

ARKANSAS ACADEMY
OF SCIENCE 2007



APRIL 13-14, 2007
91ST ANNUAL MEETING

Arkansas Tech University
(Lake Point Conference Center)
Russellville, Arkansas

JOURNAL ARKANSAS ACADEMY OF SCIENCE

ANNUAL MEETING 13-14 APRIL 2007
LAKE POINT CONFERENCE CENTER
ARKANSAS TECH UNIVERSITY

David Saugey
President

Collis Geren
President-Elect

Jeff Robertson
Secretary

Mostafa Hemmati
Treasurer

Mostafa Hemmati
NAAS Delegate

Henry Robison
Historian

Secretary's Report MINUTES OF THE 91ST MEETING

ARKANSAS ACADEMY OF SCIENCE
91ST ANNUAL MEETING
SUMMARY OF 1ST and 2ND BUSINESS MEETINGS
Arkansas Tech University (Lake Point Conference Center)
April 13-14, 2007

1. With tiny taps of the ceremonial gavel, David Saugey, President of the AAS called the meetings to order.
2. Historian: Henry Robison, SAU: submitted a report that the spring meeting on April 13-14, 2007 is the 91st Annual meeting of the Arkansas Academy of Science. This meeting marks the sixth time the Academy has met on the Arkansas Tech University campus in Russellville, Arkansas. The other years were: 1960, 1970, 1977, 1988, and 1999.
3. Secretary: Jeff Robertson, ATU: The minutes from 2006 Executive Committee business meeting in November 2006 were distributed and approved. These minutes will be going on the AAS website. Prior to this meeting, the current membership list included approximately 115 members (49 which are life members) of the Academy along with 14 institutional members.
4. Treasurer/Auditor: Mostafa Hemmati, ATU: The "books" maintained by the Academy Treasurer were reviewed by Joyce Hardin and David Saugey and found to be good financial records kept with excellent integrity and showing no inconsistencies or irregularities. (The financial status of the Academy is an Appendix found elsewhere in this JAAS volume for review).
5. *Journal* Editor-in-Chief: Stan Trauth, ASU: I am pleased to report that the printing of Volume 60 of the *Journal* has gone quite smoothly this year. I changed publishing duties from PinPoint Color of Jonesboro, AR, to Bank & Business Solutions, 1208 Falls Street, Jonesboro, AR 72401, under the tutelage of Roger Williams (1.800.442.2108), a long-time publisher of the *Journal*. His on-line address www.printformance.com can be accessed for purchasing of CDs and PDFs of the *Journal* articles. A total of 185 copies was produced at a cost of \$9,512.37. An additional 35 copies costing \$1600 are going to be ordered to provide for membership errors. Also, an extra \$300 was included in the total cost because of formatting issues associated with articles incorporating mathematical equations (see below). Revised manuscripts were provided the William's publishing team (hereafter, BBS) via CD and hard copy in October and November, 2006. PDFs were

generated for each accepted manuscript by Jeremy Baker of BBS and provided to me in a timely manner. Submitting PDFs by BBS has greatly enhanced the editing process. Formatting problems did arise in some articles that contained mathematical formulae and equations. (I urge authors submitting manuscripts using lengthy mathematical equations to generate those materials into a 1-column format.) The final galley of the *Journal* was submitted for publication on March 22, 2007. I ask for continued support of \$600 for the Editorial Assistant and \$200 for the Editor-in-Chief. And, as a reminder to the Executive Committee, 2007 (Volume 61) of the *Journal* will be my last official year as Editor-in-Chief. I will have served 15 consecutive years as either the Managing Editor or Editor-in-Chief of the Academy.

