

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE

J. T. MCGILL, SECRETARY

Vanderbilt University, Nashville

MEETINGS OF THE EXECUTIVE COMMITTEE AND THE TRUSTEES OF THE REELFOOT LAKE BIOLOGICAL STATION

1936: January 20, Monday. Meeting of the Executive Committee of the Academy and Board of Trustees of the Reelfoot Lake Biological Station in the Social-Religious Building, George Peabody College for Teachers. Present: C. R. Fountain, J. M. Shaver, J. T. McGill, A. F. Ganier, L. J. Bircher, and the resident biologist of the Station, C. L. Baker. Members elected: Marshall T. Litton, science teacher, Oneida High School, Oneida; John Caldwell Campbell, graduate student, Vanderbilt University; Charles Daniel Susano, assistant chemist, TVA laboratory, Knoxville. Report of the treasurer showed available funds of the Academy on December 31, 1935, of \$807.67. Dr. Baker and Dr. Bliss were directed to prepare a Biological Station announcement. An invitation to hold the spring meeting of the Academy at the Tennessee Polytechnic Institute, Cookeville, Tennessee, was accepted.

1936: April 17, Friday. Meeting of the Executive Committee at the Tennessee Polytechnic Institute, Cookeville, Tennessee. Present: C. R. Fountain, J. M. Shaver, L. J. Bircher, J. T. McGill, and C. L. Baker. Members elected: J. H. Dean, President, Knoxville Fertilizer Company, Knoxville; James M. Henderson, Director, Department Industrial Arts, T. P. I., Cookeville; Walter B. Harris, fellow in biology, Vanderbilt University, Gallatin; Norman L. Munn, Professor of Psychology, George Peabody College for Teachers, Nashville; Arthur Stupka, Ranger Naturalist, National Park Service, Gatlinburg. Account of C. L. Fountain for \$18.60 expenses as delegate of the Academy to a meeting held April 3, 1936, at Athens, Georgia, to formulate plans for organization of a Southeastern Division of the A. A. A. S., approved. Salary of C. L. Baker as associate director and resident biologist of the Reelfoot Lake Biological Station for 1936 was fixed at \$300.00 and his recommendation for an allowance of \$150.00 for chemicals and apparatus was approved.

SPRING MEETING OF THE ACADEMY

The thirty-eighth meeting of the Academy was held April 27-28, at the Tennessee Polytechnic Institute, Cookeville, Tennessee. President Fountain presided at the sessions Friday morning and afternoon, and Saturday morning.

PROGRAM OF PAPERS

Dr. George I. Whitlatch (Assistant Geologist), Tennessee Division of Geology, Nashville. Mileposts of Tennessee's Clay Industry.

Dr. R. L. Witherington, M.D., Cookeville. Eye and Ear Health.

Dr. Edna Scofield (Geography), State Teachers College, Murfreesboro. The Evolution of the Double Log House in Tennessee.

Dr. Lyle H. Lanier (Psychology), Vanderbilt University, Nashville. The Operational Basis of Modern Psychology.

Dr. R. O. Hutchinson (Mathematics), Tennessee Polytechnic Institute, Cookeville. The Probability That Grades in a Small Class Will Approximately Fit a Normal Curve.

D. R. Shearer, Manager, Tennessee Eastern Electric Co., Johnson City. Psychometrics in Industry.

N. W. Dougherty (Head, Civil Engineering Department), University of Tennessee, Knoxville. Tennessee Traffic Patterns.

Dr. J. C. Ayers, M.D., Memphis. The Mechanism of New-Growth.

Dr. A. Richard Bliss, Jr., Director, Reelfoot Lake Biological Station. The 1936 Summer Session of the Reelfoot Lake Biological Station.

Dr. Thurman Shipley, M.D., Cookeville. The Need of Federal Legislation to Curb Commercial Exploitation of Scientific Knowledge.

