

University of Northern Iowa
UNI ScholarWorks

The New Bulletin


Iowa Academy of Science

Fall 2009

Iowa Academy of Science: The New Bulletin, V5n3, Autumn 2009

Iowa Academy of Science

Follow this and additional works at: <http://scholarworks.uni.edu/iasnews>

 Part of the [Anthropology Commons](#), [Life Sciences Commons](#), [Physical Sciences and Mathematics Commons](#), and the [Science and Mathematics Education Commons](#)

Let us know how access to this document benefits you

Recommended Citation

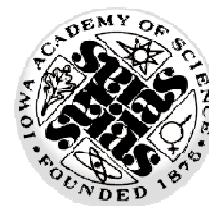
Iowa Academy of Science, "Iowa Academy of Science: The New Bulletin, V5n3, Autumn 2009" (2009). *The New Bulletin*. 16.
<http://scholarworks.uni.edu/iasnews/16>

This Newsletter is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in The New Bulletin by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Iowa Academy of Science

The New Bulletin

Volume 5 Number 3 Autumn 2009



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 Member,

Thank you for your continuing support of the Iowa Academy of Science. We are members of the only organization in Iowa seeking to advance all sciences through the promotion of science research, science education, and the public understanding of science.

The effectiveness of the Academy is determined by the willingness of its members to participate on committees, in the sections, and as members of the Board of Directors. Please consider being part of the Academy decision-making process by volunteering for one of these positions. Academy section members choose their chairs and vice-chairs, committee members are appointed, and members of the Board of Directors are elected by Academy members. It will soon be time to choose new leaders. You may indicate your willingness to fill one of these positions by contacting your section chair, a Board member, or the IAS office.

The next major event on our calendar is the ISTS Fall Conference which will be held on October 27th & 28th in Des Moines. The ISTS leadership has planned an excellent program. Read more about it inside this newsletter or go to the IAS website at www.iacad.org and link to the conference information.

Now that fall has arrived please take time to acquaint your colleagues with the Academy and its mission. We have brochures to present prospective members. New members may conveniently join on line or mail the membership card with payment to the IAS office. They may join at the introductory rate of \$50. If your institution is not an Academy member ask them to join. The cost is \$125 per year. We will be happy to send an institutional membership card and brochure to you or the proper administrator for processing.

This is also a good time to ask businesses to become corporate members. There are four membership levels ranging from \$250 to \$1000. We will provide corporate membership information at your request.

Your membership renewal notice for 2010 will be mailed in October. We are now on the new calendar year membership cycle for all members. Renew immediately and you will save the Academy the cost of postage and the office staff time required to process reminder mailings. The deadline for renewal is December 31st.

We hope to see you at the Fall Conference and the IAS Annual Meeting at Graceland University in April.

Craig Johnson
Executive Director



Table of Contents

Executive Director Message.....	1
Remembering Two Great Iowa Scientists.....	2
ISTS Fall Conference	3
Fall Conference—Interest Area Breakfasts ..	4
IAS Speakers Series	5
Corporate Memberships.....	5
Upcoming Events and Deadlines	5
2010 IAS Annual Meeting.....	6
REAP Announcements.....	6
GLOBE Program Milestone.....	6
IAS on Facebook.....	6
Membership Update	7

Lois Hattery Tiffany

March 8, 1924 – September 6, 2009

Widely respected by the public as “Iowa’s Mushroom Lady” and known by many students, colleagues and friends as “Dr. T”, Lois H. Tiffany joined the faculty of Iowa State University’s Botany Department in 1950, served as department chair from 1990 to 1996, and became a Distinguished Professor (ISU’s highest faculty rank) in 1994. Her degrees were all from ISU: BS in 1945, MS in 1947, and PhD in 1950. Her research was broad in scope, including studies of fungal diseases of native prairie plants, a 10-year survey of Iowa’s morels, and a study of the fungi of Big Bend National Park, Texas, to name just a few of her projects. The author or co-author of well over a hundred publications and professional reports, her most recent publications have been the 2nd edition (with Donald Huffman, George Knaphus and Rosanne Healy, 2008) of *Mushrooms and Other Fungi of the Mid-continental United States* and *Mushrooms in Your Pocket: A Guide to the Mushrooms of Iowa* (with Donald Huffman, 2004).

