



Kentucky Academy of Science NEWSLETTER

<http://www.kyscience.org>

May 2006

Industrial Affiliates

Associate Patron - \$2,000 level
Touchstone Energy

Sustaining Member - \$ 500 level
Third Rock Consultants

Associate Member - \$100 level
Hoffman Environmental
Research Institute
Wood Hudson Cancer
Research Laboratory

Institutional Affiliates

Fellow - \$1,000 level
Kentucky Biomedical
Research Infrastructure
Network

Morehead State University
University of Kentucky
University of Louisville
Western Kentucky
University

Sustaining Member - \$500 level
Berea College
Bellarmine University
Campbellsville University
Eastern Kentucky University
Kentucky State University
Murray State University
Northern Kentucky
University

Member - \$250 level
Asbury College
Centre College
Madisonville Community
College
Spalding University
Thomas More College
University of the
Cumberlands
West Kentucky Community
& Technical College

Associate Member - \$100 level
Pikeville College

Dear KAS Members,

The new Kentucky Academy of Science website www.kyscience.org is up and running!! Thank you to all of the KAS members who have given us feedback regarding the new site which was created by Kathie Sauer with Lumins Associates. Claire Rinehart, KAS Webpage editor, and other board members have worked with Ms. Sauer to develop a webpage to meet the needs of our growing KAS membership.

KAS members now have at their fingertips everything you need to know about our organization: how to publish in the Journal, how to apply for Marcia Athey and Botany Fund grants, access to the KAS membership directory, and members can update their KAS memberships with PayPal or credit cards!

Just a reminder, the first time you log in as a KAS member you must retrieve your password. Follow these steps to complete this task:

- go to the KAS website: www.kyscience.org
- click on Member Login at the top of the page
- click on Please first retrieve your password. (The password has been automatically assigned.)
- enter your email address
- your password will be sent to your email address.

To change your password:

- go to the KAS website: www.kyscience.org
- enter your email address and password
- on the profile page, click on Update your profile
- change your password and click on submit at the bottom of the page.

Coming soon!!! Please note, you will not only be able to register online for the 92nd Annual KAS meeting, but also submit abstracts. We hope to have this portion of the website up and running by late June. More information will follow so check the website periodically.

Please check the website calendar and announcement sections for upcoming events. Did you know Governor Fletcher proclaimed the week of March 27 to be Science Week in Kentucky? The Science Week Proclamation was signed by the Governor at a ceremony in the Capitol Building Rotunda. Also, mark your calendars for the 2006 KAS Annual Meeting November 9-11 at Morehead State University.

Thank you for your support of KAS. Please feel free to contact me regarding any KAS issue. I look forward to hearing from you!

Best wishes,
Jeanne Harris, KAS Executive Director
executivedirector@kyscience.org
859-227-2837

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Notice to Botany and Microbiology Section Members

A recommendation has been made to the KAS Governing Board that the Botany and Microbiology section be split into two independent sections, one for Botany and one for Microbiology. The rationale is to provide members an opportunity to present in a section where common interests are addressed. It was also suggested that separating the sections might encourage others who are not currently members to join KAS and the appropriate section.

All Botany and Microbiology section members are encouraged to email the KAS Executive Director and express your support or opposition to the proposed split. Anyone who is not a section member, but wishes to express an opinion on this matter, is also encouraged to send their comments to the Executive Director.

Jeanne Harris, KAS Executive Director
executivedirector@kyscience.org
859-227-2837

KAS in the News



KAS Program Coordinator Dr. Robert Creek (second from left) spoke on the role of KAS in supporting science in the Commonwealth at the ceremony held at the Capitol on March 27th where the Science Week Proclamation was signed by Governor Ernie Fletcher (seated).

2006 Annual Meeting Announcements

This year's meeting will be hosted by Morehead State University in Morehead, KY on November 9-11, 2006. KAS has invited a number of outstanding speakers to address topics of interest to all scientists in Kentucky:

- ❖ "One Long (Continuing) Argument: Some Modern Developments in Evolutionary Biology" by Robert Martin, Ph.D. Professor in the Biology Department at Murray State University. Recently published book titled "Missing Links: Evolutionary Concepts and Transitions Through Time"
- ❖ "The Closest Relatives of Birds" by Luis Chiappe, Ph.D.: Director of the Dinosaur Institute and Curator of the Department of Vertebrate Paleontology of the Natural History Museum of Los Angeles County
- ❖ "Gliding Dinosaur, Hidden Bird" by Larry Martin, Ph.D. Senior Curator of Vertebrate Paleontology, and Professor of Ecology and Evolutionary Biology at the University of Kansas
- ❖ "Nanotechnology" by Robert W. Cohn Ph.D. Director of ElectroOptics Research Institute and Nanotechnology Center Office University of Louisville
- ❖ "Valium Revisited: CNS Targets for the Treatment of Anxiety Disorders" by Dr. James K. Rowlett, New England Regional Primate Center and Harvard University.