Dr. George M. Hall (Geology and Geography), University of Tennessee, Knoxville. The Exhibition of Fluorescent Minerals at the University of Tennessee.

Dr. Francis G. Slack (Physics), Vanderbilt University, Nashville. Polaroid Plates and Some Possible Uses.

Dr. P. N. Rhodes and J. R. Drake, Jr. (Physics), Southwestern, Memphis. Polaroid, A New Magic Glass.

Dr. Jesse M. Shaver (Botany), George Peabody College, Nashville. A Botanist Takes Up Amateur Photography.

Dr. A. W. Dicus (Physics), Tennessee Polytechnic Institute, Cookeville. The Diffraction Tube, and Some Diffraction Patterns.

J. H. Dean (Botany), Shawnee Woods, Knoxville. Fern Gardening As a Hobby.

Aaron J. Sharp (Botany), University of Tennessee, Knoxville. Interesting Bryophytes of Southern Appalachians.

Dr. Stanley A. Cain and John E. Potzger, University of Tennessee and Butler University (Botany). A Comparison of Leaf Tissues of *Gaylussacia baccata* Grown Under Different Conditions.

Dr. George M. Hall (Geology and Geography), University of Tennessee, Knoxville. Galena in Holston Marble Near Knoxville.

Jere S. Cave and William M. Breazeale (School of Engineering), Vanderbilt University, Nashville. A Vacuum Tube A. C. Bridge Detector.

Dr. Louis J. Bircher (Chemistry), Vanderbilt University, Nashville. Our Changing Concepts of Water and Its Constituents.

G. C. Baughan (Chemistry), Puryear High School. The pH Value of Certain Ceramic Clays.

Dr. Max Winningham (Dentistry), Cookeville. Your Mouth and Your Health.

Charles G. Ransom (Bacteriology), Assistant Director, Litterer Laboratories, Nashville. An Interfering Agent in Human Blood Grouping.

Dr. J. Henry Davis (Biology), Southwestern, Memphis. Plant Communities of Florida.

Dr. Charles S. Shoup (Biology), Vanderbilt University, Nashville. Ovulation in the Frog. A motion picture by Dr. Roberts Pugh, Hunter College, New York City.

Dr. H. M. Jennison (Botany), Smoky Mountains National Park, Elkmont. A Record-sized Mountain Laurel.

Friday evening, after an informal dinner at the Cafeteria, a public meeting was held in the Auditorium. President Q. M. Smith of the Tennessee Polytechnic Institute and Dr. William S. Webb, Head of the Department of Physics, University of Kentucky, spoke. Dr. Webb's subject was *A Discussion of an Archaeological Survey of Norris Basin*.

Saturday afternoon Dr. B. R. Bartoo, of the Tennessee Polytechnic

Institute, led a botanical excursion to Stamps Hollow, a locality in the Cumberland Mountains of special interest to botanists.

