



INDIANA ACADEMY OF SCIENCE NEWSLETTER

Number 133

August 2006

Indiana Academy of Science Election - 2007

CANDIDATES FOR PRESIDENT-ELECT



Paul E. Rothrock received his Ph.D. in botany from The Pennsylvania State University in 1976. He joined the faculty in biology at Taylor University in 1981 where he is currently Professor of Biology and Environmental Science and Chair of the Department of Earth and Environmental Science. His research interests include systematics of the genus *Carex*, flora of the upper Midwest, wetland assessment methodologies, and prairie restoration. He has served as Chair of the Plant Taxonomy Section and the Biodiversity and Natural Areas Committee as well as being a long standing member of the editorial board for the Proceedings. He is active in presenting his work and publishing in the Proceedings of the IAS. He was elected as a Fellow of IAS in 1992.



Michael K. Watters received his PhD in genetics from University of Washington, Seattle in 1993. He has been at Valparaiso University since 1999 and holds the rank of Associate Professor of Biology. He has been a member of the Indiana Academy of Science since that time and he has been most active in the Botany section and has served as chair of that section twice. His research interests include spontaneous mutation of *Neurospora crassa* and the phenomenon of branching in filamentous fungi. He regularly presents his work and that of his students at Academy meetings.

CANDIDATE FOR ACADEMY FOUNDATION

Stanley L. Burden received his PhD in analytical chemistry from Indiana University in 1966. He formerly served as the Associate Dean of the Division of Natural Science and Chair of the Department of Chemistry at Taylor University. He currently is partially retired, teaching approximately half time in the department of chemistry at

Taylor. He is a fellow and past president of IAS. He also has served as Treasurer of IAS, has chaired the Speaker of the Year Committee as well as the chemistry section of the IAS, and has served as a member of the Science and Society Committee. He is currently serving on the Foundation Committee. He was elected as a fellow of IAS in 1981.

CANDIDATES FOR RESEARCH GRANTS COMMITTEE

Pamela Connerly received her undergraduate degree at Earlham College and graduate degrees at The University of Chicago, and completed post doctoral work at Miami University of Ohio. She is currently Assistant Professor of Biology at Indiana University Southeast, where her teaching focuses on cell, molecular, and introductory biology and her research centers on yeast cell biology and bacteriophage discovery and genomics. She coordinated development of a biotechnology degree program during her previous position at Indiana University East. She is a member of the American Society for Cell Biology and currently serves on the steering committee of the Indiana College Biology Teachers Association. She has been a member of the Indiana Academy of Science since 2005, and is looking forward to serving as Cell Biology Section Chair at the 2008 Meeting.

Richard W. Fitch received his Ph.D. in Chemistry from the University of Louisville in 1998, working under Frederick A. Luzzio in natural product synthesis. He then went to NIH as a postdoctoral fellow under John W. Daly, in pharmacology and natural product isolation. He started at Indiana State University in 2003 and is currently an assistant professor of Chemistry. His research interests are in bioorganic and medicinal chemistry with an emphasis on natural products. He is a member of American Chemical Society, American Society for Pharmacology and Experimental Therapeutics, American Society of Pharmacognosy and Indiana Academy of Science since 2004. He is currently the IAS Chemistry session chair.

Important Academy Business

“YOU CAN HOST A MEETING OF THE INDIANA ACADEMY OF SCIENCE”

One of the main duties of the IAS Programs and Invitations Committee is to receive and solicit invitations from institutions who offer their facilities as hosts of the meetings of the Academy. The committee then makes recommendations to the Council about places for future meetings. Because the Jr. Academy no longer meets at the same time and place as the Sr. Academy, the demand for facilities is not that great. Most Colleges and Universities can easily find the space for the various sections to meet. The general session for the business meeting and the Speaker of the Year needs a room with about 200 seats. This Fall we will be at the University of Indianapolis, and our meetings in 2008 will be at the University of Evansville. For 2009 we would again like to find a meeting place in Central Indiana. Please contact **David Daniell**, Chair of the Committee if you would like to host a meeting in the

(continued bottom of the next column)

CALL FOR NOMINATIONS FOR IAS FELLOWS

The IAS Awards Committee is seeking nominations for Fellow Status within the Indiana Academy of Science. Nominations should include a cover letter from the nominator describing, in detail, the qualifications of the individual being nominated as well as a brief vita form for the nominee. Information on Nominations can be found at the IAS web site (www.indianaacademyofscience.org). Nomination materials should be sent to Clare L. Chatot, Chair of the IAS Awards Committee, Dept. of Biology, Ball State University, Muncie, IN 47306. The deadline for nominations is September 17th. Questions can be directed to **Clare Chatot**.

