Journal of the Arkansas Academy of Science

Volume 60 Article 3

2006

90th Annual Meeting, 2006. Secretary's Report and Financial Statement

Academy Editors

Follow this and additional works at: https://scholarworks.uark.edu/jaas

Recommended Citation

Editors, Academy (2006) "90th Annual Meeting, 2006. Secretary's Report and Financial Statement," *Journal of the Arkansas Academy of Science*: Vol. 60, Article 3.

Available at: https://scholarworks.uark.edu/jaas/vol60/iss1/3

This article is available for use under the Creative Commons license: Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0). Users are able to read, download, copy, print, distribute, search, link to the full texts of these articles, or use them for any other lawful purpose, without asking prior permission from the publisher or the author. This Arkansas Academy Annual Meeting report is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Journal of the Arkansas Academy of Science by an authorized editor of ScholarWorks@UARK. For more information, please contact scholar@uark.edu, uarepos@uark.edu.

Arkansas Academy of Science, Dept. of Physical Sciences, Arkansas Tech University

PAST PRESIDENTS OF THE ARKANSAS ACADEMY OF SCIENCE

Charles Brookover, 1917 Dwight M. Moore, 1932-33, 64

Flora Haas, 1934 H. H. Hyman, 1935 L. B. Ham, 1936 W. C. Munn, 1937 M. J. McHenry, 1938 T. L. Smith, 1939 P. G. Horton, 1940

I. A. Willis, 1941-42L. B. Roberts, 1943-44

Jeff Banks, 1945 H. L. Winburn, 1946-47 E. A. Provine, 1948

G. V. Robinette, 1949 John R. Totter, 1950 R. H. Austin, 1951

E. A. Spessard, 1952 Delbert Swartz, 1953 Z. V. Harvalik, 1954

M. Ruth Armstrong, 1955 W. W. Nedrow, 1956 Jack W. Sears, 1957

J. R. Mundie, 1958

C. E. Hoffman, 1959 N. D. Buffaloe, 1960 H. L. Bogan, 1961 Trumann McEver, 1962 Robert Shideler, 1963 L. F. Bailey, 1965

James H. Fribourgh, 1966 Howard Moore, 1967 John J. Chapman, 1968 Arthur Fry, 1969 M. L. Lawson, 1970 R. T. Kirkwood, 1971 George E. Templeton, 1972 E. B. Wittlake, 1973

Clark McCarty, 1974 Edward Dale, 1975 Joe Guenter, 1976 Jewel Moore, 1977 Joe Nix, 1978

E. Leon Richards, 1980 Henry W. Robison, 1981 John K. Beadles, 1982 Robbin C. Anderson, 1983

P. Max Johnston, 1979

Paul Sharrah, 1984 William L. Evans, 1985 Gary Heidt, 1986 Edmond Bacon, 1987 Gary Tucker, 1988 David Chittenden, 1989 Richard K. Speairs, Jr. 1990 Robert Watson, 1991 Michael W. Rapp, 1992 Arthur A. Johnson, 1993 George Harp, 1994 James Peck, 1995 Peggy R. Dorris, 1996 Richard Kluender, 1997 James Daly, 1998 Rose McConnell, 1999 Mostafa Hemmati, 2000 Mark Draganjac, 2001 John Rickett, 2002 Walt Godwin, 2003

Betty Crump, 2005 Stanley E. Trauth, 2006

Wayne Gray, 2004

INSTITUTIONAL MEMBERS

The Arkansas Academy of Science recognizes the support of the following institutions through their Institutional Membership in the Academy.

ARKANSAS STATE UNIVERSITY, Jonesboro
ARKANSAS STATE UNIVERSITY, Newport
ARKANSAS TECH UNIVERSITY, Russellville
HARDING UNIVERSITY, Searcy
HENDERSON STATE UNIVERSITY, Arkadelphia
HENDRIX COLLEGE, Conway
JOHN BROWN UNIVERSITY, Siloam Springs
MISSISSIPPI COUNTY COMMUNITY COLLEGE, Blytheville
OUACHITA BAPTIST UNIVERSITY, Arkadelphia

SOUTHERN ARKANSAS UNIVERSITY, Magnolia
UNIVERSITY OF ARKANSAS AT FAYETTEVILLE
UNIVERSITY OF ARKANSAS AT LITTLE ROCK
UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES, Little Rock
UNIVERSITY OF ARKANSAS AT MONTICELLO
UNIVERSITY OF ARKANSAS AT PINE BLUFF
UNIVERSITY OF CENTRAL ARKANSAS, Conway
UNIVERSITY OF THE OZARKS, Clarksville
UNIVERSITY OF ARKANSAS, Fort Smith

