



INDIANA ACADEMY OF SCIENCE NEWSLETTER

Number 145

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REVISION OF THE INDIANA ACADEMY OF SCIENCE BYLAWS (CONSTITUTION)

The Academy currently is operating under a set of bylaws and a constitution. *Robert's Rules of Order; New Revised*, the Academy's parliamentary authority, recommends there be only one set of rules (bylaws) for an organization. With that in mind, a committee has revised the Academy bylaws and incorporated the pertinent information in the constitution into the bylaws thereby eliminating the need for a constitution. This has resulted in a complete revision of the bylaws. Many of the items in the old bylaws were procedural and should not be in the bylaws. These procedural items will be made a part of a new document, The Operating Policies, which will be considered later.

At the membership meeting (Saturday, October 9) at the Scottish Rites Cathedral in Indianapolis the members will be given an opportunity discuss and amend the proposed revised bylaws and vote on their adoption. The proposed bylaws may be amended by a majority vote and adopted by a three-fourth vote. Be advised that student members are not entitled to vote. Some major changes include:

- One governing body rather than two (Executive Committee becomes the Council)
- Some committees deleted (i.e., Awards, Library, Local

Arrangements, Membership, Program & Invitations, Science Education Advisory, Speaker of the Year), many of these functions will be assumed by the Executive Director

- Some appointed positions deleted (e.g., NCSE rep, archivist, AAAS rep, historian/necrologist), many of these functions will be assumed by the Executive Director
- Reduction in the number of membership categories (i.e., associate and club eliminated)
- Annual meeting moved to the Spring
- Consolidate Junior Academy and Science Talent Search under the Youth Activities Committee
- Fiscal year changed from calendar year to June 1 to May 31 with the Budget Committee meeting moved to the Spring
- Percent to adopt or amend the bylaws changed from 3/4 to 2/3
- Policies adopted by the Council
- New terms begin for elected and appointed positions immediately after annual meeting

Indiana Academy of Science INCORPORATED December 21, 1887

Bylaws

Article I: Name

The name of the organization shall be The Indiana Academy of Science (herein referred to as The Academy) and shall be organized under the law of the State of Indiana as a nonprofit corporation devoted to scientific and educational purposes.

Article II: Object

Section 1. The object of The Academy shall be to promote scientific research and the diffusion of scientific information; to encourage communication and cooperation among scientists, especially in Indiana; to prepare for publication such reports of investigation and discussion as may further the aims and objectives of The Academy as

set forth in these articles; and to improve education in the sciences.

Section 2. Inasmuch as the State makes an annual appropriation to assist in publication, The Academy shall, upon request of appropriate State officials, act as an advisory body in the direction and execution of any investigation consistent with its object. The Academy shall assume no responsibility for expenses incurred except as provided in its annual budget.

Section 3. The official publication of The Academy, known as the *Proceedings of the Indiana Academy of Science*, insofar as the State provides a portion of the publication expenses, shall become a public document and shall be circulated by the Indiana State Library as agreed upon by the Library and The Academy Council.

Article III: Members

Section 1. Any person or group interested in any aspect of science and in accord with the object of The Academy may apply for an appropriate class of membership.

Section 2. The classes of membership shall be:

1. Member - A person holding the primary class of membership.
2. Student Member - A graduate or undergraduate college or university student or a pre college student. The tenure of this membership shall be limited to five years.
3. Sustaining Member - A person strongly interested in supporting The Academy who pays substantially higher dues as determined by The Academy.
4. Life Member - A member in good standing who makes a substantial single payment of dues as determined by The Academy.
5. Emeritus Member - A member, who is 65 years of age or over, is retired, and has been a member of The Academy for 25 years or more. Petitions for Emeritus Membership shall be submitted to the Executive Director, who confirms eligibility.
6. Corporate Member - A corporation or business organized and operating for profit.
7. Institutional Member - A school, library, or nonprofit organization.
8. Honorary Member - A person with exceptional qualifications, or service to The Academy, recommended by a majority of the Council and approved by a majority of the members voting at the annual meeting. This shall be a one-year or lifetime appointment, as determined by the Council.
9. Fellow - A member for at least five years with recognized standing as a scientist, who has contributed

to the objectives of The Academy, been recommended by a majority of the Council, and been approved by a majority of the members voting at the annual meeting.

Section 3. The privileges and obligations of members of each class shall be determined by the Council and listed in the Operating Policies.

Article IV: Officers

Section 1. The Officers of The Academy shall be: President, President elect, Immediate Past President, Secretary and Treasurer.

Section 2. The term of office of the President, President elect and Immediate Past President shall be one-year. They shall not be eligible for reelection. The terms of the other officers shall be three years, and they may be reelected. All nominees shall have been a member of The Academy for at least four years, excluding student membership. Each officer shall continue to hold office until a qualified successor has been duly elected or appointed.

Section 3. Officers shall be elected by a ballot prepared and distributed by the Nominations/Elections Committee. Election shall be by a majority of votes cast by the membership. Officers will assume their duties at the conclusion of the annual meeting.

Section 4. The **President-elect** shall accede to the presidency the following year. The President elect shall have the status ordinarily accorded to a vice president.

Section 5. The **President** shall preside over all meetings of the Council, Budget Committee and general assembly; supervise and be responsible for the administration of the business of The Academy; appoint positions and committees as deemed necessary; and call such special meetings as deemed necessary.

