

Winter 2006

Iowa Academy of Science: The New Bulletin, v02n1, Winter 2006

Iowa Academy of Science

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Iowa Academy of Science

The New Bulletin

Volume 2 Number 1 Winter 2006



The Iowa Academy of Science is established to further scientific research and its dissemination, education in the sciences, public understanding of science, and recognition of excellence in these endeavors.

Message from the Executive Director

On behalf of the Board of Directors and the IAS staff I hope you enjoyed the holiday season and are ready for 2006. We expect this to be an exciting year for the Academy. In 2005 attendance at both the Annual Meeting and the ISTS Fall Conference increased as did the overall Academy membership. We now have 768 members up 18 from 2004, ending a downward membership trend. The ISTS launched a new online journal and is working hard to reach more Iowa science educators. Our new web site with a member's only section has been rolled out and will offer a growing list of information and services. Check it often for updates.

For 2006 we have submitted applications for grants to advance two projects and are working on a third. One of the grants will directly impact the Iowa Junior Academy of Science; an area that we want to focus more attention. Preliminary meetings were held at the end of December on two projects which are part of an overall strategy to educate the public and increase awareness of the Academy across the state and throughout all scientific disciplines.

In your fall membership packet I stated that I am excited about the future of the Academy. From my travels around the state it is clear that the Academy is highly respected. With the renewed interest in science education, research, environmental concerns, and the strong economic challenges facing the United States from abroad it's time for the Iowa Academy of Science to be a leader.

The year 2006 will be pivotal. We need your help through your membership, your energy, and your service. Membership must continue to grow along with participation in Academy sections, on committees, and at events. We will continue to face financial challenges that must be remedied through a larger membership base, donations, and other sources of funding. Be an ambassador for the Academy by taking advantage of our membership referral program to recruit members while reducing your Academy dues. Please visit our web site often at www.iacad.org for updates on Academy activities and events of scientific interest around Iowa and learn more about how you can help.

Thank you for your service to science in Iowa and best wishes for 2006.

Craig Johnson, Executive Director

Pare Lorentz Award for Iowa Documentary



The International Documentary Association has awarded America's Lost Landscape: The Tallgrass Prairie the Pare Lorentz award. The award is given annually to the film that embodies the activist spirit and lyrical vision of poet and filmmaker Pare Lorentz. Like the films of Lorentz, America's Lost Landscape is a socially conscious documentary. Narrator Annabeth Gish and others convey the tale of the astonishing transformation of the North American Tallgrass Prairie. The film's Executive Producer is IAS Member Daryl Smith. It was written and directed by David O'Shields and produced by New Light Media in association with the Tallgrass prairie Center at UNI. IAS members who missed the screening of America's Lost Landscape at last year's IAS Annual Meeting will be able to view the film when it airs on national PBS in 2006.



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118th Iowa Academy of Science Annual Meeting

Mark your calendars for April 21st-22nd, 2006 and join fellow science minded Iowans for the 118th Annual Meeting of the Iowa Academy of Science. The beautiful Buena Vista University Campus will be the setting for a conference packed with science presentations and experiences. Advanced Registration packets will be sent out soon, until then here are some highlights:

Special Early Bird Workshop – Conservation through Fly-fishing

This limited attendance workshop will take place Friday, before the first concurrent session. Fly-tie demos, practice casting, and learn about BVU's course that teaches conservation through fly-fishing from IAS Past President Rick Lampe and other IAS members. Join your instructors for a Fly-fishing field trip on Saturday!

General Session I - Tornadoes: From Warning Decisions to Damage Assessment

Friday, 11am

Jeff Johnson and Karl Jungbluth, from NOAA's National Weather Service in Johnston, Iowa, will cover tornadoes, from forecasting their development, to warning people in the path, to assessing damage after the tornadoes hit. Jeff and Karl will highlight some of the meteorological parameters known to favor tornado development. A wide variety of radar signatures will be shown in comparison to reports and photos from spotters. The presentation will conclude with an overview of techniques used by the National Weather Service to estimate tornado wind speeds (Fujita scale) based upon structural damage. This session should provide insight into the volumes of data and experience that go into a Tornado Warning.

Symposia:

- **Pandemic Flu - Is Iowa Prepared?**
Speaker: Dr. Patricia Quinlisk, Medical Director/Epidemiologist, Iowa Department of Health
- **Weather Forecasting Workshop**
Speaker: Dr. Alan Czarnetzki, UNI
- **TBA**
Speaker: Iowa Biotechnology Association

The Annual Meeting is the one time of the year when you can gather and network with fellow Iowa scientists in all scientific fields and at all levels of the academic hierarchy. Make the conference even better by submitting a proposal to present your current research or encouraging your graduate or undergraduate students to present. IAS is currently accepting proposal submissions via the IAS website. See the call for papers at <http://www.iacad.org> for more details. The deadline is February 17th, 2006. Don't wait, submit today!

