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The New Bulletin

Iowa Academy of Science


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Summer 2010

# Iowa Academy of Science: The New Bulletin, V6n2-3, Summer-Fall 2010

Iowa Academy of Science

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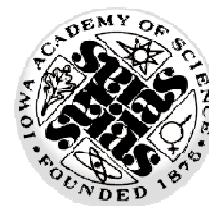
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# Iowa Academy of Science

## The New Bulletin

Volume 6 Number 2-3 Summer/Fall 2010



*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

Dear Academy Member,

As a new academic year begins it's time to reflect on the Academy; what we are doing, and where we are headed. The Academy is "we" not an "it." We are not the office where conferences and programs are facilitated and membership renewals and meeting registrations are administered. To be sure there is a staff of 5 people that gets those things and more done but the Academy embodies much more than that.

On August 27, 1875, 8 persons met in Iowa City to form this organization. Their meeting required a commitment. For one thing they didn't get there on interstate highways. They were from Ames, Davenport, Des Moines, Dubuque, Iowa City, and Tabor. The eight in attendance plus five others had a vision. I have heard it said state academies are not necessary any more; the time for general state science organizations has passed because of specialized disciplines, busy lives, and modern communications. That view is short sighted.

Iowa has many voices for science but only one organization whose original purpose is to bring all voices together. We have 12 scientific sections and room for more. Each section has wide latitude within the Academy to promote its discipline(s). The ISTS annually hosts the premier conference for science teachers in Iowa. The Iowa Community College Biologists sponsor a separate annual meeting yet many of its members are active in the Community College Biologists Section. Members of the Geological Society of Iowa active in the Academy sponsor a popular field trip at every IAS Annual Meeting. The IAS Annual Meeting brings together scientists, science teachers, graduate, undergraduate, high school, and middle school students. All of these meetings should grow in attendance and purpose.

The IAS is a facilitator, a way to bring academic, business, industry, and governmental interests together in formal and informal settings. We offer a neutral environment conducive to generating new communication and opportunities. I suspect the original organizers would look favorably upon this role for the Academy.

Encourage your colleagues, institutions, and businesses to join and support the Academy. Committees and sections should initiate new ideas and ways to help bring all voices for STEM together. The Academy remains an important voice for science just as its founders intended. We must be committed to continue what they began in 1875.

Craig Johnson  
Executive Director



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# You're invited to the 2010 Iowa Science Teaching Section Fall Conference



## Changing Iowa Classrooms: One-Room Schools to One-World Education



Join science educators from across Iowa as we learn, celebrate and network about science teaching and learning.

**Register now: <http://ists.pls.uni.edu/>**

### **Thursday Night Program**

**October 7th at various Ames locations**

**\$10.00 includes dinner, reception and choice of programs.**

5:00-6:00 pm -- [Presidential Awards for Excellence in Mathematics and Science Teaching Banquet in honor of Iowa 2010 Winner, Jessica Gogerty](#), Hickory Smoked Old Fashioned dinner buffet at Hickory Hilltop, Hickory Park Restaurant

6:00-7:00 pm -- [The Making of 'Iowa's One-room Schoolhouses' Documentary](#), IPTV's Trista Peitzman, Hickory Hilltop, Hickory Park Restaurant

7:15-8:00 pm -- [Let the Demo Speak for Itself, An Evening of chemistry How-To and Pedagogy](#), Aileen Mahood Sullivan, AHS Chemistry Teacher, Scheman Auditorium, ISC Center

6:30-8:30 pm -- [The Galileoscope: More than a Telescope, evening Workshop with Yvette McCulley](#), NESTA Regional Director, McFarland Park (additional \$10 registration fee, transportation available)

8:30 pm -- [Iowa's Skies Tonight with Ames Amateur Astronomers and Galileo](#), McFarland Park (transportation available)

9:30 pm -- [IAS-ISTS Chair Reception& Dessert](#), Kathy Megivern, McFarland Park (transportation back to Hickory Park and the Gateway Hotel available after the reception)

