Back Matter
Registration Form
106th Annual Meeting
April 4-5, 1997
Hosted by Bowling Green State University
Advance registration must be received by March 21, 1997.

ALL authors, presenters and other attendees must register.

ALL MEETING ATTENDEES: 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, Significant Others or Relatives: To promote and encourage participation of undergraduates and pre-college students, any paid, registered student may bring another student (who is not an author/presenter) as a guest for $10.00. Significant others and relatives of authors/presenters attending only to listen to a presentation may also register for $10.00. All students, significant others, and relatives must register using a separate form. This registration does not include membership or meals which must be paid separately.

Please use a separate form for each registration; 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 ________________________________
ADDRESS ____________________________________________________________
CITY __________________________ STATE ________ ZIP __________ COUNTY __________
HOME PHONE (___________) __________________________ WORK PHONE (___________) __________________________ FAX (___________) __________________________
IS THIS A HOME ADDRESS? __ Yes __ No

MAIL FORM WITH PAYMENT TO:
The Ohio Academy of Science
PO Box 12519
Columbus OH 43212-0519
FAX 614/488-2228 (M-F: 9am-5pm)
PRE-REGISTRATION DEADLINE: March 21, 1997

REGISTRATION FEES
Please check appropriate categories. One fee covers ALL THREE DAYS. Payment must be received by March 21, 1997 to avoid higher rates. On-site registration will be accepted at the higher rate by credit card or check ONLY.

MEMBER RATE
Professional $50 $60
Student or Retired $25 $30

NON-MEMBER RATE (Includes membership)
Professional $90 $100
College Student or Retired $50 $55
Student (Age 17 & under) $50 $55
Student (Age 17 & under) or Retired w/o The Ohio J. of Science $35 $40

GUEST OF PAID REGISTRANT
Student, significant other or relative $10 $15

MEALS (ONLY by pre-registration)
Friday Dinner $25 Available after $25 March 21st.
Saturday Banquet $25

ADDITIONAL INFORMATION - Check if attending
I will attend the following Internet Sessions
• Saturday Morning -- Beyond Surfing the Web
• Saturday Afternoon -- Creating a Web Site
I will attend the following Sunday field trip
• Plant Sciences
• Geology

MEMBERSHIP RENEWAL
Family (max. 3 persons) $60
Regular Member $50
Retired (age 59 and over) Member w/OJS $30
College Student $30
Student (Age 17 & under) w/OJS $30
Retired Member w/o OJS $15
Student (Age 17 & under) w/o OJS $15

TOTAL ENCLOSED $ __________________________

NO REFUNDS AFTER March 31, 1997.
Return checks are subject to a $15.00 return fee.

METHOD OF PAYMENT
Only registrations paid by Purchase Order, VISA, or MasterCard will be accepted by FAX at 614/488-2228 (M-F: 9am-5pm).
D Confirms a FAXed registration
D Check enclosed payable to The Ohio Academy of Science
D Purchase order enclosed (A $2.00 processing fee will be added)
D Charge my credit card (A $2.00 processing fee will be added)

D VISA ________ D MASTERCARD ________
CardNumber __________________________
Exp. Date ____ / _____
Signature ____________________________________________
Registration Policies

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AUTHOR'S INSTRUCTIONS FOR PREPARATION OF MANUSCRIPTS FOR PUBLICATION IN THE OHIO JOURNAL OF SCIENCE

THE OHIO JOURNAL OF SCIENCE considers for publication submissions of the following nature:

1. Solicited Submissions - Book Reviews, Research Reviews.
2. Unsolicited Submissions - Brief Notes, Research Reports.

Solicited submissions will be requested by the editor or by a member of the editorial board. Book Reviews will be requested of individuals expert in the subject matter of the book to be reviewed. The approximate length will be 750 words, and unpublished reviews must include a brief description of the subject matter addressed by the volume, its outstanding strong points, and any obvious weaknesses. 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. In general, reviews will comprise five to ten printed pages. Organization and format of solicited material will be determined by the author(s) and the editorial staff.

Unsolicited submissions, in the form of presentations of qualitative or quantitative data pertinent to any of the sections of the Academy listed inside the front cover, will be considered for peer review. Brief Notes are manuscripts which will be published on less than two printed pages (i.e., less than six pages of typescript) and will contain no more than one piece of illustrative material (i.e., table, figure, or other illustrations). The editor will identify papers which meet these criteria as Brief Notes if not so categorized by authors. Research Reports are papers which will extend beyond two printed pages and which will contain two or more pieces of illustrative material. Regardless of the length of manuscript, unsolicited submissions should be organized according to the following format:

Page 1 - Title, Authors(s), Affiliation(s), Abstract.
Page 2 and the remainder - Body of the Paper in the order; Introduction, Materials and Methods, Results, Discussion, Acknowledgements, Literature Cited. Tables, Figure Legends, Figures.

