

# Iowa Academy of Science

## The New Bulletin

Volume 4 Number 4 Winter 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

Hello from the Iowa Academy of Science. Your Winter Issue of the Iowa Academy of Science New Bulletin has arrived. The issue contains Academy news including a look back at the ISTS 2008 Fall Conference, and a look ahead to the IAS Annual Meeting, along with other announcements, events, and deadlines.

This issue also contains a profile of the Academy membership. It includes a breakdown by category, type of institution, and number of years as a Member. You will also find a comparison of section membership with the number of papers presented at the Annual Meeting. When looking at the membership distribution keep in mind that each IAS Member may belong to up to 4 sections.

I want to thank all IAS members who have renewed their memberships for 2009. The response to the first mailing has been greater than in previous years. This saves the Academy money by reducing staff time required to process additional mailings, lowers mailing expenses, and decreases paper consumption. If you have not renewed your membership for 2009 please consider doing it today. Our 1st reminder mailing will go out in January.

This is the time of year when we all receive requests to donate to our favorite charities and organizations. Please consider the Academy when making your donations. Several giving opportunities were outlined in the fall mailing but feel free to contact the Academy office if you need assistance. The Academy is a 501(c) (3) non-profit organization so your donations are tax deductible.

The Iowa Academy of Science Wildlife Refuge Audio Series website is complete. Visit [www.scienceiniowa.org/nwr](http://www.scienceiniowa.org/nwr) to learn more about these wonderful wildlife refuges in Iowa. The site was developed by the Iowa Academy of Science with support by the Iowa Fish and Wildlife Foundation. This website supports our mission by promoting the public understanding of science.

We hope to see you at the IAS Annual Meeting at Des Moines University in April. In the meantime on behalf of the Academy Board of Directors and the IAS staff; Marcy, Toni, and our student workers Emily and Hailey, have a safe and happy holiday season!

-Craig Johnson, Executive Director

### IAS NWR Website

The IAS National Wildlife Refuge Audio Series website is online at [www.scienceiniowa.org/nwr](http://www.scienceiniowa.org/nwr). The site features the 7 National Wildlife Refuge protected areas in Iowa. Its purpose is inform Iowa's about their natural heritage and enhance the experiences of people visiting these natural wonders. The site was developed by the IAS and supported by the National Fish and Wildlife Foundation. Check it out today!



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## Science: Our Past and Future

was the theme for the 2008 ISTS Fall Conference. Charles Darwin, as ably represented by storyteller Brian Ellis, was our keynote speaker, celebrating the 200th year of his birth. We build on the knowledge of scientists such as Darwin to help teach the scientists of our future. Many of those teachers from around the state were on hand for the conference.

Our participants were kept busy checking out the breakfasts, exhibition hall and over 75 workshops and presentations. Featured speakers included Mr. Ellis elaborating on storytelling and Dr. John Dunkhase on inquiry with the resources of Dr. Seuss. Dr. Jeff Goldstein, Center Director of the National Center for Earth and Space Science Education in Washington D.C., informed folks about the Voyage Project which will place a solar system to scale on the Iowa Capitol grounds. Other featured speakers were our own Nadine Wei-rather, Amanda (Schiller) Kite and Alicia Schiller sharing some of their amazing opportunities for students.



A new highlight this year was the Wednesday evening soiree at the Science Center of Iowa. Thanks to DeAnna Tibben, ISTS chair-elect and Cindy Anderson of the SCI, for making this incredible event available. More than 120 participants enjoyed “mashed potato sundaes”, a string quartet and the run of the science museum. It was a fantastic event to start the conference.

Thank-you to all the participants, presenters, helpers and planners. This event was possible because many people worked very hard. The facilities coordinator, Alison Schmitt, the registration coordinator, Aaron Spurr, the exhibitions coordinator, Barb Jacobsen, the ISTS chair Morgan Masters, the sponsorship coordinator Rick Wells, the awards coordinator and photographer, Tom Ervin, the IAS staff and of course the volunteers that set up the SCI event deserve a special mention. Please mark your calendars and plan to join us on Wednesday, October 28th, 2009 for the next ISTS Fall Conference.