### **Friday Program**

**October 8th at Scheman Building, ISU Campus**

7:45am-4:30pm

see online program for session descriptions

pre-registration open until October 3rd

Pre-registration rates are \$80 for non-members and \$55.00 for members (30% discount) and includes lunch, concurrent sessions, exhibit hall access and keynote speaker, additional fees applied to on-site registrations

- Interest Area Breakfasts (\$10, preregistration required)
- Concurrent Sessions
- Exhibit Hall

Keynote address:

Galileo as played by Michael Francis Interactive presentation where you'll learn about the man and his science

### **Saturday Program**

**October 9, Departure location TBA**

[Field Trip: Experience the Working Landscapes](#) (economics, habitat, recreation) of Story County, Iowa \$30 and includes all transportation, lunch and a 1 gallon Buck Rose

Stops include the Story County Resource Recovery Plant, Martin Marietta Materials, Ada Hayden Heritage Park and Reiman Gardens.

**ISTS Fall  
Conference Keynote Speaker  
Galileo  
As played by Michael Francis**



**Congratulations to  
Jessica Gogerty  
Iowa's 2010 Presidential Awards for Excellence in  
Mathematics and Science Teaching Winner**

To many the Universe is a closed book of secrets never to be read. Almost four hundred years ago, an unknown court mathematician in Italy opened that book and laid the foundation for modern science. Galileo Galilei turned his telescope to the heavens to discover mountains and craters on the moon, four moons of Jupiter, and countless stars never before seen. Even more significant was his method of observation and mathematical analysis. He taught future scientists the way to discover the laws of nature.

**Official Conference Hotel**

Gateway Hotel and Conference Center  
2100 Green Hills Drive  
1-800-FOR-AMES  
\$104-\$350/night/room + tax (12%)

- same rate for 2 days before and 2 days after if booked at same time
- cutoff date is Sept. 16th, a limited block of rooms is available, make your reservations early!
- ask for the Iowa Academy of Science Block in order to get this rate



## Meet Iowa Department of Education Science Consultant Yvette McCulley

Yvette McCulley is the science consultant for the Iowa Department of Education. In this position, she co-coordinates the Every Learner Inquires state initiative, the Math/Science Partnerships program, STEM initiatives and of course, other duties as assigned. She is working as the Iowa Department of Education liaison with Area Education Agency 14 for the implementation of the Iowa Core.

Prior to joining the Department of Education in 2007, McCulley worked as a classroom teacher, lead science teacher, instructional strategist, principal, magnet science program facilitator and magnet coordinator in Council Bluffs, Iowa, Omaha, Nebraska, and the Des Moines, Iowa, areas. Ms. McCulley received her B.S. in Elementary Education from the University of Northern Iowa, her M.S. from Creighton University, Omaha, Nebraska, in Educational Administration, and an Educational Specialist Degree from Drake University, Des Moines, Iowa, in Educational Leadership. Yvette is currently working with the Doctoral Cohort at Drake University in Des Moines. She plans to have her dissertation complete by spring of 2011.

Ms. McCulley received the Presidential Award for Excellence in Mathematics and Science Teaching in 2000. She spent October of 2005 researching fish in Antarctica with a group of medical scientists from Creighton University from Omaha, Nebraska. Yvette serves as the educational liaison to the Space Foundation in Colorado. She is the current Central Regional Director for NESTA. At the NSTA Conference in Philly, she participated in her very first Rock and Mineral Raffle and actually won a specimen of Pink Dolomite!

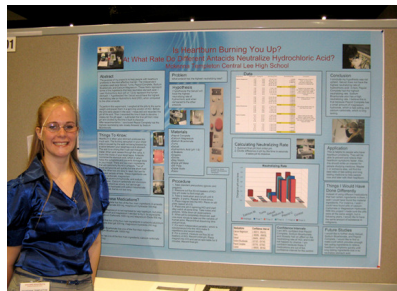
In her free time, she enjoys water aerobics, reading, shopping, playing with Anna, the dog, and of course spending time with eight grandchildren.



