

Plan now to attend the
114th Annual Meeting
 of
The OHIO ACADEMY of SCIENCE
 April 1-2-3, 2005
 Hosted by
Bowling Green State University

OFFICIAL ANNOUNCEMENT

Saturday, April 17, 2004, 1:15 PM

Youngstown State University

Room 260, DeBartolo Hall

ANNUAL BUSINESS MEETING

FOR MEMBERS ONLY:

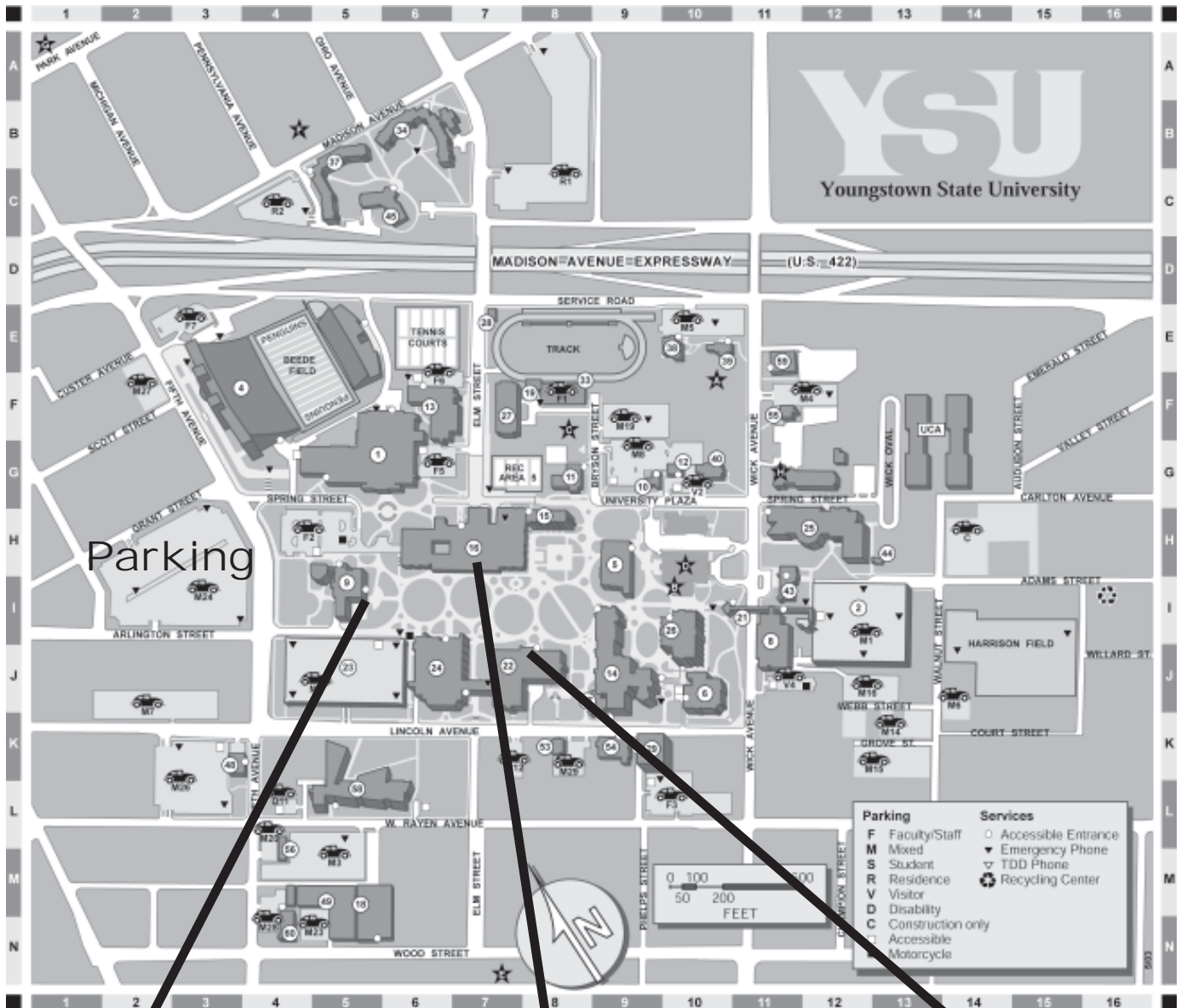
- A. A Call to Order by the President.
- B. A summary of the Minutes of the previous meeting shall be read by the Secretary.
- C. Presentation of the report of the tellers of the election of officers and other positions.
- D. Voting on any proposed amendments to the *Constitution* or *By-Laws*.
- E. Business from the floor.
- F. Adjournment.