- Traci Maxted, ISTS Fall Conference Chair with photos by Tom Ervin



# Iowa Academy of Science Fellows—Meritorious Service

Iowa Academy of Science Fellows are leaders within Iowa's Scientific Community. Fellows are members of IAS who, through their actions, embody the Academy's mission of promoting science research, science education, public understanding of science and recognition of excellence in science. To be elected a Fellow in the Iowa Academy of Science is a distinct honor. Nominees must be persons of good character and of high professional standing. Members who have provided meritorious service to the Academy and effective promotion of science in Iowa, as well as substantial contributions in science or science education will be considered.

## Fellow Nominations

Qualified IAS Members may apply for Fellow status or may be nominated by another IAS member. Nomination letters are expected to include evidence of the nominees qualifications, documenting exemplary contributions to the Academy and its programs and accompanying documentation, typically in the form of a current vita.

Consideration will be given to such activities as involvement in Academy leadership, publication of papers in the Journal of the Iowa Academy of Science or the Iowa Science Teachers' Journal, presentations at the Annual Meeting and/or Iowa Science Teaching Section's Fall Conference, publication of other scholarly work, active participation on committees and/or sections, outstanding teaching, and service in promoting the mission of the Academy within the state of Iowa. A Fellow may become a Life Fellow by payment of Lifetime membership dues as prescribed in the Bylaws.

Nomination letters should be postmarked by the *second Friday in January* for consideration in the current year. New fellows are announced at the business meeting during the IAS Annual Meeting.

## Lifetime Member Fellows

Jack Boller  
Lynn Brant  
Verona Burton  
James Christiansen  
Thomas Ervin  
Edward Finnerty  
Richard Handy  
Don Helms  
Herbert Hodges  
Donald Huffman  
James Hungerford  
Kenneth Kopf  
Jay Kopp  
Cherin Lee  
Burton Loupee  
George Marzeck  
Edward Palmer Jr  
Dean Roosa  
Raymond Sloan  
Ruth Swenson  
Harry Vaughan  
Edwin Wenberg  
Dolores Wilson  
Robert Yager

## Emeritus Fellows

Wayne Anderson  
Paul Bacher  
Norman Baenziger  
Reeve Bailey  
Richard Baker  
John Bamrick  
Dorothy Sch Baringer  
Harold Bechtoldt  
Carl Bollwinkel  
Author Bosch  
John Bowles  
Edward Buchanan Jr.  
James Chang  
Kenneth Christiansen  
Larry Clark  
William Deskin  
James Dinsmore  
Virgil Dowell  
John Downey  
Gary Downs  
LaVerne Durkee  
Lenore Durkee

Abraham Epstein  
Luther Erickson  
Mary Ericson  
Charles Estee  
David Fagle  
Donald Farrar  
Jerry Ferrell  
Verlin Fleagle  
G. Edgar Folk Jr.  
H. Bru Friedrich  
Elwood Garlock  
William Gilbert III  
Benjamin Graham Jr.  
John Hamilton  
Roger Hanson  
Edward Hatcher  
James Hedges  
Lyle Henry  
David Hodgkin  
Darrel Hoff  
Paul Horick  
Ross Iverson  
James Janecke  
Mohinder Jarial  
Paul Joslin  
Joseph Kapler  
Dorothy King  
Phyllis Kingsbury  
Donald Koch  
John Koppen  
Joseph Kutkuhn  
Roger Landers Jr.  
Donald Langr  
Howard Larson  
Paul Lentz  
Nels Lersten  
Charles Lovig  
Gene Lucas  
George Magrane  
Richard Markuszewski  
Charlie Martinson  
Manuel Mateos  
David McCalley  
Clifford McCollum  
Wayne McIlrath  
Harold McNabb Jr.  
David Metzler  
Eric Meyer  
Robert Miller  
Allen Moen  
Don Murphy

