and Tables</u> are to be uploaded as separate, individual files (file types are specified in these instructions)
<input type="checkbox"/>	Manuscript (.docx), Tables (.docx) and Figures (.xlsx), and the signed Author Agreement Form should be submitted via email not later than <u>April 15, 2022</u>

Please note: These instructions have changed from those provided for the VPC Proceedings at previous Conferences.

*Please **read and follow** these revised instructions in preparing your manuscript. Manuscripts that do not conform to the instructions will be returned to the author(s) for correction and resubmittal, which may delay manuscript publication.*

INSTRUCTIONS FOR AUTHORS

30th VERTEBRATE PEST CONFERENCE

March 7-10, 2022 Reno, Nevada, USA

Purpose

The objective of the Vertebrate Pest Conference and the resulting *Proceedings* is to help disseminate factual and ecologically sound information concerning human-wildlife conflicts and vertebrate pest damage and its control. The Conference continues to make significant contributions toward effectively understanding and resolving undesirable human-wildlife interactions and animal damage problems, promoting better management and control methodology, and minimizing adverse ecological effects. Vertebrate pest control uses applied ecology, with the goals of improving public health and conserving resources. The Conference is a forum for sharing knowledge and experiences among researchers, administrators, and practitioners in vertebrate pest control and wildlife damage management. It is organized by the California Vertebrate Pest Council, which also publishes the Conference *Proceedings*.

Manuscript Preparation

A manuscript for publication in the *Proceedings* is encouraged from every speaker and every poster presenter. Where a paper represents the work of more than one individual or where protocol demands, papers may be jointly authored.

In the event that your presentation at the Conference covers a topic for which you have submitted (or intend to submit) a manuscript to a journal or a different conference's proceedings, we ask that the author provide us with a manuscript that is sufficiently unique that the other publication will not prohibit your paper from being included in our *Proceedings*. Some journals allow publication of your paper if the proceedings has a print run of <500 copies, which will be the case for the 30th VPC *Proceedings*. An alternative, in the event your paper has already been published elsewhere, is for the author to secure from the publisher written permission for the VPC to reprint your paper in full in our *Proceedings*. Please discuss such situations with the VPC *Proceedings* Coordinator in advance of the Conference.

The Conference *Proceedings* are widely used for information and reference in the United States and in many parts of the world. For clarity and consistency, we request that you carefully follow these guidelines in the preparation of your manuscript.

Due Date

Your manuscript in final form must be submitted no later than **April 15, 2022**.

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Submit your manuscript, as well as accompanying files (tables, figures, Author Agreement Form, and scan of the signed Author Agreement Form) by attaching these forms to an email message sent to the following email address: **vpc@ucanr.edu**

Format

Manuscripts should be prepared using word processing software (Microsoft Word preferred). Please **insert or imbed figures and/or tables** within the text of the manuscript, **beginning on the page immediately following the Literature Cited**. Also, please upload these as separate individual files (see below). A list of **captions** for figures and tables should be submitted as text on a separate page included in the manuscript.

Name all files with the first (“senior”) author’s last name. The manuscript itself, which includes the Literature Cited and List of Captions for Figures and/or Tables, should simply be the first author’s last name (e.g., Thompson.docx). Name the files containing individual figures or tables as follows, also using the first author’s last name (e.g., Thompson Figure 1.xlsx; Thompson Figure 2.jpg; Thompson Table 1.docx).

Abstract

Each manuscript must begin with an abstract. The abstract should be a *brief* summary of the paper (350 words, maximum). It should give the reader the gist of the paper. Avoid using species’ Latin names in the abstract, unless the species has no familiar common name.

Key Words

Appropriate key words must be included with each manuscript. Key words should be selected that will allow for the general content of the paper to be identified, including Latin names as well as common names of species that are the main topic of the paper. Place the list of key words in alphabetical order, typically not to exceed 10 words, after the abstract and before the body of the paper. For suggested key words, see the publication “Key Word Standardization in Vertebrate Pest Control” (R. M. Timm, T. P. Salmon, and R. H. Schmidt. 1988. *In*: Vertebrate Pest Control and Management Materials, ASTM STP 974, pp. 3-11), which can be viewed or printed from the Conference’s web site:

https://ucanr.edu/sites/VPC/Author_and_Speaker_Guidelines_and_Instructions/

Length

The average manuscript has been about 12 double-spaced pages long (3,500 words). We strive to limit the length of each manuscript to a maximum of 20 double-spaced pages, including tables and figures, abstract, and references (maximum: 5,500 words, or approximately 275 words per page). Manuscripts longer than this limit may be returned to authors for condensing, unless prior approval has been obtained. (When tables or figures are included, the 5,500-word limit must be reduced commensurately.)