A workshop on Electronic Grant Submission is planned for Friday, to be conducted by Beverly Martin Daly of the U of L Sponsored Programs Office.

A workshop on Teaching Evolution in High/Middle School Science Classes is planned for Saturday morning.

Policy Change:

All students, undergraduate and graduate, may, upon their request, be considered eligible for section research paper competitions whether or not the paper has been presented previously elsewhere, or if the paper is a preliminary discussion of ongoing research. Each student research paper will be considered equally.

Procedural Change:

Due to the increase in the number of undergraduate competitive posters, space limitations, and the high cost of poster easels, posters will be divided into two sessions this year. Poster submissions will be assigned to either a 9:30-11:00 AM slot, or a 1:00-3:30 PM slot on Friday. Authors will be notified when their posters are to be presented.

Online Pre-registration and Abstract Submission:

These features are expected to be available on the KAS website in July. Look for an e-mail announcement this summer. In the meantime, please visit our website at www.kyscience.org and make sure your contact information is current. Dues and registration fees may now be paid online using PayPal or credit cards!

PAPER SUBMISSION FORM
KENTUCKY ACADEMY OF SCIENCE
92nd ANNUAL MEETING

Hosted by Morehead State University
 Morehead, Kentucky
 November 9-11, 2006

Title of Paper (Please type or print) _____

(An abstract must be submitted with this form. See reverse side for guidelines for preparation of abstract.)

Author(s) (check presenter) (one author must be a KAS member)	KAS		Institutional Affiliation	Position (circle)			
	Member			High School	Undergrad	Graduate	Professional
_____	Yes	No	_____	H	U	G	P
_____	Yes	No	_____	H	U	G	P
_____	Yes	No	_____	H	U	G	P
_____	Yes	No	_____	H	U	G	P

*Sponsor _____

*All undergraduate or high school students who are not members of KAS must be sponsored by a member of the Academy. There is not a limit on the number of student papers a member may sponsor.

_____ Check if entering the Undergraduate Research Competition. The URC presentations will be given ONLY on Friday.

_____ Check if entering the Graduate Research Competition. (Oral Presentations only)

Check Section in Which Paper will be Presented

- | | |
|---------------------------------------|-----------------------------------|
| _____ Agricultural Sciences | _____ Geology |
| _____ Anthropology and Sociology | _____ Health Sciences |
| _____ Botany* | _____ Mathematics |
| _____ Cellular and Molecular Biology | _____ Microbiology* |
| _____ Chemistry | _____ Physics and Astronomy |
| _____ Computer & Information Science | _____ Physiology and Biochemistry |
| _____ Ecology & Environmental Science | _____ Psychology |
| _____ Engineering | _____ Science Education |
| _____ Geography | _____ Zoology |

* These sections may be combined.

Type of Presentation (Check one)

- _____ Oral Presentation (15 min. max.) - each room will have a slide projector.
 _____ Oral Presentation using Power Point (15 min. max.) - load presentation prior to beginning of session
 _____ Poster Presentation - a 4' x 6' poster board will be provided.

Session Time Preference for Oral Presentation (1 = first preference; program requirements may restrict honoring preferences)

_____ Friday a.m. _____ Friday p.m. _____ Saturday a.m. _____ Saturday p.m.

Name and Mailing Address of Contact Person (undergraduate student use mentor as contact person)

Phone _____
 Fax _____
 E-mail _____

Return this form and a single spaced abstract by **October 6, 2006** to: Robert Creek, KAS Program Coordinator, Department of Biology, Eastern Kentucky University, Richmond, KY 40475. Phone (859)623-6646; Fax (859)622-1399; e-mail: rcreek@chpl.net.

PLEASE NOTE: In order to present you MUST also register to attend the annual meeting.