Marguerite Neumann  
Alan Orr  
John Patterson  
John Pesek  
Bion Pierson  
Jean Prior Sandrock  
James Redmond  
William Reece  
C. Rila  
David Robinson  
Charlotte Roderuck  
Thomas Rogers  
David Roslien  
Russell Rulon  
Jeffrey Tod Schabillon  
Donald Schmidt  
William Schmidt  
Gordon Searle  
Harrison Seip  
Holmes Semken Jr.  
John Sheeler  
Richard Shibbles  
Frederick Smith  
Paul Smith  
Frank Starr  
Andrew Stevenson  
Donald Stout  
Donald Stratton  
Harry Svec  
Harold Swanson  
Lois Tiffany  
Roy Unruh  
Carl Vondra  
Paul Waite  
Ralph Wallace  
Robert Ward  
Thomas Wheelock  
Peter Wickham  
David Wilder  
Darold Wolff

(continued on next page)



## Fellows

Marc Albertsen  
Raymond Anderson  
Paul Bartelt  
Neil Bernstein  
Mark Brockmeyer  
C. Lee Burras  
Mary Caffery  
Cliff Chancey  
Lyn Countryman  
Robert Cruden  
Kenneth De Nault  
Diane Debinski  
William Desmarais  
Sharon Fisher  
Jack Gerlovich  
David Hampton

Gilbert Hewett  
Diane Hills  
Markes Johnson  
Werner Kolln  
Gerald Krockover  
Richard Lampe  
Erica Larson  
Deborah Lewis  
David Lopatto  
Sherman Lundy  
Diana Malone  
Connie Mutel  
Donald Perschau  
Gary Phillips  
Paul Rider  
Thomas Rosburg

Dennis Schlicht  
Carol Schutte  
Daryl Smith  
Aaron Spurr  
Richard Stanley  
Eugene Stoermer  
Joseph Tiffany  
James Walters  
Rick Wells  
Karen Wignall  
Catherine Wilson  
Gail Wortmann  
Michael Zeller  
Warren Zemke

## IAS Board Retreat—Planning for the Future

The Iowa Academy of Science Board of Directors met on Saturday, November 8, at the Hartman Reserve Nature Center in Cedar Falls. The purpose was to discuss ways for the Academy to grow and prosper. The outcome from these discussions will be the development of specific action plans to address Academy challenges and opportunities.

Areas discussed included finance, membership, programming, public awareness, the Journal, and public policy. Initial recommendations were developed and will be refined during the next few months. In the end all Academy committees will be involved in implementing the action plan.

This is an exciting time for science and the Iowa Academy of Science. At the core of a non-profit organization like the Academy is its membership. If you would like an opportunity to have an impact on science in Iowa, now is the time to consider serving on an Academy committee, as a section chair or vice-chair, or on the Board of Directors. It will be a rewarding experience

**Advanced Programs for the 121<sup>st</sup> Iowa Academy of Science Annual Meeting will be mailed the week of January 5th. You will also receive an electronic copy. Please remember to encourage your colleagues, students and industry counterparts to attend and perhaps present at this conference.**

## Announcements, Events & Deadlines

- **IAS Membership Dues**  
Renewals for 2009 went out the end of November
- **Fellow Nominations**  
Due January 9th, 2009
- **Winter Solstice Workshop with Richard Louv**  
Sponsored by ICEC, January 23-25th, Honey Creek State Park and Resort
- **Iowa Science Foundation Proposals**  
Due postmarked on or before January 31st, 2009
- **Excellence in Science Teaching Award Applications**  
Due postmarked on or before January 31st, 2009
- **The New Bulletin, Volume 5, No. 1**  
Articles and announcements due February 1st, 2009
- **Abstract Submission for IAS Annual Meeting**  
Deadline is Monday, February 9th, 2009
- **Darwin Days**  
At University of Northern Iowa, February 9-12th, contact David Whitsett, whitsett@uni.edu
- **Myrle Burke Scholarship**  
Applications due March 27th, 2009.
- **IJAS Silent Auction Donations**  
Please contact Toni by April 3rd to donate.
- **IAS Annual Meeting**  
April 17th-18th, 2009, Des Moines University
- **ISTS Newsletter Articles**  
For next issue due, May 10th, 2009
- **ISTS Fall Conference Presentation Proposal**  
Deadline is June 1st, 2009
- **2009 ISTS Fall Conference**  
Wednesday, October 29, 2009, Polk County Convention Complex, Des Moines



## Spotlight on Des Moines University

Founded in 1898, Des Moines University comprises three colleges offering nine graduate degrees. A health sciences university since adding the colleges of health sciences and podiatric medicine in 1981, the programs share a collective strength — a collaborative campus community where students and faculty come together in the pursuit of knowledge.

