

JOURNAL
OF THE
Tennessee Academy of Science

VOLUME XXVI, NUMBER 2

CONTENTS

	PAGE
DOCTOR CARL TABB BAHNER, NEW PRESIDENT OF THE TENNESSEE ACADEMY OF SCIENCE.....	93
NEWS OF TENNESSEE SCIENCE. C. S. SHOUP.....	94
DR. MOFFATT C. BOYCE, NEW TREASURER, TENNESSEE ACADEMY OF SCIENCE.....	95
DR. MARION LEIGH MACQUEEN, VICE-PRESIDENT, TEN- NESSEE ACADEMY OF SCIENCE, 1950.....	95
THE STICKS REMAINED UNBROKEN. S. L. MEYER.....	97
THE MINUTE STRUCTURE OF HAIR AND CORRELATION WITH MORPHOLOGY, PHYSIOLOGY, AND BEHAVIOR. CLYDE E. KEELER.....	105
REPORT OF THE TREASURER OF THE TENNESSEE ACAD- EMY OF SCIENCE FOR THE YEAR 1950. J. J. FRIAUF....	112
TWO BLACK BASS NEW TO TENNESSEE. WILLIS KING AND JOHN PARSONS	113
THE HAYSCENTEDFERN IN TENNESSEE. JESSE M. SHAVER.	114
THREE STORY MEN. S. L. MEYER.....	117
THE SENSITIVEFERN IN TENNESSEE. JESSE M. SHAVER....	118
WHAT SCIENCE MEANS TO ME. PHYLLIS ALEXANDER.....	127
THE HARTFORDFERN (CLIMBING FERN) IN TENNESSEE. JESSE M. SHAVER.....	128
PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE FOR 1950. ARLO I. SMITH.....	135
NEW MEMBERS OF THE TENNESSEE ACADEMY OF SCIENCE ELECTED AT THE JOHNSON CITY MEETING.....	154
THE CLASSIFICATION OF SAPROPHYTIC MYCOBACTERIA CONSUMING CHOLESTEROL. ANNE O. MUELLER, HERMAN P. SCHMITT, AND GEORGE P. MULLER.....	157
THE TENNESSEE JUNIOR ACADEMY OF SCIENCE. FRANCES R. BOTTUM	162
THE PHILOSOPHY OF THE TWO WORLD SYSTEMS (PTOLE- MAIC AND COPERNICAN) UNDER NEW LIGHT. K. HUFER	164
KEENER JACKSON, JR.....	167

APRIL, 1951

JOURNAL

of the
Tennessee Academy of Science

EDITORIAL STAFF

- JESSE M. SHAVER, *Editor*, George Peabody College for Teachers, Nashville.
HARRY MONK, *Ornithology Editor*, Ovoca Apartments, Nashville.
W. ROGER RUSK, *Physics-Astronomy*, University of Tennessee, Knoxville.
CHARLES S. SHOUP, *News Editor*, Biology Division, U. S. Atomic Energy Commission, Oak Ridge.
M. L. MACQUEEN, *Mathematics Editor*, Southwestern, Memphis.
ELSIE QUARTERMAN, *Botany Editor*, Vanderbilt University, Nashville.
A. C. COLE, *Zoology Editor*, University of Tennessee, Knoxville.
-
-

Entered as second class matter February 12, 1926, at the post office at Nashville, 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 Nashville, Tennessee.

The Journal is sent to all members not in arrears for dues. The subscription price is \$2.00 a year, invariably in advance. Single copies 50c.

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.

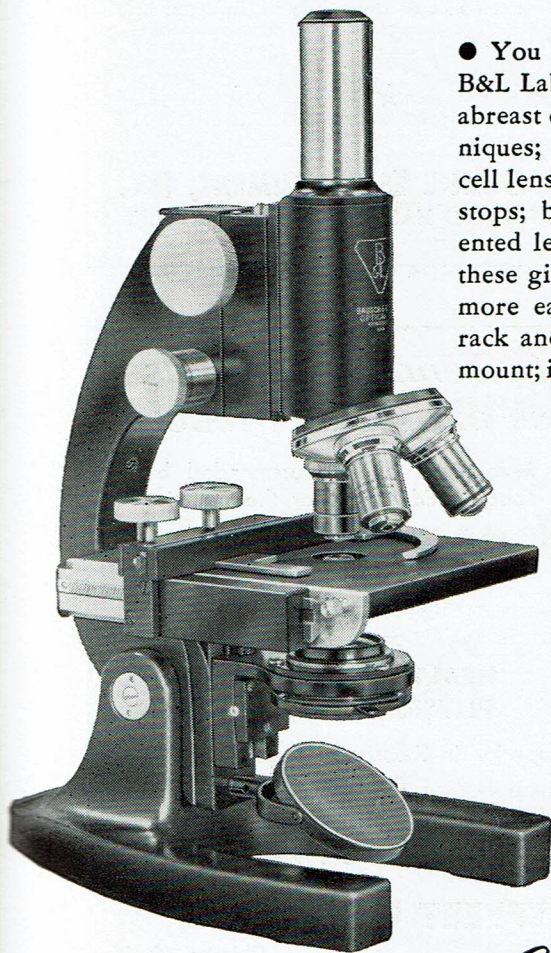
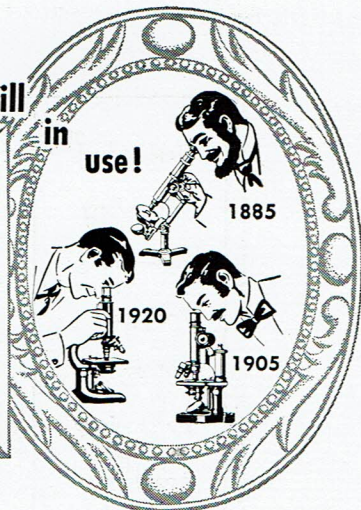
OFFICERS

