



Kentucky Academy of Science

NEWSLETTER

*The Voice of Science
in Kentucky*

www.kyscience.org

Susan Templeton, Editor

January 2012

Enhanced Affiliates

- Bellarmine University
- Berea College
- Brescia University
- Centre College
- Eastern Kentucky University
- Georgetown College
- Kentucky Community & Technical College System
- Kentucky State University
- Midway College
- Morehead State University
- Murray State University
- Northern Kentucky University
- Spalding University
- Transylvania University
- University of Kentucky
- University of Louisville
- Western Kentucky University

Honorary Patron

- Lumins Associates

Sustaining Member - \$500 level

- Campbellsville University

Member - \$250 level

- Asbury University
- Kentucky American Water Company
- Kentucky Wesleyan College
- Lindsey Wilson College
- Thomas More College
- University of Pikeville
- University of the Cumberlands
- Wood Hudson Cancer Research Laboratory

Associate Member - \$100 level

- WKU Crawford Hydrology Lab
- WKU Hoffman Environmental Research Institute

Faculty, staff and students at Enhanced Affiliate member organizations receive:

- free KAS membership
- online access to KAS Journal
- KAS Newsletter via e-mail

Editor's Note: When viewing the Newsletter in Acrobat Reader the Table of Contents (TOC) contains live links to each article; at the bottom right of each page is a link back to the TOC!

The KAS Newsletter is published in January, May and August. Current and archived issues are available at www.kyscience.org. You may contact the KAS Newsletter Editor at susan.templeton@kysu.edu.

From the President...

Welcome to 2012, and many warm wishes for an inspired, productive and rewarding new year. It is my honor and privilege to serve as Kentucky Academy of Science President in 2012. I look forward to an exciting and challenging year, and one in which I invite and encourage your active participation and involvement. KAS has frequently been referred to as the "Voice for Science" in the Commonwealth, and I and the rest of the KAS Governing Board would like to invite you, as a KAS member - be you university/college faculty, graduate or undergraduate student, industry scientist, K-12 teacher or interested layperson - to become part of the chorus. There are many opportunities for you to become involved.

We ended this past year with a very successful Annual Meeting at Murray State University. Many thanks to Dr. Steve Cobb (Dean of the College of Science, Engineering and Technology), to the Organizing Committee and to the many student volunteers for the hours they put in to make the 2011 meeting such an outstanding one. Thank you for your warm and gracious welcome. It was definitely worth the drive! And thank you to all the members - faculty, research scientists, and students - who made the trip to Murray State to present your research and to participate in the many discussions. You, too, were integral to the meeting's energy and success.

One session at the Annual Meeting which generated significant discussion and "buzz" was the Friday Symposium entitled "Kentucky Museum of Natural History: Present and Future." A panel of experts including Dr. Don Chesnut (President; Kentucky Museum of Natural History Project), Dr. Frank Etnensohn (Department of Earth and Environmental Sciences, University of Kentucky), Donald S. Dott Esq. (Executive Director, Kentucky State Nature Preserves Commission) and Mr. Kent Whitworth (Executive Director; Kentucky Historical Society; Thomas C. Clark Center for Kentucky History) were led by Dr. Judy Voelker in a discussion of the past, present and future of a Kentucky Museum of Natural History. In the year 2000, Senate Bill 216 was introduced to the General Assembly, by Senator Pendleton, proposing the creation of a state natural history museum. The bill went to the House floor in March of that year and was passed unanimously but without funding. A Kentucky Natural History Museum Board was established to further investigate and facilitate the establishment of such a museum, but, for various reasons (lack of funding being one), ceased to be an active and functioning committee. The dream was, however, not forgotten and has been kept flickering in the shadows for several years. We (KAS) were able to bring the idea of a Kentucky Natural History Museum back into the light at the 2011 meeting. Both Mr. Dott and Mr. Whitworth, who by their position are members of the Natural History Museum Board, provided many insights and were very encouraging in efforts to revitalize the museum project. They applauded the grass-roots work of Drs. Chesnut and Etnensohn and encouraged members to think broadly about museums in an age of technology and active engagement. The KAS Governing Board will be taking up the question of how we might be of service in supporting efforts to establish a Natural History Museum in Kentucky at our Board meeting in February. Many individuals who were present at the 2011 Annual Meeting

(continued on page 7)

Inside this issue

2011 Annual Meeting Report.....	2	New Journal on Undergraduate Research and Mentoring	9
Messages from the Executive Director	2	Science Across the Commonwealth	
2011 Undergrad. Research Competition Winners	3	2012 Posters-at-the-Capitol	10
2011 Superlative Awards	4-6	Kentucky Space Initiates Dropzone Program	10
Call for Nominations for Superlative Awards	6	Kentucky to Host 2012 NIH SBIR/STTR Conference	10
2012 KAS Annual Meeting	7	Darwin: Demon or Revolutionary?	10
KAS Research Funds	7	2012 Kentucky Science and Engineering Fair	11
2011 Graduate Research Winners	7	Kentucky Junior Academy of Science	11
KAS Governing Board Updates	8	Third Annual University of Kentucky STEM Education Symposium	11
New Editor Selected for the KAS Journal	8	Kentucky Heritage Land Conservation Fund: CONSERVE KENTUCKY	12
2012 Sectional Officers	9		

2011 Annual Meeting Report

The 97th meeting of the Kentucky Academy of Science was held at Murray State University on November 4-5, 2011. The meeting was very well attended with a total of 616 individuals in attendance which included the all important speakers, exhibitors and sponsors.

The meeting started on Friday evening with the Symposium. The well received Symposium was a panel discussion entitled "Kentucky Museum of Natural History: Present and Future." The Symposium was presided over by Dr. Judy Voelker with the four member panel consisting of Dr. Don Chesnut, Jr., Dr. Frank Ettensohn, Mr. Donald Dott and Mr. Kent Whitworth.

Saturday had a full day of presentations, both power point and posters, with the well attended afternoon Plenary Session being the final presentation which was presided over by Dr. Dawn Anderson. The speaker was Dr. Sean Clark of Berea College whose topic was "Fields of Learning: The Student Farm Movement in North America."

The Kentucky Association of Physics Teachers under the guidance of Dr. Richard Gelderman presented on Saturday morning a two-part workshop: a hands-on experience "Making Magnetism Visible" and a panel discussion on "Benefits and Costs of Students Participation in State and National Science Competitions." Saturday afternoon under the guidance of Mr. Glenn Campbell and Dr. Demetrio Zourarakis the Mid-America Remote Sensing Center (MARC) of Murray State Univ. hosted a Symposium on Geotechnologies and Geography Synergies.

