51st Annual Meeting, 1967. Program

Academy Editors

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PROGRAM

ARKANSAS ACADEMY OF SCIENCE
Fifty-First Annual Meeting
Arkansas State University, Jonesboro, Arkansas

Friday, April 7

9:00 a.m. to 4:00 p.m. REGISTRATION — Senior and Collegiate Academy

9:00 a.m. to 12:00 noon REGISTRATION — Junior Academy

9:30 a.m. EXECUTIVE COMMITTEE MEETING — Senior Academy — Collegiate Academy

10:45 a.m. BUSINESS MEETING — Senior Academy — Collegiate Academy of Science

11:00 a.m. MIXER

12:00 noon to 1:15 p.m. LUNCHEON — Collegiate Academy of Science.
Speaker: Dr. Harry Day, Indiana University.
Topic: "Science and a Liberal Education"

1:30 p.m. to 4:00 p.m. COLLEGIATE ACADEMY — Presentation of papers.

1:30 p.m. to 3:30 p.m. JUNIOR ACADEMY — Business Meeting and Presentation of papers.

3:00 p.m. to 5:00 p.m. SCIENCE EDUCATION SECTION

4:00 p.m. to 5:30 p.m. SCIENCE FAIR

5:30 p.m. to 7:00 p.m. BANQUET — Combined Academies

7:00 p.m. to 8:00 p.m. SCIENCE FAIR AWARDS

8:15 p.m. to 9:15 p.m. ADDRESS — Dr. Harry Day — Indiana University — "From Boron to Zinc in Nutritional Biochemistry"
# PROGRAM

**Saturday, April 8**

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<td>8:30 a.m.</td>
<td><strong>VISITING SCIENTIST</strong> — Conference for &quot;Visiting Scientists&quot;</td>
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<td>9:00 a.m.</td>
<td><strong>SCIENCE TALENT SEARCH PROGRAM</strong></td>
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<td>10:00 a.m.</td>
<td><strong>SECTION MEETINGS</strong> — Senior Academy</td>
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<td>12:00 noon</td>
<td><strong>LUNCH HOUR</strong></td>
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<td>1:00 p.m.</td>
<td><strong>BUSINESS MEETING</strong> — Senior Academy</td>
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<td>2:00 p.m.</td>
<td><strong>SECTION MEETINGS</strong> — Senior Academy</td>
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SECTIONAL PROGRAM

SCIENCE EDUCATION

Chairman: Roy C. Rom
University of Arkansas

"Utilization of Educational TV in Teaching of Science", by Mr. Lee Reaves, Arkansas Educational Television Commission, Conway, Arkansas.

"The Audio-Tutorial Laboratory Program in General Botany at the University of Arkansas", by Dr. O. Meyers and Dr. L. Bailey, University of Arkansas.

"Physical Science for the Nonscientist", by Mr. Denver Prince, State College of Arkansas.

"The University of Arkansas Physical Chemistry Laboratory Program", by Mr. Allen Robinette, University of Arkansas.

"Science Background for Non-Science College Students", by Mr. E. E. Hudson, Arkansas Polytechnic College.

"A Proposal for a CUEBS Conference in Arkansas", by Dr. N. D. Buffalo, State College of Arkansas.

"AC3 Programs for Improving Instruction in Chemistry", by Dr. Renfrew, Guest Speaker from Advisory Council on College Chemistry, Stanford University.

BIOLOGY AND AGRICULTURE

Session I

Chairman: Dr. Eugene B. Whitlake
Arkansas State University

"Thermal Resistance in the Ozark Minnow, Dienda nubila (Forbes)," by Claude Baker.

"Survival of Bacteria in One-molar Sodium Chloride," by Robert E. Bowling.


"The Directions of Nocturnal Bird Migration Along the Northwestern Shore of the Gulf of Mexico," by Bill Forsyth.

"Film Analysis of Agonistic Behavior in Ground Squirrels (Citellus)," by Gene Grubitz III.
Arkansas Academy of Science Proceedings


"Star-dependent Orientation in a Planetarium Exhibited by the White-throated Sparrow, Zonotrichia albicollis (Gmelin)," by Douglas James and Marvin D. Crabb.

"Virus Induced Cataracts," by Ruth Jarman.


"Penstemon wherryi" Pennell (Scrophulariaceae)," by Aileen L. McWilliam.

BIOLOGY AND AGRICULTURE

Session II

Chairman: Dr. Albert E. O'Donnell
Arkansas State University


"Valerianella in Arkansas," by Dwight Moore.

"A Taxonomic Separation of Larvae of the Genus Setophilus (Coleoptera: Circulionidae) by Head Capsule Morphology," by Albert E. O'Donnell and Paul D. Hunkapiller.


"How to Grow Bamboo," by Roy Prewitt.


"Metabolic Changes Induced in Weanling Rats by Feeding Different Levels of Galactose with Two Levels of Corn Oil," by Carolyn Sharp.

"Some Morphological Differences Between Smilax bona-nox and Similax rotundifolia (Liliaceae)," by D. Freeman Thomas.

"A Life History and Predatory Importance of the Striped Lynx Spider," by W. H. Whitcomb.

"The Influence of a Low Protein Diet when fed with Various Sources and Proportions of Carbohydrate and Fat on Metabolic Functions in Rats," by Callie Ann Shull.

CHEMISTRY

Chairman: Dr. J. E. Bennett
Arkansas State University

"Stereochemistry and Mechanism of the Vapor Phase Catalytic Hydrogenation of O-Xylene", by Samuel Siegel and Joseph R. West.

"A Novel Fragmentation Reaction in the Norbornane Ring System", by Laura Skillern and D. E. Gwynn.


"Vaporization Studies of Metal Phthalocyanines", by William McCall and J. E. Bennett.

GEOLOGY

Chairman: Henry N. Halberg
U. S. Geological Survey


"Geomorphic Analogs and Climax Morphogenesis," by H. Filmore Garner, Associate Professor, University of Arkansas.


MATHEMATICS

Chairman: Dr. John W. Keesee
University of Arkansas

“Estimation of Variance Components in Multiway Classification, Mixed Model Situations”, by Margin Place and James E. Dunn.


HISTORY AND POLITICAL SCIENCE

Chairman: Dr. Ronald L. Hayworth
Arkansas College


“William Hope Coin Harvey as a Figure in Richard Hofstadter’s Histories”, by William M. Baker, Texarkana College.

“Conspiracy and Power Politics”, by John E. Guendling, Arkansas Polytechnic College.

PHYSICS

Chairman: Dr. L. A. Mink
Arkansas State University

“Development of a Generally Covariant Wave Equation”, by Alan Wray.

“Premelt Variations of Current, Temperature, and Resistance in Exploding Wires”, by Tom Atwood.

“Production of Hydrogen Atoms in the 3s State by Fast H2+ and H3+ Impact on Inert Gases”, by Everett Stokes and Charles Stigers.

"Small-Angle Scattering of Monochromatic Light in Pulsed Kerr Cells", by James Sanchez and Jack G. Dodd.

"Photo-Induced Changes in the Electric Susceptibility of Lead Azide", by Larry Rowton and Jack G. Dodd.

"Holography with Low-Resolution Media: The Roles of Aperature and Grain", by Landy Doyel and Jack G. Dodd.

"Emission of Potassium Ions by Heated Metal Surfaces: the Mobility of Potassium Ions in Air", by Ronald McMillan and Jack G. Dodd.