STYLE. The general style of papers previously published by THE OHIO JOURNAL OF SCIENCE should be employed, and can be determined by reading recent issues of THE OHIO JOURNAL. Manuscripts should be typewritten with wide margins on 21.6 x 27.9 cm (8.5 x 11 in) paper, and be double-spaced throughout including the title and abstract. The only words to be underlined are scientific names. Spell out numbers one through nine and use Arabic numerals above nine. Extensive quotations in the text should be typed slightly indented from the other text. Capitalize symbols and abbreviations for units of measurement. They should be given as in the CBE Style Manual, 5th ed. (Council of Biology Editors, Inc., 9650 Rockville Pike, Bethesda, MD 20814). This volume is used for editorial decisions with regard to style. Primary text reference should use the International System of Units in all cases, with parenthetical reference to English units at the discretion of the author.

The following guidelines should be adhered to in the organization of the manuscript:

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. Names of the author(s) should be typed in capital letters below the title. The address (department, institution, city, state, postal code) of the research done should be typed below the name of the author. If more than one institution is to be credited, they should appear in the order of the authors' affiliation. If typed by word processor, copy should not be justified. Please use Elite (12 characters per inch) type. A running head of no more than 38 letters and spaces should be typed in capital letters between the address and the abstract.

ABSTRACT. The abstract should be a meaningful summary of the significant findings reported in the Brief Note or Research Report. It should be self-sufficient for the presentation of main conclusions and any new methods or procedures critical to the results of the study. The abstract should be brief (250 words or less) but should be written in complete sentences for purposes of comprehension and clarity. Phrases such as “it is presented,” “is explained,” or “is discussed” should not be used. Abstracts from THE OHIO JOURNAL, as well as from international abstracting publications, and may be the only contact that other scientists have with your work.

MATERIALS AND METHODS. This section should contain sufficient detail to allow the reader to attempt replication of the reported research. If reference is made by literature citation only to research methods devised by others, any unique modifications of the standard procedure should be explained. Any statistical methods used in the analysis of data should be described and documented.

RESULTS. The text of the results should be a descriptive narrative of the main findings, both positive and negative if the latter occurred, of the reported study. This section should not be simply a listing of the 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 consist of the comparing and contrasting of data collected in the presented study with that previously reported in the literature. A goal is to incorporate at least one literature citation and one reference to illustrative material from previous results section of discussion. Unless there are specific reasons to combine the two, as explained by the author in the letter of transmit, Results and Discussion should be separate sections.

ACKNOWLEDGEMENTS. 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 according to the following examples.

Abbreviation of journal titles should be supplied by the author, and should follow the CBE Style Manual form. References in the text are of the form Patterson (1940) or Patterson 1940, if more than two authors appear, the form should be Patterson et al. (1940), with all authors listed in the Literature Cited section.

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 underline should be made the width of the table below the column headings and at the bottom of the table. Tables do not use abbreviations. Do not use 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. General style of tables can be seen in recent issues of THE OHIO JOURNAL.

FIGURE LEGENDS. Each figure must have a complete legend even though the material is described in the text. The legends 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).

FIGURES. All illustrations are referred to as "figures," and must be numbered consecutively. Figures may be photographs, or hand- or computer-generated line drawings in black ink. For the sake of economy, closely related illustrations should be grouped and mounted close together on white cardboard for reproduction as a single unit; however, line drawings and photographs should not be pasted together to create a figure. Each figure, or collection of figures in a plate, should be identified along the top edge with name of 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 must bear permission for use and credit to the originators or publishers. All illustrations will not be returned unless specifically requested at time of submission. The author must supply a stamped self-addressed envelope for return. The size and proportions of each illustration or group of illustrations should be suitable for reduction to the width and length of the printed page (17.8 x 24.1 cm, 7 x 9.5 in). Care should be taken to minimize the space occupied by line drawings, and excessive white space should be avoided. Line drawings should not exceed 20 x 25 cm (8 x 10 in). If carefully drawn, figures need be no more than 33% larger than the size desired in print. 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 included attached to the figure. Besides the original art work for each illustration, two photocopies of each should be submitted to avoid delay in the review process.

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 a present address different from that at which the research was done, or to inform the author to whom inquiries should be directed. All other material or comments must be incorporated into the text. In no case should literature citations be inserted as footnotes. They must be listed in the Literature Cited section. 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, by examining papers in recent issues of THE OHIO JOURNAL, or by the CBE Style Manual, 5th ed., should be addressed to the editor.
F.T. Stone Laboratory, Ohio's Lake Erie laboratory and freshwater biological field station since 1895, is located on Gibraltar Island across the harbor from Put-in-Bay on South Bass Island. Dr. Jeffrey M. Reutter is the Director.

Stone Laboratory is a unique facility and a resource for the entire state and region. The Laboratory is located on an island and the "field" includes much of the western basin of Lake Erie, including glacial grooves, abandoned limestone quarries, several acres of wet prairie, stream environments, extensive shoreline marshes, alvars, and larger inhabited islands.