Dr. Tiffany taught mycology and field botany courses both at ISU and at Iowa Lakeside Laboratory. She advised many hundreds of undergraduate students and was the major professor (40+) or a committee member for numerous graduate students. Many of these have added greatly to the field of mycology in teaching and research.

She served in numerous capacities in leadership and service within and beyond ISU, including leadership in the Iowa Academy of Science. She served as the IAS’s President in 1977-78. She received numerous awards, including the Distinguished Iowa Scientist Award (1982) and the Distinguished Service Award (1994) from the IAS.

She is survived by her three children, five grandchildren, and one great grandchild. She was preceded in death by her husband and one grandson.

Memorials may be made to the Lois H. Tiffany Scholarship Fund, in care of the Iowa State University Foundation, 2505 University Blvd., Ames, IA 50010.

—Deborah Lewis

Dr. Tiffany’s Article—*Reflections on Women Scientists and the Iowa Academy of Science*, published in the 1975 Centennial Edition of the Proceedings of the Iowa Academy of Science is available at:
http://www.iacad.org/proceedings/ias_women.html

Norman Borlaug

March 25, 1914 – September 12, 2009

Born on a small farm in Cresco, Iowa, Nobelist Norman Borlaug learned the value of hard work and persistence that were to define his approach to life. As a college student at the University of Minnesota in the 1930’s he experienced the Great Depression and the effects of starvation that can drive people to desperate actions. Throughout his life, He carried the vision of observing a confrontation between people who had been locked out of work and ruffians hired to forcefully drive them away.

Borlaug received a B.A. in forestry in 1937 and a Ph.D. in pathology in 1942, both from the University of Minnesota. While working as a microbiologist for du Pont de Nemours, he was hired by the Rockefeller Foundation as the scientist in charge of wheat improvement with the Cooperative Mexican Agriculture Program in 1942. In this program, he devised an ingenious program of plant genetics that involved breeding successive generations of wheat varieties in numerous geographic and altitudinal sites within Mexico. In the 1960’s, he assumed the leadership of the International Wheat and Maize Improvement Center (CIMMYT) in Mexico.

Borlaug fearlessly confronted government officials, including leaders, in order to get support for local farmers in their attempts to use the new varieties of wheat and stave off impending mass famine. Resulting from his leadership and the success of the new varieties, Borlaug has been called the father of the Green Revolution and has been credited with saving the lives of over a billion people in Mexico, Asia, and Africa. Not all that came from this success has been met with approval. Some environmentalists have raised concerns about ground water depletion and contamination resulting from the heavy use of irrigation, fertilizers, and pesticides. In conversations with Borlaug, he raises the question of allowing millions to die of starvation or doing what seemed necessary to avoid famine. Borlaug also stressed the need to get population growth under control. He was a proponent of zero population growth. These positions reflect his experiences during the Depression.

After retiring Borlaug, who never put aside his concern for the project, frequently traveled around the world to check on the progress of the programs he had developed. In each of these countries, he has been met by cheering crowds of admirers. In retirement, Borlaug held the Distinguished Professorship in International Agriculture at Texas A. & M. He received the Nobel Peace Prize in 1970 and developed the World Food Prize in 1986. He was named a Distinguished Fellow of the Iowa Academy of Science in 1975. In February, 2007, Borlaug was presented by the President, with the National Medal of Honor, the highest civilian award in the U.S.

