

## Journal of the Arkansas Academy of Science

Volume 4 Article 5

1951

# 34th Annual Meeting, 1950. Program

Academy Editors

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## Recommended Citation

Editors, Academy (1951) "34th Annual Meeting, 1950. Program," Journal of the Arkansas Academy of Science: Vol. 4, Article 5. Available at: http://scholarworks.uark.edu/jaas/vol4/iss1/5

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## THIRTY-FOURTH ANNUAL MEETING Mt. Petit-Jean State Park, Arkansas May 5-6, 1950

## FRIDAY MORNING, MAY 5

- 10:00 Registration.
- 11:00 Meeting Call to Order. Welcome by the President of the Academy.
- 11:15 Address: "A Mycologist Views the Individual," Dr. Delbert Swartz, University of Arkansas.

## FRIDAY NOON, MAY 5

12:30 Luncheon. Initial Business Meeting (reading of minutes, announcements, election of new members).

#### FRIDAY AFTERNOON, MAY 5

2:00 Sectional Meetings. Biology; Chemistry; Geology; Mathematics; Physics; Social Research; History (Biography, Genealogy, Methods of Research Sections).

## FRIDAY EVENING, MAY 5

- 6:15 Dinner
- 7:30 Address. "Methods Employed in the Characterization of Viruses," Dr. C. E. Duffy, University of Arkansas Medical School. (Joint meeting with the Society of the Sigma Xi.)

#### FRIDAY AFTERNOON, 2:00 P.M.

#### SECTIONAL PROGRAM

#### BIOLOGICAL SCIENCE SECTION

Chairman: E. A. Spessard, Hendrix College

B-1-

Nature Study, A Stepping Stone to Science. Anna L. Nulph, Belle Grove School, Fort Smith.

B-2-2

The Oran and Branchial Movements of Developing Anuran Embryos and Larvae. James H. Fribourgh, Little Rock Jr. College, Little Rock.

B-3-3

Observations on Mismanagement of Grasslands and Woodlands. Orrin J. Henbest, 601 Forrest Avenue, Fayetteville.

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#### B-4-4

Observations on the Embryonic History of the Germ Cells of the Largemouth Black Bass, Micropterus salmoides salmoides (Lacepede). Perry M. Johnston, Department of Zoology, University of Arkansas, Fayetteville.

#### B-5-5

On the Growth Requirements of Streptobacillus Moniliformis. M. Dumoff and C. E. Duffy, Medical School, University of Arkansas, Little Rock.

#### B-6-6

Preliminary Report on the Hepaticae of Arkansas. Eugene B. Wittlake, Botany Department, University of Arkansas, Fayetteville.

#### B-7-7

New Genera and Species of Oniscoid Millipeds (Desmonidae; Polydesmoidea). Nell B. Causey, Fayetteville.

#### B-8-8

Soil Microorganisms I. A Progress Report. Delbert Swartz, University of Arkansas, Fayetteville.

#### B-9-9

Incompletely Sex-Linked Genes for Head Width in Man. H. W. Kloepfer, The College of the Ozarks, Clarksville.

#### B-10-10

Some New Records for the Arkansas Flora. Dwight M. Moore, University of Arkansas, Fayetteville.

#### FRIDAY AFTERNOON, 2:00 P.M.

#### SECTIONAL PROGRAM

#### CHEMISTRY SECTION

Chairman: P. G. Horton, Henderson State Teachers College

#### C-1-11

Design and Construction of a Calorimeter for the Measurements of the Heats of Vaporization of Volatile Components of Solutions. Robert D. Stallard and Edward S. Amis, Chemistry Department, University of Arkansas, Fayetteville.

#### C-2-12

Paper from Sericea. Maurice E. Barker, Department of Chemical Engineering, University of Arkansas, Fayetteville.

#### C-3-13

The Effect of Brewer's Yeast and of Riboflavin on the Growth Suppression Brought About by a High Level of Glycine and Choline in Rats. Barbara Kelley and Martha Northrup, Department of Biochemistry, School of Medicine, Little Rock.

#### C-4-14

Chemical Effects of Nuclear Transformations. R. R. Edwards and R. F. Overman, Nucleonics Department, Institute of Science & Technology, University of Arkansas, Fayetteville.

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#### **PROGRAM**

C-5-15

The Effects of X-Irradiation on Chicken Bone Marrow Enzymes. James S. Dinning, I. Meschan, and Paul L. Day, Departments of Biochemistry and Radiology, School of Medicine, University of Arkansas, Little Rock.