EDITORIAL STAFF

Editor-in-Chief

Stanley E. Trauth
Dept. of Biol. Sciences
Arkansas State University
P.O. Box 599
State University, AR 72467-0599
strauth@astate.edu

Managing Editor

Chris T. McAllister
Department of Biology
Angelo State University
Cavnes Science Bldg.
San Angelo, TX 76909
chris.mcallister@angelo.edu

Biota Editor

Douglas A. James Dept. of Biol. Sciences Univ. of Arkansas - Fayetteville Fayetteville, AR 72701 dj27387@uafsysb.uark.edu

COVER: Dicephalic western diamondback rattlesnake (Crotalus atrox). Photo by Chris T. McAllister.

ARKANSAS ACADEMY OF SCIENCE 2006



APRIL 7-8, 2006 90th Annual Meeting

> Lyon College Batesville, Arkansas

JOURNAL ARKANSAS ACADEMY OF SCIENCE

Annual Meeting 7-8 April 2006 Lyon College

Stanley E. Trauth President David Saugey President-Elect Jeff Robertson Secretary

Joyce Hardin Treasurer Mostafa Hemmati NAAS Delegate Henry Robison Historian

Secretary's Report MINUTES OF THE 90TH MEETING

ARKANSAS ACADEMY OF SCIENCE SUMMARY OF 1ST AND 2ND BUSINESS MEETINGS LYON COLLEGE APRIL 7-8, 2006

- With a crisp single BANG of the ceremonial gavel, Stan Trauth, President of the AAS called the meetings to order.
- 2. Local Arrangements Committee: Walter Roettger, President of Lyon College thanked the work of the Local Arrangements Chair Kurt Grafton and expressed his delight at the keynote speaker, Guy Consolmagno. Kurt Grafton then expressed his thanks to the many people who have helped to host the meeting who will also be recognized in the resolutions. There were 203 attendees that registered for the meeting. There were 92 oral presentations, 23 poster presentations as well as 35 students entered in the competitions. Also presenting will be the winner of the Jr. Academy. He then announced the various scholarly awards presented to students for their research presented at the meeting symposia. (They are listed elsewhere in this volume.)
- Historian: Henry Robison reported that this is the 90th annual meeting of the Arkansas Academy of Science. This is the very 1st time that the annual meeting has been held at the Lyon College Campus.
- 4. Secretary: The minutes from 2005 Executive Committee business meeting in November 2005 were distributed and approved. These minutes will be going on the AAS website. Prior to this meeting, the current membership list included approximately 120 members (56 which are life members) of the Academy along with 14 institutional members. A request for \$250 was made to offset mailing charges incurred for the AAS mailings, the Newsletter, and Journals that are not picked up at the annual meeting was approved.
- Treasurer/Auditor: The financial report was presented by Joyce Hardin. Page charges for Vol 59 were all e-mailed

- this year to save trees. Details on the income and expenses for the year were highlighted in addition to journal cost issues. The Academy posted a substantial gain of \$7,000, a record this year. Mostafa Hemmati and Jeff Robertson were acting auditors and reviewed the financial statements. The "books" maintained by the Academy Treasurer were found to be good financial records kept with excellent integrity and showing no inconsistencies or irregularities. (The financial status of the Academy is found elsewhere in this volume for review).
- Journal Editor-in-Chief: Stan Trauth reported that Vol. 59, 2005 of the journal is 223 pages. This is 79 more pages than last year's journal. A request for the Academy to continue to support the Journal Editor in Chief with an allotment of \$200 and \$600 for assistant editor duties to cover incurred costs was accepted.
- 7. Journal Managing Editor: Chris McAllister reported that the journal contained 29 papers, 8 notes, 21 features with 1 rejection. He noted that the peer review process for the journal was quite vigorous as can be attested to by the extensive list of reviewers, their locales and disciplines. Revised publication policies for the journal will be posted on the AAS website. He also requested \$750 to cover incurred costs associated with managing editor duties and was approved.
- 8. Arkansas Science Fair Association: The state science fair is in its 52nd year and the annual winners go to an international fair that has 1000 students from 40 countries competing. The Association is looking for a replacement for the retiring director Micheael Rapp. A request and approval was obtained for \$400 dollars to support the Arkansas Science Fair Association.
- Junior Academy of Science: The Junior Academy is in need of new directorship. Jerry Manion, the interim director, requested continued support through an allotment of \$250 which was approved.