—David McCalley

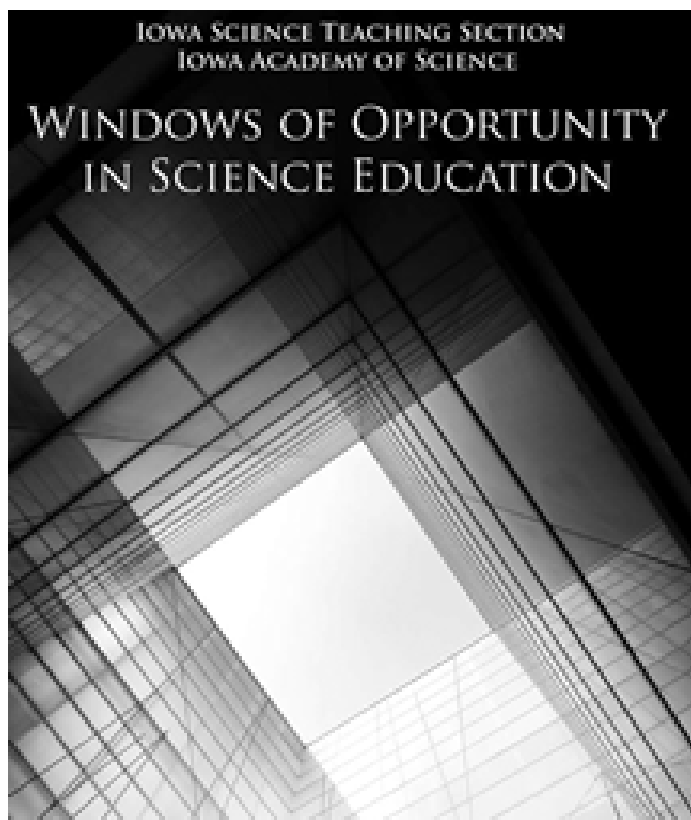
Iowa Science Teaching Section Fall Conference

October 27th & 28th, 2009

Des Moines

Learn more and register:

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



**Keynote Speakers for the 2009 Iowa Science Teaching Section Fall Conference
Wednesday, October 28th, 2009, Polk County Convention Complex**

How I Lost my Ego through Inquiry

Kari Pingel, 5th Grade Teacher, Pella Community School District, Presidential Award for Excellence in Math/Science, 2004

Taking the High Road: Inquiry Strategies that Help Build Conceptual Understanding.

Sara B. Coleman, Chemistry Teacher, Norwalk High School

The Manson Impact Structure; Evidence of Iowa's Greatest Catastrophe

Dr. Ray Anderson, Geologist, Iowa Geological Survey

Lessons Learned from Ape Language Research

Mr. William Fields, Great Ape Trust of Iowa

Formative Assessment and the Iowa Core Curriculum

Colleen Anderson, Student Assessment Consultant with the Iowa Department of Education's Bureau of Teaching and Learning Services

**Please join the Iowa Science Teaching Section for a
Night at the Science Center of Iowa
Tuesday, October 27th, 2009
6:00 P.M. — 9:00 P.M.**



Explore the Star Theatre, Discovery Labs, IMAX, Robot Rumble, and interactive exhibits while networking with colleagues from across the state. Special presentations by Shannon Cde Baca, *Teaching Great Science: a journey to the Core* and William A. Gallus, *Tornadoes — The Strongest Winds on Earth*. Tickets are \$15 and include admission to the Science Center of Iowa, special evening presentations, admission to the IMAX theater, ISTS Fall Conference Opening Reception, a string concert and more! Visit the Iowa Science Teaching Section webpage for more information: <http://ists.pls.uni.edu>

ISTS Fall Conference Interest Area Breakfasts

Breakfast meetings will occur prior to the first ISTS Fall Conference session. You must be pre-registered to attend the breakfast session (register here: <http://ists.pls.uni.edu/>). Breakfast served at 7:45 - session presentations from 8:00-8:45. Breakfast is thick sliced French Toast topped with cinnamon sugar & candied pecans with thick sliced bacon and grilled cantaloupe. A vegetarian French toast option is available for pre-order. The last day to register for the breakfast is October 23rd. Select the programs described on this page. Download the pre-program for additional details.

Earth Science — Become a Weather Spotter
Weather Spotter Training: Join Jeff Johnson, Warning Coordination Meteorologist from the National Weather Service in Des Moines to become a trained weather spotter. Learn about weather lessons from the sky to classroom.



Elementary — Connections Between Science and Literacy

Kim Wise is the co-author of Questions, Claims, and Evidence. She has been delivering professional development on the Science Writing Heuristic for the past seven years. Kim is a former elementary / middle school teacher and currently works as a science consultant for Loess Hills Area Education Agency 13. She will share her expertise regarding the connections between science and literacy and how both can be fostered in an elementary classroom.

Biology — Professional Development Opportunities in the Life Sciences

Keeping up with developments and the latest scientific findings is often a demanding enterprise which most teachers don't have time to address during the school year, especially since content based professional development is not typically available through the school districts and AEA's. Dr. Leshem-Ackerman will talk about the value of attending content based professional development programs offered during the summers at Iowa State University, what the programs entail, how to apply and the associated benefits.



