



Pennsylvania Academy of Science

PLAN TO ATTEND THE Pennsylvania Academy of Science **83rd ANNUAL MEETING**

**Radisson Hotel
Pittsburgh**

www.radisson.com/monroevillepa

March 29-April 1, 2007

In this Issue...

- | | |
|--|--|
| Page 2 ... Academy Officers | Page 8 ... Volunteer to be a Campus Representative |
| Page 2 ... From the Desk of the President | Page 9 ... Darbaker Prize |
| Page 3 ... From the Desk of the President (cont.) | Page 9 ... PAS High School Student Res. Grants |
| Page 3 ... Upcoming Meetings | Page 10... Pennsylvania Biodiversity Partnership |
| Page 4 ... Pennsylvania Online Herpetological Atlas | Page 10... PAS Annual Fund Campaign |
| Page 5 ... PAS 2006 Meetings Call for Abstracts | Page 11... College Student Research Funds |
| Page 5 ... Reminder: Abstracts Submitted Electronically | Page 12... PA Society for Biomedical Research |
| Page 5 ... Rules for Acceptance of Abstracts | Page 13... American Toad |
| Page 6 ... Resolution on Teaching of Evolution | Page 13... Call for Nominations/Interest Serving |
| Page 7 ... The PA Geographer, Manuscripts | Page 14... Application for Membership |
| Page 7 ... Scholarship and Award Opportunities | Page 14... Book Order Form |
| Page 7 ... Learned Discourses Advertisement | Page 15... Advertisement |
| Page 8 ... Renewable Energy Symposium, 2007,
Call for Abstracts | |

The Pennsylvania Academy of Science Newsletter

Richard L. Stewart Jr. and Pablo R. Delis, Editors
Shippensburg University, Shippensburg, PA 17257

Published five times annually - January, February, May, August, October by
THE PENNSYLVANIA ACADEMY OF SCIENCE
c/o Dept. of Biological Sciences, York College of Pennsylvania,
York, PA 17405-7199

Affiliated with the American Association for the Advancement of Science
PAS Home Page: <http://pennsci.org>

ACADEMY OFFICERS

Deborah D. Ricker

President

Dept. of Biological Sciences
York College of PA
York, PA 17405-7199
Ph: (717) 846-7788 ext. 1510
Fax: (717) 849-1619
e-mail: dricke@ycp.edu

Valerie G. Kalter

President-Elect

Department of Biology
Wilkes University, Wilkes-Barre,
PA 18766
Ph: (570) 408-4725
e-mail: valerie.kalter@wilkes.edu

Jane E. Huffman

Immediate Past-President

Department of Biology
East Stroudsburg University
East Stroudsburg, PA 18301
Ph: (570) 422-3716
Fax: (570) 422-3724
e-mail: jhuffman@po-box.esu.edu

Kenneth W. Thomulka

Treasurer

Univ. of the Science in Philadelphia
Dept. of Biological Sciences
600 S. 43rd Street
Philadelphia, PA, 19104
Ph: (215) 596-8923
Fax: (215) 596-8710
e-mail: k.thomul@usip.edu

Jennifer L. White

Treasurer - Elect

Department of Biology
East Stroudsburg University
East Stroudsburg, PA 18301
Ph: 570-422-3712
Fax: 570-422-3724
e-mail: jwhite@po-box.esu.edu

Richard L. Stewart Jr. &

Pablo R. Delis

Newsletter Editors

Department of Biology
Shippensburg University
Shippensburg, PA 17257
Ph: (717) 477-1095
Fax: (717) 477-4064
e-mail: rlstew@ship.edu

Michael Campbell

Recording Secretary/Archivist

Biology Department
Mercyhurst College, Glenwood Hills
Erie, PA 16546
Ph: (814) 824-2374
Fax: (814) 824-2188
e-mail: campbell@mercyhurst.edu

Robert B. Coxe

Corresponding Secretary

Membership Chair

Delaware Natural Heritage Program
4876 Hay Point Landing Rd.

Smyrna, DE 19977

Ph: 302-653-2880 x122

Fax: 302-653-3431

e-mail: robert.coxe@state.de.us

Shyamal K. Majumdar

Journal Editor

Department of Biology
Lafayette College
Easton, PA 18042-1778
Ph: (610) 330-5464
Fax: (610) 330-5705
e-mail: majumdas@lafayette.edu

Lewis M. Lutton

Book Treasurer

Steve Mauro

Assistant Book Treasurer

Department of Biology
Mercyhurst College
Erie, PA 16546
Ph: (814) 824-2372
Fax: (814) 824-2188
e-mail: llutton@mercyhurst.edu
e-mail: smauro@mercyhurst.edu

Assad I. Panah

Webmaster

Dept. of Geology and Envir. Science
University of Pittsburgh- Bradford
Bradford, PA 16701-2898
Ph: (814) 362-7569
Fax: (814) 362-5088
e-mail: aap@pitt.edu