Section 6. The **Secretary** shall keep official records of the minutes of the Council, Budget Committee and general assemblies, including the annual meeting. The material to be gathered include distributed reports and documents. The Secretary shall serve on the Council and Budget Committee. The Secretary also shall serve as an *ex officio* member of the Research Grants Committee, without vote.

Section 7. The **Treasurer** shall have custody of all funds of The Academy, except as otherwise provided; issue statements, receive payment of dues and assessments, and pay bills chargeable to The Academy; have sole authority to sign contracts on behalf of The Academy, as authorized by the Council; submit The Academy's financial records for audit; report to the Council on the financial standing of The Academy; and be responsible for filing such financial reports as may be required by state and federal offices. The Treasurer shall serve on the Council and Budget

Committee. The Treasurer also shall serve as an *ex officio* member of the Foundation Committee, without vote.

Article V. Vacancies

Except as otherwise provided, a vacancy shall be filled for the remainder of that term by appointment by the President, with the approval of the Council. The Council, with unanimous approval, may declare an office or position on a committee vacant if the incumbent does not carry out the specified duties. In case of a vacancy in the office of President, the President elect shall immediately accede to that office, serving the remainder of that term and the term for which elected as President. An appointed President elect shall be a past President of The Academy, and shall serve to the end of the term for which appointed only, and not automatically accede to the presidency in the following year.

Article VI: Meetings

Section 1. The Academy shall hold one general meeting each year to be known as the annual meeting. A special general meeting may be called as necessary. The date and place of the annual meeting or any special meetings or events (symposia, etc.) shall be determined by the Council and announced at least 60 days in advance. A quorum for business conducted at the annual meeting shall consist of 25 members in good standing.

Article VII: Council

Section 1. The Council shall consist of the current elected Academy officers (President, President-elect, Immediate Past President, Secretary and Treasurer), the chair of the Foundation Committee, the chair of the Research Grants Committee and the Executive Director, the latter without vote. The Council shall be responsible for all business, unless otherwise provided for in the Bylaws, and all matters of policy. Changing a policy shall require a two-thirds vote of the Council.

Section 2. The Council shall hold two regular meetings each year (one at the annual meeting and one in the fall). The President may call the Council into session at any time, or may submit specific questions to the committee by correspondence or electronic means for a conference at any time. The Council may invite other Academy members or special guests to meet with it at any time, but without vote. A quorum shall consist of a majority of Council members. Notice and purpose of the meeting shall be given to all Council members at least 15 days in advance of the meeting date.

Article VIII: Committees

Section 1. All committee members shall be members of the Academy members in good standing.

Section 2. Expenses incurred by a committee shall in no way become a financial obligation of The Academy except as authorized in the annual budget of The Academy.

Section 3. Elected Standing Committees. The following are recognized as elected Standing Committees. The Nominations/Elections Committee shall prepare the ballot. Election shall be by a majority of votes cast by the membership. The Executive Director shall be an *ex officio* member of all standing committees, without vote.

- 1. Foundation Committee.** The trustees of the Foundation Committee shall consist of three members, elected for rotating three year terms, plus the Treasurer as an *ex officio* member, but without vote. The committee shall have custody of the Foundation funds and investments of The Academy Foundation, and shall report regularly to the Council.
- 2. Research Grants Committee.** The Research Grants Committee shall consist of five members, elected for five year rotating terms, and may stand for reelection. The Secretary shall serve as an *ex officio* member, but without vote. The committee shall receive senior research grant applications, determine grant recipients, and the amount of the individual grants from funds designated by The Academy for that purpose. The committee shall report regularly to the Council.

Section 4. Appointed Standing Committees. The President shall appoint members of the standing committees, except the Nominations/Elections Committee. Appointments shall be for a one-year term, unless otherwise specified, and may be reappointed. Unless otherwise specified, the President shall designate one member of each committee as chair. The chair of each committee shall serve on the Budget Committee. The operation of committees shall be conducted by correspondence as far as practicable, but the chair, with 15 days advance notice, may call meetings. Except as otherwise provided, each committee shall determine appropriate rules and operational procedures and shall report to the Council as deemed necessary or when requested. The President and President elect shall be *ex officio* members of all standing committees, except the Nominations/Elections Committee, without vote. The Executive Director shall be an *ex officio* member of all standing committees, without vote.

- 1. The Budget Committee** shall be composed of: members of the Council, Biodiversity/Natural Areas Committee chair, Finance Committee chair, *Proceedings* Editor, Newsletter Editor, Special Publications Editor, Librarian, Webmaster and Youth Activities chair. Others may be present by invitation, but without vote. The Budget Committee shall meet after the annual meeting date but before May 15th each

year to establish the operating budget and to allocate trust income for the following fiscal year. Revisions of the budget or allocations of trust income may be made by a two-thirds of the Council.