Join Ms. McCulley on Thursday, October 7<sup>th</sup> at the ISTS Fall Conference for her evening workshop: *The Galileoscope: More than a Telescope*. Participants will build Galileoscopes and explore how to use Astronomy to teach how observations and evidence can lead to scientific explanations about how the world works. Register for this workshop and the rest of the conference at: <http://ists.pls.uni.edu/>

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## 2010 Iowa AmJAS Delegate, McKenna Templeton shares her experiences at AmJAS:



As we landed in San Diego... I was in awe to see half a dozen skyscrapers, swimming pools in every neighborhood, and boats in the harbor. Ms. Schiller out of the blue said, "Look at the palm

trees!" This is when it dawned on me... "PALM TREES ARE REAL!" I had never seen the ocean or palm trees before.

My hotel room over looked the harbor and the U.S.S. Mid Way. Needless to say I felt very safe. The opening ceremony was on the U.S.S. Mid Way, which was amazing. It is hard to think something that massive could exist, let alone float.

The next day we set out early for whale watching. We were at the edge of our seat while coasting out of the harbor. We sailed 10 miles off the bay in to Mexican waters. The view was great, except it was missing one thing... whales. Nothing was visible for miles... UNTIL "WASHUSH!!!!!!!!!!!!!!" A water blow. We got to see its back.

After whale watching, my group set out for Scripps Research Institute. This is a graduate college for Marine Biology. Currently, my tour guide was surgically implanting tracking devices in sharks to observe their migrating patterns. We got to walk on the beach. It was that moment in my life when I truly realized, "**Science really does pay off.**"

The next two days were filled with suits, fancy meals, presentations, and pictures. It was a very good educational experience for me, because I got to talk to people in my field of research.

I hated to go home! I am so glad that I was able to have this experience! Thank you IJAS!

- McKenna Templeton



## 2011-2012 AAAS Science & Technology Policy Fellowships

AAAS is excited to announce the 2011-2012 AAAS Science & Technology Policy Fellowships online application system is now open. We encourage you to apply and to pass on this information to friends and colleagues. The deadline for applications is **December 5, 2010**.

For more than 35 years, the AAAS Science & Technology Policy Fellowships have provided scientists and engineers with a unique opportunity to apply their knowledge and skills to national and international issues in the federal policy realm, while learning first-hand about establishing and implementing policy. Fellows select assignments in Congressional offices or federal agencies. This is a year-long opportunity, beginning September 1 and ending August 31. Most federal agencies offer Fellows the ability to renew for a second year. AAAS seeks candidates from a broad array of backgrounds and a diversity of geographic, disciplinary, gender, and ethnic perspectives. Fellows have ranged in age from late 20s to early 70s. They represent a spectrum of career stages, from recent PhD graduates to faculty on sabbatical to retired scientists and engineers. Fellows also come from a range of sectors, including academia, industry, non-profit organizations, and government labs.

Individuals interested in the AAAS Science & Technology Policy Fellowships are encouraged to apply with all scientific societies for which they qualify. Please see our website at [www.fellowships.aaas.org](http://www.fellowships.aaas.org) for details. If you have questions or concerns, please feel free to contact us at [fellowships@aaas.org](mailto:fellowships@aaas.org) or 202-326-6700.

### **Education Leaders needed to take the Environmental Literacy Needs and Partnerships Survey**

*SURVEY WILL BE OPEN THROUGH SEPTEMBER 20, 2010*

#### WHO SHOULD RESPOND TO THIS SURVEY

A senior leader of organizations (head of science department, principals, organization leaders) that have an interest in education at any level (local to national), serving any audience (kindergarten through adult) or setting (formal or informal) in any sector (K12, higher education, agencies, scientific, media, business, social services, health, outdoors and recreation, horticulture, agriculture, technology, informal science center, green design, public policy etc).

We invite you to take the perspective of your whole organization. However, if your organization is highly complex, please determine the highest autonomous unit (e.g. a university department or program center) that best describes your activities appropriate to this survey.