Peter M. Carando

Director, PA Junior Acad. of Science

New Castle Senior High School
2843 Graceland Road
New Castle, PA 16105
Ph: (724) 658-4098
e-mail: drifly@ccia.com

ADVISORY COUNCIL

Honorable Edward G. Rendell

Honorary Chairman

Governor,

Commonwealth of Pennsylvania
Governor's Mansion
Front & MacClay Streets
Harrisburg, PA 17102

Leonard Rosenfeld

Chairperson

College of Graduate Studies
Thomas Jefferson University
1020, Locust St., Suite 412
Philadelphia, PA 19107-2073
e-mail: leonard.m.rosenfeld@mail.tju.edu

Marlene Cross

Pennsylvania Talent Search

Biology Department
Mercyhurst College
501 E. 38th Street
Erie, PA 16546
Email: mcross@mercyhurst.edu

FROM THE DESK OF THE PRESIDENT



Will Roger's once said:

*"Even if you're on the right track,
you'll get run over if you just sit there."*

Not only is the Pennsylvania Academy of Science "on the right track", but also we intend to move full speed ahead in pursuit of several key initiatives and projects.

First, the PAS Board of Directors published its official position statement on the teaching of Evolution in K-12 schools within the Commonwealth. The statement was printed in both the Academy Newsletter and in the Journal of the Pennsylvania Academy of Science. Since its publication, we have received a wealth of positive feedback from various groups. Of particular interest, the National Center for Science Education (NCSE) sought permission to publish our position statement in the third edition of their Voices of Evolution text and on their website (www.ncseweb.org).

Second, the Academy is honored to have received two substantial investments this year. The first was a \$43,000 grant awarded by the Pennsylvania Department of Education. These funds will be used, in large part, to support student programs for the Pennsylvania Junior Academy of Science (PJAS). PAS will also receive a portion of this grant, which will help fund undergraduate research and training. The second investment was a generous corporate donation from Sanofi-Pasteur for \$7,500. As an esteemed member of our Advisory Council, company president Damian Braga has worked very hard in support of our Academy. We are very grateful for his generous contributions and those of his company as we continue our quest to promote science education and research throughout Pennsylvania.

Speaking of research, we are proud to award eight Undergraduate Research Grants this year, totaling almost \$5,000. The award recipients are listed in this issue of our Newsletter, and represent six Pennsylvania colleges and universities. Congratulations to all of these outstanding students, and their dedicated faculty mentors! We look forward to learning more about your research at a future Academy meeting.

Continued on Page 3

And, finally, speaking of our annual Academy meeting, please, reserve March 31-April 1, 2007, on your calendar. The 83rd annual Pennsylvania Academy of Science meeting will be held at the Radisson Hotel in Monroeville, PA. We are currently planning to sort presentations into five broad categories: Cellular & Molecular Studies, Ecology & Environmental Sciences, Organismal Biology, Physical Sciences, and Science Education. In addition, we are planning an exciting and timely symposium on Renewable Energy, for which Pittsburgh will be the perfect host city.

Taken together, these accomplishments clearly indicate that the Pennsylvania Academy of Science is not content to “*just sit there*”. Our Academy continues to advance science and technology throughout the Commonwealth and work diligently to support scientists of all ages. We welcome members from all scientific fields to join the Academy and share your input and expertise. Please, encourage your colleagues and friends to join the Pennsylvania Academy of Science and get involved!

Deborah D. Ricker, Ph.D.
Dept. of Biological Sciences
York College of PA
York PA 17405 - 7199
(717) 849-1619

e-mail: dricker@ycp.edu

DIRECTORS AT LARGE
(2005-2007) Fred Brenner
(2005-2007) Sherman Hendrix
(2006-2008) Marlene Cross
(2006-2008) Jane Cavender

Address Change and Membership Applications:

Robert B. Coxe, Membership Chairperson,
Delaware National Heritage Program, 4876 Hay Point
Landing Rd., Smyrna, DE 19977. (302) 653-2880 x122
e-mail: Robert.coxe@state.de.us

UPCOMING MEETINGS

The **83rd Annual PAS Meeting** will be held at the **Radisson Hotel, Pittsburg, PA, March 29-April 1, 2007**.
<http://pennsci.org>

The **Geological Society of American Annual Meeting** will take place on **October 22-25, 2006, Philadelphia, PA**. Please visit the website for more information
<http://www.geosociety.org/meetings/2006/>

The **Pennsylvania Science Teachers Association (PSTA) Annual Convention** will take place on **Nov. 29 - Dec. 1, 2006, Hershey Lodge and Convention Center, Hershey, PA**. Please visit the website for more information
<http://www.pascience.org/>

The **Entomological Society of American Annual Meeting** will take place **Dec. 10-13, 2006, Indianapolis, IN**. Please visit the website for more information
<http://www.entsoc.org/>

The **American Society for Cell Biology 46th Annual Meeting** will take place **Dec. 9-13, 2006, San Diego, CA**. Please visit the website for more information
<http://www.ascb.org/meetings/am2006/index.cfm>