Arkansas Academy of Science

- Intel Talent Search: Will Slaton has replaced the outgoing Jim Murray as director for the talent search as this organization reorganizes.
- 11. Junior Science and Humanities Symposium: Linda Kondrick presented highlights from the 40th annual JSHS symposium and the 29th year hosted on the Arkansas Tech University campus (http://pls.atu.edu/jshs). Support from the military sponsors and the AAS help make the 3-day event and research paper presentations by students successful. Six students represent Arkansas in the national competition. A request and approval for continued support of \$100 towards their student awards was given.

12. Committee Reports:

- Biota Committee: Doug James relays that online access to the Biota lists are moving forward, slowly but surely.
- Science Education Committee: Mostafa Hemmati reported on a lively discussion over the current debate on evolution in the classroom.
- c. Development Committee: Betty Crump related woes from an unsuccessful grant application to endow the journal but solicited other, "sexier" funding propositions to attract sponsors and hopefully produce successful grant applications.
- d. AAAS: Mostafa Hemmati reported that 4 students benefited from memberships to the AAAS and that due to snow and ice his attendance at the national meeting was cancelled.
- e. Arkansas Science Teachers Association: Tillman Kennon thanked the Academy for their continued support of the Science fair and the Jr. Academy. ASTA is hosting workshops for teachers in science lab safety and providing training to 7-12 grade teachers. They are also developing science benchmark tests for 5th and 7th grades.

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 and Treasurer. As there were no additional nominations from the floor, Joyce Hardin and Mostafa Hemmati were voted in by acclamation for V.P. and Treasurer, respectively.
- c. The development committee solicited input for

- ideas to fund scholarships, awards, the journal, etc, including but not limited to: better advertising of science education initiatives and programs by the AAS, AAS membership benefits promotion, corporate members and/or sponsors, "friends" of the Academy (philanthropic).
- d. Motion passed for the creation of a new poster award of \$100 each for graduates and undergraduates as this presentation style has become more numerous and popular at the meeting.
- e. Motion passed for the Academy to adopt the position statement of our parent organization (AAAS) on intelligent design and a link to it and other information from the AAAS on our AAS website.
- f. Jamie Oliver of the Arkansas Environmental Federation who sponsors our student awards to the tune of \$500 spoke about the participation of students at their convention and the availability of awards and scholarships.
- g. Desires were expressed by members to have the Academy:
 - 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,
 - 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. think about establishing a permanent, recognizable web address (e.g. www.arkansasacademyofscience. org).
- h. Jeff Robertson from Arkansas Tech University announced the dates of the 91st annual meeting as April 13-14, 2007 on the ATU campus in Russellville, Arkansas. Locations for 2008 and beyond are solicited.
- Resolutions for the annual meeting were read to the membership (see Resolutions).
- 14. Closing: New president David Saugey accepted the ceremonial gavel from outgoing president Stan Trauth making him Past-President, Collis Geren President-Elect and Joyce Hardin Vice-President.

Meeting adjourned.