Chemistry — How can Chemistry teachers connect STEM and the Iowa Core Curriculum?

Come have a conversation with Jeff Weld; PhD, UNI Associate professor of Biology and the Iowa Mathematics & Science Education Partnership (IMSEP) Leader and get updates on the progress of the Initiative, related professional development opportunities, as well as looking at the big picture of how STEM and the Iowa Core Curriculum can help us help our students.



Middle School — The Amazement Connection

In "Last Child in the Woods," Richard Louv suggested that we need to let kids play in the dirt, and to be amazed. Larry Stone will ponder how that amazement can build a long-lasting connection to the natural world. Larry Stone's boyhood fascination with the creeks and woodlots on his family's southern Iowa farm brings authenticity to his nature photography and writing. With degrees in biology and journalism, he also understands the natural world and can communicate the wonders of outdoor experiences.

2009 IAS Speaker Series at the Saylorville Visitor Center

The IAS Speaker Series at Saylorville for 2009 concluded on Saturday, September 26th. We would like to thank David Brenzel and Holmes Semken (University of Iowa), Thomas Rosburg (Drake University), Katherine McCarville (Upper Iowa University), and Richard Wacha (Drake University) for speaking at the Visitor Center. Adults and children enjoyed the sessions as they learned about Iowa giant ground sloths, the Loess Hills of western Iowa, fossil birds of Iowa, and the scientific discoveries of Lewis and Clark.

The speaker series is co-sponsored by the IAS and the Army Corps of Engineers at Saylorville Lake. It provides opportunities for the public to meet Academy members and learn about science in Iowa from Iowa scientists. This was the second year this series has been offered. Attendance at the sessions ranged from 8 to 25 which was an improvement over last year. We would like to offer a similar program in other areas of Iowa.

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!

Announcements, Events & Deadlines

- **IAS Board Meeting**
Tuesday, October 27th, 2009, Science Center of Iowa 3:00am-6:00pm
- **2009 ISTS Fall Conference**
Wednesday, October 28, 2009, Polk County Convention Complex, Des Moines
- **2010 IAS Membership Renewal**
Due December 31st, 2010
- **IAS Fellow Nominations**
Due January 8th, 2009
- **Iowa Science Foundation Proposals**
Due January 31st, 2010
- **Excellence in Science Teaching Award Applications**
Due January 31st, 2010
- **IAS Distinguished Awards Nominations**
Due February 5th, 2010
- **Abstracts Submissions**
Due for 123rd IAS Annual Meeting on or before February 8th, 2010
- **Iowa Wetlands Workshop** for 3rd-6th grade teachers, Orange Elementary, Waterloo
more info: seavey@uni.edu
April 10th, 2010, Register by April 1
- **123rd IAS Annual Meeting**
April 16th-17th, 2010, Graceland University

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



Environmental Issues Instruction Workshops

Iowa's Native Roadside Communities: Wet Prairies

Nov. 6-8, 2009 and Apr. 16-17, 2010 at Sleep Inn, Pleasant Hill, Iowa

Feb. 5-7, 2010 and Apr. 30-May 1, 2010 at Sleep Inn, Mt. Vernon, Iowa

More info at: <http://www.ceee.uni.edu/Portals/0/Wet%20Prairies%20Brochure%20draft%20206.pdf>

Iowa Academy of Science Annual Meeting

April 16th & 17th, 2010
Graceland University
Lamoni, Iowa



**Informative Sessions for
Scientists—Educators—Students**

**Over 100 presentations by Iowa Scientists, Engineers,
Science Educators and Science Students**

Registration Discount for Academy Members
www.iacad.org



NEW REAP PLATES COMING SOON!

The Resource Enhancement and Protection Program provides Iowa Citizens with an opportunity to be involved in conserving Iowa's natural resources. REAP provides funding for Conservation Education, DNR Opens Space and Land Management, City Parks and Trails, Soil and Water Enhancement, County Conservation, preservation of Historical Resources, and Roadside plantings.

