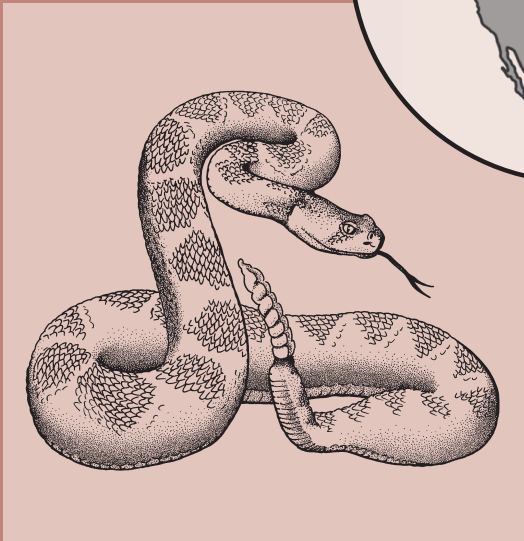
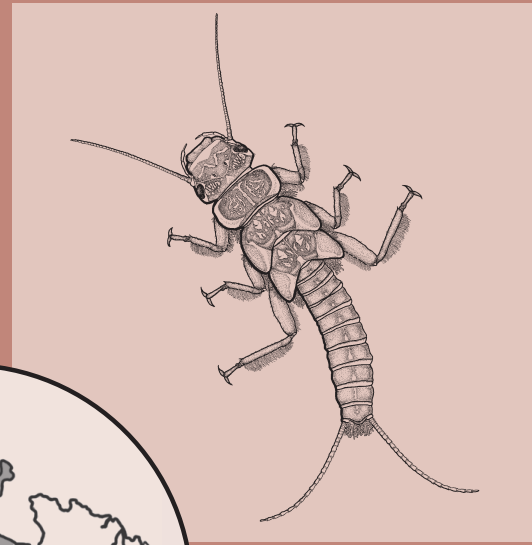


Western North American Naturalist

Volume 72 No. 4

December 2012

Brigham Young University



WESTERN NORTH AMERICAN NATURALIST

PUBLISHED AT PROVO, UTAH, BY
MONTE L. BEAN LIFE SCIENCE MUSEUM

190 MLBM
Brigham Young University
Provo, UT 84602
URL <https://ojs.lib.byu.edu/wnan>
E-MAIL wnan@byu.edu
PHONE 801-422-6688 FAX 801-422-0093

MARK C. BELK, EDITOR
JANENE AUGER, ASSISTANT EDITOR

Associate Editors

Steven D. Aird	University of Maryland University College Asia, Kadena Air Base, Japan
Elizabeth Arellano Arenas	Universidad Autónoma del Estado de Morelos, México
Brooks Britt	Dept. of Geology, Brigham Young University, Provo, UT
J. Curtis Creighton	Dept. of Biological Sciences, Purdue University Calumet, Hammond, IN
James G. Harris	Dept. of Biology, Utah Valley University, Orem
Justin D. Hoffman	Dept. of Biology and Health Sciences, McNeese State University, Lake Charles, LA
Jocelyn Hudon	Royal Alberta Museum, Edmonton, Canada
Tim Karels	Dept. of Biology, California State University, Northridge
Erin Lehmer	Fort Lewis College, Durango, CO
David C. Lightfoot	Museum of Southwestern Biology, University of New Mexico, Albuquerque
Brock R. McMillan	Dept. of Plant and Wildlife Sciences, Brigham Young University, Provo, UT
Michael L. Morrison	Dept. of Wildlife and Fisheries Sciences, Texas A&M University, College Station
C. Riley Nelson	Dept. of Biology, Brigham Young University, Provo, UT
Robert S. Nowak	Dept. of Natural Resources and Environmental Science, University of Nevada, Reno
Calvin A. Porter	Dept. of Biology, Xavier University of Louisiana, New Orleans
Ronald Ryel	Dept. of Forest, Range, and Wildlife Sciences, Utah State University, Logan
Chris A. Walser	Dept. of Biology, The College of Idaho, Caldwell
J. Jaime Zúñiga-Vega	Facultad de Ciencias, Universidad Nacional Autónoma de México

Editorial Board. Russell B. Rader, Chair, Biology; Steven L. Peck, Biology; Dennis K. Shiozawa, Biology. All are at Brigham Young University. Ex Officio Editorial Board members include Larry L. St. Clair, Monte L. Bean Life Science Museum; Mark C. Belk, Biology; and Janene Auger, Monte L. Bean Life Science Museum.

Publication and Scope. The *Western North American Naturalist*, originally founded in 1939 as the *Great Basin Naturalist*, is published quarterly by Brigham Young University. Unpublished manuscripts that further our biological understanding of western North America, including western Canada and all of Mexico, are accepted for publication.

Subscriptions. Annual subscriptions to the *Western North American Naturalist* for 2012 are \$30 for individual online only subscriptions, \$35 for individual print + online (\$40 outside the United States), \$55 for institutional online only, and \$65 for institutional print + online. Back issues are available in print and online (<http://ojs.lib.byu.edu/wnan/index.php/wnan/issue/archive>). All matters pertaining to subscriptions, back issues, or other business should be directed to *Western North American Naturalist*, 190 MLBM, Brigham Young University, Provo, UT 84602 or wnan@byu.edu.

Scholarly Exchanges. Libraries or other organizations interested in obtaining the *Western North American Naturalist* through a continuing exchange of scholarly publications should contact the Serials Exchange Coordinator, 2204 HBLL, Brigham Young University, Provo, UT 84602.

Editorial Production. Michelle Lyons

Manuscript Supervision. Megan Gebhard

Copy-editing Assistance. Michelle Lyons

Abstract Translation. CommBridge Language Services

Copyright © 2012 by Brigham Young University
Online release date: 8 February 2013
Print publication mail date: 28 February 2013

ISSN 1527-0904