Des Moines University offers degree programs in medicine and the health sciences — nothing else. We share a singular mission to educate distinctive health professionals committed to patient-centered health promotion, the application of evidence-based practice and the discovery of knowledge.

DMU is the second oldest osteopathic school in the country. The very first medical class in 1898 included both sexes and today 54% of the DMU student body are women. 66% of students were recruited to DMU from other states. 1,802 DMU alumni currently provide care in 94 Iowa counties. With a total enrollment of 1582 DMU is the largest medical school in Iowa with approximately 841 students in the osteopathic college. It's large enough to offer every educational amenity but small enough to focus on excellence.

### *DMU Programs*

- Doctor of Osteopathic Medicine (D.O.)
- Master of Science in Anatomy (M.S.)
- Master of Science in Biomedical Sciences (M.S.)
- Doctor of Podiatric Medicine (D.P.M.)
- Master of Science in Physician Assistant Studies (M.S.)
- Doctor of Physical Therapy (D.P.T.)
- Post-professional Doctor of Physical Therapy (D.P.T.)
- Master of Health Care Administration (M.H.A.)
- Master of Public Health (M.P.H.)

—From “About DMU”, <http://www.dmu.edu/about/>

The faculty, staff and students of DMU invite every member of the Academy onto the DMU campus for the 121<sup>st</sup> Annual Meeting of the Iowa Academy of Science, April 17<sup>th</sup>-18<sup>th</sup>, 2009. Be sure to sign up to attend one of the Des Moines University Medical Simulation Lab demonstrations on Saturday. Learn more about DMU and get a sneak peak at the simulation lab by watching a video available on the IAS website (<http://www.uni.edu>)



DES MOINES UNIVERSITY



## Journal of the Iowa Academy of Science

JIAS is currently soliciting papers for Volume 116. The Journal considers several types of contributions from disciplines represented by sections of the Academy including formal research with no minimum or maximum length; reviews or annotated bibliographies; and papers on science teaching. Previously copyrighted material will not be considered.

A checklist and submission form is available on the IAS website:

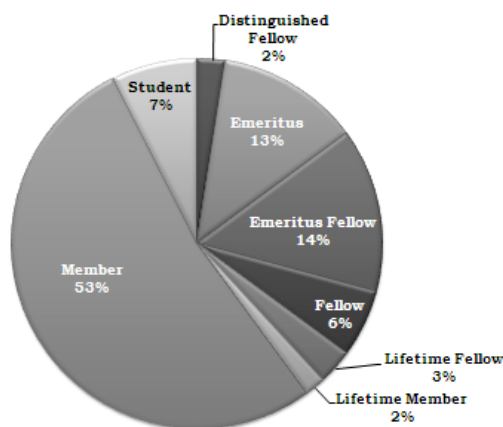
[www.iacad.org](http://www.iacad.org)

# Iowa Academy of Science Membership Overview

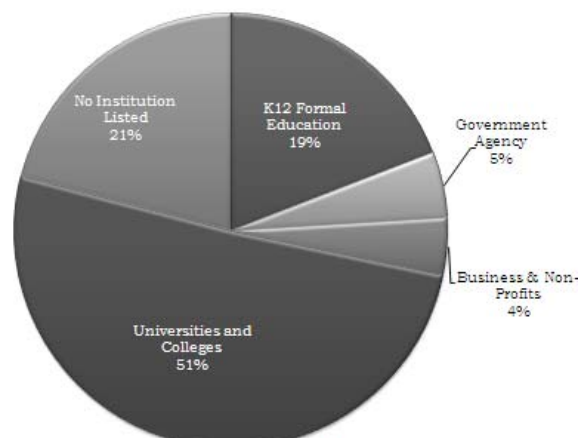
The charts on this page represent an IAS membership of 778 individual members as of December 5th, 2008.