GUIDELINES FOR PREPARATION OF ABSTRACTS FOR PAPER AND POSTER PRESENTATIONS

1. Text of abstracts must be 250 words or less.
2. Abstracts must be on white, good quality paper (8.5 x 11 in.). They must be **single** spaced throughout and have a margin of 1 inch all around.
3. Use a type size of 10cpi and the same font throughout: do not use bold. Italics should be used only for the scientific names of the organisms and other expressions that conventionally appear in italic type.
4. Do not justify the right-hand margin.
5. The address should contain the capitalized name(s) of the author(s), department, university or company, name of the city, name of the state (use two-letter abbreviation, e.g. KY, IN, OH.) and the zip code.
6. In multi-authored abstracts, the name of the presenter of the paper will be indicated by an asterisk.
7. Use standard, well-known abbreviation when the use of abbreviations is necessary.
8. When using abbreviations for chemical compounds, spell out the name in full at the first mention and follow with the abbreviation in parentheses; use the abbreviation thereafter. Do not abbreviate chemical compounds in the title of the abstracts.
9. Any special symbols not on your word processor must be carefully drawn in by hand with fine pen and black ink.
10. Scientific names of organisms should be in italics (not underlined). Spell out generic names the first time they are used; afterwards these names should be abbreviated to first letter (plus a period) when followed by a specific epithet unless confusion may result with another abbreviated generic name in the abstract.
11. In the upper right hand corner of the abstract, type in CAPITALS the name of the section in which your paper or poster is being presented.
12. The following is an example of a portion of a proper abstract.

BOTANY AND MICROBIOLOGY

Taxonomic status of the varieties of Seneca snakeroot, *Polygala senega* (Polygalaceae). AMY E. TRAUTH* and ROBERT F.C. NACZI, Department of Biological Sciences, Northern Kentucky University, Highland Heights, KY 41099.

Seneca snakeroot, *Polygala senega* (Polygalaceae), is an uncommon plant ranging throughout most of eastern North America. Two varieties have been described for the species: variety *senega* and variety *latifolia*. The taxonomic

13. The abstract must be sent with your Paper Submission Form to the Program Coordinator listed at the bottom of the form.

PUBLICATION OF ABSTRACTS IN THE *JOURNAL*

If you would like to submit your abstract for publication in the *JOURNAL*, the guidelines are the same as above except you need to send a hard paper copy and a disk or e-mail version in WordPerfect or Word. Please include with your abstract a check for \$15.00 made payable to the Kentucky Academy of Science to cover publication costs (invoices will not be sent). Abstracts for publication must be received by the Abstract Editor by December 1.

Dr. Robert J. Barney
Abstract Editor
Community Research Service
Kentucky State University
Frankfort, KY 40601
rbarney@gwmail.kysu.edu

PRE-REGISTRATION FORM
KENTUCKY ACADEMY OF SCIENCE 92nd ANNUAL MEETING
HOSTED BY MOREHEAD STATE UNIVERSITY
MOREHEAD, KENTUCKY
NOVEMBER 9-11, 2006

Please type or print. Duplicate as needed, but use a separate form for each person.

Name Badge to Read _____

Address _____

City, State, Zip _____

School/Employer _____

KAS Section Affiliation _____

Telephone Number _____ e-Mail _____

(Your e-mail will be used to notify you of receipt of preregistration fees)

PRE-REGISTRATION FEE SCHEDULE

Category	Pre-Registration
-----------------	-------------------------

Current 2006 Dues Paid

Regular Member	\$25.00	_____
Student Member	\$ 5.00	_____

Non-Members

Professional	\$50.00	_____
Student	\$ 5.00	_____

2007 MEMBERSHIP DUES SCHEDULE

Regular Member	\$35.00	_____
Family Member	\$50.00	_____
Student Member	\$15.00	_____
Life Member	\$400.00	_____

TOTAL FEES (Check each item) \$ _____

KAS AWARDS BANQUET, Friday, November 10 \$25.00 x _____ Tickets \$ _____

URC: Yes ___ No ___ Banquet is free to students entering URC but student **must preregister** in order to receive a free ticket. If you are going to the banquet, indicate after tickets that you are an URC student.

GRAND TOTAL ENCLOSED \$ _____

Thursday Evening Social - location to be announced (no charge) Attending Yes No

THIS FORM MUST BE POSTMARKED NO LATER THAN OCTOBER 20, 2006

MAIL TO: PRE-REGISTRATION
KENTUCKY ACADEMY OF SCIENCE
PO BOX 22579
LEXINGTON, KY 40522-2579

Call for Nominations for Superlative Awards

The Kentucky Academy of Science seeks nominations of individuals who have made outstanding contributions to scientific research and education in the Commonwealth in the five areas designated below. September 20, 2006 is the deadline for nominations. All nominations and supporting materials should be sent in electronic format; e-mail attachments must be in MS Word format. Send to:

Dr. John Mateja
c/o Jody Cofer
Murray State University
Murray, KY 42071
(270) 809-3192
jody.cofer@murraystate.edu

Outstanding Academy Service

Qualifications: The recipient shall have been a long time member of the Kentucky Academy of Science and shall have made significant contributions to the growth and development of the Academy. Contributions should be interpreted broadly to mean contribution directly to the leadership of the Academy that has resulted in significant enhancement of the image of the organization and has led to its growth and recognition throughout the Commonwealth. The recipient will also be a scientist and/or teacher who has been recognized for significant contributions to his or her discipline as a researcher and/or teacher.