2. The **Biodiversity/Natural Areas Committee** shall be composed of up to 12 specialists from the fields of botany, geology, mycology and zoology. It is the function of the committee to promote the study of natural history with an emphasis on the compilation and publication of data on the biota and natural features of Indiana. The committee shall conduct activities and advise the Council regarding the enumeration, conservation and preservation of natural areas and biota. Upon approval by the President, the chair shall populate the committee with qualified individuals. The chair, appointed by the President, shall serve as The Academy Representative on the Indiana Natural Resources Commission. The term of office for the chair shall be three years, and may be reappointed. The chair shall serve on the Budget Committee.
3. The **Finance Committee** shall be composed of three members who shall audit The Academy's financial records annually. The committee shall review the annual financial report, provide an evaluation of financial records and practices, and present its report to the Council at the annual meeting. The chair shall serve on the Budget Committee. The committee shall be responsible for the adequate bonding of all officers, committees and appointees having charge of funds or investments of The Academy.
4. The **Nominations/Elections Committee** shall be composed of the Executive Director and two past officers. No current officer may serve on the Nominations/Elections Committee. The Council shall be the responsible for making the two appointments. The committee shall be responsible for managing the nomination and election process for elected Academy positions.
5. The **Proceedings Editorial Board** shall be composed of members selected by the *Proceedings* Editor. The term of each board member shall be three years, concurrent with the term of office of the Editor. Board members may be reappointed for additional terms. Editorial Board members will be selected for their knowledge of particular fields of science so that the total board may constitute a broad spectrum of scientific expertise. The function of the Editorial Board shall be to assist and advise the Editor in editing and publishing the *Proceedings of the Indiana Academy of Science*.
6. The **Publications Committee** shall be composed of five members: Special Publications Editor, *Proceedings* Editor, Newsletter Editor, Librarian and Webmaster.

The Editor of Special Publications shall serve as chair. The committee shall determine what is and should be an Academy publication, and recommend policies relating to publications. The committee shall advise the editors and Council on matters pertaining to Academy publications and the website.

7. The **Science and Society Committee** shall be composed of three members: the Executive Director, who shall serve as chair, and two members appointed by the President. The committee shall advise the Council and organize special events (i.e., symposia, lectures) that are consistent with the object of the Academy. The committee is authorized to utilize various media for promotion and to solicit financial support for such approved programs. The Academy will support the programs through appropriation by the Budget Committee. The Science and Society Committee also shall promote and manage a speaker's bureau.
8. The **Youth Activities Committee** shall be composed of seven members representing different schools. The duties of the committee shall be to: oversee the Science Talent Search Competition; help administer secondary school research grants; manage the Junior Academy; and advise the Council on issues relating to secondary science education. The committee chair shall serve on the Budget Committee.

Section 5. New Committees. The Council, with unanimous vote, may approve other standing committees. No subcommittees may be formed without the expressed consent of the Council.

Section 6. Special Committees. The President may appoint special committees with the consent of the Council. The purpose of such committees shall be clearly defined. Special committees shall exist for one-year, or until the assignment is completed, or until discharged by the President.

Section 7. Appointed Positions

1. **Academy Representative on the Indiana Natural Resources Commission.** The President of the Indiana Academy of Science shall designate an Academy member to serve as an *ex officio* member of the Indiana Natural Resources Commission (Indiana Code 14.10.1.1(6) (1995)). The designee also shall serve as chair of the Biodiversity/Natural Areas Committee.
2. **Editor of the *Proceedings*.** This person shall be appointed by the President on recommendation of the Publications Committee and approval of the Council. The term of the Editor shall be three years, and may be reappointed. The Editor shall chair the *Proceedings* Editorial Board and be responsible for gathering, editing

and publishing the *Proceedings*. The Editor shall serve on the Budget Committee and the Publications Committee.

3. **Editor of the Newsletter.** This person shall be appointed by the President on recommendation of the Publications Committee and approval of the Council. The term of the Editor shall be three years, and may be reappointed. The Editor shall edit, prepare, publish and distribute the Newsletter of The Academy. The Editor shall serve on the Budget Committee and the Publications Committee.
4. **Editor of Special Publication.** This person shall be appointed by the President on recommendation of the Publications Committee and approval of the Council. The term of the Editor shall be three years, and may be reappointed. The Editor shall solicit, edit, prepare, publish and market the special publications of The Academy. The Editor shall serve on the Budget Committee and chair the Publications Committee.
5. **Executive Director.** This person shall be appointed by the Council for a two year running term, and may be reappointed. The Executive Director shall answer to the Council, work closely with the President, and be responsible for the daily functions of the Academy. The Executive Director shall propose the annual budget, with the assistance of the Treasurer and the chair of the Foundation Committee. The specific duties of the Executive Director shall be listed in the Operating Policies. The Executive Director shall be an *ex officio* member of all committees, but without vote.
6. **Librarian.** This person shall be on the staff of the Indiana State Library, shall be appointed by the State Librarian, and may for an indefinite term oversee the Academy holdings at the Indiana State Library. The Librarian shall be extended the privilege of Honorary Member as long as he/she remains Academy Librarian. The Librarian shall serve on the Budget Committee and the Publications Committee.
7. **Parliamentarian.** This person shall act in an advisory capacity for The Academy members and the formulation of proposed amendments and shall, with the assistance of the Executive Director, keep the Bylaws and Operating Policies updated by incorporating all amendments adopted by The Academy.
8. **Webmaster.** This person shall be appointed by the President on recommendation of the Publications Committee and approval of the Council. The Webmaster shall serve a three-year term, and may be reappointed. The Webmaster, in concert with the Executive Director, shall administer and be responsible for the Academy website. The Webmaster shall serve on the Budget Committee and the Publications Committee.

Article IX. Sectional Organization

Section 1. Sections, defined by discipline, may be established by the Council. A section, on becoming inactive, may be dissolved by the Council. Currently established sections are listed in the Operating Policies.

Section 2. A member of The Academy may register as a member of any section or sections at the time of payment of the yearly membership dues.

