JOURNAL

OF THE

Tennessee Academy of Science

VOLUME LX NUMBER 2 CONTENTS New President of the Proceedings of the Injury to Automobile Paint by Sphaerobolus Yolk Formation in Wood Duck Eggs Notes and New Distributional Records for Several Tennessee Orchids Breeding Birds and Vegetation Along the Duck River in Middle Tennessee A Vegetation-Habitat Study Along a Portion of the North Fork-Forked Deer River in West Tennessee

APRIL 1985

JOURNAL

OF THE

Tennessee Academy of Science

EDITORIAL STAFF

Gus Tomlinson, Editor, TSU, Nashville 37203

Bernard W. Benson, High School Science-Mathematics Editor, UTC, Chattanooga 37402

James D. Caponetti. *Botany Editor*, UT, Knoxville, TN 37916 David Kesler. *Zoology Editor*, Southwestern, Memphis, 38112 George Killough. *Mathematics and Computer Sciences Editor*, ORNL, Oak Ridge, 37830

STUART W. MAHER, Geology-Geography Editor, Kenwill, Inc., Nashville, 37801

JOHN T. MASON. Engineering Editor, TTU, Cookeville, 38505 DONALD R. RAMAGE. Medical Sciences Editor, Belmont, Nashville, 37203

E. SILBERMAN, *Physics-Astronomy Editor*, Fisk, Nashville, 37203 RICHARD SKALKO, *Zoology Eidtor*, ETSU, Johnson City, 37614 DAVID J. WILSON, *Chemistry Editor*, VU, Nashville, 37235

All articles and communications for publications, books, and publications for review, should be addressed to the Editor

New subscriptions, changes of address and applications for membership should be addressed to the Secretary. Personal items, news of events in the scientific world, and other notes suitable for the "News of Tennessee Science" department should be addressed to the Editor.

THE JOURNAL OF THE TENNESSEE ACADEMY of Science is published quarterly, in January, April, July, and October by the Tennessee Academy of Science for all members not in arrears for dues. The subscription price is \$15.00 per year. Single copies of recent issues are \$5.00. Reprints from older (2 years) issues are available from the Biology Dept., Middle Tn. State Univ., Murfreesboro, TN 37132. Whole sets of back issues on microfilm are available from AMS Press, Inc., 56 E. 13th Street, N.Y., N.Y. 10003. Second Class postage paid at Nashville, TN.

THE TENNESSEE ACADEMY OF SCIENCE

(ISSN-0040313X)

(Founded 1912, at Nashville, Tennessee) Affiliated with the American Association for the Advancement of Science

Affiliated Societies

Tennessee Ornithological Society, Nashville, Tennessee Barnard Astronomical Club, Nashville Tennessee Science Teachers' Association Tennessee Psychological Association Tennessee Junior Science and Humanities Symposium

Officers

WILLIAM H. ELLIS. *President*, APSU, Clarksville, 37040 DAVID W. YARBROUGH. *President Elect*, TTU, Cookeville, 38505 GUS TOMLINSON. *Editor*, TSU, Nashville 37203 DIANE NELSON. *Secretary*, ETSU, Johnson City 37601 R. K. FLETCHER. *Treasurer*, TTU, Cookeville 38505

Executive Committee

BERNARD W. BENSON, UTC, Chattanooga 37402
ERNEST W. BLYTHE JR., UTM, Martin 38238
WILLIAM ELLIS, APSU, Clarksville, 37040
THOMAS E. BYRNE, RSCC, Harriman 37748
GERALDINE FARMER, Dept. of Education, Nashville 37219
R. K. FLETCHER, TTU, Cookville 38505
GORDON MORRIS, UTM, Martin 38238
DIANE R. NELSON, ETSU, Johnson City 37601
WILLIAM PAFFORD, ETSU, Johnson City 37601
RICHARD J. RARIDON, ORNL, Oak Ridge 37830
BENJAMIN P. STONE, APSU, Clarksville 37044
GUS TOMLINSON, TSU, Nashville, 37203
ROBERT WILSON, UTC, Chattanooga 37402
DAVID W. YARBROUGH, TTU, Cookeville 38505

NOTICE TO AUTHORS

Manuscripts submitted for publication in the JOURNAL should be sent to the Editor. Manuscripts must be approved by the Editor and an appropriate reviewer before publication. Manuscripts should be submitted in duplicate, typewritten, double spaced with wide margins, and with legends for figures typed on a separate page. Recent issues should be consulted with regard to matters of style. Each table should be placed on a separate sheet. Greek letters and symbols should be avoided as much as possible.

Each paper should be supplied with an abstract not to exceed 250 words.

Photographs (black and white glossy prints) may be accepted as illustrations; however, line drawings and diagrams are preferable. Drawings should be made in India ink on white paper or Bristol Board. An article containing more than 2 illustrations can be published only with financial cooperation of the author.

A per page charge of \$15.00 will be made to all contributors to help defray publication costs.

A blank form for ordering reprints from the printer is enclosed with the galley proof. The cost of reprints is as follows:

	2	4	8	12	16
	pages	pages	pages	pages	pages
100 copies Ea. add. 100	\$28.00	\$48.00	\$91.20	\$112.80	\$134.40
	\$ 4.40	\$ 7.20	\$20.40	\$ 29.50	\$ 38.40

The Tennessee Academy of Science is very anxious to include in its 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.

The annual dues are \$15. For members and fellows except for students and emeritus members whose dues are \$8. Life membership is \$150. Dues may be sent direct with your application to the Secretary.