Nomination packet should include: an abbreviated curriculum vitae (5 pages or less) containing information pertinent to the award and a list of publications; and letters of recommendation from at least three but not more than five professional colleagues well acquainted with the candidate's contributions to the Academy and with his or her qualifications for this award.

Distinguished College/University Scientist

Qualifications: The recipient shall have made some significant contribution to academic research in Kentucky. Contributions should be interpreted broadly to mean the contribution directly to the Commonwealth, or to the improvement of the quality of life in the Commonwealth, or to intellectual growth in the Commonwealth.

Nomination packet should include: an abbreviated curriculum vitae (5 pages or less) containing information pertinent to the award and a list of publications from the last five years; documentation of special accomplishments as a science teacher or academic researcher; and letters of recommendation from at least three but not more than five professional colleagues well acquainted with the candidate's qualifications.

Outstanding College/University Teacher

Qualifications: The recipient shall have made some significant contribution primarily to science teaching but also to research at the college/university level in Kentucky. Contributions should be interpreted broadly to mean contribution directly to the Commonwealth, or the intellectual growth in the Commonwealth.

Nomination packet should include: an abbreviated curriculum vitae (5 pages or less) containing information pertinent to the award and a list of publications from the past five years; documentation of special accomplishments as a teacher of science; and letters of recommendation from at least three but not more than five professional colleagues well acquainted with the candidate's qualifications.

Outstanding Secondary School Science Teacher

Qualifications: The recipient shall have made some significant contributions to the teaching of science at the middle and high school level in Kentucky. Contributions should be interpreted broadly to mean contribution to the academic welfare and intellectual growth of secondary students of the Commonwealth, contribution directly to the Commonwealth, or to the quality of the life in the Commonwealth.

Nomination packet should include: an abbreviated current curriculum vitae (5 pages or less) which addresses the professional background, experience, and development of the candidate; documentation of special accomplishments as a teacher of science, especially measures of student success, participation in student development beyond the classroom, and science curriculum development; and letters of recommendation from an administrator or supervisor, a teaching colleague, a student, and a parent, not to exceed five letters.

Distinguished Professional Scientist (in a non-academic position)

Qualifications: The recipient shall have made some significant contributions to science in Kentucky. Contributions should be interpreted broadly to mean contribution directly to commerce or industry or to the improvement of the quality of life in the Commonwealth.

Nomination packet should include: an abbreviated curriculum vitae (5 pages or less) containing information pertinent to the award and a list of publications from the past five years; documentation of special accomplishments as an industrial scientist, and letters of recommendation from at least three but not more than five professional colleagues well acquainted with the candidate's qualifications.

Call for Nominations to KAS Governing Board

The Kentucky Academy of Science Nominations and Elections Committee is seeking assistance from the KAS membership in our effort to identify a ballot of quality candidates to assume leadership roles within the Academy for next year. KAS members interested in nominating colleagues for these vacant positions, or individuals willing to volunteer to be placed on the ballot, should forward the name, e-mail address/phone number for each candidate, and indicate the leadership position of interest. Then Nominations and Elections Committee will contact each candidate to request the necessary information to be included on the ballot. This is an extremely important responsibility for the members of KAS and the committee needs your assistance in identifying candidates for these vacancies. The membership is being contacted at this time for nominations for the following offices:

Vice President
Physical Sciences Representative
Social & Behavioral Sciences Representative

Any member may nominate another member for Vice President. However, for Physical Sciences Representative and Social & Behavioral Sciences Representative, the nominator must identify with that Division. Please send nominations by August 1, 2006 to:

David R. Olson, Ph. D.
Dept. of Psychology
150 University Boulevard, Box 687
Morehead State University
Morehead, KY 40351
d.olson@morehead-st.edu

High School Students Win KAS Awards

The Kentucky Academy of Science presented two special awards at the Eleventh Annual North Area Counties of Kentucky Exposition of Science (NACKES) competition that was held March 25, 2006 at Northern Kentucky University. Mara McMillen, Notre Dame Academy received the award for best project in the Life Sciences. Mary Soltys, also of Notre Dame Academy, received the award for best project in the Physical Sciences. NACKES is affiliated with the Intel International Science and Engineering Fair. We congratulate both of these young scientists for their outstanding projects

