

From the library of  
A. Floyd Scott

**JOURNAL**  
OF THE  
**Tennessee Academy of Science**

---

---

VOLUME XXXII

No. 2

---

---

CONTENTS

	Page
Doctor Isabel Hanson Tipton, 1957 President of the Tennessee Academy of Science .....	89
Earthquakes in Tennessee and Nearby Sections of Neighboring States—1901-1925. Berlen C. Moneymaker .....	91
New Knowledge of the Odonata in Tennessee. Edward J. Kormandy .....	106
Proceedings of the Tennessee Academy of Science for 1956. Donald Caplenor .....	116
News of Tennessee Science. Carl Tabb Bahner .....	145
Report of the Treasurer of the Tennessee Academy of Science for the Calendar Year, 1956. Harris J. Dark .....	146
Analyses of Water Containing <i>Aedes sollicitans</i> in Kentucky. Elbert B. Dixon .....	147
For the High School Science Teacher. John T. Johnson.....	152
Determination of the Duration of Auditory Impression. John Lord .....	152
Electrophoresis in Stabilized Media. W. C. Countess.....	154
A Study of Hybridization in Hamsters. Miner L. Moore .....	155
A Study in Sound. Alvin J. Sanders .....	157
Regeneration in Earthworms. Elizabeth Ann Compton...	159
The Challenge of the Crisis in Science Education. I. E. Wallen .....	162
Book Review, <i>The Study of Plant Communities</i> by Henry J. Oosting. A. J. Sharp .....	168

---

---

APRIL, 1957

# JOURNAL OF THE Tennessee Academy of Science

## EDITORIAL STAFF

- JESSE M. SHAVER, *Editor Emeritus*, George Peabody College for Teachers, Nashville  
HELEN L. WARD, *Editor*, University of Tennessee, Knoxville  
CARL TABB BAHNER, *News Editor*, Carson-Newman College, Jefferson City  
A. C. COLE, *Zoology Editor*, University of Tennessee, Knoxville  
E. D. EAVES, *Mathematics Editor*, University of Tennessee, Knoxville  
JAMES C. BROWN, *Engineering Editor*, Tennessee Polytechnic Institute, Cookeville  
CARL M. HILL, *Chemistry Editor*, Tennessee A and I College, Nashville  
DOUGLAS SHIELDS, *Physics-Astronomy Editor*, Middle Tennessee State College, Murfreesboro  
W. B. JEWELL, *Geology-Geography Editor*, Vanderbilt University, Nashville  
JOHN T. JOHNSON, *High School Editor*, Young High School, Knoxville  
FREDERICK T. WOLF, *Botany Editor*, Vanderbilt University, Nashville
- 

Entered as second class matter at the post office at Knoxville, Tennessee, under Act of August 24, 1912, acceptance of mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, and authorized September 16, 1931.

Published quarterly, in January, April, July, and October, by the Tennessee Academy of Science at Knoxville, Tennessee.

The Journal is sent to all members not in arrears for dues. The subscription price is \$3.00 a year, invariably in advance. Single copies 75c.

All articles and communications for publication, 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 our "News of Tennessee Science" department should be addressed to the News Editor.

---

## 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

### OFFICERS

- ISABEL H. TIPTON, *President*, University of Tennessee, Knoxville  
ARLO I. SMITH, *President-Elect*, Southwestern College, Memphis  
JESSE M. SHAVER, *Editor Emeritus*, George Peabody College for Teachers, Nashville  
HELEN L. WARD, *Editor*, University of Tennessee, Knoxville  
DONALD CAPLENOR, *Secretary*, George Peabody College for Teachers, Nashville  
HARRIS J. DARK, *Treasurer*, David Lipscomb College, Nashville
- 

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. We invite you to join our organization and take part in our activities. The annual dues are: \$3.00 for members and \$10.00 for sustaining members. They may be sent direct with your application for membership to the secretary.

# Vanderbilt University

1957 Summer Session

June 10 --- August 17

**Air Conditioned Rooms for Almost All Classes**

**Summer Session Planned to Meet Needs of**

1. Teachers
2. Students beginning or continuing graduate work.
3. High School graduates who wish to enter college in June
4. College students who wish to speed up work toward degree

**Scholarships for Teachers in Secondary Schools and Colleges**

---

For bulletin with details, write

Director of Summer Session

P. O. Box 1645, Substation B

Vanderbilt University

Nashville 5, Tennessee

## **The Burgess Publishing Co. Presents....**

**classroom tested books**

### **FUNDAMENTAL CONCEPTS OF MATHEMATICS**

Richard H. Moorman, Tennessee Polytechnic Institute

As its title implies, this book deals with the fundamental concepts of mathematics—the function concept, natural, binary and octonary numbers, the nature of proof through inductive reasoning, measurement and the concept of decimal fractions. Excellent for those lacking mathematical background. Copyright 1955; 127 Pages; 8½x11 Size; Photo Offset; Spiral Bound; \$2.75.

### **A LABORATORY MANUAL OF ELEMENTARY PHYSIOLOGY**

Samuel R. Tipton — Helen L. Ward, University of Tennessee

This book is designed to give the student a basic understanding of the functional relations between the various organ systems of the body. A few simple experiments on organ anatomy are included. Suitable for a two-quarter, elementary physiology course. Copyright 1955; 79 Pages; 8½x11 Size; Photo Offset; Spiral Bound; \$2.25.

### **MICROTECHNIQUE: A STUDENT'S GUIDE TO SLIDE-MAKING**

Arthur W. Jones, University of Tennessee, and John M. Carpenter, University of Kentucky

In this book emphasis is placed on student use of several reference works in his preparation of slides. It is a general guide which is easily adaptable to any course in technique. An excellent treatment of microscopy and evaluation of slides is also included. Copyright 1952; 46 Pages; 8½x11 Size; Mimeoprint; Spiral Bound; \$1.75.

### **GENERAL ZOOLOGY LABORATORY GUIDE**

James T. Tanner, University of Tennessee

Six broad topics are considered in this zoological guide: biology of an organism, a survey of the animal kingdom, ecology, cytology, genetics and evolution. Featured are numerous figures and diagrams; specific and general questions allows great flexibility in its use. Copyright 1952; 145 Pages; 8½x11 Size; Photo Offset; Spiral Bound; \$2.50.

You may order these books by mail. We pay the postage when remittance accompanies order.

**Burgess Publishing Company**  
426 South Sixth Street — Minneapolis, Minnesota