At the height of membership for 2008, IAS has 854 individual members. The Academy had a member retention rate of just over 87% for 2008 (*note: **member retention rate** ignores new members and only takes into consideration the number of members eligible to renew verses. the number who actually renew.*) As of December 5th, 2008, thirty-four new members have joined for 2009. The Academy's current individual membership is 778. Membership is generally lowest between the time non-paying members are dropped from the rolls and the start of registration for the Annual Meeting.

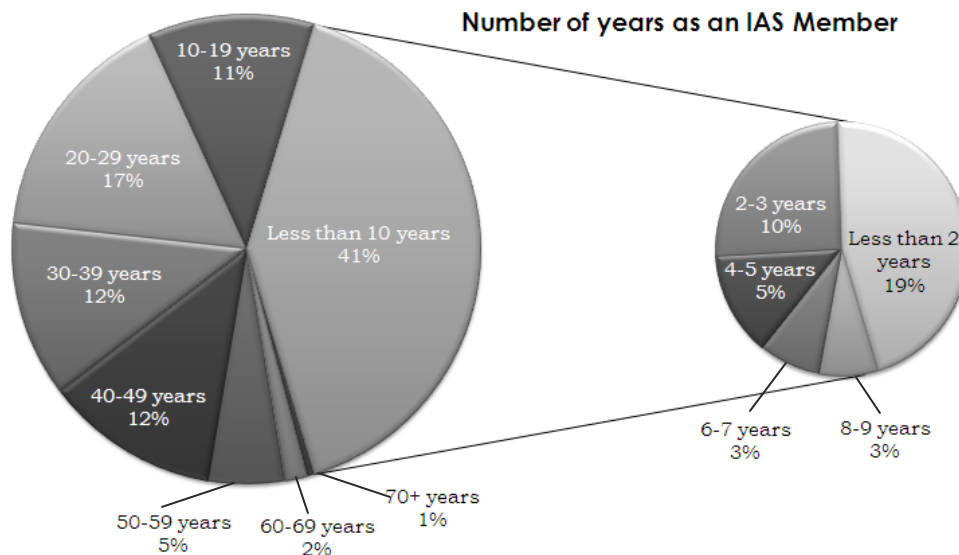
The **Number of years as an IAS Member** chart to the right illustrates a fairly healthy balance between maintaining long term memberships and recruiting new members. In order to grow the membership of the Academy, we will need to increase the percentage of new members while maintaining our already high member retention rate.