Jeff Robertson, AAS Secretary

ARKANSAS ACADEMY OF SCIENCE 2006 FINANCIAL STATEMENT			6. MISCELLANEOUS INCOME a. Stan Trauth \$3	5.00	
2000 I II WILLIAM S				5.00	
BALANCE - January 4, 2007		\$36,896.76	b. Betty Crump	3.00	\$70.00
BALANCE – January 17, 2006		\$36,174.06	TOTAL INCOME		\$20,545.08
NET GAIN		\$722.70			
			EXPENSES:		
DISTRIBUTION	OF FUNDS		EAFENSES:		
			1. STUDENT AWARDS		
Checking Account		\$8,610.08	a. Katie McLean	5100	
Bank of Ozarks, Russellville, AR			b. J.C. Wagnon	\$50	
			c. J.C. Douglas	\$50	
Certificate of Deposit		\$13,000.00		5100	
Life Membership Endowment			e. Laura McWilliams	5100	
Bank of Ozarks, Russellville,	AR		f. Chris Wyatt	\$50	
			g. Mathew Lemay	\$50	
Dwight Moore Endowment		\$5,286.68	h. Shara Jones	\$50	
Bank of Ozarks, Russellville, AR			i. Marcy Bonitts	\$50	
			J. Bonnie Earleywine	5100	
Phoebe and George Harp Endowme	ent	\$5,959.51	k. Marcy Bonwits	5100	
Bank of Ozarks, Russellville, AR			Scott Jordan	\$50	
			m. Rex Medlin	\$50	
Unrestricted		\$4,040.49	n. Taldi Walter	\$50	
Bank of Ozarks, Russellville, AR					\$950.00
TOTAL		\$36,896.76	2. AWARDS		
			a. Junior Science and Humanities Sym. \$	100	
			b. Arkansas Science Fair \$	400	
INCOME:			c. Arkansas Junior Academy of Science \$	250	
					\$750.00
1. ANNUAL MEETING					
 Check from Lyon College 	\$2,981.44		3. JOURNAL		
		\$2,981.44	a. Journal Expenses – Stan Trauth \$	200	
			b. Journal Expenses - Chris McAllister \$	750	
2. INTEREST		\$366.22	c. Journal Charges (226 Pages + Cover) \$16,239	9.04	
			d. Journal Expenses – Joy Trauth \$	600	
3. JOURNAL			e. Journal Expenses – Betty's stamps \$46	5.80	
a. Miscellaneous Sales	\$247.17				\$17,835.84
b. Page Charges	\$11,350.25				
c. Subscriptions	\$950.00		4. MISCELLANOUS EXPENSES		
		\$12,547.42		2.37	
A TOLIBNIAL CONTRIBUTION		02 200 00	b. David Saugey \$182		
4. JOURNAL CONTRIBUTION		\$3,200.00		3.35	
S MEMBERGIUS			d. Dues to the NAAS \$115	0.40	0272.21
5. MEMBERSHIP	0.000.00				\$373.24
a. Individual	\$620.00		TOTAL EVENINGS		010 000 00
b. Institutional	\$660.00		TOTAL EXPENSES		\$19,909.08
c. Life	\$100.00	01 200 00			
		\$1,380.00			

Arkansas Academy of Science

APPENDIX A

2006 AAS Award Winners

ORAL PRESENTATIONS

GRADUATE STUDENT AWARDS

Environmental Science

1st Place Joseph R. Milanovich / ASU Effects of Prescribed Burning on Reproduction of the Western Slimy Salamander (*Plethodon albagula*) in Arkansas.

2nd Place Taldi Walter / UCA
The Role of Biology and Culture in Species Invasions: Contrasting Evidence From Two Invaded Ranges.

Life Science

1st Place Toby M. Ward / UAMS Genetic Strategies for Improvement of Varicella Vaccine.

2nd Place Rex E. Medlin, Jr. / ASU Distribution of Arkansas's Bottomland Bats.

3rd Place Jacy L. Wagnon / UAMS *Trans*-Activation of Meiotic Recombination by mRNA.

UNDERGRADUATE STUDENT AWARDS

Environmental Science

1st Place Bonnie Earleywine / UCA Population Status and Distribution of Spring Cavefish, Forbesichthys Agassizi, in Southeast Missouri.

2nd Place Shara Jones / HSU
 Differences in Coral Community Structure Reflect Impacts of
 Indigenous Villages and Agriculture at 9 Reef Sites in Kuna
 Yala, Panama.

3rd Place Marcy Bonewits / UCA
Henderson Middle School Environmental Education Outreach.

Life Science

1st Place Katie McLean / Lyon Developing a *C. Elegans*-Based Bioassay for Estrogenic Activity.

2nd Place J. C. Douglas / Lyon A Mutation in Estrogen Receptor Alpha that Selectively Attenuates Activation by Phytoestrogens.

3rd Place Scott Jordan / HSU Ichthyofaunal Assemblages in Three Proximate But Ecologically Diverse Streams in Clark County, Arkansas.

Physical Science

1st Place Laura McWilliams / Lyon Response Surface Optimization of a Microwave Assisted Perkin Reaction.

2nd Place Chris A. Wyatt / UALR When You Can't Take a Dust Mop to Space: A Solution to the Mars Rover Particle Adhesion Problem.

3rd Place Matthew Lemay / ASU Investigation of Electromagnetic Shielding in Ferromagnetic Nano/Micro Powder/Polymer Composite Films.