Citizens can financially support REAP by purchasing a REAP License Plate. Citizens can also become involved in REAP by attending a local REAP Assembly, serving as a delegate to the REAP Congress and/or serving on a county REAP Committees. The 2009 REAP Assemblies took place in throughout September. At the Assemblies REAP announced two new license plate designs—Brook Trout and Whitetail Deer which will be available soon.

County REAP committees read local REAP grant proposals and make decisions about where the REAP funding in their area goes. Learn more at: <http://www.iowadnr.gov/reap/index.html>

GLOBE Database— Reaches 20 Million Data Points

Congratulations to all of Iowa's GLOBE educators and students past and present. The GLOBE Program database reached 20 million points of data on August 14th, 2009! Over 1.5% of that data has been contributed by Iowans. Learn more at www.globe.gov.

Now on Facebook The Iowa Academy of Science



Facebook members can now show their support for science in Iowa by becoming a fan of the Iowa Academy of Science or joining the Academy's Facebook Group. IAS Facebook Members will receive updates about the IAS Annual Meeting and the ISTS Fall Conference plus other IAS events and programs appropriate for the general public. Facebook members can also become a fan of specific IAS programs like the Iowa Academy of Science National Wildlife Refuge Audio Series. Simply search for Iowa Academy of Science to become a fan or join!

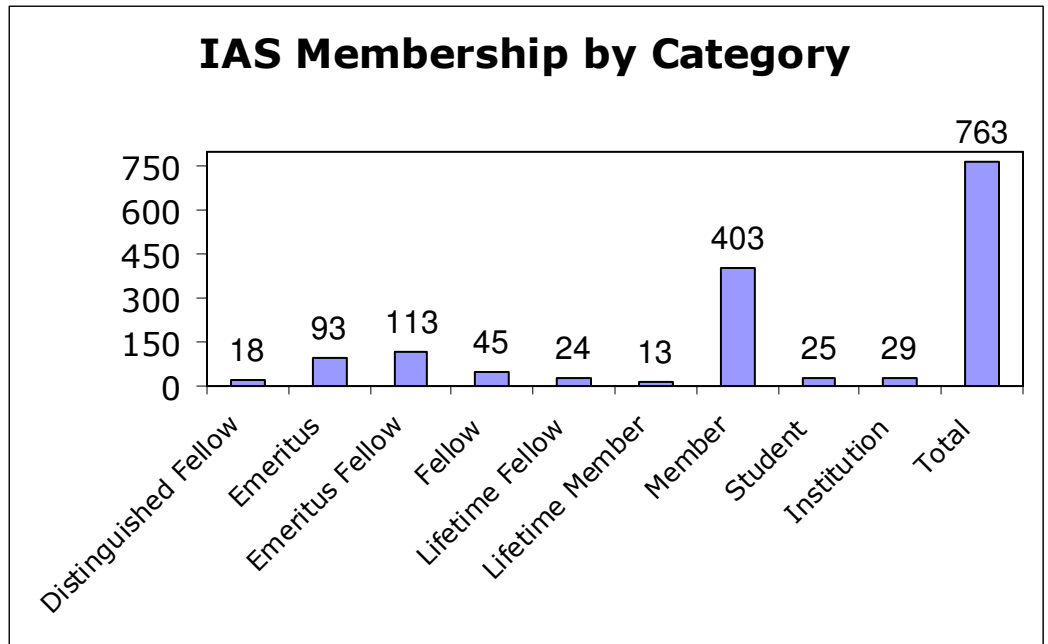
Membership Update

As the Academy prepares to mail membership renewal forms in October here is a snapshot of our membership as of October 1st. The top chart shows the membership distribution by category. Total membership stands at 763. Our membership typically increases from fall through the spring, especially prior to the IAS Annual Meeting and the ISTS Fall Conference. Each year we drop approximately 100 members after we see how many members do not respond to the final renewal notice. Of the 100 drops

