

1988

## 72nd Annual Meeting, 1988. Secretary's Report and Financial Statement

Academy Editors

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# PROCEEDINGS ARKANSAS ACADEMY OF SCIENCE

Volume 42

1988

Gary Tucker  
President

Horace Marvin  
President-Elect

Dave Chittenden  
Vice-President/President-Elect

Walt Godwin  
Secretary

Robert Wiley  
Treasurer

James Fribourgh  
NAAS Delegate

Henry Robison  
Historian

## Secretary's Report

### MINUTES OF THE SEVENTY-SECOND ANNUAL MEETING, 1-2 APRIL 1988

#### FIRST BUSINESS MEETING

Gary Tucker, President, called the meeting to order.

Dick Cohoon, Dean of Physical and Life Sciences, welcomed the Academy to the Annual Meeting. Cohoon made several announcements including mentioning the banquet and an open house at the mining institute on campus. He introduced Dr. Jim Ed McGehee, Vice President for Academic Affairs who welcomed the group to Arkansas Tech University.

Walter Godwin, Secretary, presented the minutes of the Seventy-First Annual Meeting. He stated that there were copies in the *Proceedings* and extras at the back of the room. He asked for any corrections to be presented in writing before the Second Business Meeting.

Bob Wiley, Treasurer, presented the Financial Report. He briefly discussed the report and indicated that the Academy is in good financial shape. He indicated that expenses were low for the previous year since no volume of the *Proceedings* was published. An Audit Committee consisting of Leon Richards (Chairman), and Eric Sundell will examine the report. A copy of the report follows.

#### ANNUAL FINANCIAL STATEMENT

##### SUMMARY

(15 MARCH 1987 TO 17 MARCH 1988)

Balance Approved by Audit on 4 April 1987		\$10,495.45
Total Income (Page 2)	6741.60	
Total Expenses (Page 3)	2124.21	
Balance for the Year	4617.39	
<b>TOTAL FUNDS AS OF 17 MARCH 1988</b>		<b>\$15,112.84</b>

##### DISTRIBUTION OF ACCOUNTS

Interest Bearing Checking Account (Union Bank and Trust Co., Monticello, AR)	9180.03
Certificates of Deposit	
Dwight Moore Endowment (1st National Bank of Conway - No. 78940 - 7% Interest)	1077.25
Life Membership Endowment (Heritage Federal Savings and Loan - Monticello - No. 502440 - 7% Interest)	4855.56
Arkansas Academy of Science Endowment - Matured at \$2760.92 on 18 February 1988 - A new CD to be purchased soon. Monies currently in interest bearing checking account.	
<b>TOTAL</b>	<b>\$15,112.84</b>

#### INCOME: 15 March 1987 to 17 March 1988

1. ANNUAL MEETING: RIVERFRONT HILTON, NLR, 3-4 APRIL 1987		768.98
2. INDIVIDUAL MEMBERSHIPS		
a. Regular (191)	2280.00	
b. Sustaining (21)	320.00	
c. Sponsoring (9)	325.00	
d. Life (6)	500.00	
e. Associate (5)	25.00	
Total	3450.00	3450.00
3. INSTITUTIONAL MEMBERSHIPS (14)		700.00
4. PROCEEDINGS, LIBRARY SUBSCRIPTIONS		75.00
5. BIOTA RECEIPTS		130.00
6. INTEREST		
a. Interest Bearing Checking Account	257.87	
b. Dwight Moore Endowment	75.40	
c. AAS Endowment	259.66	
d. Life Membership Endowment	224.69	
Total	817.62	817.62
7. ENDOWMENTS		730.00
8. MISCELLANEOUS		70.00
<b>TOTAL INCOME</b>		<b>\$6741.60</b>

#### EXPENSES: 15 March 1987 to 17 March 1988

1. AWARDS		
a. Kyle J. Weld (#227)	35.00	
b. Seth M. Lovrey (#223)	30.00	
c. Deidra M. Schuckman (#229)	25.00	
d. Hal Palmer (#230)	50.00	
e. Belinda Paybol (#231)	50.00	
f. Arkansas Science Talent Search (#232)	20.00	
g. Arkansas Junior Academy of Science (#233)	200.00	
h. Arkansas Science Fair Association (#234)	200.00	
Total	610.00	610.00
2. MEETING EXPENSES (RIVERFRONT HILTON) (#502)		131.25
3. OPERATING EXPENSES		
a. Secretary's Office (#224, #236)	250.00	
b. Treasurer's Office (#501, #504)	168.66	

