

# JOURNAL

OF THE

## Tennessee Academy of Science

---

---

VOLUME LXIX

NUMBER 2

---

---

### CONTENTS

President of the Tennessee Academy of Science for 1994.....	33
Proceedings of the Tennessee Academy of Science 1993	
Executive Committee Meeting, April.....	34
Executive Committee Meeting, November.....	35
Tennessee Academy of Science 103rd Annual Meeting.....	39
Abstracts of Papers Presented at the 103rd Annual Meeting.....	40
X Pond-dwelling Amphibians of Land Between The Lakes (Kentucky and Tennessee): A Quantitative Survey. <i>A. Floyd Scott and Ellen Twombly</i> .....	52
Two Larval Odonate Communities of the Edward J. Meeman Biological Station in Western Tennessee. <i>David H. Kesler, Timothy R. Moore, Michael W. Sears, James G. Scherer, Renée A. Pardieck, and Ryan A. Reardon</i> .....	59
Official Constitution and Bylaws of the Tennessee Academy of Science, Inc.....	63
Tennessee Academy of Science New Members 1994.....	70
Obituaries.....	71
Announcements.....	72

---

---

APRIL 1994

# Tennessee Academy of Science

## EXECUTIVE COMMITTEE

<i>President</i> Wilburn A. Sliger Dept. of Biology Univ. of Tennessee, Martin Martin, TN 38238-5014	<i>Past-president</i> George Murphy Dept. of Biology Middle Tennessee State Univ. Murfreesboro, TN 37132	<i>President-elect</i> Diane R. Nelson Dept. of Biology East Tennessee State Univ. Johnson City, TN 37614-0703	<i>Secretary</i> Sarah H. Swain Dept. of Biology Middle Tennessee State Univ. Murfreesboro, TN 37132
<i>Treasurer</i> John W. Harris Dept. of Biology Tennessee Tech. Univ. Cookeville, TN 38505	<i>Director, Visiting Sci. Program</i> Wayne Stevenson Univ. Programs Division Oak Ridge Associated Labs. Oak Ridge, TN 37830	<i>Director, Junior Academy</i> Jack Rhoton East Tennessee State Univ. Box 23020A Johnson City, TN 37614	<i>Director, Collegiate Division</i> Richard Raridon 111 Columbia Drive Oak Ridge, TN 37830
<i>Tennessee Dept. of Education</i> State Science Supervisor Tennessee Dept. of Education Cordell Hull Building Nashville, TN 37243-0379	<i>1992-1994 Member-at-large</i> John R. Freeman Dept. of Biology Univ. of Tennessee, Chattanooga Chattanooga, TN 37403	<i>1993-1995 Member-at-large</i> David N. Lumsden Dept. of Geological Sciences Univ. of Memphis Memphis, TN 38152	<i>1994-1996 Member-at-large</i> T. David Pitts Dept. of Biology Univ. of Tennessee, Martin Martin, TN 38238-5014
	<i>Managing Editor</i> Phyllis K. Kennedy Div. of Ecol. and Org. Biol. Dept. of Biology Univ. of Memphis Memphis, TN 38152	<i>Meeting Coordinator</i> Howard L. Freeman Dept. of Biology Bethel College McKenzie, TN 38201	

## EDITORIAL BOARD

	<i>Managing Editor</i> Phyllis K. Kennedy Div. of Ecol. and Org. Biol. Dept. of Biology Univ. of Memphis Memphis, TN 38152		
<i>Botany</i> James D. Caponetti Dept. of Botany Univ. of Tennessee Knoxville, TN 37916	<i>Cell and Molecular Biology</i> Charles J. Biggers Div. of Ecol. and Org. Biol. Dept. of Biology Univ. of Memphis Memphis, TN 38152	<i>Chemistry</i> David J. Wilson Dept. of Chemistry Vanderbilt Univ. Nashville, TN 37235	<i>Engineering</i> Michael Daley Dept. of Electrical Engineering Univ. of Memphis Memphis, TN 38152
<i>Geology and Geography</i> David N. Lumsden Dept. of Geological Sciences Univ. of Memphis Memphis, TN 38152	<i>History of Science</i> Phillip J. Lorenz Dept. of Physics Univ. of the South Sewanee, TN 37375	<i>Math and Computer Science</i> Kirk Menser Dept. of Math. and Computer Sci. Austin Peay State Univ. Clarksville, TN 37044	<i>Medical Sciences</i> Robert O'Bannon Dept. of Biology Lee College Cleveland, TN 37311
<i>Physics and Astronomy</i> Martha Weller Dept. of Chemistry and Physics Middle Tennessee State Univ. Murfreesboro, TN 37132	<i>Science and Math Teachers</i> Sarah F. Barlow Dept. of Biology Middle Tennessee State Univ. Murfreesboro, TN 37132	<i>Zoology I</i> Gerald L. Vaughn Dept. of Zoology Univ. of Tennessee M313 Walters Life Sci. Bldg. Knoxville, TN 37996-0810	<i>Zoology II</i> 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, 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. Application to Mail at Second-Class Postage Rates is Pending at: Cookeville, TN, and at additional mailing offices. POSTMASTER: Send address changes to Tennessee Academy of Science, c/o Dr. John W. Harris, Department of Biology, Tennessee Technological University, 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.