Section 3. Each section shall have a chair to preside at meetings and to contact section members when necessary. The chair shall be determined by election in the section business meeting at the annual meeting. The term shall be for two years. If an election is not held, the President shall appoint a chair.

Section 4. Expenses incurred by a section shall in no way become a financial obligation of The Academy except as authorized in the annual budget of The Academy.

Article X. Affiliated Organizations

Section 1. The Academy may, by act of the Council, offer services to any other organization whose objectives are similar to those of The Academy and which may petition to be affiliated with The Academy.

Section 2. The Academy shall not be held responsible for any expenses incurred by any affiliated organization beyond those specifically provided for in the annual budget of The Academy.

Article XI: Parliamentary Authority

The conduct at meetings of The Academy shall be governed by the rules contained in the current edition of *Robert's Rules of Order, Newly Revised*, so long as they are applicable and in which they are consistent with the Bylaws and any special rules The Academy may adopt in the Operating Policies.

Article XII: Voting

Section 1. In no instance is a member permitted to have more than one vote per issue.

Section 2. Proxy or absentee voting is not allowed.

Section 3. Student members are not entitled to vote.

Article XIII: Indemnification

Each Academy agent (i.e., elected position and appointee), whether or not then in office, shall be indemnified by The Academy against all costs and expenses reasonably incurred by, or imposed upon, him in connection with or arising out of any action, suit, or proceeding in which he may be involved, by reason of his being or by having been an agent of The Academy. The Academy shall not, however, indemnify any agent with respect to matters

resulting from dereliction in the performance of duty. The foregoing right of indemnification shall not be exclusive of the other rights to which any Academy agent may be entitled as a matter of law.

Article XIV: Amendment of Bylaws

Section 1. These Bylaws may be amended provided that notice of the proposed amendment has been given to the Council at a previous meeting, or provided by mail or electronically at least 30 days in advance of the meeting. A two-thirds vote of the Council and members voting during the general assembly is required for adoption.

Section 2. No amendment to the Bylaws may be submitted to the Council for approval unless certified by the Amendments Committee that the language is not in conflict with the Bylaws or Operating Policies.

Section 3. The Council, upon the advice of the Parliamentarian, shall have the authority to make technical

and non-substantive editorial changes in the Bylaws without submitting such changes to a vote of the general membership of The Academy.

Section 4. The Bylaws shall be posted on The Academy website.

Article XV. Distribution on Dissolution

In the event of the dissolution of The Academy, its assets shall be distributed by the Council to one or more organizations qualifying under Section 501(c)(3) or Section 501(c)(6) of the Internal Revenue Code of 1954.

PROVISO: The term of the 2010 Academy President and appointees shall be extended to the March 2011 annual meeting at which time the 2011 Academy President shall assume office for 2011 through the annual meeting in 2012. The Operating Policies will be approved by the new Council after it is established.

A NOTE FROM THE IAS PRESIDENT

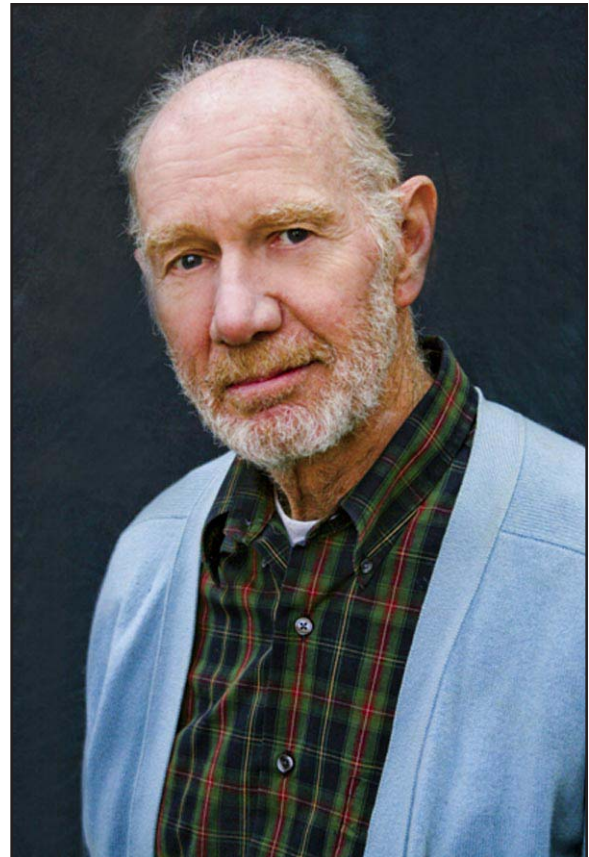
The hiring of **Delores Brown** as the Academy's first full-time Executive Director is the culmination of a nearly year-long effort by a number of people whose work needs to be recognized and applauded. At the 2009 fall meeting I named a committee, the Futures Task Force, to make recommendations to the Council on ways to renew the Academy. The members were Rebecca Dolan, Richard Kjonaas, Paul Rockroth, Ed Squires, and myself. Bill McKnight worked with the Task Force in the capacity of Transition Officer. The recommendations presented to the Council at the spring meeting included several changes to the Academy governance structure, most importantly upgrading the Executive Director position to full-time.

The Task Force recommendations were approved by the Council and I named a search committee of four people to conduct a national search for a professional Executive Director. The members of the search committee were Jim Berry (chair), Clare Chatot, Alice Heikens, and Bob Waltz. The committee organized in early June and worked through to early September, when Mrs. Brown was offered and accepted the position.