The meeting concluded with the Awards Banquet. The winners of the Superlative Awards, the URCs and GRCs are provided elsewhere in this Newsletter. There were 161 power point presentations with 75 entering the URC and 38 in the GRC. There were 159 posters with 111 entered in the URC. The total breakdown by section is as follows:

Presentations by Section	Power Point			Poster	
	Total	URC	GRC	Total	URC
Agricultural Sciences	24	8	7	11	8
Anthro. & Sociology	3	0	1	1	1
Botany	8	3	3	1	1
Cell. & Molec. Biology	7	4	3	15	12
Chemistry	18	9	6	42	32
Computer & Infor. Sci.	4	1	1	5	1
Ecology & Environ. Sci.	10	4	5	17	10
Engineering	4	3	0	5	1
Geography	9	4	1	3	0
Geology	9	4	0	2	2
Health Sciences	4	4	0	8	6
Mathematics	3	2	0	2	1
Microbiology	8	6	2	2	2
Physics & Astronomy	10	5	0	11	8
Phys. & Biochemistry	11	3	5	14	11
Psychology	12	10	2	5	4
Science Education	5	0	0	1	1
Zoology	5	2	2	14	10

*From Dr. Robert Creek,
KAS Program Director*

Messages from the Executive Director

Thank you to everyone who helped in the making of a very successful 2011 KAS Annual Meeting! This event would not be possible without the support of our 2011 sponsors, so a special thanks to:

- Platinum:** Agilent Technologies
American Synthetic Rubber Company
- Gold:** MPD, Inc; Sud-Chemie, Inc
- Silver:** Eastern Kentucky University Graduate School
- Friend:** Warren Rural Electric Cooperative Corporation

KAS would also like to thank our exhibitors: Agilent Technologies, American Synthetic Rubber Company, B&B Microscopes, Ltd., Kentucky Biomedical Research Infrastructure Network (KBRIN), Kentucky Institute of International Studies at WKU, Midway College School of Pharmacy, Murray State University Graduate School, University of Kentucky's College of Pharmacy and Integrated Biomedical Science, University of Louisville's Integrated Programs in Biomedical Sciences and School of Interdisciplinary and Graduate Studies, University Press of Kentucky, VWR International, and Western Kentucky University Ogden College of Science and Engineering.

Everyone at MSU displayed amazing hospitality to all the KAS meeting attendees. The MSU Local Arrangement Committee took care of every detail. I would like to acknowledge the entire MSU College of Science, Engineering & Technology and specifically Dr. Robert Pervine who served as Chair of the Local Arrangements, Ms. Rhonda Rogers who worked many extra hours and served as Assistant Chair of the Local Arrangements, Ms. Angela Guyton for acting as Chair of the Poster Presentations, Ms. Cathy Bazar who coordinated all the volunteers that helped with registration and other meeting events, Dean Steve Cobb, Ms. Beth Brubaker for her help with securing and showing hospitality to the meeting Exhibitors and Sponsors, Dr. Ted Thiede, Dr. Donald Adongo who coordinated the parking for the meeting, Mr. Dwaine Willoughby who made all sure all the computers and other AV equipment worked properly, Ms. Diane Thiede who completed all the research award certificates in a very timely fashion, Dr. Andrew Kellie, and Ms. Gerry Harris from Hancock Biological Station. Thank you for all of your hard work!

And one last meeting note, congratulations to Western Kentucky University for having the highest number of registered meeting attendees! Two years in a row for WKU!

I am looking forward to 2012 and working with Incoming President Dr. Dawn Anderson. With the start of the New Year, KAS will be sending annual dues notices to our affiliates and regular members. If you are currently an enhanced member of KAS and are remaining affiliated with a KAS Enhanced Affiliate no action is needed by you to retain your KAS annual membership. Please encourage your colleagues to join KAS. Membership for faculty, staff and students at KAS Enhanced Affiliates (list on page one of newsletter) is complimentary. KAS currently has 2200 members, but that number should be much higher. If you need a KAS brochure or information to share with your co-workers/students, or assistance in any KAS matter, feel free to contact me.

Best wishes,

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

2011 Undergraduate Research Competition Winners

Congratulations to the students and their mentors and thanks to those who devoted their time to judge the presentations.

AGRICULTURAL SCIENCES

- Oral 1st: Julianne Wyrick - Asbury University
- Oral 2nd: Kyla Ross - Kentucky State University
- Oral 3rd: Joshua Riggsby - Morehead State University
- Poster 1st: Katie LeBlanc - Murray State University
- Poster 2nd: Lisa Baxter - Berea College
- Poster 3rd: Samantha Kindred - Berea College

ANTHROPOLOGY AND SOCIOLOGY

- Oral 1st: Erik Wilson - Eastern Kentucky University
- Oral 2nd: Erica Coleman - Kentucky State University

BOTANY

- Oral 1st: Alexandra J. Weiser - Georgetown College
- Oral 2nd: Alexia Callihan - Morehead State University
- Oral 3rd: Brandy N. Bradford - Murray State University

CELLULAR AND MOLECULAR BIOLOGY

- Oral 1st: Premila Samuel - Berea College
- Oral 2nd: Mark Althoff - Murray State University
- Oral 3rd: James Bradley - Morehead State University
- Poster 1st: Sean Shannon - Western Kentucky University
- Poster 2nd: Sorna Kamara - Georgetown College
- Poster 3rd: Josiah Zachary - Kentucky Wesleyan College

CHEMISTRY

- Oral 1st: Dillon S. Pender - Western Kentucky University
- Oral 2nd: Adam McCallum - Northern Ky University
- Oral 3rd: Sijin Ren - Murray State University
- Poster 1st: N. Wright, A. Patel - Western Ky University
- Poster 2nd: Chelsey Lloyd, Michelle Bloom - Berea College
- Poster 3rd: E. Whitaker, D. Moya, M. Burt - Berea College

COMPUTER AND INFORMATION SCIENCES

- Poster 1st: Meghan Allen - Bellarmine University

ECOLOGY AND ENVIRONMENTAL SCIENCE

- Oral 1st: Molly Brown - Northern Kentucky University
- Oral 2nd: Brenna Tinsley - Western Kentucky University
- Oral 3rd: Mary Newton - Western Kentucky University
- Poster 1st: Alec Van Dyke - Wittenberg University
- Poster 2nd: Demetria Todd - Asbury University
- Poster 3rd: Benjamin Rausch - Wittenberg University