How to get to Youngstown State University

From the east the over pass for Rt. 422. Go over the bridge and proceed straight onto **Fifth Avenue**. Stambaugh Stadium will be on the left. Turn right at the next red light onto Grant Street. The parking lot entrance will be further down Grant Street to the left.

From the southeast (Pittsburgh) take Rt. 422 West. Take the second exit (Belmont Avenue/**Fifth Avenue**). After exiting Rt. 422, proceed to the red light and turn left onto Fifth Avenue sign. Go over the Rt. 422 overpass and through the first red light. Stambaugh Stadium will be on the left. Turn right at the next red light onto Grant Street. The parking lot entrance will be further down Grant Street to the left.

From the northwest Exit at 422 East and proceed to **Fifth Avenue**/Stambaugh Stadium Exit. Continue to the red light following the first stop sign after exiting Rt. 422. Turn right onto **Fifth Avenue**. Stambaugh Stadium will be on the left. Turn right at the next red light onto Grant Street. The parking lot entrance will be further down Grant Street to the left.



Parking

DeBartolo Hall
Saturday Registration
& Sessions

Kilcawley Hall
Saturday lunch &
OBASAM Dinner

Moser Hall
Friday Reception &
President's Address

From the northoverpass for Rt. 422. Go over the bridge and proceed straight onto **Fifth Avenue**. Stambaugh Stadium will be on the left. Turn right at the next red light onto Grant Street. The parking lot entrance will be further down Grant Street to the left.

From the south Exit 4A, Rt. 422 East. Exit the freeway at the Fifth Avenue/Stambaugh Stadium Exit. Continue to the red light following the first stop sign after exiting Rt. 422. Turn right onto **Fifth Avenue**. Stambaugh Stadium will be on

the left. Turn right at the next red light onto Grant Street. The parking lot entrance will be further down Grant Street to the left.

From the west Exit the 422 freeway at the **Fifth Avenue**/Stambaugh Stadium Exit. Continue to the red light following the first stop sign after exiting Rt. 422. Turn right onto **Fifth Avenue**. Stambaugh Stadium will be on the left. Turn right at the next red light onto Grant Street. The parking lot entrance will be further down Grant Street to the left.



THE OHIO ENVIRONMENTAL SCIENCE
& ENVIRONMENTAL ENGINEERING
SCHOLARSHIP PROGRAM

Website: <http://www.ohiosci.org/OESEESCHOLARSHIPS.htm>



APPLICATION

Deadline: Mail First Class. Postmarked by April 16, 2004

\$1,250 two year programs and **\$2,500** for four or five year programs, non-renewable

These merit based, non-renewable, tuition only scholarships will be given to undergraduate students admitted to Ohio state or private colleges and universities who can demonstrate their knowledge and commitment to careers in environmental sciences or environmental engineering. Students must be in the **final year** of the program by the autumn term. Awardees will be selected by an Academy appointed panel.