I hope that all of you will join with me in thanking the members of these two committees for their splendid work on behalf of the Academy. The long hours they spent in meetings or travel to meetings is a testament to their devotion to IAS, and the remarkable result of their efforts

speaks to their wisdom and willingness to break with the past.

-- *Jim Curry*, 2010-11 IAS President



Jim Curry, IAS President

WELCOME TO THE ACADEMY'S NEW FULL-TIME EXECUTIVE DIRECTOR

For the first time in its 125-year history, contingent upon final approval by the members at the fall meeting, the Indiana Academy of Science will have a full-time Executive Director.

Following a national search lasting throughout the summer, the Executive Committee has approved appointing Mrs. Delores Brown of Chicago to this position. Her appointment is to begin on November 1, when she will occupy the Academy's new office space in the Indiana State Museum in downtown Indianapolis. This office space represents another first for IAS. Through the efforts of President Jim Curry working with Rex Garniewicz (V.P. Programs) and Ron Richards (Chief Curator Natural History), the Academy has recently been able to lease an office on the main floor of the State Museum just inside the canal entrance to the museum.

Delores Brown is a seasoned professional with over 30 years of executive level experience in organizational management, higher education administration and community partnership. Prior to retiring from academic administration in 2007-2008, she held the positions of Dean of Admissions for Northwestern University's Feinberg School of Medicine, where she served twenty years; Program Director on a Goldman Foundation grant, and later the co-principal investigator on a National Heart Lung and Blood Institute (NIH) grant to Georgetown University Medical Center; and founding Director of Health Education for the Howard University Cancer Center, Howard University Hospital. Her work has entailed extensive involvement in community education and partnership building, fundraising, grant administration, program development and implementation, mentoring and writing.

Mrs. Brown has a BS degree from Fisk University, a Master's degree from Syracuse University, and a second Master's degree from the University of Illinois, Chicago. She is the recipient of several honors, awards, and institutional appointments; and author of numerous professional presentations and publications. Delores has had the privilege of living in different parts of the country and world, and she brings to her life work a valued global perspective.

She is presently the president of Krystal Foundation, a 501(c)3 Family Foundation having the mission of showcasing health and wellness issues important to the Chicago community, and encouraging young adult leaders to pursue the profession of medicine. Her husband is a financial planner, and her daughter is a physician.



Delores Brown, IAS Executive Director

Junior Research Grants Subcommittee

We are looking for another reviewer to join the Junior Research Grants Subcommittee, currently composed of **Steven Kristoff**, **Vanessa Quinn**, **Paul Rothrock**, and **Alice Heikens**, in evaluating proposals from high school students. Although we welcome volunteers from all areas of science, it would be especially helpful to have someone with expertise in chemistry or molecular biology. Please contact **Alice Heikens** at **ahaikens@franklincollege.edu**. The committee serves an important function in supporting young scientists and encouraging high school students to engage in quality research.

Proceedings Editorship - Call for Applicants

Jim Berry recently retired as Proceedings editor. Unfortunately, his replacement, **Gene Kritsky**, has found it necessary to submit his resignation after only a couple of months on the job. This is a loss to the Academy as Gene had considerable technical and editing expertise, and has been variously involved with the Academy for three decades.

We now need to quickly find a replacement for this important position.

There is a modest stipend and the appointment is for a three-year term, which is renewable. The person will have a few administrative responsibilities, especially involving the budget for the journal and involvement with other IAS publications issues and policies (as a member of the Publications Committee). If you would like to be considered for the position, please contact **Bill McKnight** at bnmcknight@comcast.net

Call for Nominations for Fellowship in the Indiana Academy of Science

The Academy's bylaws (I,1,11) define a Fellow as "A member with recognized standing as a scientist who has contributed to the objectives of the Academy, been recognized by two-thirds of the Committee on Awards, and been approved by a majority of the members voting at any Spring or Annual meeting. The title is awarded as an honor and is independent of the class of membership." Special consideration should be given to: length of membership in the Academy (minimum of 3 years); the nature of service to the Academy and to the advancement of science in Indiana; service to education in science; and achievements in scientific research. Nature of service to the Academy means attending IAS meetings, presenting papers at meetings, publishing in the Proceedings, serving as an officer, as a committee chair, as a committee member, playing a role in organizing Academy functions, etc.

Nominations should be sent at least 6 weeks prior to the Annual Meeting of the Academy to the Chair of the IAS Committee on Awards. The current Chair is **Clare Chatot**, Department of Biology, Ball State University, Muncie, IN 47306 (e-mail: cchatot@bsu.edu) Nominations should include the nomination form (available on the IAS web site) signed by two Academy Fellows as well as a cover letter describing the qualifications of the nominee for fellow status. A brief CV should be included if possible.

*--Clare Chatot, Chair
Committee on Awards*

News from Friesner Herbarium, Butler University

More than 1,900 specimens of ferns and orchids that grow in Indiana can now be seen and studied online, thanks to an \$8,000 grant Butler University received from the Indiana State Library.

The digital images, along with specific information on each plant, are available here. The plants are part of the collection in Butler's Friesner Herbarium, which houses specimens from more than 43,000 Indiana plants as well as 55,000 samples from elsewhere. (Herbaria are systemic collections of pressed and dried plants with labels that document who collected them, when, and where. The

focus of the Friesner Herbarium is plants that grow outside of cultivation.)