ENGINEERING

- Oral 1st: Ben Slone - Centre College
- Oral 2nd: Hodari-Sadiki James - Berea College
- Oral 3rd: Kyle Frye - Murray State University
- Poster 1st: Krishnanunni Unnikannan - Western Ky University
- Poster 2nd: Easterday, Ellard, Monger, Jenkins - Berea College

GEOGRAPHY

- Oral 1st: Victoria Allen - Western Kentucky University
- Oral 2nd: Sean Vanderhoff - Western Kentucky University
- Oral 3rd: Jonathon Oglesby - Western Kentucky University
- Poster 1st: A. Boys, B. Urbancic - Western Ky University
- Poster 2nd: Joshua Montgomery - Western Ky University
- Poster 3rd: Tommy Woodall - Western Kentucky University

GEOLOGY

- Oral 1st: Michael Powers - Western Kentucky University
- Oral 2nd: Brett Wiggins - Murray State University
- Oral 3rd: Jeffrey Molloy - Western Kentucky University
- Poster 1st: Sean Reed - Northern Kentucky University
- Poster 2nd: Kristopher Carrol - Eastern Kentucky University
- Poster 3rd: Tyler Wade - Eastern Kentucky University

HEALTH SCIENCES

- Oral 1st: Megan Reynolds - Northern Kentucky University
- Oral 2nd: Jeffrey Chalfant - Georgetown College
- Oral 3rd: Justin Pile - Western Kentucky University
- Poster 1st: J. Dolan, F. Mehmeti, K. Massana - Berea College
- Poster 2nd: Beris Dizdar - Northern Kentucky University
- Poster 3rd: Courtney Pottinger - Kentucky State University

MATHEMATICS

- Oral 1st: Bryce Norris - Murray State University
- Oral 2nd: Amir Ahmadi - Morehead State University
- Poster 1st: Julie Lang - Morehead State University

MICROBIOLOGY

- Oral 1st: J. Wes Morris - Kentucky Community and Technical College System
- Oral 2nd: Mara Varvil - Murray State University
- Oral 3rd: Samantha Kaiser - Northern Kentucky University
- Poster 1st: Travis Beeler - Western Kentucky University

PHYSICS AND ASTRONOMY

- Oral 1st: Jessica Peace - Morehead State University
- Oral 2nd: Rohan Isaac - Berea College
- Oral 3rd: Joseph Fryman - Northern Kentucky University
- Poster 1st: Marissa Brown, Mackenzie Endres - Berea College
- Poster 2nd: James T. Little - Morehead State University
- Poster 3rd: Jason J. Leszczewicz - Western Ky University

PHYSIOLOGY AND BIOCHEMISTRY

- Oral 1st: Kelly Mouapi - Berea College
- Oral 2nd: Chad Willis - Western Kentucky University
- Oral 3rd: Mary Wiechart - Wood Hudson Cancer Research Laboratory
- Poster 1st: S. Blalock, L. Francisco - Murray State University
- Poster 2nd: Howard, Rudolph, Welch - Centre College
- Poster 3rd: Evelyn Robuck - Asbury University

PSYCHOLOGY

- Oral 1st: Amy Clippinger - Northern Kentucky University
- Oral 2nd: Gianni Maione - Morehead State University
- Oral 3rd: Hillary Botts - Centre College
- Poster 1st: Carter, Dean, Frost, Gordienko, Porter - Berea College
- Poster 2nd: Hansen, Benham, Crick, George, Oberst - Centre College
- Poster 3rd: Sarah Schoenhagen, Josh Stephens - Morehead State University

SCIENCE EDUCATION

- Poster 1st: Kevin Beers - Northern Kentucky University

ZOOLOGY

- Oral 1st: James Mercer - Northern Kentucky University
- Oral 2nd: Bethany Coffey - Western Kentucky University
- Poster 1st: E. Berg, B. King, M. Martin - Berea College
- Poster 2nd: Andrew J. Jajack - Wittenberg University
- Poster 3rd: Katherine Bachman - Northern Ky University

2011

Superlative Awards

OUTSTANDING COLLEGE/UNIVERSITY TEACHER

Dr. Amer Lahamer is a Professor of Physics at Berea College. He received his bachelor's and master's degrees in Electrical and Computer Engineering from the University of Iowa, a M.S. in Theoretical Physics from the University of Iowa, and his Ph.D. in Physics from Vanderbilt University. He began his tenure as a faculty member at Berea College in 1989, and he has served as Chair of the Department of Physics since 2002. In 2008 he was appointed to the W. Leslie Worth Chair in Science at Berea.

Dr. Lahamer has taught over 25 different courses at Berea College. His students and colleagues hold him in extremely high regard. In letter of nomination, students describe Dr. Lahamer as "excellent, stimulating, humorous, great, passionate, and extremely knowledgeable" and stated "One needs only to see him lecture on the mysteries of Newton's Laws or electromagnetic theory to feel his passion for the subject, expressed with wild gesticulations and peppered with idiosyncratic phrases. As a matter of course, students find themselves imbued with his contagious fervor, encouraging them to excel in his classes and others. Here is the very heart of Dr. Lahamer's talent with teaching: he does not merely instruct, but inspires."

Dr. Lahamer has an impressive record of summer research involving undergraduate students from Berea. Over 30 students have participated in research projects under his supervision; he has a large number of presentations and publications with student co-authors. An estimated 84% of students earning bachelor's degrees



KAS President Barbara Ramey (center) presented Dr. Lahamer's plaque to his students from Berea College.

in Physics at Berea College have gone on to enter Ph.D. programs in Physics or related fields over the past 20 years.

Dr. Lahamer received the Seabury Excellence in Teaching Award at Berea in 2004, and he was awarded the George B. Pegram Award by the Southeastern Section of the American Physical Society for Excellence in Teaching in 2010.

OUTSTANDING EARLY CAREER IN POST SECONDARY EDUCATION

Dr. Stephen Richter, Associate Professor of Biological Sciences at Eastern Kentucky University, has maintained an outstanding record of teaching, service, and research since joining the faculty at EKU in 2005. He has taught an astonishing 13 different courses in 13 semesters; these courses have ranged from freshman to graduate level courses. He has been very active in encouraging undergraduate research in his department and currently serves as Undergraduate Research Coordinator, a position he originated. He has supervised 22 under-graduate students in research and 10 masters students. He routinely serves on numerous masters committees - averaging 9-10 per year.