Circle Title Ms. Mr. Mrs. First _____ Middle _____ Last _____
Home Address _____
City _____ State _____ Zip _____ EMAIL _____
Home # (____) _____ Social Security #: _____ - _____ - _____ Year in school by autumn term: 2nd 4th 5th
College or University _____
Academic major _____ Expected date of graduation _____
Advisor's full name _____ Office# (____) _____
Are you a member of an under-served population in your field of study? ____ YES ____ NO
If selected, are you willing to participate in annual follow-up surveys for three years after receipt of a scholarship? ____ YES ____ NO
May the Academy release your name and resume to potential employers? ____ YES ____ NO

PLEASE RESPOND TO THE FOLLOWING AND ATTACH APPROPRIATE SUPPORTING INFORMATION:

- (1) Academic record with an overall GPA of at least 3.0. Your current GPA _____ on a 4.0 system. Please **attach** a current (full) transcript and circle the GPA. Transcript must include all courses taken to-date. Enclose an "OFFICIAL" transcript with your original signed application and unofficial copies in the 6 identical sets.
 - (2) Attach a maximum 2 page vita, biosketch, or resume that includes the following elements, in this order: personal information, education, employment and/or internships (basic information only), honors/awards, professional memberships, publications (full citation), presentations given and professional meetings attended, and community service.
 - (3) Attach an *essay describing your reasons for choosing a career in environmental science or environmental engineering and how this scholarship will help you.
 - (4) Attach an *essay detailing any original research, scholarship, employment and/or internships, or other unique contributions to environmental science or environmental engineering.
 - (5) Attach an *essay describing your extra curricular activities and participation in organizations that demonstrates your leadership and interpersonal skills and social responsibility.
 - (6) Attach two letters of recommendation from education or environmental professionals, addressed to Scholarship Review Committee. One must be from a faculty member at your institution.
- *each essay may not exceed one, two-sided page, double spaced, 12 point type, 1" margins

Amount Requested \$ _____. Maximum: **\$1,250** for two year programs and **\$2,500** for four or five year programs, non-renewable. Date needed _____. NOTE: If you are awarded a scholarship, the check will be sent to the college financial aids office. All applicants will be notified of the scholarship recipients.

I certify that all information provided is true and accurate, I authorize independent verification, and I understand that if awarded a scholarship, information contained in this application may be released to the media.

SIGNATURE _____ DATE _____

Please enclose a self-addressed, stamped postcard to acknowledge receipt of your application.
QUESTIONS? Phone (614) 488-2228 • Email oas@iwaynet.net • Website: <http://www.OHIOSCI.org>

MAIL FIRST CLASS a complete, original signed copy with stapled attachments and 6 identical, two-sided, collated and stapled (**please do not bind**) copies (7 total) **postmarked** by Friday, April 16, 2004:

Environmental Science Scholarships
The Ohio Academy of Science
PO Box 12519
Columbus OH 43212-0519

The Ohio Academy of Science
announces the opening of the position of
Editor
of
The Ohio Journal of Science

Effective January 1, 2005

Application deadline:
Postmarked by May 1, 2004

The volunteer Editor shall be a member of the Academy and a scientist, engineer, technologist, or educator with a distinguished publication record and who has an interest in and knowledge of editing and publishing. Candidates should be currently active in research, be reasonably well organized, have tact, diplomacy and good judgment, have a sense of humor, have excellent working relationships with the administration of their employers, and be at an appropriate stage in their careers. The Editor shall supervise a part-time editorial assistant. Prior editorial experience is expected. Term of office shall be a minimum of five years.

Duties - The Editor shall: (1) Be a member of the Executive Committee, Board of Trustees, Finance Committee and the Publications Committee; (2) Encourage submission of manuscripts for *The Ohio Journal of Science* and arrange for their peer review and, if they qualify, for their timely publication; (3) Participate in the financial affairs of the *Journal*, (4) Receive all manuscripts submitted to *the Journal*, (5) Be responsible for ensuring that the *Journal* is published in a timely fashion, for maintaining a high quality of articles, and for securing peer review of manuscripts by competent referees.

Contact the Academy for additional information about the position.