6. *Journal* Managing Editor: Chris T. McAllister, Managing Editor-JAAS: There were 37 manuscripts submitted (for comparison 31 were submitted last year, an increase of 17%) for consideration of publication in volume 60 (2006) of the *JAAS* at the Batesville meeting in April 2006. All 37 papers were sent out for review.
 - Papers were sent out in early summer to reviewers and Assoc. Editors and returned between July-September 2006. There was some tardiness in getting back a couple of reviews, as usual. One reviewer (I will not mention their name) did not send back a review at all, even after three friendly reminders to do so.
 - An Asst. Editor read mss. for style, grammar, format, etc.
 - Authors were then contacted via letter by me in Sept. or October 2006 as to whether their paper was accepted tentatively and needed minor or major revision or whether their paper was outright rejected.
 - Authors were asked to turn the revision around in 48-72 hours, and send back to Dr. Stan Trauth, Editor-in-Chief, by late October/early November 2006, preferably by overnight mail.
 - Four (11%) of the mss. were **outright rejected**. These did not report any new information or were in need of additional supportive data. All reviewers noted this important necessity and I concurred. Two other papers simply did not report publishable data.
 - Numerous papers only needed **minor revision** and were in pretty good shape. In fact, I have noticed an improvement over the last few years in authors paying closer attention to style and format of the journal, and that has helped Stan and me tremendously.
 - The breakdown of submitted papers and their general topics were as follows:
 - o Invertebrates/insects = 5 (**2 were rejected**)
 - o Fisheries/Ichthyology = 5

- o Amphibians = 1 (rejected)
- o Reptiles = 1
- o Birds = 2
- o Bats = 2 (1 was withdrawn)
- o Other Mammals = 1
- o Engineering = 1
- o Biorefineries = 1
- o Botany = 4
- o Forestry = 2
- o Geography (GPS) = 1
- o Chemistry = 4
- o Physics = 3
- o Mathematics = 1
- o Science Education = 1 (rejected)
- o Parasitology = 2

Note: There were no geology, astronomy, medical, or biochemistry papers this year.

- Page proofs from the Editor-in-Chief were forwarded to me for examination in late January 2007 and I made initial corrections on all before sending them out to authors in early to mid-February 2007. We requested they be returned to Dr. Trauth within a 1 week turnaround time. Authors were also informed how to order PDFs of their article from the printer, Roger Williams at Printformance <http://www.printformance.com/JAAS/>
- Corrected proofs were returned to Dr. Trauth for further processing and inclusion in the journal. Authors were informed how to order PDF's from the printer.

I want to sincerely thank the following Associate/Assistant Editors for their help in processing manuscripts:

Dr. Robert Engelken, ASU

Dr. Walt Godwin, UAM

Joy Trauth, ASU

Finally, I want to re-remind the committee and the remaining AAS membership that Dr. Trauth and I plan to step down from our editorial positions in April 2008 and hope that a search for our replacements will be in order soon. We will handle manuscripts submitted at the 2007 Russellville meeting and follow them to completion in volume 61 of *JAAS*.

7. Arkansas Science Fair Association: Mark Bland, UCA: The state science fair is in its 53rd year and the annual winners go to an international fair that has 1000 students from 40 countries competing. The Association replaced retiring director Micheael Rapp with Mark Bland this year. A request and approval was obtained for \$400 dollars to support the Arkansas Science Fair Association.
8. Junior Academy of Science: The Junior Academy has a new director, Nolan Carter and their program was completed the week before this spring meeting. They requested and were given \$250 to support awards for the Junior Academy.
9. Arkansas Science Talent Search: Will Slaton, UCA: The Arkansas Science Talent Search provides statewide recognition of outstanding research by Arkansas High School students. The program mirrors the national Intel Science Talent Search (ISTS). In years past the ISTS sent applications it received to state directors for separate statewide recognition. However, this is no longer the case and we must now advertise the award and solicit applications ourselves.

The Arkansas Science Talent Search (ASTS) has engaged in the following activities this year:

- Developed a website to advertise the ASTS (<http://faculty.uca.edu/~wvslaton/ASTS/>)
- Sent electronic announcements to the K-16 Arkansas Science Educator ListSrv: (<http://listserv.uark.edu/scripts/wa.exe?A0=SCIENCE>)
- Received two application submissions, judged to be worthy of 1st and 2nd place.
- Winners will present their research on April 6th at the Arkansas Science Fair.
- Winners will receive certificates and a cash award. I expect to award the 1st place winner with \$100 and the 2nd place winner with \$50.