Dr. Richter's research has been focused primarily on amphibian studies, particularly amphibian genetics and conservation biology. He has worked on multiple amphibian species and examined the effects of captivity, natural versus artificial ponds, climate change, mining, fragmentation of habitat, as well as a variety of other influences on amphibian populations. Dr. Richter has involved his undergraduate and graduate students in professional presentations (28 oral presentations and 34 poster presentations) and numerous publications. He also has been very active in applying for extramural funds for both research and service activities, and has received funding in excess of \$400,000 for projects ranging from Fish and Wildlife Service Grants to investigate conservation

genetics in amphibian populations to an NSF Grant to develop a strategic plan to establish a new Biological Field Station.

Dr. Richter has been a very active member of a several professional scientific societies and has served as a member of the Board of Governors for the American Society of Ichthyologists and Herpetologists, and on the Board of Directors for the Association of Southeastern Biologists. In addition, in 2011, he became Associate Editor of Herpetological Conservation and Biology.



Dr. Richter was unable to attend the Awards Banquet; he received his award later.

Finally, as stated in his letter of nomination, "...there is no doubt that Dr. Richter has helped 100s of people, at all age levels, come to a better understanding of the wonders of nature, the intricacies of biology, and the importance of conserving biodiversity although still in the initial phases of his career, he has already established wide-ranging programs of teaching, service, and research."

DISTINGUISHED COLLEGE/UNIVERSITY SCIENTIST

Dr. Chris Groves, Professor of Geography and Geology at Western Kentucky University, serves as Director of the Hoffman Environmental Research Institute, Director of the China Environmental Health Project, and Director of the Crawford Hydrology Laboratory. Dr. Groves received his bachelor's degree in geology and master's degree in geography from Western Kentucky University, and his Ph.D. in Environmental Sciences (Geology) from the University of Virginia. He joined the WKU faculty in 1991, and has received numerous awards and honors over his career including: the Ogden College Award for Outstanding Faculty Achievement in Teaching, the Ogden College Award for Outstanding Faculty Research and Creative Activity, and the Ogden College Award for Outstanding Public Service. In 2010 he received WKU's highest honor, being named University Distinguished Professor.

Dr. Groves has had a truly outstanding career at WKU as a scholar, teacher, mentor, and public servant. He has been a prolific researcher and passionate spokesperson for the protection of karst groundwaters. He has earned international recognition for his work on water sources, contaminants, climate change related to carbon sequestration, and land use management. As one of his letter writers stated, "Dr. Groves has been of tremendous service in his efforts to assist in management of karst across our region". He regularly assists Mammoth Cave National Park with management issues, and he played a central role in efforts to establish the Mammoth Cave International Center for Science and Learning. Dr. Groves's extensive work in China led to his nomination by China's Ministry of Land and Resources, for the China Friendship Award, China's highest award for foreign experts. Dr. Groves has authored numerous papers and book chapters, and has been awarded over 3 million dollars in grants and contracts over his career. Committee members also noted Dr. Groves's outstanding contribution to



KAS President Barbara Ramey presented the award to Dr. Chris Groves of Western Kentucky University.

science in the Commonwealth of Kentucky as a research mentor. Over 20 students have completed their master's thesis under his supervision. As one of his colleagues stated in a letter of support for his nomination for this award, "hundreds of Dr. Groves's students over the years have gone on to productive careers within the state, contributing in a variety of ways to betterment of the quality of life for Commonwealth citizens".

OUTSTANDING SECONDARY SCHOOL SCIENCE TEACHER



KAS Pres. Barbara Ramey presented the award to Mr. Glen Zwanzig of DuPont Manual High School.

Mr. Glen Zwanzig has taught at Louisville's DuPont Manual High School since 1985. He received his bachelor's in biology and chemistry from Illinois Wesleyan University, his M.S. in Earth Science from Illinois State University, and his Rank 1 from the University of Louisville. He has had an exemplary career as a high school science teacher, one that has

positively impacted not only the students at DuPont Manual, but also students across the Commonwealth. One colleague stated in a letter in support of his nomination, "I have been in his classroom observing him many times and I always come away feeling uplifted ... He is a master with his students."

Mr. Zwanzig has served as a High School Science Fair Director since 1996 and became a Regional Science Fair Director in 2001. He has served as a coach for DuPont Manual's Science Olympiad Team that won the State Championship in both 2008 and 2010. Mr. Zwanzig also served as Co-Chair for the Jefferson Co. Public School Superintendent's Committee for Restructuring Science, K-12, in 2001-2002, and on the Board of Directors of the Kentucky Science Teachers Association.

Mr. Zwanzig has been the recipient of numerous teaching awards over his career including: the International Science Fair Teaching Excellence Award, the Ashland Teacher Achievement Award, Excel Teacher Award, Outstanding Biology Teacher Award for Kentucky, Jefferson County Teacher of the Year, Presidential Science Award, Toyota Tapestry Teacher Award, Coca-Cola Educators Award of Distinction, and the Amgen Award for Science Teaching Excellence.

It is clear that Mr. Zwanzig has earned the respect and admiration of his many students, his colleagues, and his supervisors. One of his letter writers eloquently stated, "...a perfect teacher would combine the natural teaching talents of Socrates, the simple, down to earth philosophies of Abraham Lincoln and Benjamin Franklin, the intuitive problem solving of Einstein and the engaging personality of Will Rogers. Now stop imagining. This perfect teacher does exist and he is teaching in DuPont Manual High School."

OUTSTANDING ACADEMY SERVICE

Dr. David White is a Professor of Biological Sciences at Murray State University and Director of the Hancock Biological Station. Dr. White received his bachelor's and master's degrees in Zoology from DePauw University in Indiana, and his Ph.D. in Biology from the University of Louisville. He has been Director of the Hancock Biological Station and a member of the faculty at Murray since 1988. He was named as Murray State University's first Distinguished Research Professor in 2001, and received the Bill Barfield Award for Outstanding Contributions in Water Resources Research in 2007.

Dr. White's contributions as a professor, scientist, and director have been outstanding- he has published over 100 papers and has secured millions of dollars in extramural funding. Dr. White also has a truly exemplary record of professional service. He is a long time member of numerous scientific societies, and has served as President of the Association of Ecosystem Research Centers, a member of the Executive Board of the Consortium of Universities for the Advancement of Hydrological Science, and he has served as Director of the Kentucky EPA EPSCoR program since 2001. In addition, he has been a member of the Board of Directors and a member of the Finance Committee of the National Ecological Observatory Network since 2008, he served as a member of the Steering Committee for the Ohio River Basin Consortium for Research and Education for twenty years, and has been Editor and a member of the Board of Directors for the Organization of Biological Field Stations since 1997.