## Arkansas Academy of Science

4. NEWSLETTER			
a. Gloria's Printing & Office Supply (#505, #507)	589.74		
b. UALR Biology Department (#506, #508)	126.11		
	-----		
	715.85	715.85	
5. DUES - National Association of Academies of Science (#509)			40.00
6. BIOTA EXPENSES (#237)			126.45
7. MISCELLANEOUS (#225, #226, #235)			82.00
			-----
TOTAL EXPENSES			\$2124.21

## ENDOWMENTS

NAME: DWIGHT MOORE ENDOWMENT  
 PLACE: 1st National Bank of Conway  
 NUMBER: 78940  
 AMOUNT: \$1077.25  
 DATE PURCHASED: 2 January 1987  
 INTEREST RATE: 7% (Interest paid to AAS semiannually)  
 DURATION: 30 Months  
 MATURITY DATE: 2 July 1990

The funds for this CD are derived from money contributed by members and friends of the AAS in memory of Dwight Munson Moore 1891-1985. It is intended that the interest generated from this capital be used to give awards in the name of the honoree. There is no obligation to use all of the interest so that the fund can grow. No provision has as yet been made as to what the awards might be other than they would be in education and would honor outstanding work in the sciences.

NAME: ARKANSAS ACADEMY OF SCIENCE ENDOWMENT  
 PLACE: 1st State Bank and Trust (Conway)  
 NUMBER: 0007-769-4  
 AMOUNT: \$2052.89  
 DATE PURCHASED: 18 February 1985  
 INTEREST RATE: 10% (Interest compounded quarterly)  
 DURATION: 36 Months  
 MATURITY DATE: 18 February 1988

The majority of funds in this CD are unrestricted as to their use. However some funds within the Arkansas Academy of Science Endowment were donated with restrictions as to their use within the following categories: Student Research Awards/Grants, Publications, and Other.

NAME: LIFE MEMBERSHIP ENDOWMENT  
 PLACE: Heritage Federal Savings and Loan Assn. (Monticello)  
 NUMBER: 502440  
 AMOUNT: \$4855.56  
 DATE PURCHASED: 11 March 1988  
 INTEREST RATE: 7% (Interest compounded quarterly)  
 DURATION: 12 months  
 MATURITY DATE: 11 March 1989

The funds for this CD are derived from money paid by members of the AAS for Life Memberships (\$200.00). It is thought that these monies should be kept separate from other monies and perhaps earmarked for some special purpose. As individuals become life members they no longer pay annual dues. Thus it may be desirable to annually remove from this endowment an amount equal to the number of life members x the annual dues and deposit it in the checking account. The additional interest earned would be used for other purposes (education and research). Life members would thus be contributing to the Arkansas Academy of Science long after they have become inactive. Life Memberships would have value not only for the life of the individual, but for the life of the Arkansas Academy of Science.

(NOTE: When CD's mature additional monies collected for that particular CD since investment are added to the maturity amount and reinvested in a new CD.)

Respectfully Submitted,



Robert W. Wiley, AAS Treasurer

Annual Meeting: 1-2 April 1988  
 Arkansas Tech University, Russellville, AR

Jim Peck, Editor of the *Proceedings*, indicated that volume 41 of the *Proceedings* was available. He stated that this volume contained 20 articles and 20 notes of great diversity. He also reminded section chairs be sure to collect papers at the sessions and to turn in those papers. He also indicated that numerous assistant editors were now being used. He mentioned that Volume 40 should go to the printer soon. He presented the following motion:

Mr. President, I move that the Academy appropriate \$500.00 for editorial assistance and \$120.00 for travel for preparation of Volume 42 of the *Proceedings* for the year 1988.

The motion was seconded and will be voted on at the Second Business Meeting.

John Rickett, Editor of the Newsletter, indicated he will be retiring after the Second Business meeting. He thanked the members for their support. He stated that the Executive Committee has voted to continue the "membership drive" with the additional copies of the Fall Newsletter. He presented the following motion:

Mr. President, I move that the Arkansas Academy of Science commit \$750.00 to the production and mailing of the two Newsletter issues for the Academic Year 1988-89.