- CARL T. BAHNER, *President*, Carson-Newman College, Jefferson City.
CARL K. SEYFERT, *Vice-President*, Vanderbilt University, Nashville.
JESSE M. SHAVER, *Editor*, George Peabody College for Teachers, Nashville.
ARLO I. SMITH, *Secretary*, Southwestern College, Memphis.
MOFFAT G. BOYCE, *Treasurer*, Vanderbilt University, 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.

Yesterday's Finest...many still

BUT TODAY you need
Bausch & Lomb "Years Ahead"
design . . .



● You need these *exclusive* advantages of the B&L Laboratory Microscope to help keep you abreast of the latest scientific findings and techniques; variable focus condenser; threadless cell lens mounts; nosepiece with roller bearing stops; bronze body tube dove-tail slide; patented lever fine adjustment. B&L features like these give you the finest quality images, faster, more easily: coarse adjustment with *matched* rack and pinion; substage with full 360° ring mount; integral substage illuminator (optional); Balcoted optical system (optional) to reduce reflection and flare.

See the difference in a demonstration

Let *your own* test prove the smooth-as-silk motion, precise focusing and illumination control, world's finest optical system, and time-and effort-saving convenience of a new B&L Laboratory Microscope.

WRITE for complete information and demonstration to Bausch & Lomb Optical Company, 657-4 St. Paul St., Rochester 2, New York.



Bausch & Lomb *Laboratory* Microscopes

Geology

Mineralogy

Paleontology

Zoology

Botany

Entomology

Anatomy

Embryology

Parasitology

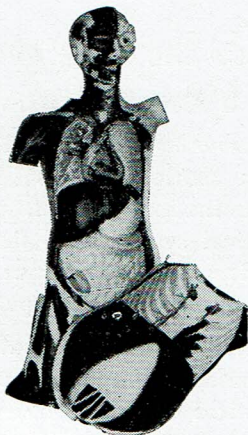
COMPANY TRADITION

WARD's has never lost sight of its role as the "servant" of those engaged in that most exacting and idealistic of professions . . . teaching. Consequently, Ward's workers extend themselves to the utmost in tending the needs and *purposes* of each individual they serve. Hence, the term, "*Ward Quality*" . . . exemplified in the informative bimonthly, *Ward's Natural Science Bulletin*. (Free to high school and college teachers of the natural sciences sending their institutional title and address).



WARD'S NATURAL SCIENCE ESTABLISHMENT, INC.
3000 RIDGE ROAD EAST • ROCHESTER, N. Y.

Every School in Tennessee Needs The D-G Torso and Head Model



Recognized and Recommended by
Leading Educators for the Effective

Teaching of

**ANATOMY
PHYSIOLOGY
BIOLOGY
HEALTH AND HYGIENE
PHYSICAL EDUCATION**

Superior in Accuracy, Appearance and
Construction

In Ordering or Requisitioning
Ask for D-G Y 9 Model

DENOYER-GEPPERT COMPANY

5235 Ravenswood Ave.

Chicago 40, Ill.

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	Euderina	Actinosphaerium
P. aurelia	Vorticella	Volvox	Chlamydomonas	Pandorina	Mixed Protozoa
	Desmids		Hydra		Pelomyxa

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

Turtox Unbreakable Models

of the

Human Torso

Why be satisfied with fragile and easily broken models? All Turtox Human Anatomy Models—including those of the torso and of the complete human figure—are made of pure rubber and are finished in flexible, chip-proof enamels. These superior models will not crack, chip or break, yet they cost no more than ordinary models.

Write for pictures and descriptions.

GENERAL BIOLOGICAL SUPPLY HOUSE
(INCORPORATED)
761-763 East 69th Place
Chicago 37, Illinois

4 *special needs given especial care by*

1951 Summer Session

1. Teachers who want to begin or continue advanced study.
2. College graduates starting or continuing graduate work.
3. High school graduates who wish to enter college now.
4. College students who wish to speed up work toward degree.

June 14 through Aug. 25

*For bulletin with details, write Director of Summer Session,
Box 80*

Vanderbilt University

Nashville 4, Tenn.