Candidates should send **four complete copies** of a curriculum vitae and letter of application detailing qualifications including editorial experience to:

Search Committee for Editor
The Ohio Journal of Science
1500 W. Third Ave. Ste 228
Columbus OH 43212-2817

Phone (614) 488-2228

Questions? email oas@iwaynet.net

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THE OHIO ACADEMY OF SCIENCE

Registration Form

113th Annual Meeting

April 16-17, 2004

Hosted by Youngstown State University

Advance registration must be received by April 7, 2004

ALL MEETING ATTENDEES MUST REGISTER: Access to sessions by name tag only. Name tag, information packet and receipt will be available at the meeting. Please return the completed registration form along with the appropriate fees to the address printed below.

STUDENTS, SPOUSES, OR RELATIVES: A special discount schedule has been approved to promote and encourage participation of undergraduates, pre-college students, non-science spouses or relatives. All students, non-science spouses, parents or relatives must register using a separate form. This registration does not include membership or meals, which must be paid separately on this form.

	AFTER	
	APRIL 7	
NON-SCIENCE SPOUSE, PARENT OR RELATIVE OF FIRST AUTHOR	\$10	\$15

***Discount Rate for students who are not first author:**

(Does not include membership)

1-4 from same institution	\$20	\$25
5-10 from same institution	\$15	\$20
11 or more from same institution	\$10	\$15

Please use a SEPARATE REGISTRATION FORM

for each person. Copy this form as needed.

PLEASE PRINT OR TYPE

Circle: Ms. Mrs. Mr. Dr.

Name _____
 First **Middle** **Last**

Job Title _____

School, Organization, Agency, Institution, or Employer _____

Is the following a home address? ___ Yes ___ No

Students MUST use home, dorm or apartment address.

Address _____

City _____

State _____ Zip _____ County _____

Work Phone (_____) _____

Home Phone (_____) _____

FAX (_____) _____

Email _____

MAIL FORM WITH PAYMENT TO:

The Ohio Academy of Science
 PO Box 12519
 Columbus OH 43212-0519
 FAX 614/488-7629

Registration Fees

Please check appropriate categories. One fee covers ALL THREE DAYS. **Payment must be received by April 7, 2004 to avoid higher rates.** On-site registration will be accepted at the higher rate by credit card or check ONLY. **First authors have pre-paid registration when submitting their abstracts and DO NOT NEED to return this form.** First authors are already registered for the meeting.

		AFTER	
		APRIL 7	
CURRENT MEMBER REGISTRATION RATE			
<input type="checkbox"/> Professional	\$65	\$70	
<input type="checkbox"/> Retired	\$40	\$45	
<input type="checkbox"/> Student	\$25	\$30	

NON-MEMBER PROFESSIONAL AND RETIRED REGISTRATION RATE			
<u>Includes</u> membership			
<input type="checkbox"/> Professional	\$140	\$145	
<input type="checkbox"/> Retired with Journal	\$80	\$85	
<input type="checkbox"/> Retired without Journal	\$65	\$70	

NON-MEMBER PRE-COLLEGE AND COLLEGE STUDENT RATE			
<u>Includes</u> Academy membership			
<input type="checkbox"/> College Student with Journal	\$65	\$70	
<input type="checkbox"/> Student (17 & under) w/Jour.	\$65	\$70	
<input type="checkbox"/> Student (17 & under) w/o Jour.	\$50	\$55	

<u>Does Not</u> include Academy membership			
<input type="checkbox"/> Pre-college student	\$20	\$25	
<input type="checkbox"/> College student	\$20	\$25	
<input type="checkbox"/> 5-10 students each	\$15	\$20	
<input type="checkbox"/> 11 or more students each	\$10	\$15	

*See table at left for more information.

NON-SCIENCE SPOUSE, PARENT OR A RELATIVE OF A FIRST AUTHOR			
<input type="checkbox"/> Spouse, parent or relative	\$10	\$15	

Please use a separate form for each.

