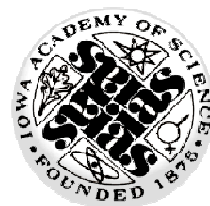


Iowa Academy of Science

The New Bulletin

Volume 7 Number 3 Fall 2011



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

As 2011 comes to a close we are reminded that this has been another busy year for the Iowa Academy of Science. The IAS Annual Meeting attracted 425 attendees to Wartburg College and the ISTS Fall Conference drew 325 teachers to Iowa State University. The conferences provided excellent opportunities for IAS members, non-members, and students.

The Academy is involved in many other activities. The Iowa Science Foundation funded 11 proposals. The Journal is a vital publication and we need articles for the next issue. Program Director Marcy Seavey provides teacher education through Project WET and the GLOBE Program. The Iowa Junior Academy of Science encourages positive science experiences for middle and high school students through mentoring, research grants, and involvement at the IAS Annual Meeting. Public outreach continued through the IAS Speaker Series at Saylorville Lake and this year two Academy members made presentations at Coralville Lake.



I am honored to represent the Academy as one of 40 members of the Governor's STEM Advisory Council. Lt. Governor Kim Reynolds and UNI President Ben Allen co-chair the Council. Jeff Weld, Director of IMSEP, serves as the council Executive Director. The council will advise the Governor on ways to grow Iowa's commitment to bolstering STEM education, STEM innovation and to better position Iowa's young people and the state's economy for the future. I am also serving on two subcommittees; the Committee on Public Private Partnerships and the Committee on Program Scale-up Design & Implementation.

Thank you for your support of the Academy during 2011. As a member you have opportunities to advance science in several ways; volunteering for committees, section leadership, or to serve on the Board of Directors. You may support Academy outreach programs by lending your expertise. Finally, please encourage your colleagues to join the Academy and consider making a tax deductible contribution to support the Academy.

On behalf of the Board of Directors and the Academy staff, Marcy Seavey, Debbie Dean, and student workers Abbey, Kelsey, and Kristine I want to wish you a joyous and safe holiday. We look forward to working with you in 2012.

- Craig Johnson, Executive Director



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Welcome Corporate Members

Three corporations have joined the Academy this year and several others are considering membership. These corporations recognize the importance of the Academy's mission. We want to sincerely thank them for their commitment to the Iowa Academy of Science and the advancement of science and STEM in Iowa.

Clipper Windpower is a United Technologies Company located in Cedar Rapids. "At Clipper Windpower, we strive to advance the technologies and services that make our customers more successful in the large-scale expansion of wind energy, lessening the impacts of fossil generation on the earth." Clipper Windpower will be featured during a symposium on wind energy at the 2012 IAS Annual Meeting in Mason City.

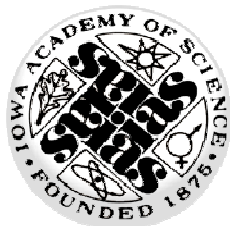
Website at <http://www.clipperwind.com/>.

Rockwell Collins is a long time member of the Iowa corporate community and was featured in a previous IAS Bulletin. It annually supports the ISTS Fall Conference and has also supported the IAS Annual Meeting by providing speakers sponsoring general sessions. It is a long time corporate leader in supporting STEM initiatives in Iowa.

Website: <http://www.rockwellcollins.com/>.

BMC Aggregates, L.C. is located in Elk Run Heights, Iowa and provides crushed stone, sand and gravel, and various specialty products including crushed concrete and asphalt. BMC is a strong supporter of science education through workshops for teachers and experiences for the public. BMC was featured in a previous IAS Bulletin.

Website: <http://www.bmcaggregates.com/>.



IAS Corporate Memberships

The Iowa Academy of Science has a new membership category—Corporate Membership. Corporate membership is open to any Iowa For-profit business that wishes to support science in Iowa. Businesses that join the Academy will receive a plaque and IAS publications and announcements. Corporate members are encouraged to share information about IAS programs and membership with their scientific and engineering employees.

Corporate membership is divided into Bronze (\$250), Silver (\$500), Gold (\$750) and Platinum (\$1000) levels. The business decides which level to join. Higher levels include free registration to IAS Conferences.

Help make our Corporate Member program a success—contact the IAS Office and request Corporate member brochures, then invite a business you know to become a part of the Academy today!

The New Bulletin is a publication of the Iowa Academy of Science and is distributed to current IAS members 3-4 times per year.