Activities to be pursued in the coming year include:

- Investigate award co-sponsors (UCA's College of Natural Science and Mathematics)
- Coordinate with the Arkansas Center for Mathematics and Science Education (<http://www.arkansasmath.com/>) and the Arkansas Department of Education (<http://arkedu.state.ar.us/>) to better advertise the ASTS and increase the number of applications received
- Update the ASTS website with pictures & info of the 2007 winners

10. Junior Science and Humanities Symposium: Linda Kondrick, ATU: presented highlights from the 41st annual JSHS symposium and the 30th year hosted on the Arkansas Tech University campus (<http://pls.atu.edu/jshs>). The National JSHS Office supports five students and the director to attend the 45th National JSHS program in Huntsville, AL. Because of the generosity of our contributors, Arkansas will be able, once again, to send a sixth delegate. Our regional first and second place winners will be presenting their papers at the National JSHS Symposium. First place winner, Theresa Edattukaren of Little Rock Central High School will present her work on "Studies of a Compound Having the Potential to Reverse Diabetic Cataracts." Second place winner Intisar Islam of Little Rock Central High School will present his work on "Potential Chemo-preventative Properties in Relation to Polyphenolic Contents of Bitter Melon Varieties." Others who placed in this competition are listed in Table 1 at the end of this report. There were six winners in each the Large and Small School Divisions of the JSHS Research Poster contest. They are listed in Table 2 at the end of this report. Other highlights include the expansion of the geographical areas represented by Arkansas JSHS delegates this year. We had participation from two new schools. Lisa Academy in Little Rock, AR had three students chosen to present their papers. Nettleton High School in Jonesboro, AR had one student chosen to present an original paper. That student took third place in the competition. We also had two other schools to return to participation this year: Drew Central High School located in Dumas, AR, and GCT from the Delaplaine, AR campus. Both of these schools entered students in the research poster competition. Drew Central High School claimed five of seven cash prizes awarded in the small School division. Goals for 2008 are twofold. One is to continue to increase the participation of schools from diverse regions of the state. The second is to raise the quality of the papers and poster submissions through teacher education workshops which will target the development of research topics and through more explicit guidelines for content and format of

student submissions. Thanks again to Arkansas Academy of Science helping to make JSHS 2007 an unqualified success. The 42nd Arkansas JSHS is set for March 14-16, 2008. We respectfully request a \$100 grant from The Academy of Science to promote this symposium.

11. Local Organizing Committee: The LOC chair, Jeff Robertson reported that the meeting had a potential record attendance with 200 participants. There were 35 poster presentations, 28 of those made by undergraduate and graduate students. There were 89 oral presentations with 52 of those made by students.

12. Committee Reports:

- a. Biota Committee: Doug James: relayed that the Biota lists are now scanned and online access is available.
- b. Development Committee: Betty Crump: Since Collis Geren has a handle on the scanning of the Journals, and pending our discussion on conversion to an on-line journal, this Committee is turning efforts towards developing a draft of an appropriate scholarship/award program. We expect it to be fairly open-ended at this point, but we want to come up with a list of potential scholarships/awards that are significant enough to attract new researchers, as well as experienced researchers that are not participating in the AAS. We welcome ideas on the subject, and need a conservative ballpark budget to work with. Linda Kondrick has been working on membership recruitment ideas and has revised the e-poster to use next year. She suggests that for next year, we send out three versions by e-mail: 1. To current members, 2. To lapsed members, and 3. To prospective members both in Arkansas and in surrounding states near the venue of the 2008 meeting. We need to identify all new prospects in the state (Jeff did that this year) and send them an invitation to participate. We need to do this when the first call for papers goes out, or even earlier. Linda also suggests that we identify prospects in surrounding states that are fairly close to next year's meeting site, and send them similar invitations. Other ideas are welcome as well.
- c. AAAS: Mostafa Hemmati reported that students benefited from memberships to the AAAS and that he did not attend the national meeting due to time and budget but may request funding for attendance of national meeting at fall Executive Committee.
- d. Science Education Committee: Tillman Kennon replaced Mostafa Hemmati as chair of the science education committee.
- e. Arkansas Science Teachers Association: Tillman Kennon thanked the Academy for their continued support of the Science fair and the Jr. Academy. ASTA is in their 50th year. They have completed science lab safety training for 212 teachers in 150 school districts throughout the state.