-- Clare L. Chatot
cchatot@bsu.edu

future or if you would like more information.

-- David Daniell, Chair
Programs and Invitations Committee
ddaniell@butler.edu

A Note from the President

Summer! I hope that you have had a great summer. For many of us, summer is time for a change of routine. It may be the time to do field work, to do writing, or to take/teach an extra class. My summers are often filled with home remodeling projects. This summer I have been working intensely on remodeling my kitchen. If you suffer from insomnia, then get relief by reading about my project at <http://schutt.net/john/wp/>.

Plan to attend our IAS Fall Meeting! I'm really excited about our fall meeting. I hope that you are making plans to attend. While you're at it, make plans to come Thursday evening and to stay for the entire day on Friday. **Uwe Hansen** has put together a wonderful program for us for **Thursday evening** that features a wonderful combination of music and science. Come and enjoy the aesthetic and intellectual aspects of the presentation. I'm looking forward to hearing our **Speaker of the Year Ann Cutler**. She will be speaking on the science of flames and explosions. Can I risk telling you that it will be a dynamite presentation? We will also have a **video premier** of (at least a large section of) the first episode of *The Natural Heritage of Indiana* documentary series. Based on Marion Jackson's book with the same title, the Indiana Academy of Science is a major financial sponsor of this project. Our fall meeting plans to be wonderful. Plan to attend and to bring a colleague/student/professor with you!

Technical Initiatives: We still have money for Technical Initiatives for academy sections who wish to enhance their fall meeting experience. These are awards of ~\$200 to help a section bring in a keynote speaker for the section meeting or plan an additional activity that will help increase interest in the fall meeting. If you are a section chair and



John Schutt, 2007 IAS President

interested in this initiative, e-mail your suggestion to me at jhschutt@tayloru.edu.

Can you tell someone else about our great organization? Let's share the good word about the IAS to someone else.

**With gratitude,
-- John Schutt
2007 IAS President**

2007 Fall IAS Meeting Speaker of the Year

This year's Speaker of the Year will be Dr. **Ann Cutler**, Assistant Professor of Chemistry, University of Indianapolis. Dr. Cutler will speak on the "**Parameters of Destruction: The Science of Flames and Explosions**"

Ann Cutler is the Editor of the National Science Teachers Associations' award-winning Journal of College Science Teaching. Ann received her PhD from Purdue University in 1987 and holds Bachelors of Science degrees in both Chemistry and Chemical Engineering. After her doctorate, Ann worked at Procter and Gamble, Kao Corporation, and the Shepherd Color Company in

Cincinnati Ohio. She is an active participant the American Chemical Society, currently serving as secretary of the local section's Executive Board.

She holds an unshakable commitment to the enhancement of science education at all levels and is involved in assisting students in making the crucial transitions from high school to university and from university to the world of work. She has a strong interest in the salubrious interpersonal effects of humor and has been known to tell groaningly bad jokes. She lives in Carmel, Indiana with her husband, Dr. John Mershon, and their three children.

2007 Fall Meeting, University of Indianapolis

25-26 October 2007

CALL FOR PAPERS

Following the success of previous meetings, we wish to invite submissions for the 123rd Fall Meeting of the Indiana Academy of Science, hosted by the University of Indianapolis. The annual meeting provides an opportunity to share and educate colleagues and students about the current state of the field. Individual papers and posters are welcomed and encouraged. Abstract submissions must be submitted on or before **September 1st, 2007**. For more information and submission forms please visit the Indiana Academy of Science website <indianaacademyofscience.org>.

MUSICAL DISCUSSION AND RECITAL

The Music Department of the University of Indianapolis and the Indiana Academy of Science invite members and the public to a special Thursday night event. Dr. Uwe Hansen of Indiana State University will discuss the physics of musical instruments. This lecture will be followed by a recital featuring these instruments. See information on page 6 of this newsletter.