Style, Formats, and Fonts (see attached *Sample*)

The manuscript page size should be 8½ × 11 inches (“Letter”). Text should be double-spaced, with 1-inch margins left and right, top and bottom, with no headers or footers, and no page numbers. The corresponding author’s name, organization, mailing address, telephone number, and email address should appear at the top left side of page 1. Use the line numbering option in “Page Layout” starting with the manuscript’s title. Use the font Times New Roman (or equivalent TrueType font) in size 12, except as noted below for tables. Insert 1 space (**not 2 spaces**) following the period ending each sentence.

Because all papers will be electronically reformatted into a two-column format, it is important that you prepare your final manuscript to be as simple and clean as possible. Please use the simplest page formats possible, with the fewest “autoformat” and “presets” possible.

New sections (with headings) should be separated by a single line space, and the **first line of each paragraph of text should be indented 0.2 inch** (use the “Paragraph – Indentation” commands in Microsoft Word).

For general style of manuscripts (e.g., capitalization, abbreviations, punctuation, symbols, tables, etc.), refer to previous VPC *Proceedings*. Some commonly-encountered style items are as follows:

- When a list of items appears in a sentence, do use a comma following the next-to-last item (e.g., California, Nevada, and Arizona).

- When expressing values exceeding one thousand as numerals, do use a comma in the expression to set off the “thousands” digits (e.g., 1,250 rather than 1250), except when used to denote page numbers within citations in the Lit Cited section.
- Do not use periods as punctuation after the abbreviations for length, area, weight, or time (e.g., kg not kg.)
- Express symbols correctly; for example, do not use the letter “x” for “by” and do not use apostrophe to express “degrees”
- Leave one space on either side of symbols like “>” “<” “+” “-” and others; do not leave a space around hyphens when using them to express a range of values (e.g. 4-6 years, not 4 – 6 years); do not leave a space around virgule (e.g. this/that, not this / that)
- For expressing numerals, please use words for numerals one through nine, and digits for numerals 10 and above (e.g. four deer; 12 deer)
- For abbreviating, use “U.S.” or “U.S.A.”, not US/USA
- When listing multiple points within the text that are numbered or lettered, numerals are preferred, followed by a single parenthesis: e.g., 1), 2), 3), etc.
- For consistency, use “pers. commun.” for personal communication; “pers. observ.” for personal observation; and “unpubl. data” for unpublished data. Note that “et.al”, “et. al.” and “*et al*” are incorrect: it is “et al.”
- Latin names of species should be *italicized*. Vernacular names of animals should be accompanied by their scientific (Latin) names the first time mentioned within the body of the text. Do not capitalize the common name unless it includes a formal noun (e.g., mountain lion, American robin).
- Spell out the words “Figure” and “Table” rather than using the abbreviations “Fig.” and “Tab.”.
- If subscripts or superscripts are appropriate within the text, they should be appropriately “reduced” in format

References in Text

Cite references within the text whenever applicable, giving the name of the author(s) and the year of publication in parentheses, without use of a comma between the author’s name and the year (e.g., Williams 1987). Multiple citations within one parenthesis should be listed in chronological order, oldest to newest (Jones 1988, Adams 2012). If there is more than one publication by the same sole author or same senior author during a single year, designate them (for example) as “Williams 2017a” and “Williams 2017b”. To cite both together, use the format “Williams 2017a,b”. Use a comma (**not** a semicolon) to separate citations, as follows: (Smith 1999, Williams 2017a). When a citation consists of three or more authors, cite using the first author’s last name followed by “et al.”. **Do not** italicize the phrase “et al.”.