The David M. Chittenden II <u>Undergraduate Green Chemistry Poster Award</u>

Amon Holt Lyon College for

Ruthenium Complexes of Novel Thiosemicarbazones: Synthesis, Characterization, and Antimicrobial Activity

APPENDIX B

RESOLUTIONS

BE IT RESOLVED that we, the membership of the Arkansas Academy of Science, offer our sincere appreciation to Lyon College for hosting the 90th annual Meeting of the Academy, held 7-8 April, 2006.

We thank our Local Arrangements Committee: Chair Dr. A. Kurt Grafton, Drs. Floyd Beckford, Ray Byler, Barry Gehm, Bob Gregerson, Stuart Hutton, David Koch, Tim Lindblom, David Pace, David Sonnier, Dave Thomas, and all of the student workers and staff who collectively contributed to such a successful meeting.

Appreciation is expressed for inviting us to this gorgeous campus and for use of these excellent facilities and the hospitality shown to us by Lyon personnel. We especially thank our keynote speaker Dr. Guy Consolmagno for his thought provoking presentation entitled, "Pluto and Planets X: Is Pluto a Planet? And Why Does It Matter?"

We thank Lyon College for their contributions to the Social and Banquet, which were both excellent and thoroughly enjoyed by all. And we thank Provost Vice President for Academic Affairs and Dean of the Faculty, Dr. John Peek. We sincerely appreciated and enjoyed the fine music provided by the Lyon College Pipe Band.

The Academy recognizes the important roles assumed by session chairs and expresses sincere appreciation to Mostafa Hemmati, James Engman, Wayne Wahls, Gus Williamson, Abul Kazi, Betty Crump, Scott Kirkconnell, Grover Miller, Steve Zimmer, Thomas Smith, Bill Shepard, Dave Thomas, Stuart Hutton, Brian Wagner, and Tim Lindblom.

A special appreciation is owed to those individuals who devoted considerable time and energy to judging student papers. They are Ginny Adams, Betty Crump, Steve Dinkelacker, James Kellum, Anwar A Bhuiyan, Mostafa Hemmati, Abul B. Kazi, Larry Lebofsky, William Slaton, Ying Hutton, David Thomas, Grover Paul Miller, Thomas Smith, Scott W. Kirkconnell, Deborly Wade, Bob Gregerson, and Tim Lindblom.

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; Jim Murry, Intel Talent Search; Jerry Manion, Junior Academy of Science; and Linda Kondrick, Junior Science and Humanities Association.

We wish to thank all those who served as directors at Regional Science Fairs and Junior Academy Meetings, including Bryan DeBusk, Jim Edson, Lynne Hehr, Tillman Kennon, Brian Monson, Mike Rapp, Kathyrn Shinn and Gus Williamson.

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 very much appreciate Walt Godwin for maintaining the Academy website.

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

Finally, the membership wishes to posthumously recognize Tom Palko for his many years of service and contributions to his students, the Academy, and to the science and biology profession.

Respectfully submitted this 8th day of April, 2006 Resolution Committee David Saugey, Chair Joyce Hardin Mostafa Hemmati