#### HOW LONG WILL THIS SURVEY TAKE

It should take about 15-20 minutes to complete.

#### WHAT IS THE PURPOSE OF THIS SURVEY

The purpose of this survey is get a pulse from the community of the:

1. Types of organizations interested in environmental literacy
2. Strength of existing partnerships and networks
3. Current focus of educational activity and future activity priorities
4. Additional needs in order to advance environmental literacy
5. Perceptions of emerging environmental and ecological topics and educational issues.

#### WHAT WILL BE DONE WITH THE RESULTS

The results of this survey will inform the planning for the Ecology and Education Summit to be held in Washington DC from October 14-15, 2010 and the drafting of a coordinated decadal Action Plan to promote Environmental Literacy for a Sustainable World from 2010-2020. For more information, please visit the Ecology and Education Summit website: [www.esa.org/eessummit](http://www.esa.org/eessummit)

#### QUESTIONS ABOUT THE SURVEY OR THE SUMMIT

Please contact: Teresa Mourad ([teresa@esa.org](mailto:teresa@esa.org), 202.833.8773.), Project Manager, Ecology and Education Summit, Director of Education and Diversity Programs, Ecological Society of America

**TAKE THE SURVEY: <http://www.surveymonkey.com/s/SZ8TLYW>**

## Experience Three Weeks in India: University of Iowa Winterim in India Program

INDIA is a three-week study abroad program utilizing education and tourism to learn from and interact directly with leading social entrepreneurs, environmental, non-profit organizations and academic institutions within the cultural, socio-economic, and geographic diversity that is India. The course titled "**Adapting Environmental Technology and Policy for Developing Communities**" will travel to Madurai in the southeastern state of Tamil Nadu. Each week of this course will be dedicated to specific goals and activities for students as a way to develop a comprehensive understanding and approach to the environmental management industry in India.

To register for this or other Winterim courses visit <http://www.uiowa.edu/~geog/india/>.

Continuity gives us roots;  
change gives us branches, letting us stretch and  
grow and reach new heights. ~Pauline R. Kezer



For 118 years JIAS has served the state of Iowa as  
the source for research about Iowa.

Let us know what you think of the Journal of the  
Iowa Academy of Science's new full color cover!

Send comments to: [seavey@uni.edu](mailto:seavey@uni.edu)

## Academy awarded REAP-CEP Grants

The Resource Enhancement And Protection—Conservation Education Program has awarded IAS two new grants. As a result of these grants, 150 Iowa preservice education majors will participate in Project WET professional development workshops and 10 Iowa inservice teachers will be selected to pilot a new course. The preservice workshops prepare Iowa's soon to be teachers to integrate environmental education and science concepts into all subject areas, provide them with a resource of over 90 activities about water physical and chemical properties and water resource management. A new pilot course, *Leading Authentic Places-based Student Investigations—Water*, will be offered by the Academy and the Iowa DNR in spring 2011. Participating teachers will take this workshop in their own classrooms, implementing assignments with their own students. They will develop a place-based water investigation with their students and present their results at the IAS Annual Meeting in April 2011. Contact Marcy Seavey ([seavey@uni.edu](mailto:seavey@uni.edu)) if you are interested in applying to be a pilot teacher for this workshop.

## Announcements, Events & Deadlines

- **World Space Week**  
October 4th-10th, 2010  
<http://www.worldspaceweek.org/>
- **ISTS Fall Conference**  
October 7th-9th, 2010  
<http://ists.pls.uni.edu/> (see page XXX)
- **Call for Presentations for IAS Annual Meeting**  
Abstract Submissions begin:  
October 15, 2010
- **Iowa Wetlands Workshop**  
for 4th-9th grade educators  
at Buena Vista University  
October 16th, 2010  
contact: [seavey@uni.edu](mailto:seavey@uni.edu) for details
- **USA Science & Engineering Festival**  
October 10-24, 2010
- **Earth Science Week**  
October 10th-16th  
<http://www.earthsciweek.org/>
- **Geography Awareness Week**  
November 14-20, 2010  
<http://www.mywonderfulworld.org/gaw.html>
- **IAS Fellow Nominations**  
Due January 14th, 2011
- **Excellence in Science Teaching Awards**  
Due January 31st, 2011
- **Iowa Science Foundation Proposals**  
Due January 31st, 2011
- **IAS Distinguished Awards**  
Due February 4th, 2011
- **Abstract Submission Deadline**  
Submission application will close at 11:55pm,  
Friday, February 11th, 2011

See [www.iacad.org](http://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](mailto:iascience@uni.edu) and let us know!