13. New Business:

- a. The JAAS Editor-in-Chief and Managing Editor are retiring! It is paramount for the Academy to find replacements for these critical positions soon. The time to think is now about what the journal needs are going to be and any changes necessary about how the publication of the journal is handled.
- b. The nominations committee announced candidates they solicited for positions of Vice President. As there were no additional nominations from the floor, Scott Kirkconnell was voted in by acclamation for V.P.

- c. Desires were expressed by members to have the Academy:
 - i. develop close contacts at each institution and promote the Academy. Department Chairs and Deans from science programs at each school should be educated and informed more about the Academy and the Journal,
 - ii. develop a strategy to have the old journals scanned electronically and available to the members online,
 - iii. find a way to reinstate journal distribution to student members,
 - iv. A motion to obtain a permanent, recognizable web address (e.g. www.ARKAcademyofScience.org or www.ARKAcadSci.org) for ~\$10-20/year from an appropriate service provider was approved along with the movement of the ACTUAL physical location of the web pages content from UAM (Walt Godwin) to ATU (Jeff Robertson).
- d. Renn Tumilson announced the dates of the 92nd Annual meeting as April 11-12, 2008 on the Henderson State University campus in Arkadelphia, Arkansas to be jointly hosted with the Arkansas Undergraduate Research Conference. Locations for 2009 and beyond are solicited.
- e. An annual budget (not including costs associated with JAAS publication and the Annual Meeting expenses) was presented to the membership and approved. This included \$3,800 for:

I. Sponsored Student Awards for AAS affiliations	
i. Arkansas Science Talent Search (Will Slaton, UCA)	\$150
ii. Arkansas State Science Fair Association (Mark Bland, UCA)	\$400
iii. Arkansas Academy of Science annual meeting student awards	\$1000
iv. Science Café Sponsorship (Linda Williams, UAMS)	\$100
v. Arkansas Junior Academy (Nolan Carter)	\$250
vi. Junior Science and Humanities Symposium (Linda Kondrick, ATU)	\$100
II. Correspondences	
i. JAAS Managing Editor	\$750
ii. JAAS Editor In Chief plus Editorial Assistant	\$800
iii. Newsletter and Secretary	\$250
TOTAL	\$3,800
- f. Motion to create a membership committee, either an ad-hoc one or to have the Executive Committee look into presenting a change to the AAS constitution and by-laws for the membership was approved.
- g. Resolutions for the annual meeting were read to the membership (see Resolutions).

14. Closing: New president Collis Geren accepted the ceremonial gavel from outgoing president David Saugey making him Past-president, Joyce Hardin President-elect and Scott Kirkconnell Vice-president.

Meetings adjourned.

Jeff Robertson, AAS Secretary

Secretary's Report

**ARKANSAS ACADEMY OF SCIENCE
2007 FINANCIAL STATEMENT**

BALANCE - January 2, 2008	\$43,000.06
BALANCE - January 4, 2007	\$37,953.06
NET GAIN	\$5,047.00

DISTRIBUTION OF FUNDS

Checking Account Bank of Ozarks, Russellville, AR	\$2,371.40
Certificate of Deposit Life Membership Endowment Bank of Ozarks, Russellville, AR	\$13,000.00
Dwight Moore Endowment Bank of Ozarks, Russellville, AR	\$5,628.66
Phoebe and George Harp Endowment Bank of Ozarks, Russellville, AR	\$7,000.00
Unrestricted Bank of Ozarks, Russellville, AR	\$6,000.00
Short Term CD Bank of Ozarks, Russellville, AR	\$4,000.00
Short Term CD Bank of Ozarks, Russellville, AR	\$5,000.00
TOTAL	\$43,000.06

INCOME:

1. ANNUAL MEETING	\$0.00
2. INTEREST	\$1,705.03
3. JOURNAL	
a. Miscellaneous Sales	\$3,315.00
b. Page Charges	\$9,034.99
c. Dr. Moser's PDF Charges	\$65.00
	\$12,414.99
4. JOURNAL CONTRIBUTION	\$1,340.00
5. MEMBERSHIP	
a. Associate	\$15.00
b. Individual	\$2765.00
c. Institutional	\$2,500.00
d. Life	\$850.00
	\$6,130.00