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also available online at:
<http://www.iacad.org>

Managing Editor: Craig Johnson
Editor: Marcy M. Seavey

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Article Submission: The deadline for submission of articles for Vol. 8 #1 is February 1, 2012. Articles must be pre-approved. For more information contact Craig Johnson, IAS Executive Director, at craig.johnson@uni.edu

Advertising Rates: request advertising information from iascience@uni.edu

**You are invited
to the 124th
Annual Meeting of the
Iowa Academy
of Science**

April 20-21, 2011

North Iowa Area
Community College

Mason City, Iowa



You are invited to the 124th Annual Meeting of the Iowa Academy of Science to be held at North Iowa Area Community College (NIACC) in Mason City on Friday and Saturday, April 20-21, 2012. Planning for this meeting is well underway with speakers and topics for the general sessions and symposia now being arranged.

Mason City is located only a few miles from beautiful Clear Lake. The community is the hometown of Meredith Wilson, composer of "The Music Man". Mason City is also home to Prairie School Architecture with several buildings in the community designed by Frank Lloyd Wright including the only remaining hotel in the world designed by Wright. Mason City was the site of the final Buddy Holly, Ritchie Valens and J.P. "The Big Bopper" Richardson's concert. It is also home to the largest collection of Bill Baird's puppets.

We receive many favorable comments from attendees about the IAS Annual Meeting. Some of the most favorable remarks have come from first time attendees and teachers who simply didn't know what to expect. They have come away inspired by how invigorating a general science meeting can be.

Please watch your email for updates on the general sessions and symposia. You will also receive the Advance Program by mail which will include information on the sessions and other activities. Please remind your colleagues that the Iowa Academy of Science Annual Meeting is an ideal location for graduate and undergraduate students to present their research.

Symposia topics include wind energy and the use of photography and remote cameras in conservation research. You will also have an opportunity to learn more about and experience Frank Lloyd Wright architecture.



**YOU can contribute to the Academy's Mission
by joining one of the Iowa Academy of Science Committees.**

Two members leave each committee and two new members are appointed annually. Terms are for three years. Each committee plays a role in helping to further the mission of the Academy.

- Committees on Committees and Elections (solicits board and committee nominations, fills committees)
- Conservation & Preserves Committee (advises the State of Iowa on conservation issues)
- Finance Committee (advises the Academy on financial issues)
- Iowa Science Foundation Committee (reviews and selects ISF Grant awards)
- Membership Committee (conducts an annual membership drive)
- Recognition and Awards Committee (reviews nominations for IAS awards, advises board on prospective fellows)
- Societal Issues Committee (advises the board, helps develop Academy messages on current science issues)
- Student Programs Committee (reviews IAS grants, makes recommendations for IAS programs/rules)

Learn more — Contact Debbie Dean at iascience@uni.edu or 319-273-2021.



Call for Papers

124th Annual Meeting

Iowa Academy of Science
April 20 & 21, 2012
North Iowa Area Community College
Mason City, Iowa

Iowa scientists, engineers, science educators and science students are cordially **invited to submit abstracts to be considered for poster or oral presentation** at the 124th Annual Meeting of the Iowa Academy of Science. Whether your work is in progress or complete, you are encouraged to submit an abstract. Presenting at the IAS Annual Meeting is an excellent opportunity for you and your colleagues to interact with other Iowa scientists.

Our meeting offers a friendly atmosphere for undergraduate and graduate students to gain experience in presenting their research to others. *You do not need to be a member of the Academy to present at the Iowa Academy of Science Annual Meeting.*

Abstracts submission is open through February 10th, 2012.

Abstract Submission
Includes
publication of your
abstract in the
*Proceedings of the
Iowa Academy of
Science*, a
complimentary
conference
registration for the
primary presenter

Submit an abstract today!

Visit www.iacad.org.

Click on the Submit Abstract button.

IAS Members log in with your username and password.

Non-members create a temporary account - enter your email address



Academy seeking Tech Savy students/teachers for service project.

Imagine what it must have been like traveling to the first meeting of the Iowa Academy of Science back on August 27th, 1875. No highways, the first automobile wouldn't make it to our state for another 26 years. Alexander Graham Bell wouldn't be awarded a patent for the telephone for another year. The eight members who came together to form the Academy probably traveled by horse or rail. Whenever I think about this first meeting of the Academy, I wonder if our founders knew what they had started. Did any of them imagine an Academy meeting 100 years in the future? Did they know the Academy would play a foundational role in the development of the state of Iowa's conservation program? The founding of the Iowa Geological Survey? That Academy members would play a leading role in the development of a state field school (Iowa Lakeside Laboratory) and the states preserve system? How many Iowan scientists first professional presentation has been at one of our meetings? We all belong to an organization rich in history.

