

Iowa Academy of Science

The New Bulletin

Volume 4 Number 1 Spring 2008



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 IAS Members,

The Academy office has been a busy place. The 120th IAS Annual Meeting is coming up on April 11th and 12th at Kirkwood Community College in Cedar Rapids. There are many fine presentations and events planned. Please refer to your Advance Program that was mailed in mid-February for more information and check our website at www.iacad.org for updates and online registration. In addition to our regular events, take special notice of the INHA organized workshop and opportunities for teachers at this Annual Meeting.

The Academy is embarking on a new program this year. We are co-sponsoring the 2008 Iowa Academy of Science Speakers Series with the Army Corps of Engineers at Saylorville. Eight of our members have volunteered to make presentations to the public at the Saylorville Reservoir Visitor Center near Des Moines. These programs are planned on Saturday evenings at 7:00. Please check the schedule in this newsletter or on the IAS website. This is a wonderful opportunity for the Academy to encourage the public understanding of science. We want to thank our members for being willing to share their passion for science with the public and thank the Army Corps of Engineers for their support.

Please read this Bulletin for important information about candidates seeking elected office in the Academy. Please have your voice heard by returning your ballot to the IAS office. We appreciate these members being willing to run for office and give their time and energy to support the Academy.

On behalf of the IAS Board of Directors, thank you for choosing to support the Iowa Academy of Science. We look forward to seeing you at the Annual Meeting in April!

Craig Johnson, Executive Director

NWR Audio Series Update

Iowans will soon be able to listen to IAS members tell the stories of Iowa's National Wildlife Refuges through streaming and downloadable audio files. Drafts are currently being finalized and authors are recording their segments. IAS member Rod Philp will narrate the series introductions, drawing upon his past narrator experience. David O'Shields, producer of America's Lost Landscape: The Tallgrass Prairie is directing the project and IAS Program Director, Marcy Seavey, is developing activities to accompany the audio files. The project serves as a pilot project to illustrate for potential funders the quality of content that IAS can produce for the public.



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Special Workshop at IAS Annual Meeting

Are you interested in Iowa flora, fauna, and microorganisms? The Iowa Natural History Association is organizing a workshop at the IAS Annual Meeting; Friday morning, April 11th, from 8:00 until 10:30 a.m. The INHA and IAS are interested in establishing a Natural History Database for Iowa. If you have data to contribute or are interested in collecting more please attend this important workshop. You must be registered for the IAS Annual Meeting to attend. INHA members may register for the IAS member rate. Optional: Bring your laptop computer with wireless card.

Teacher Seminar at IAS Annual Meeting

Leaders are problem solvers! *The Elements and Chemistry of Leadership* is a special one hour educator seminar at the IAS Annual Meeting. It will be held on Friday afternoon, April 11th, from 2:30 until 3:30 p.m. Learn about the characteristics of being a successful leader from Dr. C. Marvin Lang, and Dr. Donald Showalter, Emeritus Professors of Chemistry at the University of Wisconsin – Stevens Point. The discussion is lively and the demonstrations will be memorable. This seminar is designed for teachers and students.

www.iacad.org

For more information about the IAS Annual Meeting!

Bringing Environmental Education and Practical Applications into Preservice Educator Programs

"The Project WET workshop goes beyond theory and puts practical applications into practice." This is what University and College faculty have to say about how Project WET Preservice workshops fit into their preservice science methods courses. The Iowa Academy of Science, through grants from the Resource Enhancement And Protection—Conservation Education Program (REAP-CEP) has trained thousands of Iowa preservice educators in using Project WET over the past few years, including nearly 400 new participants last year. In 2007, IAS partnered with faculty at the University of Northern Iowa, University of Dubuque, Iowa Wesleyan College, and Morningside College to deliver preservice workshops. In the past IAS has conducted research on the attitudes and implementation levels of workshop participants. This year we surveyed and interviewed faculty at partner institutions to determine how the Project WET workshop 'fits' into the methods courses it is held in conjunction with.

Most Project WET preservice workshops are offered during non-class hours. All partner faculty attend all or part of the workshop or have attended a workshop in the past. Faculty were asked if they discussed or used Project WET in their courses beyond offering the free workshop to their students. All of the partner instructors used WET in some way. Some use Project WET activities as examples of inquiry and active learning, some required students to demonstrate a classroom lesson utilizing one of the activities. Faculty indicated that the Project WET workshop and materials assist them in meeting the objectives of their course by providing locally relevant content knowledge, allowing them to fit environmental education into science education courses, demonstrating sound educational methods, and providing their students with practical resources.

For example, the activity *Incredible Journey* (in which students learn about the water cycle and confront misconceptions about cycles) "teaches [preservice educators] the value of total physical response and that games can teach concepts".