While the above accomplishments are particularly noteworthy, tonight we are recognizing Dr. White for his outstanding service to the Kentucky Academy of Science as a member of the Governing Board and editor of the Journal of the Kentucky Academy of Sciences for the past six years. During his tenure as editor, Dr. White has continued to hold the JKAS to a high standard of



KAS President Barbara Ramey presented the award to Dr. David White of Murray State University.

professionalism. He also showed great foresight in recognizing the need to preserve all of the volumes of the Journal in electronic format. He coordinated the effort to scan every back issue of the JKAS into PDF files. Thanks to his efforts, every issue of the JKAS (representing nearly 100 years) is now available through the KAS website. Dr. White has also worked with BioOne so that the JKAS has a professional and easily accessible online presence. As one of his colleagues stated in a letter of support for his nomination, "David White has been a tremendous asset to our organization. ...he has spent many hours working as editor to make the JKAS a publication that KAS members can read with pride".

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 six areas designated below.

- Outstanding Academy Service
- Distinguished College/University Scientist
- Outstanding College/University Teacher
- Outstanding Early Career in Post Secondary Education
- Outstanding Secondary School Science Teacher
- Distinguished Professional Scientist (non-academic)

Detailed criteria for each category are available online at www.kyscience.org/content/nominations.php. Nomination packets for all awards should include an abbreviated curriculum vitae (5 pages or less) containing information pertinent to the award as well as a list of publications, and letters of recommendation from two to three professional colleagues well acquainted with the candidate's qualifications for the award.

Outstanding Academy Service Award nomination packets should include documentation of special contribution to the Academy.

Outstanding Secondary School and College/University Teacher awards nomination packets should include documentation of special accomplishment as a teacher of science, especially measures of student success, participation in student development beyond the classroom, and science curriculum development. Letters of recommendation for secondary school teachers may also come from an administrator or supervisor, a teaching colleague, a student, or a parent.

April 15, 2012, 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. K. C. Russell
Dept. Of Chemistry
Northern Kentucky University
Highland Heights, KY 41099

russellk@nku.edu
(859) 572-6110

2012 KAS Annual Meeting

The 98th meeting of the Kentucky Academy of Science will be held at Eastern Kentucky University on November 2-3, 2012.

From the President... *continued*

Symposium have already indicated an interest in helping to move the museum project forward. If you would be interested in participating or contributing to the discussions, please don't hesitate in contacting me (andersond@bera.edu). I will be glad to put you on the contact list and let you know how you too can become involved.

And while we are on the topic of involvement, I would like to invite your personal participation in various efforts of the Academy. As with any organization, much of the day-to-day work is done by various committees, and KAS is no exception. We have a number open positions on the Membership, Science Education, Awards and Kentucky Junior Academy of Science Committees. If you might be interested in being more directly and actively involved with KAS this year or if you know a member who might be (yes, go ahead and volunteer them), please don't hesitate to e-mail me. I'm more than happy to contact you or them about various committee opportunities.

I would also like to encourage you to become more involved in KAS by submitting your research for publication in the Journal of the Kentucky Academy of Science. Under the direction of Dr. David White, the Journal has continued to be a rigorously peer-reviewed and respected state Academy journal. As you may know, Dr. White has recently retired from his position as JKAS editor and has handed the responsibilities to Mr. Martin Matisoff (Land Grant Program, KSU). I would like to personally thank Dr. White for his many years of leadership and service as JKAS editor and to welcome Mr. Matisoff to the Board. I encourage you as a KAS member to consider submitting your research and, if you are faculty, that of your students to JKAS for publication. Having been privileged to hear and see the exciting research being done by graduate and undergraduate students and their faculty/research mentors across the Commonwealth at the recent KAS annual meeting, I know much of that work deserves a wider audience. The Journal of the Kentucky Academy of Science might be just the publication for you (be you faculty or student). Information about submission can be found on the KAS web site.

It's probably clear by now that the focus of my KAS newsletter "From the President" contribution is involvement. I, and the KAS Governing Board, would definitely welcome yours. We rely on a host of volunteers to keep science on the agenda in Kentucky. You can help us in that effort by serving on KAS committees, contributing research articles to JKAS, serving as a Kentucky Junior Academy of Science meeting judge, contributing suggestions or action items to the KAS Governing Board, participating in efforts like the Kentucky Natural History Museum project or any myriad of KAS-supported efforts. We welcome your participation and involvement. If the thought of adding one more item to your already over-burdened schedule might cause you to think twice, please consider the "value-added" factor. We, you, I can make a difference in promoting STEM efforts in Kentucky. Join us.

Best for a great 2012. *Dawn Anderson*

KAS Research Funds

A total of 21 grant proposals have been received and are under review. Dr. George Antonious, Chair of the KAS Committee on the Distribution of Research Funds, will present the award recommendations at the KAS Board Meeting scheduled for February 11, 2012. The grant recipients will be announced shortly thereafter at www.kyscience.org/members/grants.php. The efforts of the reviewers (Dr. Antonious, Kentucky State; Dr. K. C. Russell, Northern; Dr. Gary Ritchison, Eastern; and Dr. Ilson White, Morehead) are deeply appreciated.

2011 Graduate Research Winners

Graduate students competed only in oral presentations. Congratulations to these students and their mentors. A special thanks to those who devoted their time to judge the presentations.

AGRICULTURAL SCIENCES

- 1st: Brandon May - Kentucky State University
- 2nd: Xiaojing Liu - Murray State University
- 3rd: Jon Cambron - Kentucky State University

BOTANY

- 1st: Pranav Chandra - Western Kentucky University
- 2nd: Jacob Botkins - Kentucky State University
- 3rd: Re'Gie Smith - Kentucky State University

CELLULAR AND MOLECULAR BIOLOGY

- 1st: Jonathan Howton - Western Kentucky University
- 2nd: Hannah Flood - Murray State University
- 3rd: Richa Singhal - University of Louisville

CHEMISTRY

- 1st: Chufen Jin - Eastern Kentucky University
- 2nd: Yaowen Cui - Western Kentucky University
- 3rd: Lakshmisri M. Vangala - Western Kentucky University

COMPUTER AND INFORMATION SCIENCES

- 1st: Jesse Stewart - University of Kentucky

ECOLOGY AND ENVIRONMENTAL SCIENCE

- 1st: Coy St. Clair - Murray State University
- 2nd: Jennifer Yates - Western Kentucky University
- 3rd: Nissa Rudh - Murray State University

GEOGRAPHY

- 1st: Kamal Humagain - WKU Hoffman Environmental Research Institute
- 2nd: Nicholas Lawhon - WKU Hoffman Environmental Research Institute