MEMBERSHIP RENEWAL		
<input type="checkbox"/> Family	\$85	
<input type="checkbox"/> Regular Member	\$75	
<input type="checkbox"/> Retired Member w/OJS	\$40	
<input type="checkbox"/> College Student	\$40	
<input type="checkbox"/> Student (Age 17 & under) w/OJS	\$40	
<input type="checkbox"/> Retired Member w/o OJS	\$25	
<input type="checkbox"/> Student (Age 17 & under) w/o OJS	\$25	

TOTAL ENCLOSED \$ _____

METHOD OF PAYMENT

NO REFUNDS AFTER April 7, 2004.
 Return checks subject to a \$30.00 return fee.
 Only registrations paid by Purchase Order, VISA, or MasterCard will be accepted by FAX at 614/488-7629.

- This copy confirms a FAXed registration
- Check enclosed payable to The Ohio Academy of Science
- Purchase order enclosed No. _____
- Online payment option** www.merchantamerica.com/ohiosci
- Please charge my credit card

_____ VISA _____ MASTERCARD

Card Number _____

Exp. Date ____/____/____

Signature _____

REGISTRATION POLICIES
The Ohio Academy of Science
113th Annual Meeting
 Hosted by **Youngstown State University**

April 16-17, 2004

Advance registration must be **received** by April 7, 2004

ALL attendees must register.

ALL MEETING ATTENDEES: Access to sessions by name tag only. Name tag, information and receipt will be available at the meeting. Please return the completed registration form along with the appropriate fees to the address printed below.

STUDENTS, SPOUSES, PARENTS OR RELATIVES: To promote and encourage participation of undergraduates, pre-college students, non-science spouses, parents or relatives, a special discount schedule has been approved. **All students, non-science spouses or relatives must register using a separate form.** This registration does not include membership or meals which must be paid separately.

After
April 7th

Spouse, parent or relative of first author	\$10	\$15
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Discounted Rates for students who are not first author:

(Does not include membership)

1-4 from same institution	\$20	\$25
5-10 from same institution	\$15	\$20
11 or more from same institution	\$10	\$15

Please use a SEPARATE REGISTRATION FORM for each person.

Copy the form on the reverse side as needed.

MAILFORM WITH PAYMENT TO:

The Ohio Academy of Science
 PO Box 12519
 Columbus OH 43212-0519

FAX 614/488-7629 for credit card or purchase order.

Online payment option
www.merchantamerica.com/ohiosci

PREREGISTRATION DEADLINE: April 7, 2004

Author's Instructions for Preparation of Manuscripts

The Ohio Journal of Science considers for publication solicited **Book Reviews** and **Research Reviews**, and unsolicited **Brief Notes** and **Research Reports**. Solicited submissions will be requested by the editor or member of the editorial board. Book reviews will be requested of experts in the subject matter of the book to be reviewed. Research Reviews will be requested to serve as extensive surveys of the literature of an area of science in which Academy members have an interest.

Unsolicited submissions, in the form of presentations of quantitative or qualitative data pertinent to any of the divisions of the Academy listed inside the front cover, will be considered for peer review. Brief notes are manuscripts that are less than 2 printed pages (approximately 6 typed pages) and contain no more than one table, figure or other type of illustration. The editor will identify papers which meet these criteria as Brief Notes if not already categorized as such by the author. Research Reports are those papers which are longer than 2 pages or contain more than one illustration.

All manuscripts will be organized as follows:

Page 1 - Title, Author(s), Running Head, Abstract

Page 2 and remainder -

Introduction,
Materials and
Methods,
Results,
Discussion,
Acknowledgments,
Literature Cited,
Tables, Figure Legends,
Figures.

STYLE. *The CBE Manual for Authors, Editors, and Publishers*, 6th ed. is used for editorial decisions with regard to style. Manuscripts should be typewritten using 1 inch margins on 8.5 x 11 inch paper. Text should be left-justified using elite print (twelve characters per inch). Three copies should be submitted. Manuscript should be double-spaced throughout, including the title and abstract. Arabic numerals should be used in preference to words when the number designates anything that can be counted or measured (7 samples, 43 species). One exception to this use is that numerals are not used to begin a sentence (Twenty-one species were found in . . .). The 2nd exception is when 2 numeric expressions are adjacent in a sentence. The number easiest to express in words should be spelled out and the other left in numeric form (The sections were divided into eight 4-acre plots).