The motion was seconded and will be voted on at the Second Business Meeting.

Mike Rapp, Director of the Arkansas Science Fair Association, reported on the Science Fair. He stated that there were seven regional fairs and the state fair held this year. He thanked the Academy for both judging assistance and financial support. He presented the following motion:

Mr. President, I move that the Arkansas Academy of Science provide \$200.00 support to the Arkansas Science Fair Association for distribution among the seven regional science fairs and the state science fair.

The motion was seconded and will be voted on at the Second Business Meeting.

Mike Rapp reported for Paul Krause concerning the Arkansas Junior Academy of Science. He described the activities of the Junior Academy and mentioned that the Junior Academy now has an Executive Committee. He presented the following motion:

Mr. President, I move that the Arkansas Academy of Science provide \$250.00 support to the Arkansas Junior Academy of Science.

The motion was seconded and will be voted on at the Second Business Meeting.

John Peck, Director of the Arkansas Science Talent Search, reported on the results of this year's Talent Search. His report follows.

Following is the list of high school seniors who placed in the 37th Annual Arkansas Science Talent Search 1987-88, held in conjunction with the 47th Annual Westinghouse Science Talent Search.

## First Place

David Pearce Gillson 7500 Dover Place Fort Smith, AR 72903	Improving Air Flow Uniformity in a Lumber Predryer Fort Smith Christian School Sponsored by Mr. John Deaton and Mr. Charles Besancon
--	--

## Second Place

Jeffery Chi Wei Koay P.O. Box 1842 Pine Bluff, AR 71601	Newcomb's Paradox and Its Implications on Free Will Pine Bluff High School Sponsored by Mr. Jerrel Boast
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## Third Place

Dionne Leigh Baxter Route 1, Box 699R Batesville, AR 72501	Is Curia Creek Really Polluted? Batesville High School Sponsored by Mr. Paul Reynolds
--	---

## Secretary's Report

He presented the following motion:

Mr. President, I move that the Arkansas Academy of Science provide up to \$120.00 to the Arkansas Science Talent Search for the purpose of plaques for the three award winners for 1987-88.

The motion was seconded and will be voted on at the Second Business Meeting.

President Tucker reported for Tom Palko, Director of the Arkansas Junior Science and Humanities Symposium. He stated that the Symposium went very well this year with good participation.

President Tucker reported that Horace Marvin, President-Elect, had resigned due to health reasons. The Executive Committee has moved Dave Chittenden, Vice President, to President-Elect. Tucker expressed regret that Marvin had found it necessary to resign and also expressed appreciation for his service this year.

Glynn Turnipseed, Chairman of the Nominating Committee, presented the nominees for Vice President and President-Elect. The nominees for Vice President were Peggy Rae Dorris, Henderson State University, and Arthur Johnson, Hendrix College. The nominees for Vice President were Robert Watson, UALR, and George Harp, Arkansas State University.

Leo Paulissen reported on the Biota Survey. Combined checklists are available for \$10.

President Tucker announced that the Resolutions Committee will consist of Bill Shepherd and Rick McDaniel.

President Tucker announced that the location of the 1989 meeting will be the University of Arkansas for Medical Sciences and that the location of the 1990 Meeting will be Arkansas State University. There is also a tentative invitation from the University of Arkansas at Fayetteville for 1991.

Robbin Anderson, Chairman of the Science Education Committee, reported that there would be a committee meeting later in the afternoon.

President Tucker asked for old business and none was presented.

President Tucker asked for new business. Dick Spears expressed two ideas for Academy consideration. First, he asked if there were any representatives from 2-year institutions present. There were none. He suggested that the Executive Committee should try to generate more involvement from 2-year institutions. Secondly, he suggested that the Academy should have a representative at meeting of the Board of Higher Education. No action was taken on these suggestions.

President Tucker encouraged section chairs to keep their sections on time and to be sure to pick up papers for publication. He also stated that judges were needed for the undergraduate papers and asked for volunteers.

President Tucker adjourned the First Business Meeting.

### SECOND BUSINESS MEETING

Gary Tucker, President, called the meeting to order.