Iowa Summit on Mathematics, Science, and Technology Education

The *Iowa Summit on Mathematics, Science and Technology: Promoting Economic Development* was held in Des Moines on November 11th and 12th. This event brought together leaders from business, education, and government to examine the critical issues facing mathematics, science, and technology as they relate to the quality of mathematics and science education and economic development in Iowa.

Iowa Governor Tom Vilsack sent a pre-recorded message to the attendees and speakers included Max Phillips, past Chair of the Iowa Mathematics and Science Coalition, VP Quest; Judy Jeffrey, Director, Iowa Department of Education; Clay Jones, CEO, Rockwell Collins; and Catherine Coleman, NASA Astronaut.

The purpose of the Summit was for all attendees to participate on action committees charged with developing plans to promote mathematical and scientific literacy and technology education. Committee members are now refining the action plans and moving toward implementing their recommendations.

Craig Johnson, IAS Executive Director, and Michael Clough, ISTS President, participated on the Summit planning committee and Marcy Seavey, IAS Program Director, was a member of an action committee.

Iowa Science Teachers Journal

The current issue of the Iowa Science Teachers Journal will be the last issue that will be free for anyone to access. Beginning with the next issue, February 2006, only members of the Iowa Academy of Science will have access to ISTJ. Michael Clough, ISTS President and ISTJ Editor encourages you to spread the word about this new peer reviewed, online science journal. ISTJ may be viewed at: <http://ists.pls.uni.edu/ISTJ/index.html>

The Iowa Academy of Science Membership Directory Now Available Online

Login at <http://www.iacad.org> to review your own profile and make contact with other Academy members. Use the search features to find board members, section chairs, committee chairs, fellow section members, fellows, members from your institution and more!

CONSIDERING REORGANIZING THE IAS SECTIONS

The IAS sections serve two distinct but related purposes:

1. to organize members into groups of common interest and facilitate communication to each group
2. to divide Annual Meeting Presentations into manageable sessions

To accomplish this, the sections must be organized to represent all areas of science and as science evolves so must the IAS sections. Over the next year, the board of directors will consider options for reorganizing the Iowa Academy of Science sections to better fit the needs of IAS members and reflect modern scientific nomenclature. The goal is not change for changes sake, but to make it easier for IAS members to network with colleagues, for prospective members to identify where their research fits into the organization of the Academy, and for Annual Meeting presenters to select the section appropriate section for their presentations.

IAS President, Paul Bartelt, has reviewed the Annual Meeting section presentations for the last ten years and from those made some initial recommendations to get the conversation about section changes started. These recommendations were presented to the rest of the board and to ISTS leadership at the October Board Meeting. Now the board needs your input in order to insure that any changes to your sections meet your needs. Submit your ideas to the section changes bulletin board or contact your section chair or a board member.

IAS Bylaws place the power over section organization with the IAS membership. The board of directors may make recommendations for changes and may disband any section that does not meet or have leadership for 2 consecutive years. This means that any proposal for section changes will have to be approved by the membership either via ballot or at an Annual Meeting before taking effect.

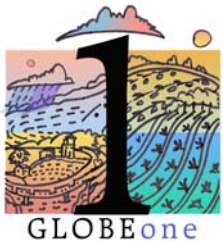
Current Sections

- Agricultural Sciences
- Anthropology
- Botany
- Cellular, Molecular, & Microbiology
- Chemical Education
- Chemistry: Inorganic, Analytical, & Physical
- Chemistry: Organic & Biological
- College Science Teaching
- Community College Biologists
- Conservation
- Earth Science Teaching
- Elementary Science Teaching
- Engineering
- Environmental Science and Health
- Geology
- Physics
- Physiology
- Psychology & Linguistics
- Science Teaching
- Zoology

Proposed Sections

- Agricultural Sciences
- Anthropology
- Cellular, Molecular & Microbiology
- Chemistry
- College Science Teaching
- Engineering
- Environmental Science and Health
- Geology
- Physics, Atmospheric & Space Sciences
- Physiology
- Medical Physiology
- Psychology & Linguistics
- Evolution & Natural History
- Ecology & Conservation Biology
- Science Teaching

- Marcy Seavey



GLOBE ONE

In 2003, the GLOBE Program selected the IAS GLOBE Partnership as the pilot site for the GLOBE ONE Project. GLOBE ONE is a concerted effort by GLOBE scientists to look at the GLOBE data from one community using an earth systems approach and to involve students and the community in each stage of the research. Students from Waterloo, Cedar Falls, and Gilbertville, Black Hawk County community members, and students and faculty of UNI and Hawkeye Community College have all participated in GLOBE ONE. One of the most exciting aspects has been the face to face interactions between local students and more than a dozen scientists from all across the US. On February 10th, the GLOBE scientists will return to Iowa for their final visit and GLOBE ONE students will present their own scientific research to the scientists. The scientists will provide feedback and share their own discoveries with the students, their families and the public.