TITLE, AUTHOR(S), AFFILIATION(S). The first page of the manuscript should contain the title, author(s) name(s), the affiliation of the author(s) at the time the research was carried out, a shortened title (running head), and the abstract. The title must be typed in upper and lower case letters as it will appear when typeset. Name(s) of the author(s) should be typed in capital letters below the title. The address (department, institution, city, state, postal code, country if not USA) should appear below the name of the author(s). If more than one institution is to be credited, they should appear in the order of the authors' affiliation. A running head of not more than 38 letters and spaces should be typed in capital letters between the address and the abstract.

ABSTRACT. The abstract should summarize the main conclusions and any new methods or procedures critical to the results of the study. It should be 250 words or fewer.

INTRODUCTION. The introduction should describe the knowledge that gave rise to the question examined by, or the hypothesis posed for the research.

MATERIALS AND METHODS. This section should describe the research design, the methods and materials used in the research (subjects, their selection, equipment, laboratory or field procedures), and how the findings were analyzed.

RESULTS. The text of the results should be a descriptive narrative of the main findings, of the reported study. This section should not list tabulated data in text form. Reference to tables and figures included in this section should be made parenthetically in the text.

DISCUSSION. This section should compare and contrast the data collected in the presented study with that previously reported in the literature. Unless there are specific reasons to combine the two, as explained by the author in

the letter of transmittal, Results and Discussion should be two separate sections.

ACKNOWLEDGMENTS. Colleagues and/or sources of financial support to whom thanks are due for assistance rendered in completion of the research or preparation of the manuscript should be recognized in this section rather than in the body of the text.

LITERATURE CITED. References to scientific literature should be arranged alphabetically by first author's last name using the Name/Year (N-Y) method as described in the *CBE Manual*.

Journals

Author(s). Year. Article title. *Journal title* volume number (issue number): inclusive pages.

Thomison JB. 1988. Uniform requirements for manuscripts. *South Med J* 81(8):947-52.

Form of citation: (Thomison 1988)

Books

Author(s). Year. Title. Place of publication: publisher name. Number of pages.

Voet D, Voet JG. 1990. *Biochemistry*. New York: J Wiley. 1223 p.

Form of citation: (Voet and Voet 1990)

Multiple author citation: (Steiner and others 1992)

TABLES. Tables must be typed double-spaced, one table to a page, numbered consecutively, and placed in the manuscript after Literature Cited. Since tables must be individually typeset, consolidation of data into the smallest number of tables is encouraged. A horizontal double underline should be made beneath the title of the table, and single underlines should be made the width of the table below the column headings and at the bottom of the table. Do not use vertical lines, and do not place horizontal lines in the interior of the table. Footnotes should be used to clarify possible questions within the table, and should be noted by asterisks, daggers, or other symbols to avoid confusion with numerical data.

FIGURES. All illustrations are referred to as "Figures" and must be numbered consecutively. Figures may be photographs, hand-drawn or computer generated drawings in black ink. Each figure should be identified along the top edge with the name of the author(s) and figure number, and on the back with name of author(s) and manuscript title. Illustrations other than those generated by the author(s) must bear permission for use and credit to the originator. ORIGINAL ARTWORK WILL NOT BE RETURNED UNLESS SPECIFICALLY REQUESTED AT TIME OF SUBMISSION. Each figure must have a complete legend. The legend should not be placed on the figure, but should be typed in order, double-spaced, on a separate sheet which precedes the figures in the manuscript. Figures should be referred to parenthetically in the text, for example (Fig. 1). The size and proportion of each illustration should be suitable for reduction. Excessive white space should be avoided. Illustrations will be reduced to one column width (3 and 3/8 inches) or two column width (7 inches) at the discretion of the editor. Lettering should be done of a size to ensure that it can be read after reduction. On maps and other illustrations where original size is a concern, a graphic scale should be incorporated into the figure.