WORKSHOPS AT THE FALL MEETING

The 123rd Fall Meeting of the Indiana Academy of Science will also present several workshops during the Friday afternoon session. Below is a brief summary of each of these workshops. If you would like to attend a workshop please indicate your preference on the registration form and return the completed form by **October 15th, 2007**.

1) Science as a way of Knowing: Teaching the Evidence for Evolution. Presented by Dr. Sandra L. Davis

We will discuss how to use the process of science as a framework to present the evidence that evolution has occurred. Students can then weigh the evidence and make conclusions and compare the strength of evidence for evolution to that of other less controversial scientific theories, such as the theory of gravity or the theory of relativity.

2) Freshwater Mussels of Indiana. Presented by Brant Fisher

Freshwater mussels are one of the most endangered and interesting group of aquatic organisms inhabiting Indiana's rivers, streams and lakes. Of the 77 native species, almost half are wither extirpated or in some sort of peril. An overview will be provided on freshwater mussel life history, their current status and distribution in Indiana, the reasons for their decline and measures for reversing this trend. An introduction to the characteristics that help identify this diverse fauna will also be presented. So, if you have never met a Wabash pigtoe or don't know what makes a threehorn wartyback unique, then plan to attend this workshop.

3) Maggots from Murders! Presented by Dr. Neal Haskell

Forensic entomology contributes valuable information to forensic science. Many investigations involve forensic entomologists when insects are involved in a crime scene. The analysis done by forensic entomologists relates to the recognition, collection, documentation, preservation and interpretation of physical evidence, specifically insects, found at a crime scene. This workshop will simulate a crime scene and analysis and allow for educators and students to utilize the current interest in forensic science and maintain a foundation in the biological sciences. This workshop will demonstrate the Laboratory Kit "Maggots from Murders" available to schools.

4) Physics Demonstration for High School Students. Presented by Dr. Uwe Hansen

This event is co-sponsored by the Physics and Education Sections of the IAS, and the Acoustical Society of America (ASA). We are bringing in about 50 High School Physics students to participate in approximately 20 hands-on experiments in acoustics. The equipment used in the experiments is furnished by the ASA.

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INDIANA ACADEMY OF SCIENCE
 123rd Fall Meeting, October 25-26, 2007
 University of Indianapolis, Indianapolis, Indiana
Registration Form

Name* _____
 Institution/Agency _____
 Address _____
 City _____ State _____ Zip _____
 Phone () _____
 E-mail address _____

CIRCLE AMOUNT PAID

	Advance Registration	Membership 2008 Dues	TOTAL
Member	\$35	\$35	_____
Member, Sustaining	\$35	\$60	_____
Member, Associate	\$35	\$25	_____
Student*	\$10	\$10	_____
Emeritus Member	\$10	\$10	_____
Non-Member	\$45		_____
Friday luncheon	\$15		_____
		TOTAL	_____

Total amount enclosed Check # _____ Cash _____

* Students must be a student member of the IAS and must have paid the \$10 membership fee to be eligible to register at the \$10 student fee. If not already an IAS student member, the fee may be paid at this time along with the registration fee for a total of \$20. Otherwise, students must pay the \$45 non-member fee. For more information visit the IAS website at www.indianaacademyofscience.org

Workshop preference (check)

- Freshwater Mussels of Indiana (Brant Fisher)
- Science as a way of Knowing: Teaching the Evidence for Evolution (Sandra Davis)
- Maggots from Murders (Neal Haskell)
- Music, Instruments and Physics (Uwe Hanson)-tentatively scheduled

Make Check Payable to ***Indiana Academy of Science***

Mail completed registration form and payment to:

Edward Frazier, Treasurer
 5007 West 14th Street
 Indianapolis, IN 46224-6503

Please return by October 15, 2007, if you plan to attend the Friday luncheon. Thank you.