"The idea is that hopefully, having this information available will make more people aware of the collection and its historical value," said Rebecca Dolan, director of the Friesner Herbarium. "And as people are interested in the history of a county, they can look back at our records. Many of our specimens were collected in the 1920s, '30s and '40s, before there was a lot of development in most of the state."

Digitizing the first 1,900 specimens began a year ago as a joint project between the Herbarium and the Irwin Library. Lewis Miller, dean of the libraries, was the principal investigator on the grant. Butler partnered with IUPUI's library to photograph the plants, then linked the images with data from each specimen. Irwin Library Catalog Librarian Janice Gustafarro entered the pictures and information into a searchable database.

Dolan said the process went so well that a second grant, this time \$20,000, will enable the University to digitize another 6,400 specimens from the sunflower/daisy family.

"The ultimate goal would be to get all 43,000 Indiana specimens digitized so people don't have to come here to see the specimens," she said.

The herbarium's collection is kept in folders inside lockers that protect the specimens from light, water and insects. Dolan said the plants are useful in a variety of ways – for professional botanists interested in species distributions; for students and teachers studying Indiana natural history; for people trying to establish historical landscapes; for

people interested in the spread of non-native plants.

The project is supported by the Institute of Museum and Library Sciences under the provisions of the Library Services and Technology Act, administered by the Indiana State Library.

The Institute of Museum and Library Services is the primary source of federal support for the nation's 123,000 libraries and 17,500 museums. Its mission is to grow and sustain a "nation of learners," because lifelong learning is essential to a democratic society and individual success. Through its grant making, convenings, research and publications, the institute empowers museums and libraries nationwide to provide leadership and services to enhance learning in families and communities, sustain cultural heritage, build 21st century skills and increase civic participation. More information is available at www.imls.gov <<http://www.imls.gov>>.

-- Rebecca W. Dolan, Director
Friesner Herbarium
Butler University

The New IAS Website

The new Indiana Academy of Science website has gone online <www.indianaacademyofscience.org>. The IAS web has both public features such as announcements of meetings, sale of books and general information about the Academy. There is a member's only portion of the web available under Member Center where members automatically receive discounts when making purchases. Members can renew their memberships, vote, can find other members, and update their membership profile online.

All personal information on this website is handled through secure information transfer (look for the "https://" in the address bar). Because of this level of security, if you enter <indianaacademyofscience.org> rather than <www.indianaacademyofscience.org> after the https:// you may receive a "Certificate error" warning message. If this happens, you can either ignore the message, or download and install the Certificate or re-enter the web address beginning with "www".

The Academy website homepage features science related color photographs. These photographs will be replaced periodically. If you have good photographs that would be appropriate for the homepage, please contact me about adding your photographs to the webpage. In

addition to eye catching color photographs for the main image on the homepage, we would like to obtain photographs of speakers at Academy events, members engaged in Academy activities, or buildings that have historically housed IAS meetings to place in the lower right of the homepage. Pictures of officers or members, scenes from field trips, or images of scientific instruments would be welcomed. If you have photographs that would be of interest to Academy members, please let me know. Thank you.

-- Mike Foos
foos@iue.edu

INDIANA ACADEMY OF SCIENCE FALL SCIENCE & SOCIETY FORUM

When: Saturday, 9 October 2010, 10 AM to Noon
Where: Scottish Rite Cathedral, 650 N. Meridian Street, Indianapolis

Title: Updating the Theory of Collective Action and the Commons
Speaker: Dr. Elinor Ostrom, Indiana University, Nobel Laureate Economics
Panelists: John Bacone, DNR Director of Nature preserves; Jesse Kharbanda, Executive Director Hoosier Environmental Council; and Mary McConnell, State director The nature Conservancy

The presentation and panel discussion will be followed by lunch for IAS Members and a business meeting from 1-3 pm. To register, go to the IAS Website at <http://www.indianaacademyofscience.org/>

A Thank You to the Academy

Dear IAS Officials:

I, along with my PI Dr. Carolyn Vann, would like to express our heartfelt gratitude to IAS for funding our MS research project titled "Abolishing Multidrug Resistance in Cultured Lung Cancer Cells with RNA Interference." It indeed was of great help and without this financial support, this project would have never been completed. We are highly pleased with the motivation and support provided by IAS. Thank you so much we wish all success to IAS in the coming days.

Regards,
-- *Kamal Prajapati*

Obituary

Charles Bixler Heiser, PhD, 89

October 5, 1920 to June 11, 2010

Charles Bixler Heiser, Jr., was born in Cynthiana, Ind., on Oct. 5, 1920, to Charles Bixler Heiser Sr. and Ines Metcalf Heiser. After living several places in Indiana (Princeton, Evansville, New Albany, Vincennes, Indianapolis, Bloomington, Columbus) his parents moved to Belleville, Ill. where he attended high school. In 1939, he enrolled in Washington University (St. Louis) majoring in Botany and English, lettering in basketball for three years and was elected to Phi Beta Kappa.

In his second year as a graduate student, he coached the University's Basketball Team. At the University, the two professors who had the most influence on him were Dr. Edgar Anderson and Dr. R.E. Woodson, Jr.

He married Dorothy Gaebler on Aug. 19, 1944. They have three children, Lynn Marie Monzo, Cynthia Roberts Hall, and Charles Bixler III and wife, Carolyn; seven grandchildren.

In 1945, he enrolled in the graduate program in Botany at the University of California at Berkeley where Dr. G. Ledyard Stebbins was most influential. In his second year as a student, he taught in Botany at the University of California at Davis and was in charge of the herbarium there.