6. MISCELLANEOUS INCOME

a. Check from ATU to balance the meeting expenses.	\$46.29	
		\$46.29
TOTAL INCOME		\$21,636.31

EXPENSES:

1. STUDENT AWARDS

a. Mathew LeMay	\$100	
b. David Harlan	\$50	
c. Josiah Walton	\$50	
d. Hunter Valls	\$100	
e. Blair Smyth	\$50	
f. Brandon Peoples	\$50	
g. Toby Ward	\$100	
h. Eric Nelson	\$50	
i. Lindsay Bradshaw	\$50	
j. Adam Cox	\$25	
k. Paige Henry	\$25	
l. Joseph Holthoff	\$12.50	
m. Chaela Sickbert	\$12.50	
n. David General	\$50	
o. Sene Gebre	\$12.50	
p. Edwin Muldreww	\$12.50	
		\$750.00

2. AWARDS

a. Junior Science and Humanities Sym.	\$100	
b. Arkansas State Science Fair	\$400	
c. Arkansas Junior Academy of Science	\$250	
d. Arkansas Science Talent Search	\$150	
e. Science Café Sponsorship	\$100	
		\$1000.00

3. JOURNAL

a. Journal Expenses - Stan Trauth	\$200	
b. Journal Expenses - Chris McAllister	\$750	
c. Journal Charges, First 185 Copies	\$9,512.37	
d. Journal Expenses - Joy Trauth	\$600	
e. Journal Mailing Cost - Stan	\$33.45	
f. Dr. Moser's PDF Charges	\$65	
g. Journal Charges, Second 35 Copies	\$1,835.69	
h. Journal Mailing Cost, Hemmati	\$2.79	
		\$12,999.30

4. MEETING EXPENSES

\$46.29

5. MISCELLANEOUS EXPENSES

a. Jeff Robertson - Web Service Expenses	\$133.00	
b. Dues to the NAAS	\$64.10	
		\$197.10

TOTAL EXPENSES

\$14,992.69

APPENDIX A

2007 AAS Award Winners

ORAL PRESENTATIONS

GRADUATE STUDENT AWARDS

Poster Awards

1st Place David General / UAM
List of Ants at the Arkansas Post National Memorial.

2nd Place Sene Gabre and Edwin Muldrew / UCA
Estrogen metabolites elicit a greater arterial relaxation than estrogen.

Life Science

1st Place Toby M. Ward / UAMS
Recombinant varicella vaccines express respiratory syncytial virus antigens and are immunogenic in vivo.

2nd Place Eric Nelson / UA
Populations and habitat selection of small mammals in the tallgrass prairies of northwestern Arkansas.

3rd Place Lindsay Bradshaw / UAMS
Does RNA metabolism play a role in recombination?

UNDERGRADUATE STUDENT AWARDS

Poster Awards

1st Place Adam Cox and Paige Henry / UCA
2-Methoxyestradiol's attenuation of vascular spasms.

2nd Place Joseph Holthoff and Chaela Sickbert / Hendrix
Genetic analysis of a histone h3 mutant in yeast and its effects on transcription elongation.

Life Science

1st Place J. Hunter Valls / Harding
Intermittent Hypoxia in Eggs of *Ambystoma maculatum*: Embryonic Development and Egg Capsule Conductance.

2nd Place Blair Smyth / UAM
Habitat Factors Affecting Trap Success of Swamp Rabbits.

3rd Place Brandon Peoples / ATU
Fluctuations in Zebra Mussel Densities.

Physical Science

1st Place Matthew LeMay / ASU
Liquid Solution Deposition of Zinc Oxide Films For Optoelectronic Applications.

2nd Place David Harlan / ASU
Photoconductance in Tungsten Sulfide-Polymer Composition Films.

3rd Place Josiah Walton / UA
Quasar Variability With The NFO Webscope.