IAS Member's Only Bulletin Boards: Grants & Award Program Announcements

More than a dozen grant and award opportunities for K-12 students & educators, undergraduate & graduate students, and researching scientists are currently listed in the Grants and Award Programs Announcement Forum. Each different grant or award is listed as its own topic. Short descriptions under each topic title allow you to quickly find those opportunities which can benefit you. Click on any topic to find out more details, and a link to the source website. New opportunities are added weekly and as an IAS member, you can post announcements for grant and award programs you would like to share at any time. Two upcoming opportunities are listed to the right. Visit the website to see the complete list!

Earthwatch Educator Fellowships

Earthwatch expeditions are unique professional development experiences. Educator volunteers have returned from our projects inspired and rejuvenated. Explore some of the materials they have produced, find out how you can join a project and how to involve your school and community in our mission.

Eligibility

Elementary, middle, and high school educators and administrators of any discipline are eligible to apply for our Education Fellowship Program. We are looking for adventuresome and innovative educators who are interested in natural and cultural conservation, sustainability, and life-long learning.

Deadlines

Applications will be accepted on a rolling basis. Early applications are eligible for a wider variety of projects. Applications received after March 1 are subject to more limited funding and projects.

Lowe's Outdoor Classroom Grants

Lowe's Charitable and Educational Foundation, International Paper and *National Geographic Explorer!* magazine have partnered to create an outdoor classroom grant program to provide schools with additional resources to improve their science curriculum by engaging students in hands-on experiences outside the traditional classroom. All K-12 public schools in the United States are welcome to apply. This school year, the program will award grants up to \$2,000 to at least 100 schools. In some cases, grants for up to \$20,000 may be awarded to schools or school districts with major outdoor classroom projects.

Visit the Grants and Award Programs Forum in the IAS Bulletin Board to find out more details and how to apply for these and other programs. While you are there, visit the other IAS forums and give us feedback on what other content you want on the IAS website.

IAS Honors New Fellows

CLIFF CHANCEY



Dr. Cliff Chancey is the Chair of the Physics Department at the University of Northern Iowa. A PhD graduate in Theoretical Physics at Johns Hopkins, Cliff went on to serve as Senior Visiting Fellow of Theoretical Physics at Oxford University, Oxford, England in 1996. He also served as a visiting research scientist at Phillips University, Marburg, Germany and senior

research examiner for PhD candidates at University of Nottingham, Nottingham, England before coming to Iowa. Cliff's current research interests include neuroscience and biophysics, particularly the dynamics and kinematics of voltage-gated ion channels in excitable cells like neurons.

Cliff is managing editor of the *American Journal of Undergraduate Research*, a refereed quarterly for undergraduate researchers and on the board of directors of the Iowa Academy of Science. He is also serving as section chair for the IAS Physics section. About the Academy Cliff says, "IAS provides a wonderful forum for Iowa science at all levels, from elementary schools to universities, and in all spheres--personal, local, state-wide. If we want science to be appreciated by our fellow citizens then we couldn't have a better vehicle than the IAS."

LEE BURRAS



Dr. C. Lee Burras is an Associate Professor in the Department of Agronomy at Iowa State University where he teaches about soils and the environment. Lee's research focuses on soil-landscape relationships and long-term human impacts on soil quality. He earned his B.S. and M.S. at Iowa State University and his Ph. D in Soil Genesis at Ohio State University. Dr. Burras is on the faculty of Iowa Lakeside Laboratory where he teaches Watershed Hydrology and Surface Processes and Soil Genesis & Landscape Relationships. He is currently serving the last year of his term on the Iowa Academy of Science Board of Directors.

DOROTHY BARINGER

Dorothy Baringer joined the Academy as a student in 1973. She taught at Drake University ran her own native prairie seed company, *Wildflowers from Nature's Way*. Dorothy has been active in conservation around the state, serving on the state conservation advisory board and as a county conservation board member. She became an emeritus member in 1999 and a fellow in 2005. Photo unavailable.

Now Accepting 2006 Fellows Nominations

An Iowa Academy of Science Fellow is a member of the Academy who effectively promotes science throughout Iowa, who is a leader within their scientific field, and who has provided meritorious service to the Academy throughout their years as a member. Any current Academy member can nominate another member for this honor. The Membership Committee is currently accepting nominations for new Academy Fellows. Please take a moment to consider nominating an IAS member you admire as a new fellow for 2006. Nomination materials were included with the IAS fall mailing and are available online at: http://www.iacad.org/download/fellow_nomination.pdf. Nominations must be received by February 24th, 2006. Awardees are selected in March and presented with a Fellow Plaque at the Annual Meeting in April.



Do you want to nominate someone, but are unsure if they are already a fellow? All IAS Fellows are identified in the new IAS Online Directory. Fellow's member information cards have the statement "An IAS Fellow since <year>" under the email address.



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Article Submission: The deadline for submission of articles for Vol. 2 #2 is March 1, 2006. Articles must be pre-approved. For more information contact Craig Johnson, IAS Executive Director, at ias@uni.edu

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