

# PROCEEDINGS OF THE ANNUAL MEETING OF THE TENNESSEE ACADEMY OF SCIENCE IN 1934

DR. J. T. MCGILL, SECRETARY

The thirty-fifth meeting of the Tennessee Academy of Science was held in Nashville Friday and Saturday, November 30 and December 1, 1934. In co-operation with the Academy, its affiliated societies, the Tennessee Ornithological Society and the Tennessee Barnard Society held their annual meetings and contributed papers to the program. The sessions were held in Buttrick Hall, Department of Biology, Vanderbilt University. The Botanical Section held a separate meeting Friday afternoon.

Classification of the papers shows anatomy 2, astronomy 2, biochemistry 3, biology 9, chemistry 2, forestry 2, geology 2, meteorology 1, ornithology 1, pathology 1, physics 2, physiology 2, psychology 2. The average of attendance at the meetings was about fifty, but more than one hundred were present to hear the paper by William R. Amberson, of Memphis, on "Haemoglobin-Ringer, a New Substitute for Blood in Mammals" which was illustrated with motion pictures. At the request of the program committee and for the information of the members, Dr. A. Richard Bliss, Director of the Reelfoot Biological Station, read a report which he is to make to the Board of Trustees on the work which was carried on at the station last summer.

President Pond appointed A. F. Gainer and W. B. Jewell, committee on nominations, C. F. Fountain and A. E. Ganier a committee on resolutions.

Friday evening, Dr. Otto Struve, Director of the Yerkes Observatory of the University of Chicago, delivered the Academy address in the War Memorial Auditorium on "Modern Conceptions of the Universe." The address was given under the auspices of the Watkins Institute of Nashville, Judge John H. DeWitt, Chairman of Board of Directors, and the Barnard Astronomical Club of Nashville, Mrs. Roberta Dillon Lyne, President. About sixty members were present at the Academy Dinner at the Andrew Jackson Hotel, the special guests being Dr. and Mrs. Struve and the respective presidents of the Knoxville and Chattanooga Astronomy Societies, Mrs. Lilian C. B. McA. Mayer of Knoxville, and Mr. Jones, of Chattanooga.

## THE BUSINESS MEETING

It was almost noon Saturday morning when President Pond at the completion of the reading and discussion of the papers on the program called the meeting to order for business. The reading of the minutes of the meetings of the Academy and Executive Com-

mittee within the past year was first in order, but the Secretary, to save time and by permission, gave instead a synopsis of the proceedings of the Academy as published in the January and October numbers of the volume nine of the journal and a brief statement of the business transacted at the meetings of the Executive Committee.

The Secretary-Treasurer made a report pertaining chiefly to the membership and the financial status of the Academy. Present membership in several cities and town of Tennessee is: Nashville, 129; Memphis, 79; Knoxville, 30; Chattanooga, 12; Johnson City, 5; Jackson, 5; Murfreesboro, 5; Cookeville, 5; Elizabethton, 5. The record shows changes in membership in four years from 398 in 1931 to 356 in 1934—a loss of 10.56 per cent. A surprising recent change from membership to fellowship in the status of Academy members belonging to the A. A. S. was noted.

The financial statement shows that the savings account is \$516.25; endowment fund, \$113.02; and the checking account, \$159.24, with the cost of the October issue of the Journal, this meeting, and the running expenses of December yet to be paid.

Dr. Sanborn made a motion which was amended and then passed to read that a committee of five be appointed by the president to study the problem of an amendment of the by-laws relating to the method of nominating and electing officers.

The committee on nominations reported for President, Dr. George M. Hall; for Vice President, Dr. William Litterer; and for Secretary-Treasurer, Dr. J. T. McGill.

The nominees were elected.

The committee on resolutions reported:

*Resolved 1.* That the Academy of Science express to Vanderbilt University its deep appreciation for the use of its buildings and facilities which has helped very much to make this such a successful meeting.

*Resolved 2.* That the Academy express to Professor Shoup and other members of the committees having charge of the annual meeting its appreciation of the splendid program prepared.

The resolutions as read were approved.

Adjournment was at 12:45 P. M.

## P R O G R A M

### FRIDAY MORNING SESSION

DR. WALTER F. POND, PRESIDENT OF THE ACADEMY, PRESIDING

The Pre-Chattanooga Development of the Nashville Dome. C. W. Wilson, Jr., (Geology) Vanderbilt University.

Electric Current Analysers—Lamp Board Types. C. R. Fountain, (Physics) George Peabody College for Teachers.

Methods of Obtaining Upper-Air Data. R. M. Williamson, (Meteorology) U. S. D. A. Weather Bureau, Nashville.

The Biological Action of Deuterium Oxide (Heavy Water) in Low Concentrations. Samuel L. Meyer, (Biology) Vanderbilt University.

