JOURNAL

Tennessee Academy of Science

VOLUME 70 NUMBER 1

CONTENTS	
Effects of Temperature and Time of Day on Metabolic Rate in the Salamanders Desmognathus ochrophaeus and Plethodon websteri. Lynnette M. Sievert and Belinda K. Davis	
Importance of a Time Variable in Length-weight Relationships for Blue and Channel Catfishes in Kentucky Lake and Lake Barkley. Russell J. Johnson and Tom J. Timmons	4
Effects of Disturbance Size and Location on Extinction Dynamics. J. C. Beamon	7
Paleodepositional Model of the Hartselle Formation and Monteagle Limestone (Mississippian) Exposed in a Roadcut Along Eastbound Interstate-24, Dade County, Georgia. Richard E. Bergenback	9
Sedimentary Structures in a Core Taken on Signal Mountain, Tennessee (Cumberland Plateau), Were Used to Interpret the Depositional Environment of the Pennsylvanian Sewanee Sandstone, Signal Point Shale, and Warren Point Sandstone. Richard E. Bergenback and Leah Cantrell.	4
Home Ranges of Adult Male Raccoons (<i>Procyon lotor</i>) in Western Tennessee. <i>Barry D. Sumners</i> and <i>Michael L. Kennedy</i>	7
Announcements2) /

WINTER (JANUARY) 1995

Tennessee Academy of Science

EXECUTIVE COMMITTEE

President

Diane R. Nelson
Dept. of Biology
East Tennessee State Univ.
Johnson City, TN 37614-0703

John W. Harris
Dept. of Biology
Tennessee Tech. Univ.
Cookeville, TN 38505

Tennessee Dept. of Education
Linda Jordan, Science Consultant
8th Floor, Gateway Plaza
710 James Robertson Parkway
Nashville, TN 37243-0379

Past-president
Wilburn A. Sliger
Dept. of Biology
Univ. of Tennessee, Martin
Martin, TN 38238-5014

Director, Visiting Sci. Program
Wayne Stevenson
Univ. Programs Division
Oak Ridge Associated Labs.
Oak Ridge, TN 37830

1993-1995 Member-at-large
David N. Lumsden
Dept. of Geological Sciences
Univ. of Memphis
Memphis, TN 38152

Managing Editor
Phyllis K. Kennedy
Div. of Ecol. and Org. Biol.
Dept. of Biology
Univ. of Memphis
Memphis, TN 38152

President-elect
David H. Kesler
Dept. of Biology
Rhodes College
Memphis, TN 38112

Director, Junior Academy
Jack Rhoton
East Tennessee State Univ.
Box 70684
Johnson City, TN 37614-0684

1994-1996 Member-at-large
Martha Weller
Dept. of Physics and Astronomy
Middle Tennessee State Univ.
Murfreesboro, TN 37132

Meeting Coordinator
Linda Roberson
Dept. of Biology
David Lipscomb Univ.
Nashville, TN 37204-3951

Secretary
Sarah H. Swain
Dept. of Biology
Middle Tennessee State Univ.
Murfreesboro, TN 37132

Director, Collegiate Division
Richard Raridon
111 Columbia Drive
Oak Ridge, TN 37830

1995-1997 Member-at-large
Linda Lawson
Dept. of Mathematics
East Tennessee State Univ.
Johnson City, TN 37614-0663

EDITORIAL BOARD

Managing Editor
Phyllis K. Kennedy
Div. of Ecol. and Org. Biol.
Dept. of Biology
Univ. of Memphis
Memphis, TN 38152

James D. Caponetti
Dept. of Botany
Univ. of Tennessee
Knoxville, TN 37916

Geology and Geography
David N. Lumsden
Dept. of Geological Sciences
Univ. of Memphis
Memphis, TN 38152

Physics and Astronomy

Martha Weller

Dept. of Physics and Astronomy

Middle Tennessee State Univ.

Murfreesboro, TN 37132

Cell and Molecular Biology
Charles J. Biggers
Div. of Ecol. and Org. Biol.
Dept. of Biology
Univ. of Memphis
Memphis, TN 38152

Phillip J. Lorenz
Dept. of Physics
Univ. of the South
Sewance, TN 37375

Science and Math Teachers
Sarah F. Barlow
Dept. of Biology
Middle Tennessee State Univ.
Murfreesboro, TN 37132

Chemistry

Martin V. Stewart

Dept. of Chemistry and Physics

Middle Tennessee State Univ.

Murfreesboro, TN 37132

Math and Computer Science
Kirk Menser
Dept. of Math. and Computer Sci.
Austin Peay State Univ.
Clarksville, TN 37044

Zoology I
Gerald L. Vaughn
Dept. of Zoology
Univ. of Tennessee
M313 Walters Life Sci. Bldg.
Knoxville, TN 37996-0810

Engineering
Michael Daley
Dept. of Electrical Engineering
Univ. of Memphis
Memphis, TN 38152

Medical Sciences
Robert O'Bannon
Dept. of Biology
Lee College
Cleveland, TN 37311

Zoology II

Michelle Barnard

Dept. of Biology

Middle Tennessee State Univ.

Murfreesboro, TN 37132

The TENNESSEE ACADEMY OF SCIENCE was founded in 1912 at Nashville, Tennessee. Membership all teachers and professors of science, research workers in science both in educational institutions and industrial establishments, and all others who are interested in some phase of science. Annual dues are \$20 for members and fellows, except students and emeritus members whose dues are \$10. Life membership is \$200. Applications for membership should be addressed to the Treasurer.

Affiliated societies of the Academy are: American Association for the Advancement of Science (AAAS); Barnard Astronomical Society, Clarence T. Jones Memorial Observatory, Chattanooga; Barnard-Seyfert Astronomical Society, Nashville; National Association of Academies of Science; Tennessee Association of Science Department Chairs; Tennessee Junior Science and Humanities Symposium; Tennessee Ornithological Society, Nashville; Tennessee Psychological Association; and Tennessee Science Teachers' Association.

The JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE (ISSN 0040313X) is published quarterly by the Tennessee Academy of Science, Department of Biology, Tennessee Technological University, 900 N Dixie Avenue, Cookeville, TN 38505, for all members not in arrears for dues. The subscription rate is \$20 per year. Single copies of recent issues are \$10. Whole sets of back issues on microfilm are available from AMS Press, Inc., 56 E. 13th Street, New York, NY 10003. Second Class Postage paid at: Cookeville, TN, and at additional mailing offices. POSTMASTER: Send address changes to: JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE, C/O DR. JOHN W. HARRIS, DEPARTMENT OF BIOLOGY, TENNESSEE TECHNOLOGICAL UNIVERSITY, P.O. BOX 5063, COOKEVILLE, TN 38505.

This Journal is abstracted by Biological Abstracts, Chemical Abstracts, and Nuclear Abstracts and is indexed by Science Citation Index and Agricola Citations.