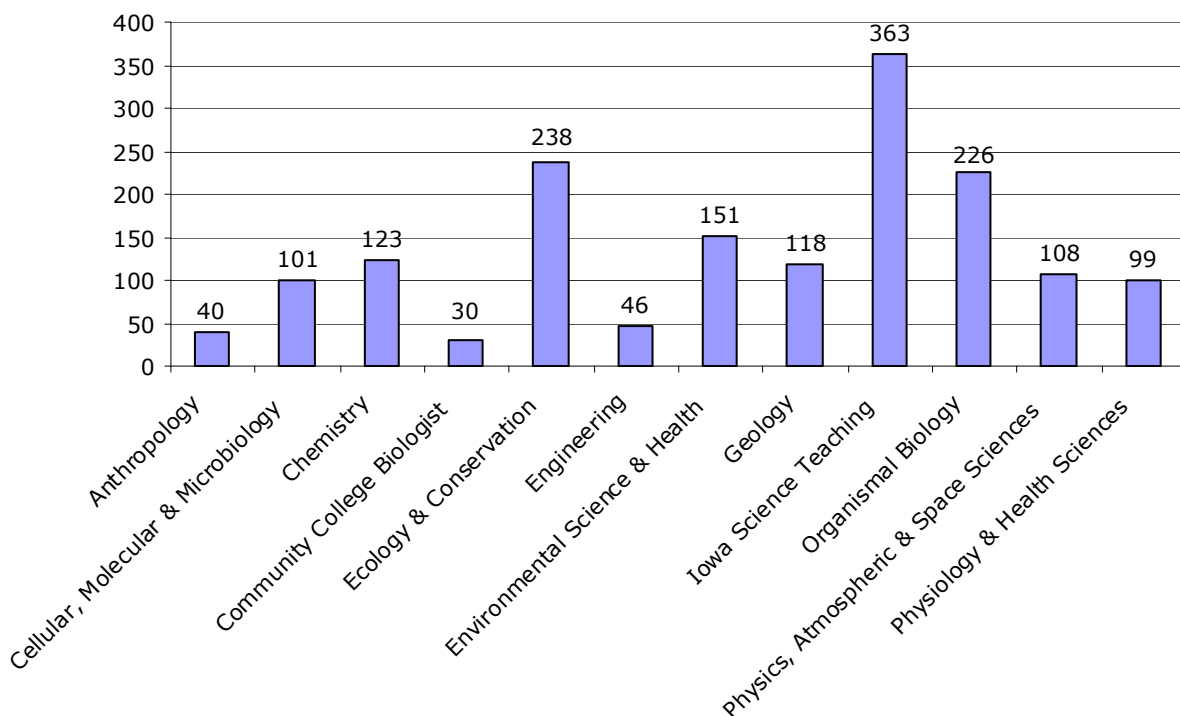
about 40 are students. The annual gain and loss of members has amounted to a slight overall increase in membership during the past few years. It has been gratifying to see younger faculty and teachers join the Academy as existing members promote IAS.

The bottom chart shows membership by section. As you can see from the chart the Academy has 12 sections with the largest sections being Iowa Science Teaching, Ecology & Conservation, Organismal Biology and Environmental Science and Health. Size does not necessarily indicate how actively a section is functioning. Many of the smaller sections are very active with numerous oral and poster presentations at the Annual Meeting. Physics, Atmospheric & Space Sciences has not had a chair or vice-chair for the past 3 years.

As you return your renewal form take the time to ask your colleagues to join. If you are a regular attendee of the Fall Conference and the Annual Meeting pass the word about these fine meetings. Joining the Academy makes it possible for our many programs to function. Increasing membership will insure a bright future for the Academy and its influence for science in Iowa.



IAS Membership by Section



Iowa Academy of Science The New Bulletin

Volume 5 Number 3 Autumn 2009

Iowa Academy of Science
UNI -175 Baker Hall
2607 Campus St.
Cedar Falls, Iowa 50614-0508

Return Service Requested

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

Volume 5 Number 3 Autumn 2009
also available online at:
<http://www.iacad.org>

Managing Editor: Craig Johnson
Editor: Marcy M. Seavey

Copyright 2009. All rights reserved.
For copy permission, send a formal request to iascience@uni.edu.

Article Submission: The deadline for submission of articles for Vol. 5 #4 is December 1, 2009. 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

Iowa Academy of Science Institutional Members

University of Northern Iowa, Cedar Falls
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
Earthpark, Pella
Graceland University, Lamoni
Grand View University, Des Moines
Great Ape Trust of Iowa, Des Moines
Grinnell College, Grinnell
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
Loras College, Dubuque
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