Walter Godwin, Secretary, moved the approval of the minutes of the Seventieth Annual Meeting as distributed with no corrections. The motion was seconded and passed.

President Tucker repeated his statement from the first meeting that Horace Marvin had resigned and that Dave Chittenden had been

moved from Vice President to President-Elect by the Executive Committee. He also repeated the report from Glyn Turnipseed, Chairman of the Nominating Committee, indicating that the nominees for Vice President were Peggy Rae Dorris, Henderson State University, and Arthur Johnson, Hendrix College and that the nominees for Vice President were Robert Watson, UALR, and George Harp, Arkansas State University. Arthur Johnson asked that his name be removed from consideration and nominated Richard Spears. The nomination was seconded. It was moved, seconded and passed that the nominations cease. Ballots were distributed and collected. A report of the results appears later in these minutes.

Robert Wiley, Treasurer, indicated that the additional copies of the Treasurer's Report were available and discussed it briefly. He moved that the Treasurer's Report be approved. The motion was seconded. Edward Richards, Chairman of the Audit Committee, presented the following report from the Audit Committee.

The Audit Committee on reviewing the Treasurer's Financial Statement, books and records for 1987-88 find everything to be in order and correct. We recommend the Treasurer's Report be accepted and extend to Dr. Robert Wiley our thanks and congratulations for excellent and accurate record keeping.

Respectfully submitted,  
Edward L. Richards, Chairman  
Eric Sundell

It was moved and seconded to accept the report of the Audit Committee. The motion passed. The initial motion concerning acceptance of the Treasurer's Report passed.

The motion presented at the First Business Meeting by Jim Peck, Editor of the *Proceedings*, to allocate \$500 for editorial assistance and \$120 for travel for the *Proceedings* for next year was passed.

The motion presented at the First Business Meeting by John Rickett, Editor of the Newsletter, to allocate \$750 for the Newsletter for next year was passed.

The motion presented at the First Business Meeting by Mike Rapp, Director of the Arkansas Science Fair Association, to provide \$200 support to the Arkansas Science Fair Association for next year was passed.

The motion presented at the First Business Meeting by Mike Rapp for Paul Krause, Director of the Arkansas Junior Academy of Science, to provide \$250 support to the Arkansas Junior Academy of Science for next year was passed.

The motion presented at the First Business Meeting by John Peck, Director of the Arkansas Science Talent Search, to provide up to \$120 to the Arkansas Science Talent Search for the purpose of plaques for the three award winners for 1987-88 was passed.

Henry Robinson, Historian, reported that this was the 72nd Annual Meeting and that it was the fourth time the Academy had been hosted by the Arkansas Tech University.

Ed Bacon reported for the Development Committee. He mentioned the Development Brochure which had been developed and distributed the past year. He reported that there was \$5000 in the general Endowment Fund and \$1100 in the Dwight Moore Endowment Fund. He thanked members for their support and encouraged additional contributions. He stated that development efforts would continue.

Leo Paulissen reported on the Biota Survey. A compilation of about 50 checklists is now available.

Robbin Anderson, Chairman of the Science Education Committee, mentioned increasing needs in the education area and especially in

## Arkansas Academy of Science

teacher education. He stated that the committee had no specific recommendations but that it will keep in contact with the Academy.

President Tucker reported on the undergraduate awards. He reported that the awards had been won by:

## Physical Sciences:

J.G. Ross - UCA

Measurements of the Drag on Spheres Falling Through the Air.

## Life Sciences: tie

Luke Eggering - Arkansas Tech University

Autumn Diets of White-Tailed Deer in Arkansas

Yvette Randle - UAPB

*Strongyloides stercoralis*: Immunobiological Studies of an Unusual Worm.

Dick Spears reexpressed two ideas for Academy consideration. First, he asked if there were any representatives from 2-year institutions present. There were none. He stated that there are 10 such schools in the state, three of which are affiliated with 4-year schools. He suggested that a project be undertaken to encourage participation from these schools. Secondly, he suggested that the Academy should have a representative at meeting of the Board of Higher Education since the board directs education in the state. It was decided that the Executive Committee should consider these proposals.

Dave Saughey stated that a preliminary list of herptiles of the State Parks had been completed. Copies of this list are available.

President Tucker announced the results of the election. Robert Watson was elected Vice President and Dick Spears was elected President-Elect.