- The Neural Basis of Cutaneous Sensation. Lyle H. Lanier, (Psychology) Vanderbilt University.
- Food Poisoning Caused by the Staphylococci. William Litterer, M.D., (Bacteriology) Department of Public Health, State of Tennessee, Nashville.
- Bacterial Species in Cultures of *Endamoeba histolytica*. W. McA. Deacon and Amy Breyer, (Biology) Vanderbilt University.
- The Etiology of Mumps. Ernest W. Goodpasture, M.D., and Claud D. Johnson, M.D., (Pathology) Vanderbilt Medical School.
- A New Type Photometer, and Lamp Efficiencies. C. R. Fountain, (Physics) George Peabody College for Teachers.
- Report of the Director of the Reelfoot Lake Biological Station. Dr. A. R. Bliss, Jr., Memphis.

FRIDAY AFTERNOON SESSION  
(GENERAL SECTION)

DR. GEORGE M. HALL, VICE PRESIDENT OF THE ACADEMY, PRESIDING

- The Determination of the Minimum Age at Which *Trichinella spiralis* Larvae Can Produce Trichinosis in Rats. J. Marion Edney, (Biology) State Teachers College, Murfreesboro.
- Inclement Weather as a Factor in Bird Mortality, A. F. Ganier, (Ornithology) Nashville.
- The Emergency Conservation Work of the Tennessee Forestry Service. James O. Hazard, (Forestry) Tennessee Forestry Service.
- Further Remarks on the Work of the Forestry Service. Joel M. Whitney, (Forestry) Tennessee Forestry Service.
- The Intermittent Spring in Greenbrier Cove. George M. Hall, (Geology) University of Tennessee, Knoxville.
- A Study of the Remote Mountain People in the Tennessee Valley. L. R. Wheeler, (Psychology) State Teachers College, Johnson City.
- Sunspottedness. Mrs. Lillian C. B. McA. Mayer, (Astronomy) Knoxville.
- Amateur Astronomical Photography. Latimer Wilson, (Astronomy) Nashville.

(BOTANICAL SECTION)

- DR. G. R. GAGE, PROFESSOR OF BOTANY, VANDERBILT UNIVERSITY, PRESIDING
- A Preliminary Report on the Ferns and Their Allies in Chester County, Tennessee. J. R. Endsley, (Biology) Freed-Hardeman College, Henderson.
- The Ferns of Davidson County. Jesse M. Shaver, (Biology) George Peabody College for Teachers.
- The Nature and Function of the Pyrenoid. Harold C. Bold, (Biology) Vanderbilt University.
- Plant Sociological Studies on Roan Mountain Vegetation. D. M. Brown, (Biology) State Teachers College, Johnson City.
- The Present Status of the Dutch Elm Disease. George R. Gage, (Biology) Vanderbilt University.

Followed by a Round-Table Discussion of Elm Diseases in Tennessee

FRIDAY EVENING

THE ACADEMY DINNER

ANDREW JACKSON, 6:00 P. M.

THE ACADEMY ADDRESS, 8:00 P. M.

MODERN CONCEPTIONS OF THE UNIVERSE

DR. OTTO STRUVE, DIRECTOR,

THE YERKES OBSERVATORY OF THE UNIVERSITY OF CHICAGO

JUDGE JOHN H. DEWITT, NASHVILLE, PRESIDING

SATURDAY MORNING SESSION

DR. WALTER F. POND, PRESIDENT OF THE ACADEMY, PRESIDING

The Effects of X-Radiation on Regeneration in *Amblystoma*. W. O. Puckett, (Biology) Southwestern, Memphis.

Effect of Vitamine A on the Female Reproductive System. Karl E. Mason, (Anatomy) Vanderbilt Medical School.

Some Observations on Cortical Stimulation in the Cat. James W. Ward and Sam L. Clark, M.D., (Anatomy) Vanderbilt Medical School.

Haemoglobin-Ringer, a New Substitute for Blood in Mammals. William R. Amberson, (Physiology) University of Tennessee, School of Medicine, Memphis.

The Effects of Methylene-Blue on the Survival-Time of Hearts Poisoned with Cyanide and Mono-Iodoacetic Acid. A. G. Mulder and H. E. Freedman, (Physiology) University of Tennessee, School of Medicine, Memphis.

The Mechanism of the Antidotal Action of Methylene-Blue in Cyanide Poisoning. William B. Wendel, (Biochemistry) University of Tennessee, School of Medicine, Memphis.

Selenium and Tellurium as Carriers in the Bromination of Benzene. A. A. O'Kelly, (Chemistry) State Teachers College, Murfreesboro.

A Study of the Reduction and Volumetric Estimation of Potassium Perchlorate. J. T. Dobbins and W. M. Mebane, (Chemistry) University of North Carolina and State Teachers College, Murfreesboro.

The Reversal of the Iodine Detoxification of Ricin. Roy C. Avery (Pathology) and Ferrin B. Moreland (Biochemistry), Vanderbilt Medical School.

The Toxicity of Hydrogen Cyanide Gas. J. N. Etteldorf and B. K. Harned, (Biochemistry) University of Tennessee, School of Medicine, Memphis.