2006 - 2007 MEMBERSHIP

FIRST MI	LAST NAME	LIFE MEMBERS INSTITUTIONS	FIRST MI	LAST NAME	EGULAR MEMBERS INSTITUTIONS
Edmond J.	Bacon	University of Arkansas-Monticello	Alois	Adams	University of Arkansas-Little Rock
ernon	Bates	Ouachita Mtns. Biological Station	Scott	Austin	University of Central Arkansas
loyd	Beckford	Lyon College	Anwar A.	Bhuiyan	Arkansas Tech University
Vilfred J.	Braithwaite	University of Arkansas-Little Rock	Stephen K.	Boss	Department of Geosciences
alvin	Cotton	Geographics Silk Screening Co.	William R.	Bowen	Jacksonville State University (AL-retired)
etty	Crump	U.S.D.A.	Donald	Bragg	U.S.D.A. Forest Service
ames	Daly	University of Arkansas/Medical Sciences	Morris	Bramlett	University of Arkansas-Monticello
obert H.	Dilday	University of Arkansas-Fayetteville	Tom	Buchanan	University of Arkansas-Ft. Smith
fark	Draganjac	Arkansas State University	Alan	Christian	Arkansas State University
m	Edson	University of Arkansas-Monticello	Amanda	Crnkovic	Ouachita Mountains Biological Station
aniel R.	England	Southern Arkansas University	Prabudha	Dahal	University of Arkansas-Monticello
illiam L.	Evans	University of Arkansas-Fayetteville	Jennifer	Dearolf	Hendrix College
im	Fifer	University of Arkansas/Medical Sciences	Paul	Doruska	Arkansas Forest Resources Center-UAM
mes H.	Fribourgh	University of Arkansas-Little Rock	Andrea	Duina	Hendrix College
rthur	Fry	University of Arkansas-Fayetteville	Jane	Duina	Henderson State University
inda	Gatti-Clark	Hendrix College	Jane	Dunn	Trenderson State Chiresony
ollis	Geren	University of Arkansas-Fayetteville	Rudolph	Eichenberger	Southern Arkansas University
hn	Giese	Ark. Dept. of Env. Qual. (ret)	Roberts	Ficklin	University of Arkansas-Monticello
alter	Godwin	University of Arkansas-Monticello	Thomas	Foti	Arkansas Natural Heritage Commission
nthony	Grafton	Lyon College	Jonathan	Fuller	Texas A&M University-Texarkana
e M.	Guenter	Lyon Conege	Barry	Gehm	Lyon College
yce	Hardin	Hendrix College	Wilson J.	Gonzalez	Arkansas Tech University
eorge		Arkansas State University	Wayne	Gray	University of Arkansas/Medical Sciences
noebe	Harp		Laurence		Ouachita Mountains biological Station
	Harp	Arkansas State University		Hardy	
ary	Heidt	University of Arkansas-Little Rock	John L.	Harris	Arkansas Highway Dept.
onnie	Helms	Ashanaa Tash Hainaaita	Philip	Hyatt	U.S. Forest Service
ostafa	Hemmati	Arkansas Tech University	George	Johnson	Arkansas Tech University
ouglas	James	University of Arkansas-Fayetteville	Abul	Kazi	University of Arkansas-Pine Bluff
onald	Javitch	Natural History Rare Book Found.	Tillman	Kennon	Arkansas State University
rthur	Johnson	Hendrix College	Shaheen	Khan	University of Arkansas-Pine Bluff
indy	Kane	University of Arkansas/Medical Sciences	Robert E.	Kissell Jr.	Uninversity of Arkansas-Monticello
cott	Kirkconnell	Arkansas Tech University	Brian	Lockhart	US Forest Service
oger	Koeppe	University of Arkansas-Fayetteville	Michael	Looper	U.S.D.AARS
onald	Mattison	March of Dimes National Office	Michael	Lynch	University of Arkansas-Pine Bluff
oland	McDaniel	FTN Associates	Sayeed	Mahmood	University of Arkansas-Monticello
rover	Miller	University of Arkansas/Medical Sciences	Michael	Matthews	Henderson State University
erbert	Monoson	Arkansas Science & Technology Authority	Chris	McAllister	Chadron State College
mes	Peck	University of Arkansas-Little Rock	Malcolm	McCallum	Louisiana State Univeristy-Shreveport
ichael	Rapp	University of Central Arkansas	Scott	McConnell	University of Arkansas-Monticello
ennis	Richardson	Quinnipiac College	Rose	McConnell	University of Arkansas-Monticello
ff	Robertson	Arkansas Tech University	Warren	Montague	U.S.D.AForest Service
enry	Robison	Southern Arkansas University	Matthew	Moran	Hendrix College
avid	Saugey	U.S. Forest Service	William	Moser	Smithsonian Institution
ephen	Sewell	University of Mississippi	Rod	Nelson	University of Arkansas-Fort Smith
tty	Speairs	Ouachita Mtns. Biological Station	Russell	Nordeen	University of Arkansas-Monticello
eorge	Templeton	University of Arkansas-Fayetteville	Reine	Protacio	University of Arkansas/Medical Sciences
anley	Trauth	Arkansas State University	Janet	Rader	Southern Arkansas University
iry	Tucker	FTN Associates	Satyendra	Rajguru	University of Arkansas-Fayetteville
nn	Tumlison	Henderson State University	Thomas	Risch	Arkansas State University
mes	Wickliff	University of Arkansas-Fayetteville	E. Moye	Rutledge	
bert	Wiley	University of Arkansas-Monticello	Blake	Sasse	Arkansas Game and Fish Commision
			Bill	Shepherd	
			David	Simons	Ouachita Mtns. Biological Station

Journal of the Arkansas Academy of Science, Vol. 60, 2006

REGULAR MEMBERS (CONT.)