C-6-16

Vinylogy in Sweetening Agents. W. K. Noyce, C. H. Coleman, Department of Chemistry, University of Arkansas, Fayetteville.

C-7-17

Means of Increasing Fired Strength of Electrical Porcelain. W. J. Smothers, Institute of Science & Technology, University of Arkansas, Fayetteville.

C-8-18

The Methylation of Guanidoacetic Acid by the Rat. Edward M. Popp, James S. Dinning, and Paul L. Day, Department of Biochemistry, School of Medicine, University of Arkansas, Little Rock.

C-9-19

Spectrophotometric Determination of Empirical Formulae. Aubrey E. Harvey and Delmer L. Manning, University of Arkansas, Fayetteville.

#### GEOLOGY SECTION

Chairman: H. B. Foxhall,
Director of Division of Geology
Arkansas Resources and Development Commission

G-1-20

The Relationship Between the Coefficients of Permeability and Storage and the Age of Rocks in the Arkansas Coastal Plain. Harlan B. Counts, U. S. G. S., Ground Water Div., Little Rock.

G-2-21

The Geologic and Hydrologic Problems of the Sparta Formations. Donald B. Tait U. S. G. S., Ground Water Div., Little Rock.

G-3-22

Tripoli of Northwest Arkansas. Denny P. Schafer, Seismograph Service Corp., Tulsa, Oklahoma.

G-4-23

Stratigraphy of the Eastern Part of the Philpot Coal Field. Edward W. McRae, University of Arkansas, Fayetteville.

#### DISCUSSION

G-5-24

Topographic Relation of the Brentwood Limestone. W. D. Diggs, University of Arkansas, Fayetteville.

G-6-25

Para-Ripples in Limestone. V. O. Tansey, University of Arkansas, Fayetteville.

#### DISCUSSION

#### MATHEMATICS SECTION

Chairman: C. L. Perry, University of Arkansas

M - 1 - 26

Fourier Integral Methods in the Solution of the Maxwell-Lorentz, Electromagnetic Field Equations, (Preliminary Report). H. M. Schwartz, University of Arkansas, Fayetteville.

M-2-27

Speaking for Mathematics. John R. Abernethy, Arkansas Polytechnic College, Russellville.

M - 3 - 28

Moment-Generating Functions and Laplace Transforms. James F. Miller, University of Arkansas, Fayetteville.

M-4-29

The Evaluation of the Rate Constants of a Chemical Reaction. Clifton Bob Clark, University of Arkansas, Fayetteville.

M-5-30

On the Elliptic Plate with a Hole. C. L. Perry, University of Arkansas, Fayetteville.

Discussion of College Algebra Courses.

#### PHYSICS SECTION

Chairman: L. B. Ham, University of Arkansas

P-1-31

The Learning Process in the Physics Laboratory. L. B. Ham, University of Arkansas, Fayetteville.

P-2-32

Teacher Training in Demonstration Techniques. J. A. Doughty, University of Arkansas, Fayetteville.

P-3-33

X-Ray Diffraction Study of Water Absorption by Mg (OH)<sub>2</sub>. A. B. Chappelle, D. S. Burgess, and P. C. Sharrah, University of Arkansas, Fayetteville.

P-4-34

Notes Concerning Cloud Chamber Experiments with Positrons. H. M. Schwartz, University of Arkansas, Fayetteville.

P-5-35

Magnetic Deflection of Cosmic Rays. P. C. Sharrah and H. M. Schwartz, University of Arkansas, Fayetteville.

P-6-36

Intensity Determinations of Magnetic Fields by Photoelectric Means. Z. V. Harvalik, University of Arkansas, Fayetteville.

#### PROGRAM 11

#### P-7-37

Determination of Low Energy Beta Spectra by the Gas Multiplication Method. Paul E. Damon, R. R. Edwards, University of Arkansas, Fayetteville.

#### P-8-38

X-Ray Diffraction Study of Pararosaniline Hydrochloride-Palladous Chloride Complex. E. S. Amis, P. C. Sharrah and O. J. Foust, University of Arkansas, Fayetteville.

#### SOCIAL RESEARCH SECTION

Chairman: F. Adler, University of Arkansas

#### S-1-39

The Population Problem of India. Joe C. Shaw, Arkansas State Teachers College, Conway.

#### 5-2-40

Negro Stereotyped Conceptions of the White Liberal. Tilman C. Cothran, A. M. and N. College, Pine Bluff.

#### 5-3-41

The Washington County Mental Health Survey: A Follow-up of Patients Admitted to the Arkansas State Hospital, 1930-48. Leta M. Adler, University of Arkansas, Fayetteville.