APPENDIX B

RESOLUTIONS

Be it resolved that we, the membership of the Arkansas Academy of Science, offer our sincere appreciation Arkansas Tech University for hosting the 91st annual meeting of the Arkansas Academy of Science. We thank the Local Arrangements Committee: Chair Jeff Robertson, the faculty of ATU School of Physical and Life Sciences and all of the student workers and staff, particularly Rosemary Page and Valli Wanzer, who collectively contributed to such a successful meeting. Appreciation is expressed for the use of these superior meeting facilities at ATU Lake Point, and the hospitality shown to us by Michael Roys, Chip Porter and their staff. We especially thank our Keynote Speaker, Dr. Kenneth Kelton for his participation presentation entitled "The Nucleation of First Order Phase Transitions: Fahrenheit to Arctic Fish." We thank Arkansas Tech University for their donations to the Social and Banquet, which were both excellent and thoroughly enjoyed by all. We thank ATU President Dr. Robert Brown for hosting the AAS and his welcome.

The Academy recognizes the important role assumed by Session Chairs and expresses sincere appreciation to: Eric Lovely (Biology I), Wilson Gonzalez-Espada (Science Education), Anwar Bhuiyan (Chemistry), Scott Kirkconnell (Molecular Biology and Physiology), Scott Austin (Astrophysics), Joe Winstead (Plant Biology), George Johnson (Botany Symposium), Ivan Still (Cell and Molecular Biology), Dan Bullock (Physics and Engineering), Don Bragg (Biology II) and Tsunemi Yamashita (Aquatic Zoology). We also recognize the contributions of the Judges who facilitate student participation and awards, in particular Bruce Tedford and Linda Kondrick who directed these efforts. The judges were Eric Lovely, Charlie Gagen, Grover Miller, George Johnson, Tom Nupp, Umadevi Garimella, Islam Shahidul, Robert Weih, Derek Sears, Dan Bullock, Salomon Itza, Brent Hill, Ivan Still, Russell Nordeen, Anwar Bhuiyan, Scott White, Abul Kazi, Linda Williams, Scott Austin, Mostafa Hemmati, Tsunemi

Yamashita, Karen Fawley, Don Bragg, William Shephard, Lawrence Mwasi, Jackie Bowman, and Scott Kirkconnell.

We gratefully acknowledge the various directors of the science and youth activities which are supported or supervised by the Academy: Mostafa Hemmati, Science Education Committee; William Slaton, Arkansas Science Talent Search; Nolan Carter; Junior Academy of Science; Mark Bland, Arkansas Science Fair; and Linda Kondrick, Arkansas Junior Science and Humanities Association. We wish to thank all those who served as directors at Regional Science Fairs and Junior Academy Meetings.

We very much appreciate Walt Godwin for maintaining the Academy website.

We congratulate all who presented papers and posters at this meeting. Student participants are especially recognized since their efforts contribute directly to the future success of the Academy and the improvement and advancement of science in Arkansas. We thank the Arkansas Environmental Federation for supporting the student competition.

The continued success of the Academy is due to its strong leadership. We offer sincere thanks to our officers for another excellent year: David Saugey (President), Collis Geren (President-Elect), Joyce Hardin (Vice-President), Stan Trauth (Past-President), Jeff Robertson (Secretary), Mostafa Hemmati (Treasurer), Stan Trauth (*Journal* Editor-in-Chief), Chris McCallister (*Journal* Managing Editor), Jeff Robertson (Newsletter Editor), and Henry Robison (Historian).

Respectfully submitted this 14th day of April, 2007.

