

JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE

MANAGING EDITOR

M. Gore Ervin
Dept. of Biology, Box 60
Middle Tennessee State Univ.
1500 Greenland Drive
Murfreesboro, TN 37132
Phone: 615-898-2045
FAX: 615-898-5093
E-mail: mervin@mtsu.edu

EDITORIAL BOARD

Botany

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

Ethics in Science and Technology

Norman Tolk
Dept. of Physics and Astronomy
Vanderbilt University
Nashville, TN 37235

Medical Sciences

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

Cell and Molecular Biology

Charles J. Biggers
Dept. of Biology
The Univ. of Memphis
Memphis, TN 38152

Geology and Geography

David N. Lumsden
Dept. of Geological Sciences
The Univ. of Memphis
Memphis, TN 38152

Microbiology

Jon H. Lowrance
Dept. of Biology
Lipscomb Univ.
Nashville, TN 37204

Zoology I

James A. Huggins
Dept. of Biology
Union Univ.
Jackson, TN 38305

Chemistry

Martin V. Stewart
Dept. of Chemistry
Middle Tennessee State Univ.
Murfreesboro, TN 37132

History of Science

George E. Webb
Dept. of History
Tennessee Tech. Univ.
Cookeville, TN 38505

Physics and Astronomy

Martha Weller
Dept. of Physics and Astronomy
Middle Tennessee State Univ.
Murfreesboro, TN 37132

Zoology II

Karl H. Joplin
Dept. of Biological Sciences
East Tennessee State Univ.
Johnson City, TN 37614-0703

Engineering

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

Math and Computer Science

William K. Glunt
Dept. of Math. and Computer Sci.
Austin Peay State Univ.
Clarksville, TN 37044

Science and Math Teachers

Sarah F. Barlow
Dept. of Biology
Middle Tennessee State Univ.
Murfreesboro, TN 37132

INFORMATION FOR CONTRIBUTORS

THE JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE was established in 1925 to publish science-based papers that are of interest to people residing and working in Tennessee. Acceptable topics include biology, chemistry, engineering, geology, geography, history of science, mathematics, computer science, medical sciences, physics, astronomy, and science teaching.

Manuscripts should include a brief but explicit title, and the name, affiliation, and address for each author. All manuscripts must have an abstract consisting of one paragraph of 250 words or less. An introduction (with no heading) follows the abstract and includes the purpose of the study or paper. The text follows the introduction and should be divided by central main headings such as materials and methods, results, and discussion. However, organization of the main headings will vary depending on the discipline. The text should be followed with sections such as literature cited, appendix, figure legends, and tables, as needed. Figure legends and tables should be on a separate page.

Type and double space all materials including abstract, text, literature cited, figure legends, and tables on one side of a substantial grade of standard size (22 × 28 cm) white paper. Leave 2.5 cm margins on all text pages. Do not right-justify, and avoid hyphenated words at right-hand margins. All text to be printed in italics should be typed in italics. Do not use boldface or underline.

Submit three copies of each manuscript, including figures, to the Managing Editor. Manuscripts will be reviewed by at least two appropriate reviewers and are subject to editing. Final acceptance of the paper is decided by the Managing Editor. At least one author of any accepted paper must be a member of the TENNESSEE ACADEMY OF SCIENCE before the paper can be published. A charge of \$45 per printed page is required to help defray the costs of publication. Payment of the total cost of publication (\$90 per printed page) normally will result in early publication. Reprints (in multiples of 100) may be ordered at the time proofs are received. Payment of page charges and reprint costs is expected prior to publication.

Prospective authors can consult a recent *Journal* issue for general style. Detailed instructions are available from the Managing Editor and on the TENNESSEE ACADEMY OF SCIENCE Website (<http://www.tnacadsci.org>). Manuscripts that are not in proper form may be returned to the authors without review.

**INSTITUTIONAL SUSTAINING MEMBERS
OF THE TENNESSEE ACADEMY OF SCIENCE**

Austin Peay State University, Clarksville, Tennessee

East Tennessee State University, Johnson City, Tennessee

Middle Tennessee State University, Murfreesboro, Tennessee

The University of the South, Sewanee, Tennessee

Tennessee Technological University, Cookeville, Tennessee

The University of Tennessee, Martin, Martin, Tennessee

**FUTURE MEETINGS OF THE
TENNESSEE ACADEMY OF SCIENCE**

2003

Joint Meeting with the Tennessee Science Teachers Association
Franklin, Tennessee

2004

Columbia State Community College
Columbia, Tennessee

2005

The University of Tennessee, Martin
Martin, Tennessee