The **Experimental Biology Annual Meeting** will take place **April 28-May 2, 2007, Washington, DC**. Please visit the website for more information
<http://www.eb2007.org/>

The **American Society for Microbiology General Meeting** will take place **May 21-25, 2007, Toronto, ON Canada**. Please visit the website for more information
<http://www.gm.asm.org/>

The **Association for Biological Laboratory Education (ABLE) 29th Annual Conference** will take place on **June 5-9, 2007 at the University of Kentucky, Lexington, KY**. Please visit the website for more information.
<http://www.zoo.utoronto.ca/able/conf/able2007/index.html>

This is a society dedicated to “Improving the undergraduate biology laboratory experience by promoting the development and dissemination of interesting, innovative, and reliable laboratory exercises”. They have many of their resources designed to teach biology laboratories online at:
<http://www.zoo.utoronto.ca/able/proc/contents.htm>

Pennsylvania Online Herpetological Atlas

A new resource is available for people interested in adding to our understanding of Pennsylvania's herpetofauna (Amphibians and Reptiles). Dr. Tim Maret of Shippensburg University maintains the Pennsylvania Online Herpetological Atlas at <http://www.ship.edu/~tjmare/herp.htm>. This is an extension the atlas project initiated by Dr. Art Hulse of Indiana University of Pennsylvania. An excerpt from the webpage explains the history of this initiative. "Dr. Hulse established a network of volunteers to collect information on the distribution of amphibians and reptiles throughout the state. The project ran for six years, during which time a tremendous amount of important and useful information was gathered. For example, some of the data were used in the decision to designate two species as endangered in Pennsylvania. However, we still lack critical information on 36 of Pennsylvania's 73 native amphibian and reptile species. Therefore, it was decided to revitalize the project in a new online form, as the **Pennsylvania Online Herpetological Atlas**."

A better understanding of the natural history, including distribution and abundance, of the herpetofauna in Pennsylvania is sorely needed and this web page provides an avenue for people to help. A menu on the left of the page provides links for Submitting a finding, Amphibian species of conservation concern, Reptile species of conservation concern, Resources for identifying species, Tips for photographing specimen, and other links including <http://www.topozone.com/>. The Topozone website is an extremely valuable tool as one may use the search portion (at the bottom of the page) or browse by state and county to identify specific coordinates where their amphibian or reptile was observed. An area is provided within the Submitting a finding form to include these coordinates. To assure that the submitter identified the amphibian or reptile correctly, you should include a picture of the organism with the provided upload a file feature at the bottom of the page.



The Resources for identifying species will aid those having difficulty identifying amphibians or reptiles and can be used by students and teachers of natural history alike. Specifically, untrained people interested in aiding this effort can use a link to a key developed and maintained by Dr. Ralph Grove of James Madison University titled Pennsylvania Online Herpetological Atlas Amphibian and Reptile Identification Helper or simply identifying an amphibian or reptile they have recently discovered.

Maps will be posted on the website to show where each species has been found, although specific locations will remain with Dr. Maret and the individuals utilizing the information to protect these populations. This website is a valuable tool and its existence should be shared with those that may be able to help by submitting findings. Please visit and evaluate the website for yourself at <http://www.ship.edu/~tjmare/herp.htm> and keep it in mind when you do discover amphibians or reptiles on your excursions into nature. If you have questions or can provide suggestions for improving the website, you may email Dr. Maret at tjmare@ship.edu.



CALL FOR ABSTRACTS

83rd Annual Meeting of the Pennsylvania Academy of Science

March 29- April 1, 2007

Radisson Hotel
Pittsburgh, PA

DEADLINE FOR RECEIPT OF ABSTRACTS: 15 December 2006

INSTRUCTIONS FOR PREPARING AND SUBMITTING ABSTRACTS

Read All Rules Before Writing Abstract

http://www.pennsci.org/annual_meeting/meeting_absrules.htm

**PLEASE NOTE: ALL ABSTRACTS MUST BE SUBMITTED USING THE
WEB PAGE AT**

http://www.pennsci.org/annual_meeting/Meeting_Submit_an_Abstract.htm

RULES GOVERNING SUBMISSION AND ACCEPTANCE OF ABSTRACTS

1. The corresponding author must be a member of PAS in order to submit an abstract
2. One person cannot be listed as the presenter on more than three abstracts.
3. Once the Program Committee has accepted an abstract, it cannot be withdrawn.
4. The Abstracts will be published in a supplemental issue of the Journal of the Pennsylvania Academy of Science to be distributed at the annual meeting.
5. Any abstracts received after December 15, 2006 will not be published.
6. Authors will be notified when the abstract is received and if the abstract is accepted the time and place of the presentation will be printed in the February PAS newsletter and posted on the PAS website <http://pennsci.org/>.

The Pennsylvania Academy of Science Board of Directors met on April 2nd 2006 at the 82nd annual meeting in the Holiday Inn in Grantville, PA and passed the following resolution.