Bill Shepherd, Chairman of the Resolutions Committee, moved the adoption of the following resolution.

Be it resolved:

The members of the Arkansas Academy of Science express their gratitude to Arkansas Tech University for hosting the Academy's 1988 meeting. In particular, the Academy thanks Richard Cohoon, Dean of Physical and Life Sciences, who was in charge of local arrangements, and the entire faculty of Cohoon's school, who assisted in various ways. Appreciation is expressed to all who helped provide comfortable and convenient facilities and an excellent banquet. Dr. Warren H. Wagner's outstanding banquet address on endangered species was a highlight of the meeting, and the Academy is grateful to the ATU office of Academic Affairs for underwriting the cost of bringing him to Russellville.

The Academy appreciates the work of the various section chairmen and recognizes the important role they played in the conduct of the meeting. They are as follows: O. D. Smith (Agronomy/Forestry), Harlan McMillan (Aquatic/Environmental I), John Martin (Biomedical/Microbiology I), Gerald Hutchinson (Botany), Robert Allen (Chemistry I), Victor Vere (Geology/Earth Science), Robbin Anderson (Science Education I & II), Glyn Turnipseed (Vertebrate Zoology I), Bruce Shackelford (Aquatic/Environmental II), Scott Kirkconnel (Biomedical/Microbiology II), William Trigg (Chemistry II), Raymond Couser (Invertebrate Zoology), Mostafa Hemmati (Physics/Mathematics), and Tom Nelson (Vertebrate Zoology II).

The Academy expresses gratitude to the various directors of the science youth activities supported by the Academy:

Robbin Anderson, the Science Education Committee; Mike Rapp, Director of the Arkansas State Science Fair; Tom Palko, Director of the Junior Science and Humanities Symposium; Paul Krause, the Arkansas Junior Academy of Science; John Peck, Director of the Arkansas Science Talent Search; Leo Paulissen, the Biota Committee; and Ed Bacon, the Development Committee.

The Academy is only as successful as its leadership in planning, working, and directing the various activities. To Gary Tucker, President; David Chittenden, President-Elect; Walter Godwin, Secretary; Robert Wiley, Treasurer; Ed Bacon, Past-President; Jim Peck, *Proceedings* Editor; John Rickett, outgoing Newsletter Editor; and Henry Robison, Historian, the Academy expresses gratitude and thanks for an excellent year.

The Academy expresses thanks and encouragement to continue in Advanced Scientific, Inc., the Arkansas Geological Commission, Jacobs Instrument Co., the Ozark Interpretive Association, S & S Scientific Co., and Sargent-Welch Scientific Co. for their exhibition booths at the meeting.

The Academy recognizes with appreciation the work of Ed Bacon, Rose McConnell, and Mike Rapp for their efforts on the Student Awards Committee, Glyn Turnipseed, William Evans, and Henry Robison for their work on the Nominating Committee, and Victor Vere and William Guest as tellers.

The Academy is appreciative for design and art work to the ATU Art Department, program cover; Jim Edson, plaques; and Calvin Cotton, calligraphy on student awards.

Finally, the Academy expresses fond remembrance and regret in the deaths of two of its members, Maxine Clark and Delzie Demaree.

The motion was seconded and passed.

President Tucker announced that there would be a group picture taken after adjournment of the business meeting.

President Tucker announced that meetings have been scheduled for the next three years. The Academy will meet at the University of Arkansas for Medical Sciences in 1989, at Arkansas State University in 1990, and tentatively at the University of Arkansas at Fayetteville in 1991.

President Tucker expressed appreciation for the help he has received in the past year.

President Tucker presented a plaque to John Rickett in recognition of six years service as Newsletter Editor.

President Tucker called on President-Elect Dave Chittenden and passed the gavel to him.

President Chittenden invited all members to UAMS for next year's meeting.

President Chittenden presented Past-President Tucker with a plaque in recognition of his year of service.

President Chittenden asked that a representative from each institution or organization pick up copies of the *Proceedings* for those not in attendance.

It was moved, seconded and passed to adjourn the meeting.