It is preserving that history and insuring that it is available to inspire future generations of young Iowans that I am writing this article. I am seeking a group of individuals willing to research and update/create Wikipedia entries for the Academy's 120 Past Presidents. I image that the ideal group would be students under the direction of a science and a social studies, English or technology teacher at a high school that has a service learning graduation requirement. This project would give students real world skills researching the accomplishments of Iowa scientists, citing sources, and writing/editing objective factual biographies while volunteering for the Academy.

It would be possible for several schools to participate, each taking responsibility for certain decades. If response is overwhelming we would like to do a similar project researching the Academy's Distinguished Fellows. Students researching recent presidents could include oral history/email interviews with living past presidents. The Academy can provide participating schools with issues of the *Proceedings of the Iowa Academy of Science* for relevant years. And documentation for their

hours of volunteer service.

When the project is completed the Academy website would be linked to each biography. Iowa has a rich history of scientific discovery and the roots of our scientific community run deeper than most of us know. For example, did you know that the 6th President of the Iowa Academy of Science, L.H. Pammel played a central role in encouraging both Ada Hayden and George Washington Carver to seek their graduate degrees from Iowa State? Or that Past president George W. Stewart (1916-17) invented the acoustic filter and sold the rights to Bell Telephone Laboratories?

If you know of a group that would be interested in taking on all or part of the Iowa Academy of Science past president's project please contact me at seavey@uni.edu.

-Marcy Seavey, IAS Program Director.

Iowa Math & Science Coalition Funds pass to ISTS

On April 1, 2011 a long standing advocate for mathematics and science education in Iowa was disbanded. The Iowa Mathematics and Science Coalition (IMSC) formed in 1990 as a collaboration of leaders in business, government and education and worked for positive changes in mathematics and science education in Iowa. Over the years IMSC supported Iowa Mathematics League, the Regent's Academy for Mathematics and Science, modeling mathematics and science reform, content networks to identify scientifically research-based curriculum, and more. In 2004 it was awarded a grant to participate in the NASA Explorer School Partnership program.

When non-profit organizations disband remaining funds are dispersed to organizations with similar missions. In July of 2012 the Iowa Academy of Science received \$46,934.48 designated for the Iowa Science Teaching Section of the Academy. The Academy thanks the IMSC for its donation. The IAS Board of Directors has directed the donation be held to protect the principle and has asked ISTS to make recommendations about how the funds should be utilized in accordance with the missions of IMSC and IAS.

REAP-CEP Grant Awards value Natural Resources and Science

The Resource Enhancement and Protection (REAP) was enacted by the state of Iowa in 1989 to protect and increase Iowa's open spaces and natural resources. Since enactment REAP has distributed between 5 and 18.5 million dollars annually to acquire and manage state and city open spaces, for soil and water projects, county conservation, roadside vegetation, historical preservation and other conservation projects (see <http://www.iowadnr.gov/Environment/REAP/> for additional information).

The first \$350,000 of each year's REAP funding is allocated to the REAP-CEP—Conversation Education program. This program's mission is to ensure that Iowa's educators are prepared and have Iowa specific resources needed to provide quality environmental education. REAP-CEP has been a strong supporter of the Academy's Iowa Project WET workshops for 13 years. More than 4500 Iowa preservice and inservice educators have received professional development in water science, watersheds, and water resource management through Iowa Project WET Workshops since the Academy became Iowa's Project WET sponsor in 1999. The REAP-CEP Board awarded IAS \$11,122 to provide workshops for 100 preservice educators this spring. Workshops have already been scheduled for Morningside College, Grandview University and the University of Northern Iowa. Each partici-

pant will receive 6 contact hours, a copy of the new Project WET Curriculum and Activity Guide and access to the Project WET Portal of online resources. In this way the Academy and REAP-CEP support the initial environmental education preparation of Iowa's future teachers.

This round of REAP-CEP projects includes several other programs of interest to Academy members. Iowa Public Television was awarded a grant to develop a second season of Iowa Outdoors focused specifically on science topics. http://www.iptv.org/series.cfm/15752/iowa_outdoors

ISTS Members who attended the 2011 ISTS Fall Conference evening program at Reiman Garden's may remember that the butterflies in the butterfly wing were engaging but the wing itself was devoid of educational support materials. A CEP grant to Reiman Gardens will remedy this for future visitors.

