CONTENTS

Page

Table of Contents, Volume XLIX, 1974 ........................................ 113

Petrology of a Carbonate Core from the Mississippian Pennington Formation: Sand Mountain, Alabama. Alexander MacGregor and Richard E. Bergenback ........... 114

Notes on Crayfishes from the Chickasaw Basin. J. F. Payne and L. A. Riley .................................................. 125

The Land Planarian, Bipalium kewense Mosely, 1878, in Middle Tennessee. Clay M. Chandler ................................................. 128


Studies in the Absolute Configuration of Optically Active Amines Related to Amphetamine and Ephedrine. C. D. Mount, H. E. Smith and R. I. Mani ............ 134

A new record for Necturus maculosus in the Great Smoky Mountains. D. A. Merkle and D. A. Kovacic .............................................. 142

Abstracts of Papers Presented at the Spring Collegiate Meetings .................................................. 143

Index to Volume XLIX, 1974 .................................................. 146

News Items, Awards and Current Events .................................. 124, 148

OCTOBER, 1974
JOURNAL OF THE Tennessee Academy of Science

EDITORIAL STAFF
GUS TOMLINSON, Editor, George Peabody Coll., Nashville 37203
BERNARD W. BENSON, High School Science-Mathematics Editor, The Univ. of Tennessee at Chattanooga 37401
JAMES MASON, Medical Sciences Editor, The Univ. of Tennessee, Memphis 38103
JAMES D. CAPONETTI, Botany Editor, The Univ. of Tennessee, Knoxville 37916
ROY W. CLARK, Physics-Astronomy Editor, M.T.S.U., Murfreesboro, Tennessee 37130
ROBERT GOODRICH, Interim Engineering Editor, Vanderbilt University, Nashville, Tennessee 37203
ROBERT G. LITCHFORD, Zoology Editor, The Univ. of Tennessee at Chattanooga 37403
STUART W. MAHER, Geology-Geography Editor, Tennessee Division of Geology, Knoxville 37919
JOHN T. NETTERVILLE, Chemistry Editor, David Lipscomb College, Nashville 37203
JAMES STACK, Mathematics Editor, Austin Peay State Univ., Clarksville 37040

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.

Published quarterly, in January, April, July and October, by the Tennessee Academy of Science at Box 153, George Peabody College, Nashville, Tennessee 37203.

The JOURNAL is sent to all members not in arrears for dues. The subscription price is $8.00 a year, invariably in advance. Single copies $3.00.

Second Class Postage Paid at Nashville, Tennessee.

THE TENNESSEE ACADEMY OF SCIENCE
(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
ALBERT MYERS, President Elect, Carson-Newman Coll., Jefferson City 37760
ROBERT AMY, President, Southwestern, Memphis 38112
GUS TOMLINSON, Editor, George Peabody Coll., Nashville 37203
JAMES D. CAPONETTI, Secretary, Univ. of Tennessee, Knoxville 37916
ROBERT WILSON, Treasurer, Univ. of Tennessee at Chattanooga, Chattanooga 37403
WINIFRED SMITH, Director, Reelfoot Lake Biol. Sta., at U.T., Martin 38237

This journal is abstracted by Biological Abstracts, Chemical Abstracts, and Nuclear Abstracts, and indexed by Science Citation Index.

NOTICE TO AUTHORS

Manuscripts submitted for publication in the JOURNAL should be sent to the Editor. Manuscripts must be approved by the Editor and the appropriate Section Editor 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. Footnotes should not be used except very rarely. 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 $10.00 will be made to industrial contributors.

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

<table>
<thead>
<tr>
<th>Number of Pages</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>$12.00</td>
</tr>
<tr>
<td>4</td>
<td>$20.00</td>
</tr>
<tr>
<td>8</td>
<td>$38.00</td>
</tr>
<tr>
<td>12</td>
<td>$47.00</td>
</tr>
<tr>
<td>16</td>
<td>$56.00</td>
</tr>
</tbody>
</table>

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 $8.00 for members except teachers below the college level, whose dues are $5.00, student dues are $3.00 and a life membership is $100. Dues may be sent directly with your application for membership to the Secretary.
TABLE OF CONTENTS

VOLUME XLIX, 1974

NUMBER 1, JANUARY

Page
Report of the Director of the Reelfoot Lake Biological Station, Winfred L. Smith .......... 1
A View on the Origin of a Modern State, Clifton C. Carpenter .................................. 2
Semiprime Goldie Rings Satisfy the Invariant (Quasi-) Basis Property, James C. Pleasant .... 8
A Taxonomic and Ecological Study of Some Algae in Two Ponds in South Shelby County, Tennessee, Martha Powell Brown .......... 9
Earth Science Teacher Preparation: A State-Wide Perspective. R. Jerry Rice and James X. Corgan .... 10
Immature Stages of Some Eastern Neartic Tabanidae (Diptera). V. Stenotobanus (Aegialomyia) magnicallis (Stone). James C. Goodwin ............................................. 14
Checklist, Distribution and Key to the Lumbricidae in Tennessee. John W. Reynolds .......... 16
Some Aspects of the Autecology of Bupleurum rotundifolium in Tennessee Cedar Glades. Jerry M. Baskin and Carol C. Baskin .......... 21
Undergraduate Research: It Can Be Done in a Liberal Arts College. Carl Tabb Bahner .......... 24
Effects of Coumarin Upon Plant Growth and Development. Frederick T. Wolf .......... 27
Cockroach Collections from Tennessee (Blattaria: Blattellidae). Frank W. Fisk .......... 36
TAS News Events and Announcements .......... 36

NUMBER 2, APRIL

Page
New President of the Tennessee Academy of Science .......... 37
Proceedings of the Tennessee Academy of Science .......... 38
Abstracts of Papers Presented at the Annual Meeting .......... 47
The Two-Year College: An Historical Sketch of the National and Regional Scenes. James C. Perry, Jr. .......... 60
A Profile of Tennessee Community Colleges. Frank C. Bell, Jr. .......... 62
Science in the Tennessee Community Colleges. Michael A. Dorset .......... 71
Pond and Cage Culture of Channel Catfish in Virginia. Donald W. Holmes, Vaughn M. Douglass and Robert T. Lackey .......... 74
News Items, Awards and Current Events .......... 79, 80

NUMBER 3, JULY

Page
Observations Concerning the Use of Derivative Maps in Comprehensive Community Planning. Phillip R. Kemmerly .......... 95
A Decade of Agricultural Change in Delicias, Chihuahua. H. G. McDowell .......... 100
Ophioglossum crotalophoroides Walt, in Tennessee. R. Dale Thomas and Paul S. Marx .......... 104
An Aquatic Technique for Collecting Small Adult Insects. Morgan E. Sisk .......... 105
Distribution of Chiroptera in Western Tennessee. Frank F. Graves, Jr. and Michael J. Harvey .......... 106
News Items, Awards and Current Events .......... 103, 109, 112

NUMBER 4, OCTOBER

Page
Table of Contents, Volume XLIX, 1974 .......... 113
Notes on Crayfishes from the Chickasaw Basin. J. F. Payne and L. A. Riley .......... 125
The Land Planarian, Bipalium kwensense Mosely, 1878, in Middle Tennessee. Clay M. Chandler .......... 128
Abstracts of Papers Presented at the Spring Collegiate Meetings .......... 143
Index to Volume XLIX, 1974 .......... 146
News Items, Awards and Current Events .......... 124, 148