#### 5-4-42

The Attitudes of Patients at the United States Public Health Service Center at Hot Springs, Arkansas. Robert A. Anglin, Arkansas A. M. and N. College, Pine Bluff.

#### 5-5-43

Recent Income Trends in Arkansas. Ernest C. Harvey, University of Arkansas, Fayetteville.

#### S-6-44

The Cahinnio Caddo, A Contact Unit In the Eastern Margin of the "Caddo Area." Dr. and Mrs. Thomas L. Hodges, Bismarck.

#### S-7-45

The Elements Delimiting the Boston Mountains of Arkansas as a Geographic Region. O. Orland Maxfield, University of Arkansas, Fayetteville.

#### 5-8-46

Plato and His Significance for Today. J. L. Stone, Arkansas A. and M. College, Pine Bluff.

#### 5-9-47

Veblenian Economics: Does It Represent an Important Contribution to Economic Theory? Herbert F. Klingman, University of Arkansas, Fayetteville.

#### S-10-48

Ethics Cannot be Based on Emotions. Maximilian Beck, Central College, North Little Rock.

#### DISCUSSION

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# HISTORY (BIOGRAPHY, GENEALOGY, METHODS OF RESEARCH SECTIONS)

Chairman: John P. Anderson, Hendrix College, Conway

H-1-49

The Fight for the Pre-emption Law of 1841. S. Lyle Johnson, University of Arkansas, Fayetteville.

H-2-50

The German Social Democracy's View of the Revolutionary General Strike as a Proletarian Weapon Against War. Richard J. Hostetter, University of Arkansas, Fayetteville.

H-3-51

The Workingmen's Parties of 1828-1831. Roman J. Zorn, University of Arkansas, Fayetteville.

H-4-52

Alexander Turrentine and His Descendants. G. R. Turrentine, Arkansas Polytechnic College, Russellville.

H-5-53

Charlotte Stephens, Living Link. Clara B. Kennan, Little Rock Junior College, Little Rock.

H-6-54

Cephas Washburn: The Man and the Puritan. Thomas Alfred DuLaney, Arkansas Polytechnic College, Russellville.

H-7-55

Shall We Improve Rivers for Navigation? Elmer S. Jack, Arkansas State College, Jonesboro.

H-8-56

Home Demonstration Work in Arkansas. Mrs. J. Howard Crawford, Arkansas Council of Home Demonstration Clubs, Arkadelphia.

#### DISCUSSION

#### SATURDAY MORNING, MAY 6, 9:00 A.M.

#### GENERAL MEETING

Chairman: R. H. Austin

1-57

Arkansas' Position in Eastern United States Archaeology. Lynn E. Howard, University of Arkansas, Fayetteville.

11-58

Arkansas Water Resources. Harrison Hale and G. A. Billingsley, University of Arkansas, Fayetteville.

#### PROGRAM

111-59

A Method of Calculating Exposures for Photomicrographs. Harold M. Hefley, University of Arkansas, Fayetteville.

IV-60

Some Botanical Aspects of Petit-Jean Mt. Dwight M. Moore, University of Arkansas, Fayetteville.

V-61

The Need for Additional Training Facilities for Public Welfare Personnel in Arkansas. Sylvia Childs, University of Arkansas, Fayetteville.

VI-62

Adventures in Building a Personal Research Library—On a Shoestring. Mary D. Hudgins, 457 South Border, Hot Springs.

Business Meeting: Treasurer's Report

Report of Standing Committees
Report of Special Committees
Election of Officers for next term
Appointment of Committees
Location of next year's meeting
New business

SATURDAY NOON, MAY 6, 12:15 P.M.

Informal lunche on

SATURDAY AFTERNOON, MAY 6, 1:30 P.M.

Sectional Meeting (Psychology Section)

Arkansas Academy of Science, 34th Annual Meeting adjourned.

SATURDAY AFTERNOON, 1:30 P.M.

#### SECTIONAL PROGRAM

#### PSYCHOLOGY SECTION

Chairman: S. M. Roshal, University of Arkansas

Ps-1-63

Effect of Monochromatic Light on Color Perception. Z. V. Harvalik, University of Arkansas, Fayetteville.

Ps-2-64

Abstract Thinking and Personal Adjustment. Henry N. Peters, Veterans Administration Hospital, North Little Rock.

Ps-3-65

The Estimation of  $O_k$  in the Method of Paired Comparison and Its Application to the Quantification of Reaction Potential. R. H. Burros, University of Arkansas, Fayetteville.

DISCUSSION

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