RESOLUTION ON TEACHING OF EVOLUTION

Be it resolved on this 2nd day of April, in the year 2006, the Executive Board of the Pennsylvania Academy of Science passed the following resolution on the teaching of science based evolution in accredited elementary and secondary schools (K-12) in the Commonwealth of Pennsylvania.

The theory of evolution is based on sound scientific principles and supported by over 145 years of research in all biological disciplines. It is the cornerstone of biological education around the world.

The scientific evidence and well-supported data for evolution, as proposed by Darwin (1859) and refined through the modern synthesis by Dobzhansky, Chetverikov, Fisher, Wright, Simpson, Stebbins, Babcock, Gould, Freeman, Miller, Mayr and others, are overwhelming.

In contrast, there is no scientific evidence or supporting data for the idea of intelligent design. This theological/philosophical concept does not belong in the science curriculum, but perhaps in cultural, philosophical, or theological comparative studies.

Accordingly, be it resolved that the Executive Board of the Pennsylvania Academy of Science rejects the idea that intelligent design as an alternative to modern evolutionary theory be taught in science/biology classes in accredited elementary and secondary (K-12) schools across the Commonwealth of Pennsylvania.

Be it also resolved, that the Executive Board of the Pennsylvania Academy of Science supports the teaching of evolution, as supported by valid scientific evidence, in science/biology classes in accredited elementary and secondary schools (K-12) across the Commonwealth of Pennsylvania.

MANUSCRIPTS FOR *THE PENNSYLVANIA GEOGRAPHER*

The editors of *The Pennsylvania Geographer*, a peer reviewed, semi-annual journal of the Pennsylvania Geographical Society, are soliciting manuscripts for the Spring/Summer 2007 edition. The journal is in its 44th consecutive year of publication. The general topic for this issue (Volume 44, #1) of the journal is: **ECOTOURISM**. Papers dealing with the above theme, or any other geographical topics, will be considered for publication. The deadline for submitting materials for the spring/summer 2007 issue is **February 15, 2007**. Please send manuscripts and/or inquiries to Dr. William B. Kory, Editor, or Dr. Gregory Faiers, Associate Editor, *The Pennsylvania Geographer*, Geography Department, University of Pittsburgh at Johnstown, Johnstown, PA 15904. Phone: (814) 269-2994; 2993 or 2990. E-mail: koryupj@pitt.edu

TOPICS FOR FUTURE ISSUES:

Fall/Winter 2006 (Volume 44, #2):

“G eography and T errorism ”

August 15, 2006 deadline for receiving material

Spring/Summer 2007 (Volume 45, #1):

“C ultural G eography”

February 15, 2007 deadline for receiving material

Fall/Winter 2007 (Volume 45, #2):

“W ater R esources”

August 15, 2007 deadline for receiving material

Visit us on the web at

<http://www.pitt.edu/~pageog/>

SCHOLARSHIP & AWARD OPPORTUNITIES

Spencer Foundation Major Research Grants Program

The grants program is intended for research projects requiring more than \$35,000 in grant support. Awards of up to \$35,000 are made. Inquiries and preliminary proposals are accepted at any time. The principal investigator must have an earned doctorate in an academic discipline or a professional field and must be affiliated with a college, university, research facility, or cultural institution. The foundation supports research that promises to contribute new knowledge to the improvement of education, broadly conceived, in the U.S. and abroad. A variety of disciplinary and interdisciplinary approaches are favored, though emphasis is given by charter to the behavioral sciences. The foundation is interested as well in the related research areas of cultural knowledge, socialization, and the production and distribution of knowledge. Research may range from medium-sized studies that can be completed in a year by an individual researcher to more extensive collaborative studies that last several years. Grants are not made to maintain organizations or infrastructures of educational research. Additional information can be found on the Web at <http://www.spencer.org/proginfo.htm> For further information, contact: John B. Williams, Vice-President, Spencer Foundation, 900 North Michigan Avenue, Suite 2800, Chicago, IL 60611-1542.

LEARNED DISCOURSES

Timely Scientific Opinions

Intent. **Learned Discourses** provide a forum for open discussion by and for PAS members. These articles will reflect the professional opinions of the authors regarding scientific issues. They will not represent PAS positions or policies. And, although they are subject to editorial review for clarity, consistency, and brevity, these articles will not be peer reviewed. The success of the **Learned Discourses** depends on our contributors. We encourage submissions that are timely and will inform and stimulate discussion. If you disagree with an opinion expressed here, *submit a reply*.

Rules. All submissions must be succinct: preferably no longer than 1,000 words, no more than 6 references, and at most one table or figure. Reference format should follow that of the Journal of the Pennsylvania Academy of Science. Topics may fall within any area of science.

Submissions. Send submissions as e-mail attachments (Microsoft Word), to Richard Stewart (rlstew@ship.edu). Submissions will be printed on a first-received basis when space limitations apply.