Respectfully submitted,

Walter E. Godwin  
Secretary



## Secretary's Report

## REGULAR

- Stephen R. Addison  
Syed M. Aljaz  
Bob Allen  
Robert T. Allen  
Slike Huffnagel Allen  
John T. Annulis  
Robert K. Bacon  
Owen Barber  
Sara Mills Barnett  
Adolphina M. Basford  
John Kenneth Beadles  
Ann Marie Benson  
C. Bhuvaneshwara  
Veryl V. Board  
Harilyn D. Bocksnick  
Laurence J. Boucher  
William R. Bowen  
Robert E. Bowling  
Leo H. Bowman  
Jitemy D. Bragg  
Marge A. Brewster  
John F. Bridgman  
Arthur V. Brown  
Connell J. Brown  
Helen G. Brown  
Richard H. Brown  
Charles T. Bryant  
Charles T. Bryant, Jr.  
Neal D. Buffalo  
Michael Cartwright  
John S. Choiniski, Jr.  
Frances E. Clayton  
Malcolm K. Cleaveland  
Lorris G. Cockerham  
Richard R. Cohoon  
George W. Colton  
Robert M. Cordova  
Bob W. Cowling  
Fred Dalske  
James J. Daly  
James T. Daniels  
Stanley N. David  
Leo Carson Davis  
Robert H. Dillard  
Peggy Rea Dorris  
Lee Lee Doyle  
Benjamin T. Duhart  
Danny J. Ebert  
Tammy Kay Ebsen  
Rudolph J. Eichenberger  
Thomas K. Ekman  
Hudson B. Eldridge  
Don England  
Lawana England-Whaley  
Carole R. Engle  
Claude E. Epperson  
Wilbur W. Everett  
Steve Filipek  
Sheldon Fitzpatrick  
E. P. Floyd  
Thomas L. Foti  
Paul B. Francis  
Winefred Fraser  
Jack Gaiser  
Joe P. Gentry  
Thomas E. Goodwin  
D. Leroy Gray  
Donald C. Greenland  
B. R. Griffin  
Gaston Griggs  
Tyrrel C. Grohman  
Mark Gross  
William C. Guest  
Jim Gullden  
Rao P. Gullapalli  
Paul D. Gwinup  
Bruce Haggard  
Earl L. Hanabrink  
B. J. Hankins  
Richard H. Hanson  
George L. Harp  
Jarvis Harper  
John L. Harris  
Calvin J. Haskins  
Mustafa Hemmati  
Larry Hinck  
Maxine R. Hite  
Art Hobson  
John R. Hodges  
Kathy M. Holobar  
Kay Holtman  
E. E. Hudson  
Jim Huey  
Joe Jeffers  
Michael I. Johnson  
Jay Justice  
Phillip L. Kehler  
Scott Kirkconnell  
Maurice G. Kieve  
Richard Klueder  
University of Central Arkansas  
University of Arkansas at Pine Bluff  
Arkansas Tech University  
University of Arkansas  
Hendrix College  
University of Arkansas at Monticello  
University of Arkansas  
University of Central Arkansas  
Texas Education Agency & UT-Austin  
Henderson State University (Retired)  
Arkansas State University  
University of Arkansas for Medical Sciences  
University of Arkansas for Medical Sciences  
Arkansas College  
Arkansas Tech University  
Arkansas State University  
University of Arkansas at Little Rock  
University of Arkansas for Medical Sciences  
Arkansas Tech University  
Henderson State University  
University of Arkansas for Medical Sciences  
University of the Ozarks  
University of Arkansas  
University of Arkansas  
University of Arkansas  
Ouachita Baptist University  
Water Resources Associates of Arkansas  
Water Resources Associates of Arkansas  
University of Central Arkansas  
Arkansas Game & Fish Commission  
University of Central Arkansas  
University of Arkansas  
University of Arkansas  
NCTR Associated Universities  
Arkansas Tech University  
Arkansas Geological Commission  
Cordco Consulting  
University of Central Arkansas  
University of Arkansas for Medical Sciences  
SAU - Tech  
Arkansas State University  
Southern Arkansas University  
Univ. of Ark. Cooperative Extension Service  
Henderson State University  
University of Arkansas for Medical Sciences  
University of Arkansas at Pine Bluff  
U. S. Forest Service  
University of Arkansas at Little Rock  
Southern Arkansas University  
Southern Arkansas University  