"The science content covered in the activities is new to them. The chemical and physical properties concepts are new, not for the all, but for the vast majority of the students. They estimate the amount of water they use daily...they estimate WAY low and they are surprised. But then someone in the class always volunteers stories about low flow showerheads and new washers. Someone will share about their grandparents washing in rain water. When we talk about these subjects it becomes more real to these students as adults and as citizens."

"The students [preservice teachers] have a lot of fun. Now here is the truth about fun. If they don't have fun, they will never use it in their own classrooms." And past research by Iowa Project WET has shown that the majority of these students will go on to use Project WET activities in their future classrooms.

2008 Iowa Academy of Science Speakers Series Visitor Center, Saylorville Reservoir

All presentations begin at 7:00pm, are free and open to the public.

May 10 -

Archeology of Dragoon Forts Around Iowa

William Whittaker, Project Archaeologist, Office of State Archaeologist,
University of Iowa

May 17 -

Water Quality History of the Des Moines and Raccoon Rivers

Chris Jones, Laboratory Supervisor, Des Moines Water Works

June 7 -

Science of the Lewis and Clark Expedition: A Retrospective View

Richard Wacha, Department Chair and Professor of Biology, Drake University

July 19 -

Spacious Skies: Earth's Weather from Space

Craig Johnson, Executive Director, Iowa Academy of Science

July 26 -

Ground Water: Underfoot and Under Appreciated

Teri Wiese, Biology Teacher, Davenport Community School District

August 2 -

For Measuring Sticks and Blazing Stars...

and for Us: Iowa's Conservation Heroes at Work

Deborah Lewis, Director, Ada Hayden Herbarium, Iowa State University

September 13 -

Some of Iowa's Awesome Plants and Their Nifty Adaptations

Tom Rosburg, Associate Professor of Biology, Drake University

October 18 -

Sea Turtles of Georgia; Perspective from the Prairies of Iowa

Gale Bishop, Emeritus Professor of Geology, Georgia Southern University

PLEASE POST

For more information contact:
Saylorville Lake Visitor Center
(515) 964-0672



The Iowa Academy of Science
Speakers Series at the Visitor Center,
Saylorville Reservoir is sponsored by
the Iowa Academy of Science
in partnership with the Army Corps
of Engineers, Rock Island District.

Candidates for President-Elect of the Iowa Academy of Science



Lyn Le Countryman
Associate Professor of
Teaching and Science
Education
University of Northern
Iowa

"IAS holds as its members, strong, dedicated scientists, science teachers and those interested in science. With increased emphasis on science for our students we are at a critical crossroads. I will continue the exciting new initiatives that will help us become provide interactive experiences for the public

to engage in science around our natural resources and will help us become the VOICE of science in our state."

Iowa Academy of Science Activities

IAS Member since 1983, Fellow since 1999

IAS Board Member (2007-2010)

Distinguished Service Award, Iowa Science Teachers' Section of the Iowa Academy of Science (2002)

Served on the Excellence in Science Teaching Award Committee (1992, 1999-2002)

President-Elect/President/Past President ISTS (1997-2000)

Iowa Fall Science Teachers Membership Committee (1991, chair 1992-1995)

Professional Experience

Current Teaching Assignment, Malcolm Price Laboratory School, High School Biology & coursework for Biology Department and Science Education UNI

Associate Professor of Teaching and Science Education, University of Northern Iowa (1997-present)

Assistant Professor of Teaching and Science Education, University of Northern Iowa (1994-1996)

Instructor of Teaching, UNI (1990-1993)

Adjunct Instructor, Buena Vista College – Marshalltown Center (1989-1990)

Pre-school Instructor, Busy Bee Preschool, Tama, Iowa, (1989-1990)

National Board Certification, Renewal (2004)

National Board Certification, Early Adolescent Generalist (1994)

Ph.D., University of Iowa, Science Education (1992)

M. S., University of Iowa, Science Education (1987)

B.S., Iowa State University, Zoology (1980)

Science Ambassador Program, National Institute of Health (2007)

Teacher Advisory Council, National Academies (2003-2006)

Presidential Award for Excellence in Mathematics and Science Teaching, National Award (1999)

Candidates for Iowa Academy of Science Board of Directors



Dr. Robb Dunbar
Assistant Professor
Buena Vista University

"Participation in the Iowa Academy of Science has permitted me to grow personally and professionally over the years. Serving on the Board would be a great opportunity for me to give back to the Academy by broadening my commitment and involvement. Thank you for your consideration."