GEOLOGY

- 1st: Matthew Ryan Prusinski - Murray State University
- 3rd: Ann Harris - University of Kentucky

MICROBIOLOGY

- 1st: Juanita Von Dwingelo - Murray State University
- 2nd: Emily D'Angelo - Murray State University

PHYSIOLOGY AND BIOCHEMISTRY

- 1st: Yajie Wang - Western Kentucky University
- 2nd: Gopinath Rajadinakaran - Western Kentucky University
- 3rd: Lynsey Bochenek - Murray State University

PSYCHOLOGY

- 1st: Cassie Watkins - Morehead State University
- 2nd: Kayla Sizemore - Morehead State University

ZOOLOGY

- 1st: Jacob Eldridge - Western Kentucky University
- 2nd: Derek Rupert - Western Kentucky University

KAS Governing Board Updates

The Nominations and Elections Committee, chaired by Sean Reilley, congratulates those who were elected to office and expresses sincere appreciation to all those willing to serve the Academy by allowing their names to be placed into nomination.

Newly elected Board Members:

Vice President K. C. Russell (Northern)
Secretary Robert Kingsolver (Bellarmine)*
Treasurer Ken Crawford (Western)*
At-Large Representative KatieAnn Skogsberg (Centre)*
Biological Sciences Rep. Pamela Feldhoff (Uof L)

Continuing Board Members:

President Dawn Anderson (Berea College)
Past President Barbara Ramey (Eastern)
President Elect Cheryl Davis (Western Ky University)
Social & Behavioral Sci. Rep. Sean Reilley (Morehead)
Physical Sciences Rep. Eric Jerde (Morehead)
Social & Behavioral Sci. Rep. Judy Voelker (Northern)
Biological Sciences Rep. Ron Jones (Eastern)
At-Large Representative Mary Jansen (KCTCS)

Ex-officio Board Members:

Executive Director Jeanne Harris
Junior Academy of Science Director Ruth Beattie (UK)
Program Coordinator Robert Creek (Eastern)
AAAS/NAAS Representative Nancy Martin (U of L)
Journal Editor Martin Matisoff (Kentucky State)
Webpage Editor Claire Rinehart (Western)
Newsletter Editor Susan Templeton (Kentucky State)
Executive Secretary Emeritus Don Frasier (UK)

Retiring Board Member:

Past President Nancy Martin (Uof L)
Biological Sciences Rep. Richard Durtsche (Northern)
Journal Editor David White (Murray)

*re-elected incumbent

Retiring board members were recognized for their service to KAS by President Barbar Ramey at the Kentucky Academy of Science Annual Business Meeting on November 5, 2011.

Note: When K. C. Russell takes office as Vice President on January 1, 2012, that creates a vacancy for his currently held Physical Sciences Representative seat. A replacement will be nominated by President Dawn Anderson and confirmed by the Governing Board at its February 11, 2012, meeting.

The KAS Governing Board recently elected to become a Kentucky Nonprofit Best Practices Partner. The Kentucky Nonprofit Best Practices Partnership is a commitment made by nonprofit organizations and the Kentucky Nonprofit Network to promote and implement best practices that encourage efficient, effective and ethical operations to best meet community needs.

For more information about the Kentucky Nonprofit Network, visit www.kynonprofits.org/.

New Editor Selected for the KAS Journal

At the November meeting, the KAS Governing Board selected Martin A. Matisoff (right) as the new editor of the Journal of the Kentucky Academy of Science. Mr. Matisoff received his Master of Science degree in Entomology from the University of Nebraska, Lincoln, in 2010. He received his Bachelor of Arts degree in English Literature from Western Illinois University, Macomb, in 1998.



Martin Matisoff began his professional career in the late 1970s as an Environmental Test Engineer for Litton Data Systems. In 1985, he joined the Components Engineering Group at Singer Librascope and, in the late 1980s, became a technical writer for an automated test equipment company. In 1993 he joined international medical publisher Wolters Kluwer where he was the senior medical editor for four trade newsletters: *Biomedical Technology Information Service*TM, *Clinical Lab Letter*[®], *Orphan Drug Letter*TM, and *Prosthetics & Orthotics Engineering Letter*TM. Matisoff also was a contributing editor to the *Journal of Clinical Engineering*. In 2000, he joined the Pacific Communications division of Allergan Inc. as the Managing Editor and Scientific Liaison of the Strategic Communications Group.

In 2004, Mr. Matisoff and his wife, Sharon, moved to Louisville, Kentucky, where he continued to work as a freelance medical writer and editor. In 2011, he published his first e-book with co-author Larry Barksdale of the Lincoln Nebraska Police Department, entitled *Bloodstain Pattern Evidence: A Field Manual*. Mr. Matisoff also co-wrote a peer-reviewed paper with Sergeant Barksdale, entitled *Statistical Analysis of Bloodstain Pattern Evidence*. The two-part paper is slated for publication in the spring and summer issues of *The Forensic Examiner*[®]. Mr. Matisoff currently is studying the honey bee pathogens *Nosema apis* and *N. ceranae* in Dr. Thomas Webster's apiculture laboratory at Kentucky State University.

About J-KAS

Each Volume of the Journal normally contains two Numbers, the first published in spring and the second in fall. J-KAS publishes original research papers and notes on all areas encompassed by the Academy. Review papers and Special Contributions will be considered for publication, but the Editor should be consulted in advance. J-KAS will publish manuscripts from symposiums and special workshops; again, the Editor should be consulted as symposium plans are developed. Announcements, News, Board Minutes, and other Academy information (as listed in the bylaws) will be included as received.

Guidelines for contributors to the Journal are available at <http://www.kyscience.org/content/publish.php>. Manuscripts may be submitted at any time to the Editor via e-mail as MS Word documents; in the cover e-mail, list names, addresses, telephone numbers, and E-mail addresses of three potential reviewers. Contact the J-KAS editor at martin.matisoff@kysu.edu.