FIRST MI	LAST NAME	INSTITUTIONS
Kazem	Sohraby	University of Arkansas-Fayetteville
Malathi	Srivatsan	Arkansas State University
Richard	Standage	USDA Forest Service
Philip A.	Tappe	University of Arkansas- Monticello
Bruce	Tedford	Arkansas Tech University
Jonathan	Treece	Arkansas State University
Deborly	Wade	Central Baptist College
Brian	Wagner	Arkansas Game and Fish Commission
Wayne	Wahls	University of Arkansas/Medical Sciences
Richard	Walker	University of Arkansas-Pine Bluff
Gerald	Walsh	
Robert	Weih	Uninversity of Arkansas-Monticello
Benjamin	Wheeler	Arkansas State University
William	Willingham	University of Arkansas-Pine Bluff
Tsunemi	Yamashita	Arkansas Tech University
Douglas	Zollner	The Nature Conservancy

SUSTAINING MEMBERS

FIRST MI	LASI NAME	INSTITUTIONS
David L.	Davies	University of Arkansas/Medical Sciences
Mary	Lynch	University of Arkansas-Pine Bluff

STUDENT MEMBERS

STUDENT MEMBERS				
FIRST MI	LAST NAME	INSTITUTIONS		
Eileen	Banach	Ouachita Mtns. Biological Station		
Hunter	Broadaway	Arkansas State University		
Cassondra	Brooks	Texas A&M University-Texarkana		
Misty	Caple	Texas A&M University-Texarkana		
Laura	Conley	Hendrix College		
Rupali	Das	University of Arkansas/Medical Sciences		
Mark	DeWall	University of Arkansas/Medical Sciences		
Jonathan	Fuller	Texas A&M University-Texarkana		
Jun	Gao	University of Arkansas/Medical Sciences		
Myra	Harris	Texas A&M University-Texarkana		
Jonathan	Hartley	University of Arkansas- Monticello		
Justin	Homan	Arkansas State University		
Matthew	Hurd	University of Arkansas- Monticello		
Rebecca	Mason	Texas A&M University-Texarkana		
J.L.	McCallum	Louisiana State Univeristy-Shreveport		
Christy	Melhart	University of Arkansas-Fayetteville		
Joe	Milanovich	Arkansas State University		
Tess	Perez	Ouachita Mtns. Biological Station		
Jennifer	Roller	Hendrix College		
Harish	Shandilya	University of Arkansas/Medical Sciences		
Brandon	Thurow	Hendrix College		
Jacy	Wagnon	University of Arkansas/Medical Sciences		
Toby	Ward	University of Arkansas/Medical Sciences		
Bradley	Williams	University of Central Arkansas		
Katherine	Winsett	University of Arkansas-Fayetteville		

Contributions to the Arkansas Academy of Science's Journal As of February 6, 2007

\$500

Dr. Arthur Johnson Hendrix College 53 Meadowbrook Drive Conway, AR 72032

\$100

Dr. William Willingham UAPB 1200 University Pine Bluff, AR 71601

\$100

Dr. Joyce Hardin Dept. of Biology Hendrix College Conway, AR 72035

\$100

Dr. John Giese 37845 Sr 16 Jerusalem, AR 72080

\$100

Mr. David Saugey U.S. Forest Service P.O. Box 189 8607 Highway 7 North Jessieville, AR 71949

\$100

Dr. Mostafa Hemmati Department of Physical Science Arkansas Tech University Russellville, AR 72801

\$100

Dr. Scott Kirkconnell Department of Biology Arkansas Tech University Russellville, AR 72801

\$50

Dr. William Shepherd 2805 Linden, Apt. 3 Little Rock, AR 72205

\$100

Dr. James Wickliff University of Arkansas-Fayetteville 1215 Columbus Blvd. Fayetteville, AR 72701

\$100

Dr. Arthur Fry University of Arkansas-Fayetteville 1923 Joyce Street #323 Fayetteville, AR 72703

\$200

Dr. Rudolph Eichenberger Southern Arkansas University Box 9176 Magnolia, AR 71754

\$100

Dr. Stanley Trauth
Department of Biological Sciences
Arkansas State University
P.O. Box 599
State University, AR 72467

\$100

Dr. George Templeton University of Arkansas Fayetteville PS 217 Fayetteville, AR 72701