After receiving his Doctoral Degree from California in 1947, he came to Indiana University as Assistant Professor of Botany and Curator of the Herbarium. Except for a Visiting Professorship at the University of Texas in 1979,

all of his teaching has been done at Indiana University where he became Distinguished Professor in 1979 and Professor Emeritus in 1986.

His first sabbatical leave was spent in Costa Rica in 1953 to study chili peppers and to learn the flora. His meetings of two students, Jorge Soria and Jaime Diaz from Ecuador at the Inter-American Institute of Agricultural Science at Turrialba, Costa Rica, was particularly important, for he was to spend his next two sabbaticals in Ecuador (1962, 1969) and they were most helpful.

In 1969 on his way to Quito, with wife and two children, he would also visit Cuba, after several armed passengers boarded the plane at Guayaquil and demanded that the pilots take them to Havana. In 1975 on a National Science Senior Post Doctoral Fellowship, he was to spend his time in Ecuador and Peru. At a meeting to celebrate his Fifty Years at Indiana University in 1996, he received a plaque from INIAP (the National Institute of Ecuador for Agricultural Research) for assisting in their research.

His other most significant honors and awards follow: American Society of Plant Taxonomists, President, 1967; Asa Gray Award, 1988; Raven Outreach Award, 2002 (for his books); Botanical Society of America, Merit Award, 1972, President, 1980; Centennial Award, 2007; Society for the Study of Evolution, President, 1974; Society for Economic Botany, President, 1978; Distinguished Economic Botanist, 1984. He also served on the committee that founded the Society; Gleason Award of the New York Botanical Garden, 1969; Guggenheim Fellowship, 1953; Pustovoit Award of the International Sunflower Association, 1985; elected to the National Academy of Sciences, 1987; Distinguished Scholar Award, Indiana Academy of Science, 1997.

His early research, beginning in the 1940s, was with the sunflower. He showed that hybridization was important in its evolution, and he made artificial hybrids to document those that he claimed occurred naturally.

He also studied the origin and development of the sunflower domesticated for its seed, showing that it was one of the few crops to have been domesticated in what is now the United States. He has since been interested in the origin and domestication of a number of other crops, most recently the naranjilla or lulo, a crop grown for its juice, in southern Central America and the northern Andes. He developed the variety now most widely grown in Ecuador.

In addition to his many scientific papers, he has published six semi-popular books dealing mostly with plants.

Nightshades, the Paradoxical Plants, 1969 (slightly revised and published as *The Fascinating World of the Nightshades: Tobacco, Mandrake, Potato, Pepper, Eggplant, etc.*, 1987); *Seed to Civilization, the Story of Food*, 1973 (3rd ed, 1990); *The Sunflower*, 1976; *The Gourd Book*, 1979; *Of Plants and People*, 1985; *Weeds in my Garden*, 2003 (received Garden Globe Award “for best talent/writing” in 2004).

He also took pride in his introduction of two ornamental plants: the ball loofah or “*Luffa operculata*” and *Peperomia Serpens* ‘Tena’, neither of which has become invasive.

At Indiana University, he has taught courses in Survey of Vascular Plants; Systematics of Flowering Plants; Economic Botany or Ethnobotany and Evolution. Twenty-nine students have received their Ph.D. degrees under his direction.

After 89 vigorous years, he died on June 11, 2010, at Bell Trace Health and Living Center.



Platanthera peramoena, purple fringeless orchid found during the Goose Pond Fish and Wildlife bioblitz. See pages 12-15. Photo by Scott Namestnik.

Successful Biodiversity Survey at Goose Pond Fish and Wildlife Area

by Barbara Simpson, Friends of Goose Pond; Daryl R. Karns, Hanover College; Donald Ruch, Ball State University; and Brad Feaster, Indiana Department of Natural Resources

The first biodiversity survey of Goose Pond Fish and Wildlife Area (FWA), an 8000 acre wetland restoration located south of Linton in southwestern Indiana, was conducted July 16-17, 2010. This first step in assessing an important Indiana wetland provided baseline biodiversity information and laid the groundwork for future studies. The call for taxonomic experts in the March and June IAS newsletters received overwhelming response, with 98 scientists, naturalists, students, and others volunteering their time and expertise to make the event an overwhelming success. Institutions and agencies represented at Goose Pond included the Indiana Department of Natural Resources, Indiana State University, Indiana University, Purdue University, Indiana University Purdue University at Indianapolis, Ball State University, Hanover College, University of Evansville, Amos Butler and Sassafras Audubon Societies, Hoosier Herpetological Society, and JFNew Company. Thanks to generous support from The Indiana Academy of Science (IAS), the Rivers Institute at Hanover College, the Friends of Goose Pond, Amos Butler Audubon Society of Indianapolis, and the Greene County Soil and Water Conservation District, lodging and food were provided at no cost to the participants. In addition, the IAS sponsored an Amphibian and Reptile Workshop for educators and naturalists (19 participants). Taxonomic team leaders were identified and they recruited their respective teams. The 15 taxonomic teams and their leaders were:

Amphibians & Reptiles: **Daryl Karns**

Bees: **Robert Jean**

Beetles & other insects: **Jeff Holland**

Biogeochemistry: **Lenore Tedesco**

Birds: **Lee Sterrenburg**

Butterflies: **Don Gorney**

Dragonflies & damselflies: **Amanda Bellian**

Fish & Mussels: **Brant Fisher**

Fungi: **Don Ruch**

Macroinvertebrates & plankton: **Bill Jones**

Mammals: **John Whittaker**

Marsh flies: **Bill Murphy**

Moths: **Megan McCarty**



Common white tailed dragonfly.
Photo by Scott Namestnik.