2012 Sectional Officers

<u>SECTION</u>	<u>CHAIRPERSON</u>	<u>SECRETARY</u>
Agricultural Sciences	Sheri Crabtree sheri.crabtree@kysu.edu	Iin Handayani iin.handayani@murraystate.edu
Anthropology & Sociology	Benjamin Freed benjamin.freed@eku.edu	Changzheng Wang changzheng.wang@kysu.edu
Botany	Maggie Whitson whitsonma@nku.edu	Allen C. Risk a.risk@moreheadstate.edu
Cellular & Molecular Biology	Ajay Srivastava ajay.srivastava@wku.edu	Auexey Arkov aarkov@murraystate.edu
Chemistry	Darrin Smith Darrin.smith@eku.edu	Chris Mullins csmullins@campbellsville.edu
Computer & Information Sciences	Jerzy W. Jaromczyk jurek@cs.uky.edu	Sherif Rashad s.rashad @moreheadstate.edu
Ecology & Environmental Science	Scott Grubbs scott.grubbs@wku.edu	John Starnes john.starnes@kctcs.edu
Engineering	Sadeta Krijestorac s.krijestor@moreheadstate.edu	Sanjeev Adhikari s.adhikari@moreheadstate.edu
Geography	Glenn Campbell glenn.campbell@eku.edu	Demetrio Zourarakis demetrio.zourarakis@ky.gov
Geology	Thomas B Brackman brackmant1@nku.edu	Robert T. Lierman tom.lierman@eku.edu
Health Sciences	Cecil Butler cecil.butler@kysu.edu	Bruce Branan bbranan@asbury.edu
Mathematics	R.Doug Chatham d.chatham@moreheadstate.edu	John Porter ted.porter@murraystate.edu
Microbiology	Marcia Pierce marcia.pierce@eku.edu	Timothy Johnston tjohnston1@murraystate.edu
Physics & Astronomy	Akhtar Mahmood am Mahmood@bellarmine.edu	Art Pallone pallonea1@nku.edu
Physiology & Biochemistry	Julia Carter jcarter@woodhudson.org	Tracy Livingston tracy_livingston @georgetowncollege.edu
Psychology	KatieAnn Skogsberg katieann.skogsberg @centre.edu	Jennifer Goetz jennifer.goetz@centre.edu
Science Education	Jay Kirchner jkirchner@galencollege.edu	Jason Fuller jason.fuller@eku.edu
Zoology	Michael Floyd mike_floyd@fws.gov	Lindsey Walters waltersl3@nku.edu

New Journal on Undergraduate Research and Mentoring

An interesting new on-line journal is being produced by Elon University titled *Perspectives on Undergraduate Research and Mentoring* (PURM). You may access this journal for free at <http://blogs.elon.edu/purm/issue-1-1/>.

This new publication promises to put forward some interesting ideas and articles on undergraduate research. The lead article in PURM by Alan Jenkins and Mick Healey discusses undergraduate research in the United Kingdom (it's not just a U.S. phenomena any more).

To help ensure more people learn about this new publication, I would encourage you to send the link to any of your colleagues who you believe would be interested.

*Shared by John Mateja, Director,
McNair Scholars Program, Murray State University*



Science Across the Commonwealth



2012 Posters-at-the-Capitol

Kentucky's Posters-at-the-Capitol will be held on January 26, 2012. This year's event will feature 119 posters highlighting the work of undergraduates and their faculty mentors from the Commonwealth's public universities and community colleges. Governor Steve Beshear has proclaimed January 26th as "Undergraduate Research Day" throughout the Commonwealth.

Posters-at-the-Capitol activities will begin with welcoming remarks in the Capitol Rotunda at 11:00 a.m. Posters may be viewed on the second floor of the Capitol building from 11:00 a.m. to 3:30 p.m., with a reception being held from 1:30 p.m. to 3:00 p.m. Posters-at-the-Capitol activities are open to the public and students, teachers, faculty and administrators are particularly encouraged to attend.

More information regarding Posters-at-the-Capitol can be found online at <http://campus.murraystate.edu/services/URSA/index.html>.

Kentucky Space Initiates Dropzone Program

On Friday, November 4, 2011, Kentucky Space announced a novel education initiative tailored to middle and high school students. "Dropzone" is an ambitious outreach program that uses near space (high altitude) balloons and targeted content to teach students about the space sciences. Through the excitement of near spaceflight, the program will encourage students to consider an education in the science, technology, engineering and math (STEM) disciplines.

The program, in addition, uniquely connects communities to science education by offering local supporters a memento in exchange for their sponsorship of student science in their community - a picture of a logo or brand image, supplied by individual sponsors, at the edge of space.

Near space balloons are also an excellent means to fly payloads that could lead to suborbital, orbital satellite or International Space Station experiments. Through Dropzone students will plan, design and launch their own experiments into near space (approximately 100,000 feet).

For further details or to request information on scheduling a mission contact Wayne Hall at whall@kentuckyspace.com | 859.421.0264 or Chris Winfield at cwinfield@kentuckyspace.com | 303.736.9110.

Kentucky Space LLC is a nonprofit enterprise involved in designing and developing educational, R&D and entrepreneurial space platforms. It collaborates with state universities and businesses and uses their combined resources and capacities including the technical expertise and physical facilities.

For information about Kentucky Space, please visit the Kentucky Space website at www.sefspaceworks.com or contact Kris Kimel at kkimel@kentuckyspace.com | 859.246.3223.

Darwin: Demon or Revolutionary?



Speaker:
Eugenie C. Scott, Ph.D.

7:00pm
February 16, 2012
Singletary Center
University of Kentucky
Lexington, Kentucky

Although recognized internationally as the founding father of evolutionary biology and one of the world's most influential scientists, in the creationist world, Charles Darwin is characterized as an incompetent scientist, an atheist dedicated to undermining Christianity, and a proponent of racism. The actual Darwin contrasts strikingly with these mischaracterizations which serve to promote an overall anti-evolutionary agenda that has been embraced by a surprisingly large percentage of Americans.

This event is sponsored by the Kentucky Section of the American Institute for Professional Geologists and the Kentucky Paleontological Society.

2012 Kentucky Science and Engineering Fair (KY-SEF)



The Tenth Annual Kentucky Science and Engineering Fair (KY-SEF) will be held in Richmond, Kentucky, on Saturday, March 31, 2012. More than 175 of the finest young scientists from grades 5-12 from across the state will compete for awards and scholarships. The senior high school competition is affiliated with the Intel International Science and Engineering Fair (ISEF) and the best senior high projects from the statewide KY-SEF will be entered in the ISEF competition in Pittsburgh in May.

This event represents an exciting milestone for the science and technical education community in Kentucky. The Fair's mission is to expand educational opportunities for all middle and high school students and to enhance the visibility and importance of science and engineering in Kentucky by providing annual statewide competitions that support, encourage and recognize student excellence in science and engineering research. The Fair also gives the public a chance to see the quality of science being done in Kentucky middle and high schools and to showcase what the students are capable of doing.