Learned Discourses Editors

Richard Stewart and Pablo R. Delis

2007 Renewable Energy Symposium *Call for Abstracts*

RENEWABLE ENERGY CATEGORIES

solar energy;
wind;
low-impact hydropower;
geothermal energy;
biologically derived methane gas, including landfill gas;
agriculturally derived biomass;
fuel cells;
coal-mine methane;
waste coal;
coal liquefaction;
coal polygeneration;
integrated gasification combined cycle electricity generation;
demand management measures, including recycled energy and energy recovery, energy efficiency and load management; and
general renewable energy topics.

The following topics are listed for your convenience to match your paper with one of the titles. If your research title does not match with the following, submit your abstract for inclusion in the general renewable energy discipline.

For more information contact: Dr. Assad I. Panah, webmaster
Dept. of Geology and Environmental Science
University of Pittsburgh- Bradford
Bradford, PA 16701-2898
Ph: (814) 362-7569
Fax: (814) 362-5088
e-mail: aap@pitt.edu

Volunteer To Be A Campus Representative Now!

The Pennsylvania Academy of Science is seeking Campus Representatives from your school. If you are willing to place advertising on available bulletin boards and serve as a resource for students interested in becoming a member, this may be a service role for you. The webpage created to identify representatives' needs updating. It is located at http://www.pennsci.org/Campus_representative.htm Please contact the editors if you are willing to serve in this role.

Contact the Newsletter Editors

Dr. Richard Stewart
Dr. Pablo R. Delis
Biology Department
Shippensburg University
Shippensburg, PA 17257
(717) 477-1095
e-mail: rlstew@ship.edu

DARBAKER PRIZE - \$1,000

The Darbaker Prize is a Pennsylvania Academy of Science (PAS) award given for outstanding scholarly contributions, which use microscopic techniques and present microscopic illustrations in the reporting of biological research. The award is competitive amongst qualified papers submitted in association with the Academy's annual meeting.

The Pennsylvania Academy of Science established the Darbaker Prize in 1952. Funds for the award are made available through a bequest of the late L.K. Darbaker, 1939 PAS President. Referring to the award, Dr. Darbaker stated: "Any sum applicable to the Pennsylvania Academy of Science shall be for grant or grants in Microscopical Biology."

To qualify for the Darbaker Prize, a scientist or scientists must: (1) have used microscopy (light, SEM, TEM or other technologies) in the research they report, (2) submit in proper format a manuscript reporting the results of the completed study for consideration to be published in the *Journal*, (3) specifically state a request to the Editor of the *Journal* to have their manuscript considered for the Darbaker Prize for the current calendar year, and (4) be a member of the Pennsylvania Academy of Science. Darbaker Prize competition manuscripts are expected to be presented and submitted at the PAS annual meeting, but if not, manuscripts will be accepted for consideration within four weeks (28 calendar days) following the last day of the annual meeting. Only manuscripts that have successfully completed the review process and have been accepted for publication in the *Journal* will be eligible for the award.

The Editor of the *Journal* will examine all manuscripts submitted for award consideration to determine the fulfillment of requirements. The editor will then forward the eligible manuscripts with his/her and reviewers' recommendations to the PAS President for final decision. The Darbaker Prize will be made in the *Journal* at an appropriate time.

For further information contact:

Shyamal K. Majumdar, Ph.D,
Editor of the Journal
Professor of Biology
Lafayette College
Easton PA 18042
Ph: (610) 330 5464; Fax: (610) 330 5705
e-mail: majumd@lafayette.edu

PAS HIGH SCHOOL STUDENT RESEARCH GRANTS

The PAS has funds to provide modest financial support, not in excess of \$100, for student research projects. Students working on projects in the Natural or Physical Sciences under the direction of PAS member scientists at high schools, colleges, or in industry may submit an application for support.

Proposal Guidelines:

1. Funds are to be used primarily for supplies; secondarily, for small pieces of equipment if essential.
2. Funds are not to be used for major pieces of equipment, student stipends, travel, etc.
3. Proposals are encouraged that involve groups of students working together on a project.
4. Students are encouraged to present their findings at the next meeting of the Pennsylvania Junior Academy of Science (PJAS).

Proposal Requirements:

1. A title page with project title, name and grade of the student; sponsor name (PAS member); school name, address and phone number; characterization of school location (urban, suburban, or rural). The title page should also include the total amount requested (not to exceed \$100) and the signatures of student and sponsor.
2. A short summary of the project, including pertinent background information, a statement of the hypothesis, a description of the planned experiments, and a statement of the expected results.
3. Budget, including a statement of how the money will be used and a statement of the time frame during which the project will be performed.

Proposal Deadlines:

March 30 and November 15. Proposals received after a deadline will be reviewed during the following period. Send completed proposals or requests for further information to:

Dr. Jane F. Cavender
Chairperson, PAS Research Grant Committee
Department of Biology
Elizabethtown College
Elizabethtown, PA 17022-2298.