Headings

Section headings within the text of the manuscript (except headings for “Abstract” and “Key Words”) should conform to the following example:

MAIN HEADING IN ALL CAPS, BOLD

First Subheading in Title Case, Bold

Second Subheading in Title Case, Bold Italicized

Page Numbering

Do not number pages in the manuscript, either within the page text or in headers or footers. Turn off any automatic page numbering functions.

Tables

Simple tables created in Microsoft Word are preferable. Do not insert additional empty rows to create space between rows with text. Instead, format the height/width of each row and column

to allow for proper spacing. For text within tables, use Arial font in size 11 or size 10. Table headings can be in **Arial bold** font, if appropriate. When tables contain data in columns, numerals should be right-justified (rather than centered) so that numerals or decimals are aligned vertically. Please remember to include or imbed tables within the body of the manuscript following the Literature Cited section, as well as uploading them as individual files.

Because all papers will be re-formatted for printing in a two-column format, tables will need to be sized to fit either a single column (3 3/8 inches wide) or two columns (7 inches wide) and should not exceed 9 inches in length. Avoid long and complex tables. Each table should be referenced at some point within the text (e.g., "Table 1"). However, a good table should be understandable without reference to the text. A caption for each table should be submitted on the separate page at the end of the manuscript that contains all figure and table captions.

Figures

Because all papers will be re-formatted for printing in a two-column format, most figures will be re-sized to fit a single column (3 3/8 inches wide). Ensure that all figures have a resolution of at least 300 dpi. It is critical that you make sure that your figures are designed so that when reduced to fit a single column, important data or captions will not be lost or impossible to read due to reduction in size. Since most figures have to be reduced to fit within the column format, it is important to avoid complex figures. Each figure should be referenced at some point within the text (e.g., Figure 1). However, a good figure should be understandable without reference to the text. Also, figures must be uploaded as separate files from the text of the manuscript.

Usually, figures will have to be re-sized by the layout staff. Therefore, we prefer figures such as graphs (bar graphs, line graphs, etc.) be created in Microsoft Excel or other compatible software, enabling the editors to make adjustments to size, shading, and text labels within graphs as necessary. In the printed *Proceedings*, figures are reproduced in high-contrast black and white. Although use of color for graphs and figures has become popular, we do not reproduce colors within the printed *Proceedings*. If bar graphs or other parts of figures require differential shading, we recommend distinct hatching patterns based on black & white patterns, rather than shades of gray (which often do not reproduce distinctly). Figures created in Microsoft Excel should be submitted electronically as Excel (.xlsx) files. **Such files should contain the raw information used in creating the figure, so that the font size of data labels, etc., can be manipulated by the Editor.**

If figures are not computer-created but instead are original line drawings, they should be submitted as .jpg images (preferred); alternatively, submit them as hard copy, in black ink on white paper. Be aware that the original figure will typically have to be reduced to a maximum width of 3 3/8 inches, and any labels or other content must remain legible following this size reduction.

Photographs

Photographs often do not reproduce well in the *Proceedings*, and their use as figures is discouraged. Photos will be accepted only if they add significantly to the paper. Photographs that help demonstrate specific control procedures or techniques may be an asset to the paper, but photographs of habitat or examples of damage are usually not acceptable. Submit photos in .jpg or .tiff formats; these should be uploaded as separate files and labeled according to their figure number. Recognize that such photos will be reproduced in the printed *Proceedings* as black & white figures, but will appear in the digital version in color. You should print them in black & white to make sure the images you wish to convey to the reader are understandable without the use of color, or else submit two different versions of the figure with appropriate captions for each. Submit text for captions (legends) for photos along with your manuscript.

Literature Cited

Each citation listed should be referenced somewhere within the text of the manuscript, or within accompanying tables or figures. Citations should be in alphabetical order by the authors' surname(s). Within the alphabetical order, sequence is chronological from oldest to newest.

In your manuscript, citations should be double-spaced and formatted with a hanging indent of 0.2 inch. Authors' names should be in "Title Case" (**not** in ALL CAPITALS) and author initials should be formatted as follows: "J. M. Bond" or "Bond, J. M." Note that there is a single space after each period. Please refer to the examples below and attached manuscript sample. Citation style is similar to that used by the *Journal of Wildlife Management*. Examples of the most common types of literature citations are as follows:

Journal article

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.