University of Central Arkansas  
Harding University  
Arkansas State University Alumnus  
University of Arkansas at Pine Bluff  
University of Arkansas for Medical Sciences  
Ouachita Baptist University  
Arkansas Game & Fish Commission  
University of Arkansas at Pine Bluff  
U. S. Public Health Service (Retired)  
Arkansas Natural History Commission  
University of Arkansas at Monticello  
Arkansas College  
University of Central Arkansas  
Arkansas Science & Technology Authority  
Hendrix College  
Univ. of Ark. Cooperative Extension Service  
U. S. Fish & Wildlife Service  
U. S. Fish & Wildlife Service  
John Brown University  
University of Arkansas for Medical Sciences  
University of Arkansas Graduate Institute of  
University of Arkansas  
University of Arkansas at Monticello  
University of Arkansas at Little Rock - GIT  
Arkansas State University  
Hendrix College  
Arkansas State University  
Univ. of Ark. Cooperative Extension Service  
University of Arkansas at Little Rock  
Arkansas State University  
Alcoa  
Arkansas Highway & Transportation Department  
Arkansas Game & Fish Commission  
Arkansas Tech University  
Arkansas State University  
University of Arkansas  
University of Arkansas at Little Rock  
Everglades National Park  
University of Arkansas at Little Rock  
Arkansas Tech University  
University of Arkansas at Monticello  
Ouachita Baptist University  
Nettleton High School  
Arkansas Dept. of Pollution Control & Ecology  
University of Arkansas at Little Rock  
Arkansas Tech University  
University of Arkansas at Little Rock  
University of Arkansas at Monticello  
Richard A. Komoroski  
Randall A. Kopper  
Walter A. Korfmacher  
Timothy M. Kral  
Jack C. Krele  
Timothy T. Ku  
Forrest E. Lane  
Danny L. Lattin  
Kwang Lee  
Linda A. Lee  
Thomas J. Lynch  
Chris T. McAllister  
Clark W. McCarty  
Rose McConnell  
Harlan McMillan  
Walter E. Meshaka, Jr.  
Lawrence A. Mink  
Richard S. Mitchell  
Leland F. Morgans  
G. J. Musick  
Paul Hove  
Nathaniel Nehus  
Thomas Nelson  
W. Donald Newton  
William F. Nicholson  
Joe Nix  
Timothy J. O'Brien  
Kelly H. Oliver  
Derrick M. Osterhuis  
Tom Palko  
Bryan D. Palmer  
Leo J. Paulissen  
Mark A. Paulissen  
John E. Pauly  
Ernest J. Peck  
John D. Peck  
Carlos H. Pennington  
Jacob R. Phillips  
Robert A. Pierce  
Albert B. Pittman  
Michael V. Plummer  
Harold Pray  
Denver L. Prince  
Paul L. Raines  
Michael W. Rapp  
Derik J. Reed  
Ruby S. Reynolds  
Edward L. Richards  
Donald Rickard  
Peggy Root  
Perry C. Rothrock, III  
S. Jeffery Scott  
John A. Sealander  
Elwood B. Shade  
William H. Shepherd  
Samuel Siegel  
Dewey H. Sifford  
Buria J. Sims  
Sidney Skinner  
Tom Slattion  
Erwin B. Smith  
Kimberly G. Smith  
Roy J. Smith, Jr.  
Frederick W. Spiegel  
Kenneth F. Steele  
Stan Steight  
Ann H. Steinmeir  
T. W. Steward  
Nathan Stone  
Joseph Sylvester  
Sandy Tedder  
Lyell Thompson  
Dan Timmerman  
Les Torrans  
Stanley E. Trauth  
William W. Trigg  
Renn Tumison  
Tom Turner  
Glyn Turnipseed  
Victor Vere  
Tito Viswanathan  
David L. Vosburg  
George H. Wagner  
Joel T. Walker  
Robert L. Watson  
G. J. Weidemann  
Wendy Welch  
Laurin Wheeler  
Marion C. Wicht, Jr.  
T. Bentley Wigley  
James T. Willcutt  
William M. Willingham  
Rebecca L. Willis  
Edmond W. Wilson, Jr.  
Duane C. Wolf  
Robert D. Wright  
William V. Wyatt  
Chia C. Yang  
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Arkansas State University  
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