050

Mr. Brian Lockhart USDA Forest Service PO Box 227 Stoneville, MS 38776

\$100

Mrs. Betty Crump USDA Forest Service P.O. Box 1270 Hot Springs, AR 71902

\$900

Anonymous USDA Forest Service P.O. Box 1270 Hot Springs, AR 71902

\$100

Dr. Henry Robison 2714 Chaffin LN. Magnolia, AR 71753

\$100

Dr. Wayne Gray 215 Colonial Ct Little Rock, AR 72205

\$100

Dr. Roger E. Koeppe 305 N. Washington Fayetteville, AR 72701

\$50

Dr. Barry Dean Gehm 3425 Juniper Batesville, AR 72501

\$1000

Dr. Douglas James University of Arkansas Department of Biological Science Fayetteville, AR 72701

\$25

Dr. Michael Looper 3214 Excelsior RD. Greenwood, AR 72936

Journal of the Arkansas Academy of Science, Vol. 60, 2006





Arkansas Academy of Science 90th Annual Meeting April 7-8, 2006

Welcome

I welcome all of you to the 90th annual meeting of the Arkansas Academy of Science. This year, we are very pleased to be meeting on the Lyon College campus for the very first time. On behalf of the AAS Executive Committee, I also thank all of you for your attendance, participation, and involvement in the AAS as well as the Arkansas Junior Academy of Science. We are looking forward to many diverse presentations during the next two days. This time will go quickly, but I hope you will have the opportunity to meet new acquaintances, visit with colleagues, and renew old friendships as we share and disseminate scientific knowledge. On behalf of the entire AAS membership, I want to extend a deep appreciation to Local Arrangements Committee and Lyon College for hosting this year's annual meeting.

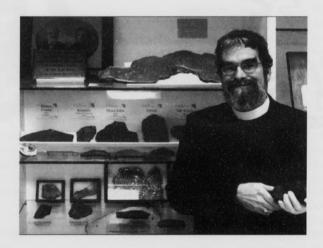
Stanley E. Trauth President, Arkansas Academy of Science

On behalf of Lyon College and the Local Arrangements Committee, I welcome you to our campus and the 90th Annual Meeting of the Arkansas Academy of Science. This is the first time, but hopefully not the last, that Lyon (once known as Arkansas College) has hosted the AAS. This year, we are pleased to be hosting over 100 presentations and posters from a wide variety of scientific disciplines. We hope you enjoy the meeting and your time on our campus as much as we've enjoyed planning and preparing for your visit. To help you find your way around Batesville and Lyon College, you'll find building, campus, and area maps in the back of this program. If you have any other questions or need any assistance during the meeting, just look for any member of the Local Arrangements Committee; we'll all have red ribbons on our name badges.

Anthony K. Grafton Chair, Local Arrangements Committee

Journal of the Arkansas Academy of Science, Vol. 60, 2006

Keynote Speaker



PLUTO AND PLANETS X: IS PLUTO A PLANET? AND WHY DOES IT MATTER?

Guy J. Consolmagno, Vatican Observatory, V-00120 Città del Vaticano, Italy

Less than 15 years ago, the first "trans-Neptunian Object" besides Pluto was discovered. Within the past two years, a rush of new discoveries have revealed a number of bodies whose size rivals that of Pluto. What are these objects? Where did they come from, and what can they tell us about the origin and evolution of the solar system? How are these objects found, and why they only being discovered now? Finally, are they indeed new planets? Who gets to say, and how is this determined? Observing these objects, and observing their observers, is a revealing story in both the science and politics of planetary astronomy.

Dr. Guy Consolmagno, S.J., is a Jesuit monk, and an astronomer at the Vatican Observatory whose research includes observing the colors of trans-Neptunian Objects at the Vatican Observatory's Advanced Technology Telescope. He is also president of the International Astronomical Union Commission 16, Planets and Satellites, and a member of the IAU Working Group on Defining a Planet. Dr. Consolmagno also serves as curator of the Vatican Meteorite collection, one of the largest in the world. His research explores the connections between meteorites and asteroids, and the origin and evolution of small bodies in the solar system. Dr. Consolmagno divides his time between Tucson, Arizona, where he observes asteroids and Kuiper Belt comets with the Vatican's 1.8 meter telescope on Mt. Graham, and Castel Gandolfo, Italy, home of the Vatican meteorites. He has also traveled extensively around the world doing research and giving talks. A short biography (from which this was excerpted) is available from the Vatican Observatory facility in Arizona (http://clavius.as.arizona.edu/vo/R1024/GConsolmagno.html). Image courtesy of Alessia Giuliani.