Iowa Academy of Science Activities

Member since 2004

Sponsor - multiple student poster presentations at IAS annually

Committee on Committees and Elections (2006-Present)

Chair, Physiology & Health Sciences Section (2007)

Initiated visit of Kathie Olsen (Deputy Director of NSF) to IAS Annual Meeting

Professional Experience

Director of Postdoctoral Program in Undergraduate Research and Teaching (PPURT; 2007-Present)

President-Iowa Physiological Society (2006-2007)

Assistant Professor-Buena Vista University (2003-present)

Post-Doctoral Fellowship-Duke University (2002-2003)

Ph.D.-Neuroscience; University of Minnesota (1995-2002)

Awarded NSF MRI grant for confocal microscope (2005)

Carver Foundation Grant for Postdoctoral Program in Undergraduate Research and Teaching (2006)

Summer Undergraduate Research (2005, 2006, 2007)

Save the date!

**Iowa Science Teachers' Section
Fall Conference**

October 23, 2008

Polk County Convention Center, Des Moines

Candidates for Iowa Academy of Science Board of Directors



Todd T. Tracy
Assistant Professor of Biology
Northwestern College

"I am proud to be a member of the IAS, and if elected, I will passionately serve the organization in its endeavors to promote excellence in science education and scientific research, especially among the youth of our state."

Iowa Academy of Science Activities

Member since 2006

Presented at Annual Meeting (2006, 2007)

ISF research grant recipient (2006, 2007)

Last Vice Chair of the Zoology Section"

Professional Experience

Assistant Professor, Northwestern College, Iowa (2002-present)
Interim Coordinator of Undergraduate Programs, School of Professional Studies, Colorado Christian University (2001)
Affiliate Professor, Colorado Christian University (2000-2002)
Adjunct Faculty, Front Range Community College (2000-2001)
Instructor and Visiting Professor, Department of Biology, Colorado State University (1999-2001)
Graduate Teaching Assistant, Department of Biology, Colorado State University (1993-2000)
Laboratory Coordinator & Laboratory Instructor, Department of Math/Science, Kirkwood Community College (1991-1993)

Advanced Placement Environmental Science exam grader, 2005-present

Faculty advisor for a Lewis & Clark College Mellon Foundation

Research Initiative grant

IOWATER volunteer & member of Sioux County Birders' Club



Peter J. van der Linden
Executive Director
Iowa Lakeside Laboratory

"I have worked in other states for most of my career and look forward to becoming more involved with IAS now that I have returned to Iowa. I believe that my experience in non-profit management and board service would be useful to the Academy."

Iowa Academy of Science Activities

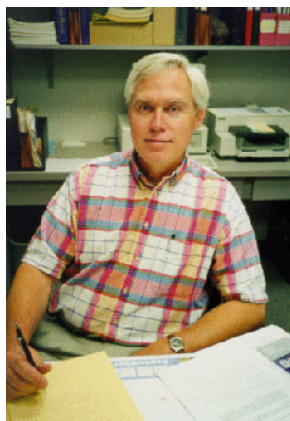
Member since 1983

Professional Experience

Executive Director, Iowa Lakeside Laboratory (2007-present)
Executive Director, Fernwood Botanical Garden & Nature Preserve (2000-2007)
Executive Director, Bickelhaupt Arboretum (1998-2000)
Curator of Plant Collections, The Morton Arboretum (1987-1998)
Executive Director, Iowa Arboretum (1981-1987)

Board of Directors and Treasurer, International Oak Society, 1994-2003

Board of Directors, The Brenton Arboretum (1999-present)



Dr. Jim Walters
Head of the Dept. of Earth Sciences
University of Northern Iowa

"As scientists, one of the most important things we can do is to regularly interact with our peers, certainly within our own discipline but also with those outside our area of expertise. The IAS provides such an opportunity and allows us to work together to support and promote the sciences among

professionals, students, and the public."

Iowa Academy of Science Activities

member and fellow of the IAS since 1975

Geology Section vice chair (2007)

ISF Committee (2001-2004, chair 2004)

Election Committee (1997-2000, chair 2000)

Membership Committee (1991-1994, chair 1994)

Geology section chair (1983)

Professional Experience

Jim Walters is Professor of Geology and Head of the Dept. of Earth Sciences at UNI, where he has taught since 1975. From 2003-2006 he also served as the Interim Director of Environmental Programs in the College of Natural Sciences at UNI. In addition to administrative duties, Jim teaches Geomorphology, Physical Geology, Oceanography, Glaciers and Glaciation, Iowa Landforms, and Geology of Iowa for Teachers on a regular basis. He received his Ph.D. in Geology from Rutgers University.

1995, UNI College of Natural Sciences Dean's Award for Teaching Excellence in Departmental Programs.

1991, UNI College of Natural Sciences Dean's Award for Superior Achievement as a Faculty Member.

Iowa Academy of Science – Election 2008 Ballot for ISTS Section

Rules: Ballots must arrive at the IAS Office by April 2nd, 2008. One Ballot per member.
Return to: Toni Arends, IAS Office Manager, 175 Baker Hall, Cedar Falls, IA 50614-0508

IAS President-Elect
(vote for one)

_____ Lyn Countryman

_____ write in _____

IAS Board Director
(vote for two)

_____ Todd _____

_____ Todd _____

_____ Peter van der Linden

_____ Jim Walters

Please use your paper copy to vote.