Book

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

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

Edited Book

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

Chapter in Edited Book

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, WI.

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.

Paper in a numbered Proceedings volume

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

Agency or Government Publication

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

Thesis or Dissertation

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

Tacha, T. C. 1981. Behavior and taxonomy of sandhill cranes from mid-continental North America. Ph.D. dissertation, Oklahoma State University, Stillwater, OK.

Web page

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>. Accessed 23 Aug 2005.

Peer Editing

All papers contained within the *Proceedings* of the 30th Vertebrate Pest Conference will be peer edited. Papers will be evaluated by the *Proceedings* Editors and by selected other academicians and resource professionals from within the Vertebrate Pest Council. This process of peer editing, while not as rigorous as peer review typically practiced by scientific journals, permits review of manuscript content and expedites more timely publication of the information presented at the Conference. Editorial liberties will be taken in instances where improved clarity is needed or where style is incorrect. In the case of most manuscripts, the authors will not be contacted during the peer editing process. Unfortunately, time does not permit circulation of galley proofs for authors' review. Manuscripts improperly prepared or formatted, or which need significant improvement to meet the *Proceedings'* standards for scientific merit and clarity of expression, will be returned to the authors.

Publication

For the 30th Conference, we're continuing the strategy used in publishing the 29th *Proceedings*. We intend to review and edit manuscripts as quickly as possible following their receipt, and to make them available individually as open-access publications on the University of California's eScholarship site within 6 months or less after the Conference. A print-on-demand hard copy of the entire *Proceedings* will be available for purchase in late 2022. Papers submitted after the due date may not be included in the 30th *Proceedings*. It is to the authors' advantage to submit their paper as soon as possible, as papers will be published in the order received (except for papers requiring revision).



The Vertebrate Pest Council appreciates your contribution to this upcoming Conference, and we look forward to your participation.

30th Vertebrate Pest Conference
March 7-10, 2022, Reno, Nevada, USA

Conference Chairperson

Roger Baldwin
Wildlife, Fish & Conservation Biology
University of California-Davis
Davis, CA 95616
email: rabaldwin@ucdavis.edu
phone: (530) 752-4551

Conference Program Chairperson

Niamh Quinn
UC South Coast Research & Extension Center
7601 Irvine Blvd.
Irvine, CA 92618
email: nmquinn@ucanr.edu
phone: (949) 301-9182

Proceedings Managing Editor

Denise M. Woods
Woods Biological Research and Services
4040 University Rd.
Hopland, CA 95449
email: dwoods@woodsbiological.com
phone: (707) 391-9025

Proceedings Coordinator

Robert M. Timm
UC Hopland Research & Extension Center
Email: rmtimm@ucanr.edu
Phone: (707) 972-7985

Manuscript Sample

An example of the style to follow in preparing your manuscript for the 30th Vertebrate Pest Conference Proceedings.

***** ***** *****

Gary Witmer
USDA National Wildlife Research Center
4101 Laporte Avenue
Fort Collins, CO 80521-2154
Phone: 970/266-6335
Email: Gary.W.Witmer@aphis.usda.gov

1 **An Evaluation of Potential Repellents for Botta's Pocket Gophers**

2
3 **Gary W. Witmer and Rachael S. Moulton**

4 USDA APHIS Wildlife Services, National Wildlife Research Center, Fort Collins, Colorado

5 **Roger A. Baldwin**

6 Dept. of Wildlife, Fish, and Conservation Biology, University of California, Davis, California

7
8 **Abstract:** Pocket gophers are fossorial rodents that cause substantial damage to crops,

9 reforestation, and property. We tested potential repellents to identify candidates to reduce

10 irrigation tubing damage. We dipped carrot chunks in the test materials, using mineral oil as the

11 solvent. Gophers prefer tuberous roots and, when kept in captivity, are often fed carrots as part of

12 their maintenance diet. None of the materials tested proved effective as repellents, even at

13 concentrations as high as 20% active ingredient or in combinations. Wood blocks soaked in a

14 few of the repellents received nearly significantly less damage than the control blocks and could

15 be looked at further as repellents. However, it appears that the quest for an effective gopher

16 repellent will continue to elude researchers.