Marcia Athey & Botany Funding Award for 2006

The 2006 Marcia Athey & Botany Funds award recipients are:

- Channing Richardson and Allen Risk, Department of Biological and Environmental Sciences, Morehead State University, "A Survey of the Pteridological, Bryological, and Lichenological Diversity of Carter Caves State Resort Park." \$883.70 from the Botany Fund.
- Tara Trammell and Margaret Carreiro, Department of Biology, University of Louisville, "Distribution and Ecosystem Services of Woody Plant Communities along Urban-to-rural Highway Corridors." \$993.50 from the Athey Fund
- Christopher Owen and Jeff Jack, Department of Biology, University of Louisville, "In vitro Culture of Glochidia of Several Threatened and Endangered Freshwater Mussels: Prospects of Metamorphosis Without a Parasitic Host." \$900.00 from Athey Fund.

The Research Awards Committee would like to encourage more KAS members to take advantage of the Academy's grant opportunities. Instructions and guidelines can be found on the KAS web site (<http://kas.wku.edu/kas>) and the KAS newsletter.

Funding Request Deadlines

November 15, 2006

Undergraduate Research Supply,
Summer Undergraduate Research

Detailed instructions for preparing the proposal can be found on our web site. A cover sheet as well as terms and conditions of the research supported can be obtained from the Research Committee Chair:

Dr. George Antonious
Water Quality/Environmental Toxicology
218 Atwood Research Building
Kentucky State University
400 East Main Street
Frankfort, KY 40601
502-597-6005
george.antonious@kysu.edu



Kentucky Junior Academy of Science

The Junior Academy was begun over fifty years ago to foster an interest in science for middle school and high school students in Kentucky. Members of the Kentucky Junior Academy have the opportunity to:

- interact with other high school students across the state who are interested in science and technology,
- apply for money to design and complete science projects,
- present projects at the annual KJAS meeting, and
- publish an abstract in the Journal of the Ky Academy of Science.

The Kentucky Junior Academy of Science 2006 Spring Symposium was held Saturday, April 15, 2006 at Campbellsville University. A record 110 papers were presented. The KJAS also elected state officers for next year.

The overall winner of the Life Sciences Division was Jessica Miles who presented a talk on "The Protein Tarp and Its Role in Actin Recruitment during Chlamydia Cell Invasion." Suhail Malhotra was the overall winner in the Physical Sciences Division. He presented a talk on "Nano Electrochemical Sensor Fabrication using Carbon Nanopipettes." These two young scientists will represent Kentucky at the national American Junior Academies of Sciences meeting February 2007.

Are you interested in joining the Kentucky Junior Academy of Science or just want to learn more about it? Check out the web site at www.kyjas.org or contact the KAS/KJAS office at:

University of Kentucky
 Outreach Center for Science & Health Careers
 102 Chandler Medical Center Annex 5
 Lexington, KY 40536-0078



Above: Life Sciences Division overall winner Jessica Miles (left) and Physical Sciences Division overall winner Suhail Malhotra are both from duPont Manual High School.

Below: The new state officers are: President: Jessica Miles, duPont Manual High School, Vice-President: J.D. Baumgarten, Ballard High School, and Secretary: Ann S. Cooper, Lafayette High School.



Yes, I Want to Join the Kentucky Academy of Science

Check appropriate boxes

Individual Membership

(January to December)

- \$35 Active Member
- \$15 Student member (College)
- \$10 KJAS member (K-12)
- \$50 Family member
- 400 Life member

Educational/Industrial Affiliate Membership

- \$5,000 Patron
- \$2,000 Associate Patron
- \$1,000 Fellow
- \$500 Sustaining Member
- \$250 Member
- \$100 Associate Member
- \$25 High School Member

Check up to 3 sections of interest:

- Agricultural Sciences
- Anthropology & Sociology
- Botany & Microbiology
- Cell & Molecular Biology
- Chemistry
- Computer & Information Sciences
- Ecology & Environmental Science
- Engineering
- Geography
- Geology
- Health Sciences
- Mathematics
- Physics & Astronomy
- Physiology & Biochemistry
- Psychology
- Science Education
- Zoology

Voting Section Choice _____

Payment Enclosed \$ _____

Name _____

Street _____

City _____ State _____ Zip _____

Employer or School _____

E-mail _____

Please make checks payable and mail to:

The Kentucky Academy of Science
 PO Box 22579
 Lexington, KY 40522-2579