MEETINGS OF THE EXECUTIVE COMMITTEE AND THE TRUSTEES OF THE BIOLOGICAL STATION

- 1936: April 27. Meeting of the Board of Trustees of the Reelfoot Lake Biological Station in Furman Hall, Vanderbilt University. Present: Fountain, Shaver, McGill, Shoup, and the resident biologist, Dr. C. L. Baker. On recommendation of Dr. Baker, research scholarships for work at the Station next summer were awarded to Mrs. Louise Caper Baker, Fred Ray Cagle, D. S. Collins, Jr., J. Henry Davis, Jr., J. M. Edney, Susie C. Green, Clarence E. Moore, Malcolm V. Parker, and Wendell Whitemore.
- 1936: May 4. Meeting in Furman Hall. Present: C. R. Fountain, J. M. Shaver, L. J. Bircher, J. T. McGill. The treasurer was directed to approve for payment bills presented and approved by Dr. Baker to the sum of \$400.00 for items under 2, 3, 4, 5, and 6 in his letter of April 29, namely, 2, fundamental laboratory equipment for permanent use; 3, equipment and material used, furnished by Southwestern; 4, incidental equipment for laboratory use purchased by the Associate Director; 5, rental of boats for investigators; 6, keeping in good repair electric gas, and water plant. It was recommended that the disbursements for research scholarships be made monthly; the Associate Director about the middle of each month sending approved bills for that month to the Treasurer to be by him approved and transmitted to the State Game and Fish Department for payment.
- 1936: October 23. Meeting of the Executive Committee in Furman Hall. Present: C. R. Fountain, J. M. Shaver, Albert F. Ganier, L. J. Bircher, J. T. McGill. Fourteen applicants for membership were elected, namely, O. B. Christy, Muncie, Indiana; Brooks D. Drain, Knoxville; Leonard W. Edwards, Nashville; Wm. Henry Gaub, Nashville; W. King Jordan, Nashville; Felix B. Litton, Blacksburg, Virginia; Max Finley Mortimer, Nashville; Fairfax T. Proudfit, Memphis; Hiram Miller Showalter, Bristol; Herman A. Thigpin, Nashville; Hans Thurnauer, Chattanooga; Newton Underwood, Nashville; Mike Wright, Nashville; Leo J. Zuber, Nashville. After consideration of twelve applications for the A. A. S. research grant for 1936, the award was made to Dr. Horace B. Huddle, Professor of Chemistry, State Teachers College, Johnson City, his subject being *The Study of the Oil of the Tennessee Red Cedar* (an analysis of the oil by vacuum distillation and a study of the fractions to find new uses, if possible). Secretary McGill was appointed to represent the Tennessee Academy of Science in the Association Council and in the Conference of State Academies of Science at the meeting of the American Association for the Advancement of Science, Atlantic City, December 28, 1936. Local committees for the meeting of the Academy in Nashville, November 27-28, 1936, were appointed.

FALL MEETING OF THE ACADEMY

The thirty-ninth meeting of the Academy was held on November 27-28, 1936, at Vanderbilt University. President C. R. Fountain presided at the general sessions in Furman Hall Friday morning and afternoon, and Saturday morning. Chairman L. R. Hesler presided at the session of the botanical section in Buttrick Hall, Friday afternoon, and L. J. Bircher presided at the meeting of the Academy in the Andrew Jackson Hotel, Friday evening.

GENERAL SESSIONS

- L. J. Zuber, Tennessee State Planning Commission, Nashville. A Comparative View of Regional Planning.
- H. T. Straw (Geography), State Teachers College, Murfreesboro. Battle Creek, Michigan: A Study in Urban Geography.
- T. M. N. Lewis (Archæology), University of Tennessee, Knoxville. Present Status of Archæological Research in Tennessee.
- J. D. Ives (Biology), Carson-Newman College, Jefferson City. Cave Hibernation of Mosquitos.
- S. A. Cain (Botany), University of Tennessee, Knoxville. The Biological Laboratory of the Long Island Biological Association.
- E. W. Goodpasture and Katherine Anderson (Pathology), Vanderbilt University School of Medicine, Nashville. The Problem of Infection as Presented by Bacterial Invasion of the Chorio-Allantoic Membrane of Chick Embryos.
- R. L. Petry (Physics), University of the South, Sewanee. Animations of Wave Motions.
- Louise C. Baker (Biology), Southwestern, Memphis. Observations on the Life History of *Amphiuma tridactylum*.
- C. L. Baker (Biology), Southwestern, Memphis. (a) Commercial, Game, and Rough Fishes of Reelfoot Lake. (b) Game Laws and Fishing at Reelfoot Lake.
- A. Stupka (Park Naturalist), Great Smoky Mountains National Park, Gatlinburg. The Great Smoky Mountains National Park as a Field for Biological Research.
- W. King (National Park Service), Elkmont. Notes on the Distribution of Native Eastern Brook and Rainbow Trout in the Streams at Great Smoky Mountains National Park.
- A. R. Cahn, Tennessee Valley Authority, Knoxville.
- N. W. Dougherty (Engineering), University of Tennessee, Knoxville. Highway Planning Surveys.
- J. H. Davis, Jr. (Biology), Southwestern, Memphis. Mangrove Vegetation and Land Building in Southern Florida.
- F. L. Wren (Mathematics), George Peabody College for Teachers, Nashville. Calculation of Partial and Multiple Coefficients of Correlation (Preliminary Report).
- C. L. Baker (Biology), Southwestern, Memphis. Report of the Associate Director and Resident Biologist of the Summer Session of Reelfoot Lake Biological Station.

