

*From the library of
W. H. Floyd Scott*

JOURNAL
OF THE
Tennessee Academy of Science

VOLUME XXXII

No. 4

**THE BIRDS OF
KNOX COUNTY, TENNESSEE**

JOSEPH C. HOWELL
and
MURIEL B. MONROE



OCTOBER, 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
WENDELL HOLLADAY, *Secretary*, Vanderbilt University, 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.

Two Series of Turtox Microscope Slides to Demonstrate Wood Anatomy

Two series of Turtox microscope slides have been prepared to demonstrate wood anatomy. One series consists of thin sections of mature woods; each slide bears a cross, radial and tangential section of one wood. The other consists of whole mounts of isolated and stained cells, secured by completely macerating mature woods. More than fifty of each type are available and the woods so prepared include most of the important timber trees of North America.

For detailed listings of these slides refer to your Turtox Biology Catalog, or write today for lists of Turtox microscope slides of Wood Anatomy.

GENERAL BIOLOGICAL SUPPLY HOUSE, Inc.

8200 So. Hayne Ave.
CHICAGO 20, ILLINOIS

CAROLINA CULTURES

A Dependable Culture Service

Class of:		25	50	75	100
L1	Giant Amoeba proteus	\$2.00	\$3.50	\$4.75	\$6.00
(standard for study)					
L2	Paramecium multimicronucleatum	1.50	2.50	3.25	4.00
(giant form; excellent for laboratory study)					
L220	Planaria maculata or dorotocephala	2.00	3.50	4.75	6.00
(maculata, light colored species, is generally preferred)					

SAME PRICE AS AMOEBA:

P. caudatum	Stentor	Peranema	Spirostomum	Eudorina
P. aurelia	Vorticella	Volvox	Chlamydomonas	Pandorina
	Actinosphaerium		Desmids	Pelomyxa
	Mixed Protozoa		Hydra	

SAME PRICE AS PARAMECIUM:

Euglena	Chilomonas	Euplotes	Copepods	Spirogyra	Elodea
Arcella	Centropyxis	Daphnia	Diatoms	Nitella	Rotifers
	Vinegar Eels			Oscillatoria	

To expedite handling at transfer points in transit all living cultures are shipped Special Delivery same day received, or according to customer's shipping schedule. The above prices include container. Postage and Special Delivery are charged to the customer.

For Drosophila cultures, Tenebrio or "Meal-worms," Aquarium Sets or Assortments, living Frogs, Turtles, Rats, Mice, etc., see our Catalogue number 18.

Cultures of Bacteria and Fungi are also available.

We have a complete line of Preserved Specimens, Microscope Slides, Kodachromes, Dissecting Instruments, etc. Our publications—CAROLINA TIPS and Catalogue number 18—will be sent free upon application.

CAROLINA BIOLOGICAL SUPPLY COMPANY
Elon College, North Carolina

A SCIENCE CURRICULUM

Especially Arranged For Preparing Teachers of Science

The prospective teacher may get a minimum of three years in one science (Biology or Chemistry), two years in a second science, and one year in the third science, with the courses in Psychology and Education required for a teaching certificate, including practice



teaching in science. Graduate work through the master's degree given in biology and chemistry in order to prepare teachers for the larger high schools or for teaching positions in small colleges.

Write for catalogue mentioning the field of your interest to

THE SECRETARY
**GEORGE PEABODY COLLEGE
FOR TEACHERS**

NASHVILLE 5, TENNESSEE