Information on various research grants can be found on the PAS web site at <http://pennsci.org/>

PENNSYLVANIA BIODIVERSITY PARTNERSHIP SOLICITS INPUT ON PENNSYLVANIA BIODIVERSITY CONSERVATION PLAN



The Pennsylvania Biodiversity Partnership (PBP) is a broad-based public-private partnership formed in 2000 to promote the conservation of native species and their habitats. PBP members include conservation and

environmental organizations; government agencies; business and industry; scientists and academic organizations; sportsmen and women; and private landowners.

A consensus quickly emerged with the Partnership that a statewide plan, focusing on strategies and opportunities for protecting Pennsylvania's natural resources, while at the same time maintaining economic vigor and quality of life for all Pennsylvanians, must be developed and implemented.

The development of this comprehensive plan for biodiversity is a multi-year process with a projected completion date of 2005. *Biodiversity in Pennsylvania: Snapshot 2002*, released in December 2002, marked the end of the first phase. This 48-page document is a concise literature-based report that synthesizes the present status of Pennsylvania's biodiversity.

Building on *Biodiversity in Pennsylvania*, PBP is actively soliciting input from all stakeholders, including biologists and other scientists, in developing the first draft of the Pennsylvania Biodiversity Conservation Plan. Please tell us what issues are important to you and what you would like the plan to contain by visiting the PBP website (www.pabiodiversity.org) and completing a short comment form online.

Additional information about PBP and copies of *Biodiversity in Pennsylvania* and the executive summary, may be found on the PBP website. Free copies of the report or executive summary may be obtained by contacting PBP, 16 Terminal Way, Pittsburgh, PA 15219, telephone (412) 481-4100, e-mail: pbpinfo@pabiodiversity.org



PENNSYLVANIA ACADEMY OF SCIENCE ANNUAL FUND CAMPAIGN

Fellow members of the Pennsylvania Academy of Science:

I would like to thank all of those who contributed to our first Annual Fund Campaign and to ask for your continued support. In order to adequately fund our undergraduate research program, we need to increase our Undergraduate Research Endowment. Currently we are funding the Journal by page charges and the operating fund of the Academy, but we would like to be able to create a sufficient endowment so that the interest can be used to support our excellent peer reviewed journal. The executive board of the Academy established the annual fund drive to increase our endowment for undergraduate research and to endow the Journal of the Pennsylvania Academy of Science. It is our desire to have the journal be self-sufficient and to be supported entirely through page charges and interest from our recently established Journal of the Pennsylvania Academy Endowment.

Pennsylvania Academy of Science Annual Fund Campaign

Please apply my contribution of:

_____ **to the Undergraduate Research Fund**

_____ **to the Journal of the Pennsylvania Academy of Science Endowment**

Signature _____

Thank You.
Fred J. Brenner, Past PAS President

COLLEGE STUDENT RESEARCH FUNDS AVAILABLE

The Pennsylvania Academy of Science has funds available to support UNDERGRADUATE AND GRADUATE COLLEGE STUDENT research in the natural, physical, or social sciences. Proposals should be written and submitted by the student under faculty guidance. Proposals will be accepted until May 1 at which time they will undergo review by professional referees, and evaluation by the PAS Research Grant Committee. Authors of proposals selected for funding will be notified by October 15. Unsuccessful applicants will be notified by November 15. Grants are normally made in the amount of \$500 or less, as requested in the proposal and, therefore, proposal budgets should take this limit to consideration.

General Guidelines for proposal:

- (1) Projects should be of such nature that they could be initiated and completed within one year.
- (2) The PAS funds are to be used primarily for expendable supplies, small pieces of equipment, and travel, living and/or housing expenses, if essential for the project.
- (3) Funds are not to be used for major pieces of equipment.
- (4) Results of the project are normally communicated at the next meeting of the PAS following completion of the research. The student is encouraged to submit a manuscript for consideration of publication in the *Journal of the Pennsylvania Academy of Science*.

Proposal Format should include the following Sections:

- (1) A titled INTRODUCTION describing the nature of the project and discussing the novelty or significance of the research. A general summary of the pertinent literature must be provided to demonstrate to the reviewers that the author has adequate knowledge of the research area.
- (2) A titled METHODS & MATERIALS describing how the research will be carried out; the kinds of materials and equipment used; the procedures to be employed regarding the care, use and disposition of research animals; the approximate starting and finishing dates of the research for which PAS funding is requested.
- (3) A titled STUDY PARTICIPANTS identifying the student(s) and supervising PAS member, their affiliation (e.g., academic institution or employer), and position or section status. The role of the student(s) must be CLEARLY identified. The previous relevant experience of the PAS member in supervising research must be discussed. A statement is required that the research supervisor is a current PAS member. A statement should be made regarding primary responsibility for writing the proposal, if not the author(s) given.
- (4) A titled BUDGET will include an ITEMIZED budget showing how PAS funds are to be used, and identifying the piece of equipment and facilities currently available to do the research. If funding is to be supplied by other sources, this should be identified. Additional guidance regarding format can be found in the "Guidelines for Authors" in *Journal of the Pennsylvania Academy of Science*.