BOTANICAL SESSION

- J. M. Shaver (Biology), George Peabody College for Teachers, Nashville.
- A. Photographic Contribution towards a Study of the Ferns of Tennessee.
- L. G. Charleswirth, Box 310, Route 3, Nashville. A Rapid Method of the Dry Sand Treatment in the Preservation of Flowers.
- M. Wright (Graduate student, Biology), Vanderbilt University, Nashville. Notes on a Recent "Water-Bloom" at Radnor Lake, Davidson County.
- H. M. Jennison (Botanist), Great Smoky Mountains National Park, Gatlinburg. (a) Wild Trilliums of the Great Smoky Mountains National Park. (b) Sketch of the Flora of the Great Smoky Mountains National Park.
- J. E. Smith, Jr. (Floriculturist), Joy Floral Company, Nashville. Experimental Floriculture.
- G. R. Gage (Botany), Vanderbilt University, Nashville. Status of the Dutch Elm Disease for 1936.
- W. D. Billings (Botany), University of Tennessee, Knoxville. (a) A Preliminary Report of the Genus *Solidago* in Knox, Blount, and Sevier Counties. (b) Some Effects of the Removal of the "A" Horizon on the Soil and Vegetation.

W. B. Drew (Botany), University of Tennessee, Knoxville. A Preliminary Report on the Genus *Aster* in Knox, Blount, and Sevier Counties.

S. A. Cain (Botany), University of Tennessee, Knoxville. The Hempstead Plains, Long Island—an Eastern Grassland Vegetation.

T. A. Frick (Biology), State Teachers College, Jacksonville, Alabama. Plant Associations of a South-facing Slope: a Preliminary Report.

C. E. Moore (Biology), State Teachers College, Memphis. The Herbaceous Plants and Vines of the Reelfoot Lake Region.

H. M. Showalter (Biology), King College, Bristol. Mosaic Flowers and Mutable Genes in *Mirabilis jalapa* L.

J. R. Endsley (Biology), Freed-Hardeman College, Henderson. Some Ferns from Decatur County, Tennessee.

FRIDAY EVENING

Academy Dinner (Informal). Andrew Jackson Hotel, Ball Room.
Academy Address. Andrew Jackson Room, Andrew Jackson Hotel. *Radio Gives the Doctor a New Weapon—Ultrasonic Waves*. C. R. Fountain, President of the Academy and Professor of Physics at George Peabody College for Teachers, Nashville.

BUSINESS MEETING

At the close of the reading of papers Saturday morning at eleven o'clock a business meeting was held, a brief account of which follows:

The Secretary-Treasurer, J. T. McGill, reported an increase of twenty members during the year but a slight decrease in income. He stated, however, that it had not been necessary to draw on the reserve fund which amounts to about \$675.00.

Dr. Shaver, Editor of the *Journal of the Tennessee Academy of Science*, made a report in which he emphasized the interest and value of the January (1937) number of the *Journal* in which are to be published the researches at the Reelfoot Lake Biological Station by selected workers under the direction of Dr. C. L. Baker, Associate Director and Resident Biologist.

