CONTENTS

Science in the Southern Cultivator, 1839-1840. James X. Corgan .......................................................... 84
Asymptotic Behavior of Total Cross Sections. Ronald E. Mickens .......................................................... 84
First Records of the Giant Beaver (Castoroides ohiensis) from Eastern Tennessee. Paul W. Parmalee and Arthur E. Bogan .......................................................... 87
An Evaluation of Some Cottontail Rabbit Marking Techniques. James R. Brady and Michael R. Pelton .......................................................... 89
Wallows of the European Wild Hog in the Mountains of East Tennessee. Robert C. Belden and Michael R. Pelton .......................................................... 91
Synthesis and Studies of Bacteriostatic Activity of Sulfilimines. Jitendra J. Shah .......................................................... 93
A Survey of Intestinal Helminths in Stray and Domestic Dogs of Rutherford County, Tennessee. Simeon W. Panagatos and Mary C. Dunn .......................................................... 97
Compilation of Electronic f-Values for Diatomic Molecules: 6, 13, 14, 15, 22 and 23 Electrons. Ray Hefferlin, Joe Mashburn, Jorge Flechas and Roger P. Main .......................................................... 100
Occurrence of an Albino Blarina brevicauda from Western Tennessee. Dwight G. Smith .......................................................... 108
Science in the Agriculturist, 1840-1845. James X. Corgan .......................................................... 109
Moth Activity of Heliothis zea (Boddie) in Wisconsin (Lepidoptera: Noctuidae). Baldev S. Mangat .......................................................... 112
Mechanisms of Dissolved Oxygen Depletion in the Thermocline of Center Hill Reservoir, Tennessee. John W. Tibbels, Jr. and Eric L. Morgan .......................................................... 114
TAS News, Events and Announcements .......................................................... 83, 90 and 99

JULY, 1976
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. MAIER, Geology-Geography Editor, Tennessee Division of Geology, Knoxville 37919

ERIC MORGAN, Zoology Editor, Tenn. Tech. Univ., Cookeville 38501

JOHN T. NETTERVILLE, Chemistry Editor, David Lipscomb College, Nashville 37203

JOHN KINLOCH, Mathematics Editor, East Tennessee State Univ., Johnson City 37601

RICK FERGUSON, Editorial Assistant, George Peabody College, Nashville, Tenn. 37203

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, 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

JOHN M. MALLETT, President, University of Tennessee at Nashville, Nashville 37203

RAYMOND L. TANNER, President Elect, Univ. of Tennessee Medical Units, Memphis 38103

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

WINTFRED 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.

Executive Committee

ROBERT L. AMY, Southwestern, Memphis 38112

JOHN H. BAILEY, East Tennessee State Univ., Johnson City 37602

S. K. BALLAL, Tennessee Tech. Univ., Cookeville 38501

JAMES D. CAPONETTI, Univ. of Tennessee, Knoxville 37916

CLAY M. CHANDLER, Middle Tennessee State Univ., Murfreesboro 37130

JULIAN T. DARLINGTON, Southwestern, Memphis 38112

MYRON S. MCCAY, Univ. of Tennessee at Chattanooga, Chattanooga 37403

JOHN M. MALLETTE, Univ. of Tennessee at Nashville, Nashville 37203

RICHARD J. RAYDON, ORNL, Oak Ridge 37831

JERRY RICE, State Dept. of Education, Nashville 37219

WINTFRED SMITH, Univ. of Tennessee at Martin, Martin 38237

RAYMOND L. TANNER, Univ. of Tennessee Medical Units, Memphis 38103

GUS TOMLINSON, George Peabody Coll., Nashville 37203

ROBERT WILSON, Univ. of Tennessee at Chattanooga, Chattanooga 37403

A. PAUL WISHART, The Univ. of Tennessee, Knoxville 37916

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>Pages</th>
<th>2</th>
<th>4</th>
<th>8</th>
<th>12</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$12.00</td>
<td>$20.00</td>
<td>$38.00</td>
<td>$47.00</td>
<td>$56.00</td>
</tr>
<tr>
<td>Ea. add. 100</td>
<td>2.00</td>
<td>3.00</td>
<td>8.50</td>
<td>12.25</td>
<td>16.00</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 direct with your application for membership to the Secretary.