Musical Acoustics: “Science and Performance”
an evening with **Ensembles and Soloists** from the
Department of Music of the University of Indianapolis and
Dr. Uwe J. Hansen, Professor Emeritus of Physics
Indiana State University and
Fellow of the Acoustical Society of America

Sponsored by The **Indiana Academy of Science** and the
Acoustical Society of America

Thursday, October 25, 2007, 7:00 PM
Ruth Lilly Hall of the
Christel DeHaan Fine Arts Center
University of Indianapolis
1400 East Hanna Ave, Indianapolis

Come to an exciting evening of great music! These performances by ensembles and soloists from the University of Indianapolis music department will be introduced by brief comments on the scientific basis of music. You will discover why a clarinet does not sound like a violin. Representatives of each instrument family will demonstrate the principles which characterize the tone quality of that family. Included in performances will be bowed strings, woodwinds, brasses, percussion and the piano. The scientific introduction will include demonstrations of wave-forms and spectra. Timbre illustrations will be given by performance of representative musical selections. While the brief scientific explanations will enhance understanding of musical instruments, the evening will be primarily devoted to presenting enjoyable music.

2007 Fall Meeting *con't*

Roll out the Green Carpet!!

A special sneak preview of the first hour video based on the Academy published Natural Heritage of Indiana will be shown during the annual fall meeting of the Indiana Academy of Science on Friday, October 26. The meeting will be held at the University of Indianapolis and will feature scientific presentations, the Speaker of the Year, IAS business meeting, posters, plus a great chance to meet old friends and gain new ones.

The video is being shot by Sam Orr and the production is being headed by Clayton Taylor of Indianapolis public broadcasting station WFYI. Your Academy has helped to underwrite the series which will include three hour-long programs that feature first the natural setting and features of Indiana, then the state's biological abundance, concluding with a view of human interactions with the environment. The series will be supported by a number of allied materials and events that will be generated in the coming year. You may be asked to assist with producing the supporting content and certainly in spreading the good word.

The time(s) for the viewing of this important and beautiful production is yet to be determined. If you have suggestions for a showing time(s), please contact **Nelson Shaffer**.

-- **Nelson Shaffer**
Executive Director of IAS
shaffern@indiana.edu

Outreach Programs at the 2007 IAS Fall Meeting

Outreach: In connection with the 2007 IAS Fall meeting, we are sponsoring two outreach activities. The announcement of the Thursday evening concert represents one (see page 6 of the newsletter), the other event is co-sponsored by the Physics and Education sections, and the Acoustical Society of America (ASA). We are bringing in about 50 High School Physics students to participate in approximately 20 hands-on experiments in acoustics. The equipment used in the experiments is furnished by the ASA.

In Case You Missed It, The *Proceedings* Now Has "SHORT COMMUNICATIONS"

At the Spring meeting of the Council, it was decided to include a new category of papers in the *Proceedings*. These will be for information that members would like to publish but where the information may not be extensive enough or well-developed enough to warrant a full-length research paper. They will be reviewed by experts in the field, as are regular submissions to the journal. The description and guidelines (which can currently be found on the IAS website) will appear in the next issue of the *Proceedings*.

Short Communications are usually limited in length to three pages, including tables and figures. The format for these is less constrained than for regular journal articles. The text must still have a logical flow, but formal headings are usually omitted and other deviations from standard article format can be permitted when warranted by the material covered.

-- **James W. Berry, Ph.D.**
Editor, *Proceedings* of the Indiana Academy of Science

From the Editor

I have two items that I would like to bring to the attention of the membership.

Item 1: In case you are unaware of it, Marcia Moore loads a PDF copy of the IAS Newsletter on the IAS Web Site around the 5th of each month that the newsletter is distributed, e.g., March, June, August, and December. To see important information before it is mailed, go to <http://www.indianaacademyofscience.org>

Item 2: In order to document our annual meetings (spring and fall), we need you, the membership, to take pictures of the various events and **send** these electronic images to the editor for inclusion in the newsletter. You will be given full credit for you images. *Heck, you will be able to list photo credits in you CV or Resume.*

Thanks for your assistance,
-- **Donald G. Ruch**
Editor

IMPORTANT NOTICE

**Deadline for submission of abstracts for the Fall meeting is
September 1st.**

**To submit an abstract on line, go to the IAS Home Page at
www.indianaacademyofscience.org**

**Fall 2007 meeting of the Academy is October 25-26,
University of Indianapolis, Indianapolis, IN**

Deadline for submission of copy for the December issue of the IAS Newsletter in November 15, 2007.

Send copy to Donald G. Ruch at druch@bsu.edu

For IAS information, go to: www.indianaacademyofscience.org