Resolution Committee
Joyce Hardin and Jeff Robertson

Arkansas Academy of Science

2007 - 2008 MEMBERSHIP

LIFE MEMBERS

FIRST MI	LAST NAME	INSTITUTIONS
Edmond J.	Bacon	University of Arkansas-Monticello
Vernon	Bates	Ouachita Mountains Biological Station
Floyd	Beckford	Lyon College
Wilfred J.	Braithwaite	University of Arkansas-Little Rock
Calvin	Cotton	Geographics Silk Screening Co.
Betty	Crump	Ouachita National Forest
James	Daly	University of Arkansas/Medical Sciences
Leo Carson	Davis	Southern Arkansas University
Mark	Draganjac	Arkansas State University
Jim	Edson	University of Arkansas-Monticello
Daniel R.	England	Southern Arkansas University
Kim	Fifer	University of Arkansas/Medical Sciences
James H.	Fribourgh	University of Arkansas-Little Rock
Arthur	Fry	University of Arkansas-Fayetteville
Linda	Gatti-Clark	Hendrix College
Collis	Geren	University of Arkansas-Fayetteville
John	Giese	Ark. Dept. of Env. Qual. (ret)
Walter	Godwin	University of Arkansas-Monticello
Anthony	Grafton	Lyon College
Joe M.	Guenter	University of Arkansas-Monticello
Joyce	Hardin	Hendrix College
George	Harp	Arkansas State University
Phoebe	Harp	Arkansas State University
Gary	Heidt	University of Arkansas-Little Rock
Mostafa	Hemmati	Arkansas Tech University
Douglas	James	University of Arkansas-Fayetteville
Ronald	Javitch	Natural History Rare Book Foundation
Arthur	Johnson	Hendrix College
Cindy	Kane	University of Arkansas/Medical Sciences
Scott	Kirkconnell	Arkansas Tech University
Roger	Koeppe	University of Arkansas-Fayetteville
Donald	Mattison	March of Dimes National Office
Roland	McDaniel	FTN Associates
Grover	Miler	University of Arkansas/Medical Sciences
Herbert	Monoson	Ark. Science & Technology Authority
James	Peck	University of Arkansas-Little Rock
Michael	Rapp	University of Central Arkansas
Dennis	Richardson	Quinnipiac College
Jeff	Robertson	Arkansas Tech University
Henry	Robison	Southern Arkansas University
David	Saughey	U.S. Forest Service
Stanley	Trauth	Arkansas State University
Gary	Tucker	FTN Associates
Renn	Tumlison	Henderson State University
Scott	White	Southern Arkansas University
James	Wickliff	University of Arkansas-Fayetteville
Robert	Wiley	University of Arkansas-Monticello
Steve	Zimmer	Arkansas Tech University

REGULAR MEMBERS

FIRST MI	LAST NAME	INSTITUTIONS
Alois	Adams	University of Arkansas-Little Rock
Ginny	Adams	University of Central Arkansas
Reid	Adams	University of Central Arkansas
Jennifer	Akin	Arkansas Natural Heritage Commission
Scott	Austin	University of Central Arkansas
Ben	Barridge	North Arkansas College
Anwar	Bhuiyan	Arkansas Tech University
Lisa	Brennan	Arkansas Tech University
Tom	Buchanan	University of Arkansas-Ft. Smith
Daniel	Bullock	Arkansas Tech University
Martin	Campbell	Henderson State University
Mari	Davidson	University of Arkansas/Medical Sciences
Steve	Dinkelacker	University of Central Arkansas
Andrea	Duina	Hendrix College
Rudolph	Eichenberger	Southern Arkansas University
Karen	Fawley	University of Arkansas-Monticello
Marvin	Fawley	University of Arkansas-Monticello
Robert	Ficklin	University of Arkansas-Monticello
Thomas	Foti	Arkansas Natural Heritage Commission
Tobin	Fulmer	Arkansas Natural Heritage Commission
Umadevi	Garimella	University of Central Arkansas
Barry	Gehm	Lyon College
Johnnie	Gentry	University of Arkansas-Fayetteville
Sherry	Gibbany	North Arkansas College
Fiona	Goggin	University of Arkansas-Fayetteville
Wilson J.	Gonzalez-Espada	Arkansas Tech University
Wayne	Gray	University of Arkansas/Medical Sciences
Roberts	Gregerson	Lyon College
Frank	Hardcastle	Arkansas Tech University
Laurence	Hardy	Ouachita Mountains Biological Station
Michael	Held	Saint Peter's College
Philip	Hyatt	US Forest Service
Shahidu	Islam	University of Arkansas-Pine Bluff
Salomon	Itza	University of the Ozarks
David	Jamieson	
Clark	Jenkins	North Arkansas College
George	Johnson	Arkansas Tech University
Abul	Kazi	University of Arkansas-Pine Bluff
Brent	Kelley	Audubon Arkansas
Julia	Kennefick	University of Arkansas-Fayetteville
Tillman	Kennon	Arkansas State University
Robert	Kissell	University of Arkansas-Monticello
Jeanne	Kuhler	Auburn University
Eric	Lovely	Arkansas Tech University
Chris	McAllister	Chadron State College
Malcolm	McCallum	TAMU-Texarkana
Rahul	Mehta	University of Central Arkansas
Matthew	Moran	Hendrix College
William	Moser	Smithsonian Institution
Jim	Musser	Arkansas Tech University
Lawrence	Mwasi	University of Arkansas-Pine Bluff
Russell	Nordeen	University of Arkansas-Monticello
National	Park	Buffalo National River