**Connect a Million Minds  
promotes IJAS & other Iowa STEM  
Programs!**

Learn more & make the pledge to bring  
STEM to youth in your area!

[connectamillionminds.com](http://connectamillionminds.com)

**SCIENCE  
ROCKS**

CONNECT  
a MILLION  
MINDS.

## Support The Academy

The Iowa Academy of Science provides many opportunities for its members to support science in Iowa. If you aren't familiar with how the Academy works please take a few minutes to scan the bylaws and other information found on our website at <http://www.iacad.org/about.html>. As a 501 (c) (3) non-profit the Academy fosters an environment where individual members are able to influence the direction of science in Iowa.

You may participate by being a member of Academy committees or becoming involved in your section leadership and elected positions. Most of these positions involve a minimal time commitment especially when all members carry a share of the load. The Academy needs your expertise in whatever ways you can share it. Meetings may be face-to-face or via conference calls and by email.

You may also participate by donating to Academy programs and funds. This is very important because the cost of dues do not cover all of the operating expenses of the Academy. Please look over the donation opportunities below and consider supporting the future of the Academy. Opportunities are available for annual donations or for supporting the Academy through a planned giving program. Please contact the IAS office for more information on how you may help the Academy support science and serve Iowa.



### Specify where your IAS donation goes...

**Iowa Academy of Science General Fund**—Funding the day-to-day operations of the Academy. IAS Membership Dues do not account for all of the funding required to pay staff, publish newsletters and other member mailings, maintain the website, pay phone bills, etc. Until the Iowa Science Endowment is large enough to support the regular activities of the Academy, additional funds for general activities must be sought. If you do not select a place to allocate your donation and you donate less than \$250, your donation will be placed in this category.

**Iowa Junior Academy of Science Endowment**—The Iowa Space Grant Consortium provides \$6,000 to support the IJAS Annual Meeting Competition and awards for 2010. In return the Academy must raise a matching \$6,000 to provide long-term support for IJAS. Donations made specifically to IJAS and proceeds from the IJAS Silent Auction contribute to the Academy's match.

**Iowa Junior Academy of Science Starr Student Research Grants**—IAS provides \$1,000-\$2,000 in small grants to individual middle and high school students to support their science fair projects. The Student Programs Committee provides additional support to these students through grant proposal feedback and matching students to scientist mentors.

**Iowa Science Teachers Fall Conference**—Iowa's Largest gathering of Science educators. The Iowa Science Teachers Section of IAS raises their own funds to put on this conference each year. Donations to ISTS will assist in bringing in guest luncheon speakers and other event programming.

**Iowa Science Endowment Fund**—This fund was established to secure the long term financial success of the Academy. Donations of \$250 or more that are not designated specifically for other projects are automatically placed into this fund. A portion of the annual growth of this fund may be used by the IAS Board for IAS projects including general expenses.

**Benchmark Fund**—IAS uses the Benchmark fund to develop additional revenue for the Academy. The benchmark fund pays membership brochures and other promotional materials and activities.



# Iowa Academy of Science The New Bulletin

Volume 6 Number 2-3 Summer/Fall 2010

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Managing Editor: Craig Johnson  
Editor: Marcy M. Seavey

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**Article Submission:** The deadline for submission of articles for Vol. 6 #4 is December 1, 2010. Articles must be pre-approved. For more information contact Craig Johnson, IAS Executive Director, at [craig.johnson@uni.edu](mailto:craig.johnson@uni.edu)

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