The Tallgrass Prairie Center, under direction of Academy member Daryl Smith is awarded funds to produce a series of short videos about how to establish a prairie reconstruction. It is through project such as these that Iowans become more knowledgeable about the natural resources of our state and the scientific research behind conservation efforts.



Academy receives GLOBE Grant to pilot Webinar GLOBE Workshop

The GLOBE Program has awarded the Academy \$1800 to host a series of GLOBE Webinars introducing teachers to the Student Climate Research Campaign. The webinars will be offered on Tuesday evenings throughout the month of February, 2012. The GLOBE Student Climate Research Campaign (SCRC) aims to engage students in measuring, investigating, and understanding the climate system in their local communities and around the world. Drawing on GLOBE protocols and data, as well as other datasets, students take climate-related measurements and investigate research questions about climate. The Academy's Webinar series will include Climate Foundation activities; learning the air temperature, precipitation and site selection protocols; practicing data entry; and planning classroom participation in the Climate Campaign. The webinars will be somewhat informal and collaborative in nature. Participants will need a computer with internet access and be willing to share their experiences with other participants.

Current classroom teachers who are new to GLOBE may become GLOBE Certified by participating in the *entire* series. The webinars will be free. The first 10 Iowa teachers to sign up and participate in 3 segments of the series will receive a GLOBE certified rain gauge for their school. Register at: <http://classic.globe.gov/fsl/workshop/reginfo.pl?session=34065>

To receive additional information, please contact Marcy at seavey@uni.edu.



Wanted: Saylorville Gift Shop

Coordinator

Gene Lucas, the Academy's longtime volunteer in the gift shop of the Saylorville Visitor Center, has asked to step down from his position. Gene has served the Academy, the Saylorville Visitor Center, and the public for many years by overseeing the inventory in the gift shop. To continue our relationship with the Army Corps of Engineers at Saylorville the Academy needs a volunteer to fill the position.

Our arrangement with the Army Corps of Engineers at Saylorville has provided the Academy with an important outreach opportunity. We help choose interpretive and educational items for the visiting public and in return the Academy is able to use the facilities for IAS sponsored events such as our summer Speaker Series at Saylorville. We also share in the profits earned from the gift shop.

If you would like to learn more about this position please contact:

Craig Johnson, Executive Director

Phone: 319-273-2581

Email: craig.johnson@uni.edu

Honor the 4th element of the
Iowa Academy of Science Mission
by nominating a worthy colleague
as a fellow

or to receive a
Distinguished Award or
Excellence in Science
Teaching Award.

Brochures are available for the
Academy Awards
and recognition programs at:

<https://www.iacad.org/tools.html>

Announcements, Events & Deadlines

- **Excellence in Science Teaching Awards (ESTA)**
Due: January 31st, 2012
- **Iowa Science Foundation (ISF)**
Grant Proposals Due: January 31st, 2012
- **Nominations for Distinguished Awards**
Due: February 3rd, 2012
- **IAS Annual Meeting Abstract Submission**
Due: Friday, February 10th, 2012
- **IJAS Members represent Iowa at American Junior Academy of Science Conference**
February 16-20, 2012
Vancouver, Canada
- **Myrle Burke Scholarship**
Applications Due: March 30th, 2012
- **Advance Registration for IAS Annual Meeting**
Due: Friday, April 5th, 2012
(fees increase after this date)
- **The 123rd Annual Meeting of the Iowa Academy of Science**
April 20 & 21, 2012
North Iowa Area Community College,
Mason City



See www.iacad.org for additional event/program details.

Do you have know of an event that should be listed in here? Contact iascience@uni.edu and let us know!



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Buena Vista University, Storm Lake
Central College, Pella
Coe College, Cedar Rapids
Cornell College, Mt. Vernon
Des Moines University, Osteopathic &
Podiatric Medicine
Drake University, Des Moines
Graceland University, Lamoni
Grand View University, Des Moines
Great Ape Trust of Iowa, Des Moines
Iowa Central Community College
Iowa Conservation Education Coalition
Iowa State University, Ames

Iowa Wesleyan College, Mt Pleasant
Kirkwood Community College, Cedar
Rapids
Krell Institute, Ames
Luther College, Decorah
Mount Mercy College, Cedar Rapids
North Iowa Area Community College,
Mason City
Northwestern College, Orange City
Simpson College, Indianola
The Nature Conservancy, IA
The Putnam Museum, Davenport
University of Dubuque, Dubuque
University of Iowa, Iowa City
Wartburg College, Waverly