FOOTNOTES. Text footnotes **should not be used** with the following exceptions. A footnote to the title will be added editorially to state the dates of manuscript submission and revision. A footnote to name(s) of author(s) may be used to indicate present address different from that at which the research was done, or to indicate the author to whom inquiries should be directed. All other material or comments must be incorporated into the text. Literature Cited should not be inserted as footnotes. Footnotes to tables are permissible, and are encouraged to promote clarity.

Attention to the above instructions will minimize the need for revision and editorial correction, and will shorten the time from submission to publication. Any questions which are not answered by these instructions, or by consulting the *CBE Manual for Authors, Editors, and Publishers*, 6th Edition, should be addressed to the editor.

Dr. Isadore Newman, Editor
THE OHIO JOURNAL OF SCIENCE
College of Education
Zook Hall
The University of Akron
Akron OH 44325-4201 USA
Phone: 330/972-7680
inewman@uakron.edu

Plan NOW to Attend Stone Laboratory in 2004

F.T. Stone Laboratory, The Ohio State University's Island Campus, offers over 30 college credit courses to undergraduate and graduate students, educators, and outstanding high school students every summer. From Lake Erie geology to aquatic biology courses, students receive a hands-on science experience in one-day, one-week, or term courses. This facility is located on the 6.5-acre Gibraltar Island and is the nation's oldest freshwater biological field station and research laboratory. Stone Laboratory is the Lake Erie research and teaching laboratory for the Ohio Sea Grant College Program.

Stone Laboratory's Summer 2004 Course Offerings



Introductory Courses

*Open to college and select high school students.**

Week Courses: June 6 - August 25

3 credits; classes meet Sunday through Saturday

- Aquatic Biology (offered four times)
- Field-Based Oceanography
- Insect Biology
- Local Flora
- Study of Birds

**To qualify, high school students must have completed their sophomore year, be 15 years of age or older, and have completed one course of high school biology prior to the beginning of the course.*

Special Non-Credit Course

Open to the public (18 years and older), and college students as a non-credit course. All students must register directly through the Columbus Office.

- Lake Erie Islands Photography Workshop (Digital camera required)

Courses for Educators

For classroom teachers, non-formal educators, and education majors with junior or senior rank by summer 2004.

Week Courses: June 6 - August 25

3 credits; classes meet Sunday through Saturday

- Alien Species Education
- Aquatic Environmental Science for Teachers
- Field Ecology
- Fisheries Science for Teachers
- Geologic Setting of Lake Erie (Sat. through Fri.)
- Insect Biology for Teachers
- Local Flora for Teachers
- Marine & Aquatic Education
- Ornithology for Teachers
- Principles of Oceanography for Science Teachers
- Stream Ecology for Teachers

Upper-Level Courses

For undergraduate and graduate students in biological sciences, education, and natural resources; professional biologists, and ecologists; and biology and general science teachers.

Term 1 Five Weeks: June 20 - July 23

5 credits; classes meet three days a week

- Field Zoology
- Ichthyology
- Limnology

Term 2 Three Weeks: July 25 - August 13

5 credits; classes meet five days a week

- Aquatic Entomology
- Fish Ecology
- Aquatic and Wetlands Flora

Week June 6 - August 25

3 credits; classes meet Sunday through Saturday

- Ecology and Management of Wetland Birds
- Field Ecology
- Herpetology
- Structuring Environmental Decisions for the Great Lakes Region

1-10 Days

- Current Topics in Environment & Engineering – 1 credit; 3 evening seminars (6 lectures)
- Field Plant Pathology – 3 credits; 10 days
- Ichthyoplankton Identification Workshop – 1 credit; one day



For Application Materials, Course Descriptions, Changes, & Updates, visit our web site or call 614.292.8949

www.stonelab.ohio-state.edu