Secretary's Report

REGULAR MEMBERS (cont.)

FIRST MI	LAST NAME	INSTITUTIONS
John	Rhine	ATOKA, Inc.
Ed	Roberts	Pottsville High School
Fred	Robinson	Ouachita Mtns. Biological Station
Blake	Sasse	Arkansas Game and Fish Comm.
Bill	Shepherd	
William	Slaton	University of Central Arkansas
Michael	Slay	The Nature Conservancy
Richard	Smith	University of Arkansas/Medical Sciences
Thomas	Smith	Southern Arkansas University
Richard	Standage	USDA Forest Service
Jonathan	Stanley	Arkansas State University
Ivan	Still	Arkansas Tech University
Philip A.	Tappe	University of Arkansas- Monticello
Bruce	Tedford	Arkansas Tech University
Sherry	Townsend	North Arkansas College
Rick	Ulrich	University of Arkansas-Fayetteville
Deborly	Wade	Central Baptist College
Brian	Wagner	Arkansas Game and Fish Commission
Timothy	Wakefield	John Brown University
Robert	Weih	University of Arkansas-Monticello
Benjamin	Wheeler	University of Arkansas CC-Batesville
Linda	Williams	University of Arkansas/Medical Sciences
Marisa	Williams	University of Arkansas-Fayetteville
Joe	Winstead	Southern Arkansas University
Theo	Witsell	Arkansas Natural Heritage Commission
Tsunemi	Yamashita	Arkansas Tech University
Steve	Yanoviak	University of Arkansas-Little Rock
Douglas	Zollner	The Nature Conservancy

SUSTAINING MEMBERS

FIRST MI	LAST NAME	INSTITUTIONS
David L.	Davies	University of Arkansas/Medical Sciences
Linda	Kondrick	Arkansas Tech University
Warren	Montague	USDA/Forest Service

STUDENT MEMBERS

FIRST MI	LAST NAME	INSTITUTIONS
Mohammed	Ali	University of Arkansas-Little Rock
Brent	Baker	University of Central Arkansas
Erin	Billings	University of Central Arkansas
Lauren	Blair	University of Arkansas/Medical Sciences
Lindsay	Bradshaw	University of Arkansas/Medical Sciences
Samuel	Collom	University of Arkansas-Little Rock
Luke	Driver	University of Central Arkansas
Shane	Foley	University of Arkansas-Monticello
Benton	Gann	Arkansas Tech University
Joe	Gerken	University of Central Arkansas
Benjamin Seth	Glaze	University of Arkansas-Monticello
Nathan	Harris	University of Arkansas-Pine Bluff
Thomas	Inebnit	University of Central Arkansas
Jason	Jones	Texas A&M University-Texarkana
Kevin	Labrum	Arkansas Tech University
Ryan	Laddusaw	Ouachita Baptist University
Katie	McCumpsey	University of Arkansas/Medical Sciences
Carey	Minteer	University of Arkansas-Fayetteville
Eric	Nelson	University of Arkansas-Fayetteville
Erica	Nelson	University of Arkansas-Fort Smith
Michelle	Park-Kim	University of Arkansas-Little Rock
Sachin	Terdalkar	University of Arkansas-Fayetteville
Michael	Weller	Arkansas Tech University
Bradley	Williams	University of Central Arkansas