17
18 **Key Words:** Botta's pocket gopher, drip irrigation, repellent, rodent damage control, *Thomomys*

19 *bottae*

20 21 **INTRODUCTION**

22 There are numerous species of pocket gophers in North America with most species belonging

23 to the genera *Geomys* and *Thomomys* (Nowak 1991). Pocket gophers cause various types of

24 damage to agricultural and rangeland resources and to reforestation (Witmer and Engeman
25 2007). Pocket gophers (*Thomomys* spp.) are generally considered one of the most damaging
26 wildlife pests in California (Marsh 1992, Clark 1994). A recent study estimated average losses
27 ranging from 5.3-8.8% across a variety of crops in CA (Baldwin et al. 2014), with one study
28 showing a loss of 36.5% of annual production in alfalfa in fields with high density gopher
29 populations (Smallwood and Geng 1997). The most widespread pocket gopher in California is
30 the Botta's pocket gopher (*Thomomys bottae*) (Case and Jasch 1994).

31 Primary control options for pocket gophers include trapping, burrow fumigation with
32 aluminum phosphide, and baiting with rodenticides (Barnes et al. 1982, Baroch and Poché 1985,
33 Evans et al. 1990, Case and Jasch 1994, Witmer and Engeman 2007, Baldwin 2012, 2014). Both
34 trapping and burrow fumigation can be highly effective at controlling pocket gophers (Lewis and
35 O'Brien 1990, Proulx 1997, Baker 2004), but are typically more time consuming and costly than
36 baiting (Marsh 1992, Engeman and Witmer 2000). ...

37

38 **METHODS**

39 Pocket gophers (henceforth, gophers) used in this study were Botta's pocket gophers live-
40 trapped in California and transported to NWRC, Fort Collins, CO. Gophers were kept in
41 individual numbered shoebox cages in a climate-controlled animal room. ...

42

43 **RESULTS**

44 A sizable number of potential repellents were tested in our study. Some of these are already
45 known to have some repellency with certain vertebrate or invertebrate species. Additionally,
46 some have been identified in research studies as having repellency to some rodent species (e.g.,
47 Fischer et al. 2013, Cowan et al. 2014). Unfortunately, we did not find any of the tested materials
48 to show significant repellency during our trials with Botta's pocket gopher. This was true even

49 when the concentration was increased and when we combined two or three of the active
50 ingredients (see Tables 1 and 2). ...

51

52 **DISCUSSION**

53 Other researchers have noted that potential repellents that work for some rodent species may
54 not work for other rodent species and that ones that work for one gender may not be very
55 effective for the other gender (Hansen et al. 2015, 2016). In our previous trials to identify
56 effective gopher repellents, it was only predator odors that showed the most potential promise as
57 repellents (Witmer et al. 1997). In their review, Lindgen and others (1997) also noted the
58 potential for predator odors as repellent for various rodent species. ...

59

60 **ACKNOWLEDGMENTS**

61 This study was conducted under the NWRC IACUC approved study protocol QA-2285. The
62 study was funded by Netafim Irrigation, Inc., Fresno, CA. We thank the landowners that allowed
63 us to live trap pocket gophers on their properties in California.

64

65 **LITERATURE CITED**

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67 controlling valley pocket gopher. *Proceedings of the Vertebrate Pest Conference* 21:253-257.
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73 M. Timm, and G. E. Larson, editors. Prevention and control of wildlife damage. University
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75 Clark, J. P. 1994. Vertebrate pest control handbook. Fourth edition. California Department of
76 Food and Agriculture, Sacramento, CA.

77 Mattson, D. J. 2016. Exploitation of pocket gophers and their food caches by grizzly bears.
78 Journal of Mammalogy 85: in press. doi:10.1644/BJK-125.

79 ...

80

81 Captions for Tables and Figures

82

83

84 Table 1. Carrot consumption after 1 day and 2 days by treatment groups and control groups of
85 pocket gophers.

86

87 Table 2. Amount of wood block removed by gopher chewing after 3 days by treatment groups
88 and control group.

89

90

91 Figure 1. A single Botta's pocket gopher (*Thomomys bottae*) housed within a shoebox cage
92 containing a repellent-treated wood block.