IAS Members by Membership Category

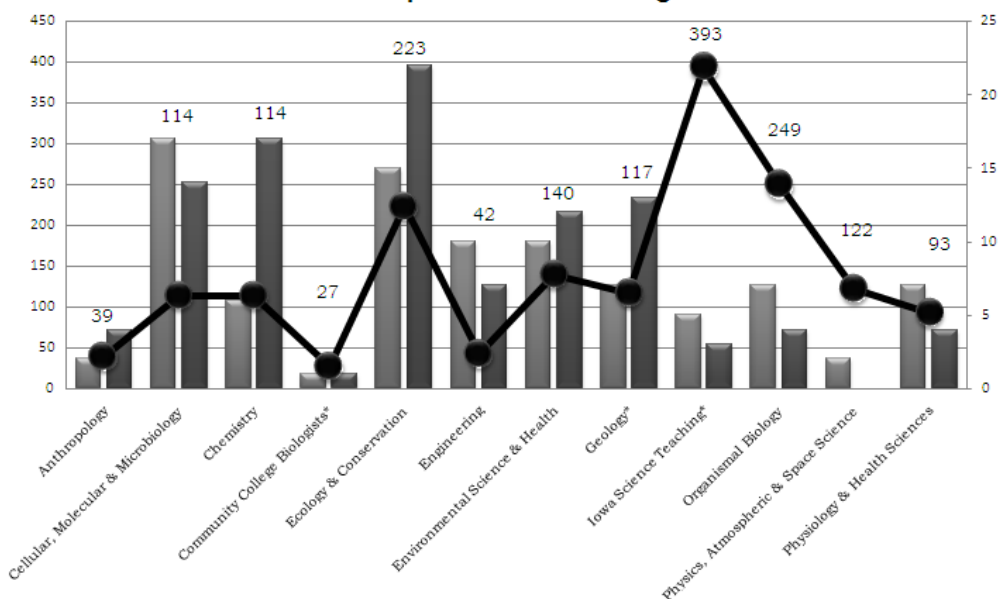


Members by Type of Institution



Number of years as an IAS Member

## Section Membership & Annual Meeting Presentations



Presentations 2007 Annual Meeting
  Presentations 2008 Annual Meeting
  # Section Members (2008)

## Section Membership & Annual Meeting Presentations Chart

IAS members may belong to 4 sections. The left y-axis is the number of section members. The specific number of section members is also included in the chart above each section name. The right y-axis is the number of poster and oral presentations presented at the last two Annual Meetings.

Sections with a \* after the name hold special events/activities independent of the Annual Meeting. Section membership, Annual Meeting presentations, additional section activities and a willingness by members to take leadership roles within the section all contribute to the viability of individual sections.

# ISTJ—Practical Science Education Applications from Iowans to the World

## ***A Rich History***

The Iowa Science Teachers' Journal was first published in 1963 under the editorial direction of Robert Yager. This is the same year that the Iowa Science Teachers Association became affiliated with the Iowa Academy of Science and the Iowa State Education Association (ISEA). In that year membership included membership in ISTA, IAS, the science section of ISEA, a subscription to the new Iowa Science Teachers Journal and "a chance for you to exchange your ideas on science education in Iowa. That first issue included an article on implementing Biology Sciences Curriculum Study (BSCS) across Iowa, an invitation to schools to join the Iowa Junior Academy of Science and a call to members to contribute to the development of the Iowa Science Teachers Journal. For the next 31 years the Iowa Academy of Science published ISTJ. ISTJ served as a venue for IAS members to share their experiences teaching in K-12 science classrooms, preparing new teachers, participating in professional development opportunities and improving science education throughout Iowa.

## ***ISTJ Revived for the 21st Century***

In 2005, Academy members Jeff Weld and Michael Clough gained the support of the Iowa Science Teachers Section and the Board of Directors of the Iowa Academy of Science to renew the Iowa Science Teachers Journal in an electronic form. The Iowa Academy of Science Board provided funding for the first four issues of the Journal. The first issue, Volume 32 No. 3 was published in the fall of 2005. Editor Michael Clough's first article mirrored statements from the original paper issue of ISTJ from 1963 by encouraging IAS members to submit manuscripts based on their ISTS Fall Conference presentations and to provide feedback and ideas about improving the Journal.

## ***The Nature of Science***

The current issue of ISTJ, Volume 35, No. 2 is a special issue devoted to the Nature of Science. The issue's four articles illustrate activities and strategies for incorporating accurate Nature of Science messages throughout the school year, challenging student's misconceptions and avoiding the creation of new misconceptions about what science is and how scientists work. Read the articles here: [http://ists.pls.uni.edu/istj/issues/35/2\\_spring\\_08/](http://ists.pls.uni.edu/istj/issues/35/2_spring_08/)

The next issue of ISTJ will center around the topic of action research and will be available shortly.

Manuscripts are currently being sought for Volume 36, No. 1. Please consider contributing to quality science in Iowa and beyond by sharing your stories of success in the science classroom. Visit <http://ists.pls.uni.edu/istj/submit/index.html> to learn more about submitting an abstract to ISTJ and become a part of science education history in Iowa!

-Marcy Seavey, IAS Program Director





# Iowa Academy of Science

## The New Bulletin

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**Article Submission:** The deadline for submission of articles for Vol. 5 #1 is February 1, 2008. 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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### **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  
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