Research in aquatic, terrestrial, and island sciences has been conducted at the Laboratory since 1895. Stone Laboratory's association with other programs based at The Ohio State University — the Ohio Sea Grant College Program, the Center for Lake Erie Area Research (CLEAR), and the Great Lakes Aquatic Ecosystem Research Consortium (GLAERC) — has made it an important research facility. Recent research projects have dealt with the following issues:

- Control and impact of zebra mussels and other nonindigenous species
- Island ecology
- Toxic algae and water taste and odor problems
- Transfer of contaminants through the food chain
- Ecosystem management
- Controlling nonpoint source pollution and agricultural run-off
- Wetland research and management
- Sport fishery development
- Insect and snake populations.

Summer Courses
Stone Laboratory students learn in the classroom, laboratory, and field in courses that provide a comprehensive background in freshwater systems and specific information on the unique environmental attributes of Lake Erie.

Upper-level courses are designed for undergraduate and graduate students in biological sciences, education, and natural resources; professional biologists and ecologists; and biology and general science teachers. These courses meet three days a week for five weeks.

Introductory courses are available to college and select high school students who have completed a high school biology course. These courses meet daily for one week.

Other uses of Stone Laboratory
Custom-designed aquatic science workshops and group field studies are offered from mid-April through October. Science teachers who teach 4th grade classes and higher are encouraged to bring their students to Stone Laboratory for one to three days of field study. Stone Laboratory can provide laboratories, research boats, field equipment, and experienced field ecologists for such groups.

Conference and retreat facilities are available from mid-April through October. The isolated, informal atmosphere on the island makes it ideal for these programs.

Research facilities at Stone Laboratory are available year round.

For more information, contact:
Dr. Jeffrey M. Reutter, Director, F.T. Stone Laboratory,
The Ohio State University, 1314 Kinnear Road, Room 1541,
Columbus, OH 43212-1194, 614/292-8949, Fax 614/292-4364.
Web site http://www-ohiosg.osc.edu/OhioSeagrant
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ADDRESS __________________________________________________________

CITY __________________________ STATE ________ ZIP __________ COUNTY ________

HOME PHONE (_______) __________________________ WORK PHONE (_______) __________________________

FAX (_______) __________________________

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  - Geology

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  - Retired Member w/o OJS $15
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TOTAL ENCLOSED $ __________

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METHOD OF PAYMENT

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- Charge my credit card (A $2.00 processing fee will be added)

VISA/MASTERCARD

Card Number __________________________
Exp. Date ______/____
Signature __________________________

PRE-REGISTRATION DEADLINE: March 21, 1997
In 1996 the Kent State University Press published *A Geography of Ohio*. The book, edited by geographer Leonard Peaceful, features an introduction, sixteen chapters and a conclusion presenting various aspects of Ohio’s diverse human and physical geography. Chapters with a physical geography orientation include “The Land,” “Climate and Weather,” “Ohio Soils” and “Ohio’s Mineral Resources.” Chapters with a human geography orientation include “Aboriginal Cultures and Landscapes,” “Ohio’s Settlement Landscape,” “The Development of the Economic Landscape,” “Population Patterns,” “Small Towns,” “Energy Production and Consumption,” “Agriculture,” “Manufacturing,” “Transportation,” “Outdoor Recreation and Tourism” and “Change on the Edge of Ohio.” And embedded nicely near the book’s center is a composite chapter entitled “Cities in Ohio” with subsections on Columbus, Cleveland, Cincinnati, Toledo, Akron, Youngstown and the Dayton-Springfield Metropolitan Area. The text is widely recognized across Ohio and is generally accepted as the penultimate reader on the state’s geography. This panel discussion features several contributing authors to *A Geography of Ohio* as well as a contemporary policy maker interested in the many dimensions of the state’s physical and human geography. Panelists will not review their contributions to the book but will build on the perspectives presented there to look into the future. Each panelist will be asked to address the following questions. How will the subject of your chapter change as we move through the next century? Will the importance of your subject increase or diminish during the next 100 years? In terms of your subject, what advantages does Ohio possess that will present the state with a competitive advantage? In terms of your subject, what disadvantages does Ohio possess that will present the state with a competitive disadvantage? What are the most controversial aspects of your subject’s immediate and long range future? Upon addressing each of these questions panelists will entertain questions from each other and the audience. The policy maker will provide an overview of the discussion, address selected subjects and their implications on state-level policy considerations and look ahead to Ohio’s future.

**DISCUSSANTS:**

- **Prof. Nancy Bain**  
Ohio University

- **Prof. Jeff Gordon**  
Bowling Green State University

- **Dean Henry Moon**  
University College, The University of Toledo

- **Dr. Richard Janson**  
The Janson Industries

- **Mr. Tim Gerber**  
Div. of Soil & Water Conservation, Ohio Dept. of Nat. Resources

- **Prof. Emeritus Henry Hunker**  
Dept. of Geography, The Ohio State University

- **Mr. Tom Nash**  
Cuyahoga Valley NRA, Brecksville, OH

- **Elected Public Official**  
To Be Announced

Please see registration form on reverse side.