An amendment proposing that the Executive Committee include in addition to its present personnel, the chairmen of the various sections was prepared by Dr. Stanley Cain and presented by Dr. Jesse M. Shaver.

Resolutions which met with approval were offered by McGill and Bircher in appreciation of the services of Dr. A. Richard Bliss, Jr., as director of the Reelfoot Lake Biological Station, by Ives and Dicus tendering thanks to Vanderbilt University, to President Fountain, to the members of the local committees, to Mrs. R. B. Lynne and Mrs. A. R. Laskey, to the *Banner* and the *Tennessean*, for various and distinct services.

The committee on nominations, Slack and Pond, reported for officers:

Louis J. Bircher, *President*

Peyton N. Rhodes, *Vice-President*

J. T. McGill, *Secretary-Treasurer*

The nominees were unanimously elected, the Secretary casting the vote.

MEETING OF THE EXECUTIVE COMMITTEE

1936: November 27. Meeting of the Executive Committee in Furman Hall, Vanderbilt University. Present: Fountain, Shaver, Rhodes, McGill, and Dr. C. L. Baker, Associate Director and Resident Biologist of the Reelfoot Lake Biological Station. Members elected: Paul J. Arnold, State Teachers College, Jacksonville, Alabama; Dr. Alvin R. Cahn, TVA, Knoxville; Richard L. Caylor, State Teachers College, Cleveland, Mississippi; D. S. Collins, Jr., High School, Union City, Tennessee; Dr. W. P. Fishel, Department of Chemistry, Vanderbilt University; Robert Sugg Fleming, Training School, East Carolina Teachers College, Greeneville, North Carolina; Percy Johnson, Municipal Waterworks, Nashville, Tennessee; Rayburn W. Johnson; Harold C. Jones, Professor of Biology, Berry College, Mount Berry, Georgia; Dr. Amalia Lautz, Department of Chemistry, George Peabody College for Teachers; William Hugh McBride; Ewell B. Pittard; Dr. Harold T. Straw, Professor of Geography, State Teachers College, Murfreesboro; Dr. Frank L. Wren, Department of Mathematics, George Peabody College for Teachers. Dr. Baker presented a report of the work done at the Reelfoot Lake Biological Station during the past summer.

MEETING OF THE BOTANICAL SECTION OF
THE TENNESSEE ACADEMY OF SCIENCE

HAROLD C. BOLD, SECRETARY

Department of Biology, Vanderbilt University, Nashville

The meeting of the Botanical Section of the Tennessee Academy of Science was held in the afternoon of November 27, 1936, in Room 115, Buttrick Hall, Vanderbilt University. The Chairman, Dean L. R. Hesler of the University of Tennessee, presided. Approximately forty persons were in attendance.

The fifteen papers and two demonstrations listed on the printed program were presented during the meeting.

A short business meeting followed the program. Dr. Shaver presented the report of the Committee on By-laws (for the Botanical Section) and moved the adoption of a set of By-laws. These were unanimously adopted by the members of the Section. The Chairman then called for nominations and election of officers for the coming year, as required by the By-laws. Dr. Jesse M. Shaver of George Peabody College for Teachers, Nashville, was unanimously elected to the office of Chairman, and Harold C. Bold of Vanderbilt University, Nashville, to that of Secretary of the Botanical Section. The meeting adjourned at 5:30 P. M.

BY-LAWS OF THE BOTANICAL SECTION OF THE
TENNESSEE ACADEMY OF SCIENCE

(ADOPTED NOVEMBER 27, 1936, AT VANDEBILT UNIVERSITY,
NASHVILLE)

1. The main purpose of the Botanical section is to unite all botanists, or those interested in botany, in Tennessee and nearby states, into a compact group. It is hoped that such a group will foster research in the field and stimulate the younger and the older but less active members into renewed activity.
2. Any member of the Tennessee Academy of Science who evinces interest in plants may be enrolled as a member of the Botanical Section.