Submission by email is strongly encouraged. You may also submit an original and FIVE (5) copies of the proposal and clearly list on the cover page, the area to which the grant most closely applies: Biochemistry, Chemistry, Cell Biology, Ecology, Environmental Science, Genetics, Geology, Microbiology or other. The PAS Research Grant Committee will evaluate all proposal reviews, and the proposals will be ranked for preference for funding. Only those proposal judged worthy of funding will receive funding to the extent funding is available. Unsuccessful proposals may be reconsidered after revision in accordance with suggestions by the PAS Research Grant Committee and proposal referees.

Send emails or materials to:

Dr. Jane Cavender,
Chairman PAS Research Grant Committee
Department of Biology
Elizabethtown College
Elizabethtown, PA 17022, e-mail: cavender@etown.edu

PENNSYLVANIA SOCIETY FOR BIOMEDICAL RESEARCH

The Pennsylvania Society for Biomedical Research (PSBR) is a 501(c)(3) non-profit science education organization, which was founded in 1990 and became operational in 1991. Universities, medical schools, pharmaceutical firms and professional societies in Pennsylvania formed the society. Current members and supporters include many of the Commonwealth's leading biomedical research and educational institutions, professional societies, and hospitals. Our mission is to foster a better understanding of the benefits of biomedical research and the vital role it plays in improving the quality of human and animal health and expanding our economy. A board of directors elected from its membership governs the society. The board meets three times a year, usually at a member organization. PSBR's annual meeting provides an opportunity for participants to be briefed of the status and activities of PSBR and to discuss important issues. The PSBR strongly supports the continued role of animals in research when no reliable alternative exists.

Our goals include:

1. Develop PSBR as a resource for pertinent facts about the indispensable use of animals in biomedical research.
2. Serve as a credible resource for the general public, educators, students, legislators and member organizations.
3. Responsibly manage our resources to enhance an environment which supports biomedical endeavors to improve human and animal health.

PSBR seeks to meet its goals through the following programs in cooperation with our member organizations:

1. **PSBR Information**

Publish PSBR Bulletin, a newsletter that documents items of interest to the biomedical research community

Maintain a PSBR home page and web site on the Internet (<http://www.psbr.org>)

Maintain a database and resource library of biomedical research information.

2. **Educational Programs**

Conduct contests for students on topics related to animals in research

Provide information for teachers through workshops and training programs

Provide educational materials and speakers to elementary, secondary and college classrooms

Provide reference materials on biomedical research to school and public libraries

Exhibit materials at scientific and educational conferences

Develop and maintain a hands-on exhibit about animals in research

Coordinate all PSBR programs with the Pennsylvania Department of Education

3. **Membership support – Public Relations/media**

Media/speaker training

Assistance in crisis management planning

Provide resources and information to members dealing with requests from the media and animal rights organizations

Contribute editorials and press releases on items of interest to biomedical research

Enlist the governor to proclaim October 21 as Biomedical Research Day, Pennsylvania

4. **Staff Orientation and Information**

Assist animal care staff in explaining their contribution to biomedical research

Enlist member personnel to participate in PSBR educational programs

5. **National Cooperation**

Network with other state biomedical research organizations, and with national organizations in order to maximize effectiveness through information exchange and development of cooperative projects and programs

6. **Animal Rights Movement**

Maintain a current knowledge of the animal rights movement by review of animal activist publications, web sites and information hotlines

Cooperate with national and other state biomedical research organizations

Seek opportunities to counter negative representations about biomedical research

7. **Legislation and Government Relations**

Monitor and review newly introduced legislation for impact on biomedical research

Provide information on key issues to legislators :

Keep members informed of the status of important legislation

For further information contact

PSBR

Post Office Box 1163

Camp Hill PA 17001-1163

Ph: (717) 731 3557; Fax: (717) 731 3506; e-mail: psbr@psbr.org

AMERICAN TOAD (*BUFO AMERICANUS*) IN NORTH MOUNTAIN, FRANKLIN COUNTY PENNSYLVANIA

By Pablo R. Delis



CALL FOR NOMINATIONS AND INTEREST IN SERVING

The members of the Pennsylvania Academy of Science are requested to submit nominations for the following offices of the Academy to be elected at the 2007 annual meeting:

Treasurer-elect (2006-8)

Director-at-large (2007-9) 2 positions (Nominated from among the committee chairs)

Additionally, if you or students at your school routinely go to the PAS annual meeting, PAS has an advisory role for you.