Non-vascular plants: **Bill McKnight**

Vascular plants: **Scott Namestnik**

A special thank you goes to all the scientists, naturalists, students, and volunteers who came to Goose Pond during a hot July weekend to spend time in the field identifying and cataloguing the spectrum of plant and animal life. Special thanks also to the Friends of Goose Pond and partners who provided excellent logistical support throughout the survey. The event produced an incredible amount of information in a brief snapshot of time, and also provided opportunities for participants to meet one another, share results informally, and enjoy the collegiality. A group dinner was held the first evening and teams reported their early results, highlighting finds of particular interest.

At the final day wrap-up session, teams reported their preliminary summaries. Species counts reported thus far include 20 species of amphibians and reptiles, 70-80 species of beetles, 37 bee species, 124 bird species, 48 butterfly species, 30 species of dragonflies and damselflies, 74 moth species identified with 6 more to be identified, 4 species of marsh flies, 4 fungi and 1 fungal associate, and 379 vascular plant species. When all teams have reported their final results, the total count will likely be over 870 species. The teams all agreed that spending just two days in July only scratched the surface; painting a



*Peter Scott bee collecting.
Photo by P. Hoernig.*



Members of the plant team. Photo by P. Hoernig.

complete picture of the biodiversity to be found at Goose Pond FWA would require long-term seasonal surveys. But even with this brief look, the results show the richness and value of this developing wetland restoration. Highlight species reported included the purple fringeless orchid, American ruby spot dragonfly, bog lemming, and barn owl. Of the 30 species of dragonflies and damselflies, 13 were new Greene County records. The plant team reported 123 probable county records. Of particular interest to the plant team was the diversity of wetland plants that were present through natural recruitment, since no wetland vegetation was planted at the beginning of the restoration. The butterfly and moth team reported 59 moth county records. The amphibian and reptile team saw many turtle nests and found five species of turtles.

A team from IUPUI Center for Earth and Environmental Science added a biogeochemistry survey to the mix. The group reoccupied a series of sites established in 2006 to assess carbon sequestration and wetland soil development in the wetland complex. Sites were initially selected to document the effects of different depth and duration of flooding as well as restoration age - with sites in both Beehunter and Goose Pond. They team reoccupied all six sites and repeated the sampling. Results are not yet available but they did find that up to 4-6 inches of organic muck had already accumulated in some areas showing rapid development of wetland soils.

Species lists for each taxonomic group and a brief summary of results will be posted on the IAS website

(<http://www.indianaacademyofscience.org/academy/program-archive/bioblitz/>). Data from the survey will be shared with appropriate state agencies and a brief report will be submitted to the *Proceedings of the IAS* for publication. Watch for the IAS newsletter publication of more information at <http://indianaacademyofscience.org/publications/newsletter/>

There was general consensus that repeating this biodiversity study in approximately 5 years during the same time period would be useful in assessing the progression of the restoration. To assess the development of the plant communities, a 10 year time frame was recommended. To continue to build upon the inventory of plants and animals begun with this study, another biodiversity study in a different season would be of benefit, recognizing that some early season species were undoubtedly missed. The large scale and habitat diversity, 8000 acres of wetlands, prairie, open water, and bottomland tree plantings, offer opportunities for a wide range of research projects.

Goose Pond FWA is Indiana's largest wetland restoration done under the Natural Resources Conservation Service (NRCS) Wetlands Reserve Program (WRP), United States Department of Agriculture (USDA), and the 7th largest in the United States. The restoration covers 7138 acres in two sections, Goose Pond (5945 acres) and Beehunter Marsh (1193 acres) that are both part of Goose Pond FWA, Indiana Department of Natural Resources. The diverse habitats include 4000 acres of



Vicky Meretsky of the herpetology team. Photo by P. Hoernig.

shallow open water, 400 acres of bottomland tree plantings, and 1380 acres of tall and short grass prairies. The NRCS and IDNR have limited resources for gathering baseline data and monitoring the development of the restoration. They rely on volunteers contributing to studies such as this biodiversity survey to gather data that assist

them in the conservation and management of Indiana's public natural areas. To learn more about Goose Pond FWA please visit <http://www.in.gov/dnr/fishwild/3094.htm> or Friends of Goose Pond at <http://friendsofgoosepond.org/>.



Volunteers listening to the reports from the various taxonomic groups. Photo by P. Hoernig.

Lee Sterrenburg and Don Allen of the bird team, canoeing in a deep marsh. Photo by C. Davidson.



IAS FALL SCIENCE & SOCIETY FORUM

When: Saturday, 9 October 2010, 10 AM to Noon
Where: Scottish Rite Cathedral, 650 N. Meridian Street, Indianapolis
Title: Updating the Theory of Collective Action and the Commons
Speaker: Dr. Elinor Ostrom, Indiana University, Nobel Laureate Economics
Panelists: John Bacone, DNR Director of Nature preserves; Jesse Kharbanda, Executive Director Hoosier Environmental Council; and Mary McConnell, State director The nature Conservancy

**Deadline for submission of material for the December issue of the IAS Newsletter is
November 30, 2010**

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

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