The Kentucky Academy of Science has been a loyal supporter of KY-SEF by providing both financial support and judges each year. The commitment of KAS members to this event is very important and the organizers of the fair hope that they can rely on your continued support. Please consider judging and playing a very rewarding role in the academic development of our next generation of scientists. Reserve **Saturday, March 31, 2012**, on your calendar and sign up to be a judge by visiting the KYSEF website at www.kysciencefair.uky.edu/judging.php.

In these times of financial challenges, the Kentucky Science and Engineering Fair is no different from other organizations; we are looking for funds. Supporting the Fair will help the top high school winners to attend the INTEL International Science and Engineering Fair. Your tax-deductible contribution will be appreciated. No sum is too small! Please send your check made out to "KYSEF" to Dr. Robert Creek, Department of Biological Sciences, Moore 235, Eastern Kentucky University, Richmond, KY 40475.

If any KAS member knows of a corporation or other group that would like to become involved with this worthy activity, please contact Barbara Ramey (barbara.ramey@eku.edu) or Bob Creek (robertcreek@bellsouth.net).

The 2012 Annual Meeting of the Kentucky Junior Academy of Science will be held 8.30am - 5pm on Saturday, April 28, 2012, in the T. H. Morgan Building on the campus of the University of Kentucky, Lexington, KY.

Any Kentucky high school or middle school student may present his or her research findings; to register for the meeting, a teacher, supervisor or principal from your school must return to the Director of KJAS, the requisite membership form and fee, abstracts and papers for all students entering from your school by March 30, 2012. Late submissions WILL NOT be accepted.

Four overall winners are selected and these students represent Kentucky at the National American Junior Academies of Sciences (AmJAS) meeting held in February the following year. The Kentucky Academy of Science will provide needs-based funding for these students to attend this meeting, up to a limit of \$1000.00 per person. Needs-based funding will also be available for chaperones, up to a limit of \$1000/person.

Checklist for presenting at the meeting:

- Paper Submission Form
- Membership Form and fee
- Abstract (hard copy only)
- 2 hard copies of word-processed Research Paper
- Signed copy of waiver

Additional information and parking directions will be mailed on receipt of above materials. All forms and instructions can be downloaded from the KAS webpage (click on KJAS link).

www.kyacademyofscience.org/members/jkas.html

Mail to: Dr. Ruth E. Beattie, Director, KJAS, Dept. of Biology, University of Kentucky, Lexington, KY 40506, rebeat1@uky.edu, 859-257-7647 by March 30, 2012.

Attention KAS Members: Judges are needed for the KJAS Spring Symposium. Please contact rebeat1@email.uky.edu to volunteer. Thanks.

Third Annual University of Kentucky STEM Education Symposium

The Third Annual University of Kentucky STEM Symposium will be held Friday, February 3, 2012. This meeting will address successful multi-disciplinary and multi-sector endeavors focused on STEM education transformation. Participants from across the Commonwealth will offer presentations, Round Tables, and a Research Poster Session on STEM and STEM education topics. Members of university and K-12 communities, and STEM education stakeholders across Kentucky are encouraged to attend!

The keynote speaker for the Symposium will be Dr. Elizabeth VanderPutten. She is a National Science Foundation Program Director in the Division of Research on Learning in Formal and Informal Environments and the Lead PD for the Discovery Research K-12 Program that funds research and development of resources, models and tools for elementary and secondary students and their teachers. She is also a PD for the Math and Science Partnership Program in the Division of Undergraduate Education.

For additional information or to register online, visit www.rsvpbook.com/event.php?465922.

Kentucky Heritage Land Conservation Fund

Drs. William H. Martin and Richard K. Kessler

CONSERVE KENTUCKY

A state-wide coalition of organizations interested in land conservation was formed in 2011 to increase awareness of the importance of Kentucky's lands and waters and to help coordinate legislative efforts among outdoor recreation, tourism, agriculture, natural resources, and environmental interests. Led by the Kentucky Chapter of The Nature Conservancy, this initiative is called Conserve Kentucky, and by the time you read this short discussion, there should be a bill being considered by the Kentucky Legislature to provide sustained, substantial funding for land conservation with funds going for land acquisition, conservation easements, and leasing with the cooperation of willing sellers and landowners.

The need for this conservation effort is absolutely critical to Kentucky's future. According to latest available data from the Natural Resources Conservation Service (NRCS), over 120 acres a day-over a square mile a week-of the state's forests and fields are being permanently converted into developed land. Since most KAS members are at colleges and universities and live in small and large urban areas, development in your county and surrounding areas is probably quite evident and has been going on for some time. Such a rate of land conversion is not sustainable for Kentucky's wildlife, natural lands and greenspace, fresh water quality and quantity, and for the state's economy.

Indeed, the economy of Kentucky is much dependent on tourism and outdoor recreation with a total impact of \$11 billion per year realized from tourism and providing thousands of jobs! The economic impact of the state parks alone is over \$800 million per year. Most people do not visit and tour Kentucky to see the pavement and construction of developed areas but to enjoy our beautiful rural landscapes, unique natural features, the state parks and other public lands, and numerous historic sites that are mostly in rural areas. Hunters and anglers across the United States and from other countries join numerous Kentuckians during the hunting seasons and in fishing our abundant and biologically diverse streams and lakes.

Further, Kentuckians are very supportive of any efforts to conserve our natural beauty, diversity, and landscapes. A bipartisan study conducted last fall (2011) shows overwhelming support for state-funded conservation programs: 86% of voters support maintaining and or increasing state government funding for programs to protect land, water, and wildlife; 66% of voters support dedicating additional public funding for land, water, and wildlife conservation in Kentucky; 74% of voters believe we can have a clean environment and strong economy at the same time without have to choose one over the other.



The Kentucky Heritage Land Conservation Fund, members of the managing Board, and organizations represented on the Board play a major role in this effort to improve the quality of life for all Kentuckians by conserving natural and working lands across the state.

For more information about the status of this collaborative effort, visit www.conservekentucky.org.

Information about the legislation, the bill number, and its status can also be determined by going to the Legislative Research Commission home page, www.lrc.ky.gov, and following the links to introduced legislation.

For additional information about the Kentucky Heritage Land ConservationFund visit <http://heritageland.ky.gov>.

KAS members can support the KHLCF by buying a nature license plate at their next renewal; ten dollars goes to the Fund for each plate sold.

The current issue of U of L's *Sustain* magazine focuses on biodiversity; an article by Terry Cook, State Director of The Nature Conservancy of Kentucky, has detailed polling and economic data. This issue is available at:

<http://louisville.edu/kiesd/sustain-magazine/Sustain25.pdf>