Nominations or inquiries of interest should be sent to:

Dr. Jane E. Huffman
PAS Past-President
Department of Biology
East Stroudsburg University
East Stroudsburg, PA 18301
Ph: (570) 422-3716
Fax: (570) 422-3724
e-mail: jhuffman@po-box.esu.edu

PENNSYLVANIA ACADEMY OF SCIENCE-APPLICATION FOR MEMBERSHIP

Date: ____ / ____ / ____
 Last Name: _____ First Name: _____ Middle Initial or Name: _____
 Complete Mailing Address: _____ City: _____ State: _____ Zip: _____
 Institution: _____ E-mail: _____
 Office Phone: (____) _____ Home Phone: (____) _____ Fax: (____) _____
 Branch of Science Main Interest: _____
(Biology, Zoology, Botany, Physiology, Chemistry, Physics, Engineering, Spectroscopy, Biochemistry, Psychology, Medicine, Mathematics, Geology, Geography, etc.)
 Degrees: _____ Title: _____

Where did you learn about PAS? _____

Member of AAAS? Yes	PSTA Yes	PASA Yes	PA Chapter Wildlife Society Yes
Society of College Science Teachers Yes	PA Biological Survey Yes	PA Assoc of Environmental Professionals Yes	
Comm of PA Univ Biologists Yes	MidAtlantic Assoc College Biologists Yes		
Active Member - \$ 35.00 per year	Student Member - \$17.50 per year	Sustaining Member - \$35.00 or more per year	
Life Member - \$525.00 (<i>can pay in installments</i>)		Non-profit Institution/Library Member - \$45.00 per year	
For-profit Institution/Library Member - \$150.00 per year			
Back Issue of <i>Journal</i> - \$15.00 each (List desired issue) _____		Contribution to PAS	_____

Please return this application and first year's membership dues, made payable to the **Pennsylvania Academy of Science**, or an address change to: **Dr. Robert B. Coxe, Membership Chairperson**, Delaware Natural Heritage Program, 4876 Hay Point Landing Rd. Smyrna, DE 19977. Ph: 302-653-2880 x122, Fax: 302-653-3431 or e-mail: robert.coxe@state.de.us

Book Order Form

I want to order the following books:

- Wildlife Diseases: Landscape Epidemiology, Spatial Distribution, and Utilization of Remote Sensing Technology (\$60.00)
- Renewable Energy: Trends and Prospects
- Science, Technology and National Security
- Ethics in Academia (\$50.00)
- The Era of Materials (\$50.00)
- Ecology of the Wetlands and Associated Systems (\$50.00)
- Forests – A Global Perspective (\$45.00)
- Environmental Contaminants, Ecosystems and Human Health (\$45.00)
- Medicine and Health Care into the Twenty-First Century (\$50.00)
- The Oceans: Physical-Chemical Dynamics and Human Impact (\$40.00)
- Biological Diversity: Problems and Challenges (\$40.00)
- Conservation and Resource Management (\$40.00)
- Global Climate Change: Implications, Challenges and Mitigation Measures (\$40.00)
- Natural & Technological Disasters: Causes, Effects and Preventive Measures (\$40.00)
- Science Education in the United States: Issues, Crises and Priorities (\$40.00)
- Air Pollution: Environmental Issues and Health Effects (\$40.00)
- Water Resources in Pennsylvania (\$40.00)
- Environmental Radon: Occurrence, Control and Health Hazard (\$40.00)
- Wetlands Ecology and Conservation (\$40.00)
- Management of Hazardous Materials and Waste (\$40.00)
- Ecology and Restoration of the Delaware River Basin (\$40.00)
- Contaminant Problems and Management of Living Chesapeake Resources (\$40.00)
- Environmental Consequences of Energy Production: Problems and Prospects (\$40.00)
- Endangered and Threatened Species Programs in Pennsylvania and other States: Causes, Issues and Management (\$40.00)
- Management of Radioactive Materials and Wastes (\$25.00)
- Hazardous and Toxic Wastes (\$35.00)
- Solid and Liquid Wastes (\$25.00)
- Pennsylvania Coal (\$15.00)
- Energy, Environment and the Economy (\$15.00)

TOTAL COST OF BOOKS ORDERED: \$ _____

Include \$5.00 Postage and handling per order: \$ 5.00

PA residents please add 6% sales tax*: \$ _____

TOTAL REMITTED:\$ _____

* Non profit Organizations, please provide tax exempt number:

Discounts on orders of 10 or more copies of a single title.

This book order form, together with the appropriate payment made payable to The Pennsylvania Academy of Science, should be sent to: Dr. Shyamal Majumdar, Department of Biology, Lafayette College, Easton, PA 18042.

Last Name: _____ First Name: _____ Middle Name or Initial: _____
 Complete Mailing Address: _____

SALES & SERVICE

NEW & USED

DOLBEY-JAMISON

SINCE 1909

MICROSCOPES MICROTOMES LABORATORY INSTRUMENTATION

Limerick Airport Business Center
213 Jones Blvd., Suite 105
Pottstown, PA 19464
1-800-220-3073 Fax: (610) 495-2005

PENNSYLVANIA ACADEMY OF SCIENCE, INC.

R. L. Stewart or P. R. Delis,
Editors of the Newsletter
1871 Old Main Dr.
Shippensburg, Pennsylvania, 17257

ADDRESS SERVICE REQUESTED