Iowa Science Teachers' Section Election Candidates

**Candidate for ISTS Section
Vice Chair 2008/Chair 2009**



De Anna J. Tibben
Earth Science Teacher
Ames High School

"I was asked to put my "hat in the ring" by the current president-elect and the current past-president. I feel that they have confidence in my abilities to help move ISTS forward. We each bring our own unique talents and gifts to the organizations, memberships, and teaching assignments we hold. I am willing to give ISTS my time, energy, and talents to help move it forward for current membership as well as future memberships. I feel that as the Iowa Core Curriculum is implemented over the following years, ISTS could play an important role in helping current and future science teachers across the

state. I am both encouraged and excited about how the science teaching profession is evolving. I would like to help make positive progress in the evolution of Iowa Science Teaching."

I have been a member of Iowa Academy of Science since my graduate years at UNI. I have been an active ISTS member since Fall 2004. I saw the need for the Earth Science Breakfast sessions to be better organized, so I volunteered. I have been the Interest Chair since 2006. As a result of my planning/organizing the Earth Science Breakfast session, the attendance for the session has more than doubled the last two years.

Professional Experience

9th grade Earth Science Teacher, AHS (1999-present)
Instructor- Meteorology, UNI (Summer 2008)
Instructor- Elementary Science Teaching Methods, ISU CI 449 (2008)
Interest Area Chair – Earth Science, ISTS (2006-present)
6th, 7th, & 8th grade Science Teacher, UMS (1994-1999)
NSTA Member # 2158962F (1993-present)
IAS Membership (1993-present)
Sigma Gamma Epsilon, Gamma Sigma Chapter (1990-present)

While teaching at Union Middle School, I was nominated twice for the Golden Star Teaching Award. My greatest "awards" have been the times when former students visit me, or send me letters expressing how much of an impact I had on their lives. To me that is more meaningful than a plaque on the wall.

Candidate for ISTS Secretary



Kathleen Lockard
Professional Development Coordinator
Green Valley AEA 14

"My students displayed so much excitement and enthusiasm when participating in science activities. That same excitement is evident at the ISTS meeting as dedicated science edu-

cators meet in order to make science education better for Iowa students. I would be honored to help the ISTS organization by serving as secretary."

Iowa Academy of Science Activities

Secretary, Iowa Science Teachers' Section (2000-2006)
Green Valley AEA 14 Regional Director (1997-present)
SPARKS Editor (2000)
Iowa Science Teachers Section Chair (1999)

Professional Experience

Professional Development Coordinator, Green valley AEA
Success4/Learning Support/School Improvement Consultant, Green Valley AEA (2000-2006)
Elementary Instructor, East Union Community School, Afton, Iowa (1984-2000)
Elementary Instructor, Diagonal Community School, Diagonal, Iowa (1983-1984)

NASA Education Workshop for Elementary School

Iowa Academy of Science Grant Awards for 2007

In addition to donations, dues, publication sales, sponsorships, conference fees and the State of Iowa's appropriation for ISF and the IAS Journal the Academy received the following grand awards in 2007:

REAP-CEP

\$26,626 for Project WET Preservice Workshops

Iowa Space Grant Consortium

\$10,500 for development of I wonder program
\$6,000 for Iowa Junior Academy of Science Competition

State of Iowa Title II Education Grant (as a partner on a grant awarded to the University of Northern Iowa)
\$15,503

Preserve America—National Wildlife Refuge Grant

\$14,700 for a 21 part audio series on Iowa's NWRs.

2007 Donations & Grants

Thank you to the following Academy members who made financial contributions to IAS between January 1—December 31, 2007.

\$1000 plus

Harry Horner

\$500 plus

\$100 plus

Robert Baumann
Gary Donnermeyer
Tom Fenton
Charles Martinson
Marcy Seavey
Paul Waite

\$50 plus

George Burnet
John Clem
Carl Gross
Bion Pierson
Jean Sandrock
Gerald Scheppers
Clayton Swenson
Ruth Swenson
Ronald Wilmot
Michael Yohe
J. Yohe

Under \$50

Paul Bartelt
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<http://www.iacad.org>

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Article Submission: The deadline for submission of articles for Vol. 4 #2 is June 1, 2008. Articles must be pre-approved. For more information contact Craig Johnson, IAS Executive Director, at craig.johnson@uni.edu

Advertising Rates: Full page, single issue \$160; Half page, single issue \$75, two consecutive issues \$100; Business Card (3.5"x 2.0"), single issue \$30, two consecutive issues \$40. For more information or to submit an advertisement, contact: iascience@uni.edu

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Graceland University, Lamoni
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