Index to Abstracts - Meeting Information - Author's Instructions
### Index to Abstracts of First Authors

<table>
<thead>
<tr>
<th>Adams, Judy L, 33</th>
<th>Hall, Prudence J, 24</th>
<th>Lee, Karen Danielle, 20</th>
<th>Sinha, Ayusa, 27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albrecht, Matthew A, 25, 36</td>
<td>Hannum, April Marie, 30</td>
<td>Lee, Luann Christensen, 25</td>
<td>Skaleski, Laura Beth, 9</td>
</tr>
<tr>
<td>Aughenaugh, Michael L, 15</td>
<td>Hart, Emily C, 7</td>
<td>Lopez, Lisa Kimberly, 18</td>
<td>Smith, Adam Ray, 14</td>
</tr>
<tr>
<td>Baers, Robert C, 15</td>
<td>Hayden, Todd A, 26</td>
<td>Lundberg, Erica Wade, 16</td>
<td>Smith, Bruce W, 21</td>
</tr>
<tr>
<td>Baker, Kenneth N, 31</td>
<td>Headings, Mark E, 38</td>
<td>Makary, Mina Samir, 28</td>
<td>Smith, Ebone, 10</td>
</tr>
<tr>
<td>Barfield, Meredith L, 19</td>
<td>Heath, Robert T, 32</td>
<td>Margida, Michaela Gabrielle, 27</td>
<td>Snyder, Fred L, 30</td>
</tr>
<tr>
<td>Beaver, Meredith A, 14</td>
<td>Herbert, Elizabeth M, 17</td>
<td>Mason, David L, 6</td>
<td>Sommer, Thomas E, 29</td>
</tr>
<tr>
<td>Benoit, Joshua B, 7</td>
<td>Hetrick, Mary, 11</td>
<td>Matheny, Erica M, 34</td>
<td>South, Paul F, 40</td>
</tr>
<tr>
<td>Black, Dawn R, 16</td>
<td>Hefner, Scott J, 23</td>
<td>Mazzuovancher, Suzanne, 26</td>
<td>Steed, Jared Benjamin, 28</td>
</tr>
<tr>
<td>Boley, Meredith A, 23</td>
<td>Hileman, Kira A, 22</td>
<td>McAninch, Kevin Patrick, 8</td>
<td>Stuckey, Ronald L, 35</td>
</tr>
<tr>
<td>Boykin, Crystal Monet, 26</td>
<td>Hoehn, Jennifer Lynn, 12</td>
<td>McCall, Julianne Rose, 18</td>
<td>Stull, chantal M, 15</td>
</tr>
<tr>
<td>Brown, Mariya D, 20</td>
<td>Holman, Bream M, 16</td>
<td>McCall, Robert David, 18</td>
<td>Styfurak, Lysa M, 39</td>
</tr>
<tr>
<td>Buchenic, John, 8</td>
<td>Homsher, Michael T, 33</td>
<td>McCarthy, Brian C, 36</td>
<td>Sundermeier, Alan Paul, 11, 35</td>
</tr>
<tr>
<td>Carty, Susan, 25</td>
<td>Hughes-Williams, Laura, 23</td>
<td>McCarty, Benjamin S, 14</td>
<td>Thompson, Danielle K, 10</td>
</tr>
<tr>
<td>Chakraborty, Arup Ratan, 22</td>
<td>Hung, Yung-Tse, 41, 42</td>
<td>McEwan, Ryan W, 24, 36</td>
<td>Toffle, Jeremy Charles, 21</td>
</tr>
<tr>
<td>Cieri, Lindsay M, 27</td>
<td>Iler, Amy Marie, 9</td>
<td>MCQuatte, Carolyn J, 37</td>
<td>Veerapaneni, Ram Satish, 17</td>
</tr>
<tr>
<td>Claiborne, Elizabeth Jean, 13</td>
<td>Ingold, Danny J, 23</td>
<td>Mead, Kristina S, 38</td>
<td>Vellanki, Krishna D, 28</td>
</tr>
<tr>
<td>Collaco, Anne M, 6</td>
<td>Ivanikova, Natalia V, 8</td>
<td>Melnykov, Igor, 21</td>
<td>Voelker, Bryan, 9</td>
</tr>
<tr>
<td>Conroy, Joseph David, 32</td>
<td>Jackson, Cassie, 29</td>
<td>Michaels, Helen J, 37</td>
<td>Waldron, Matthew James, 5</td>
</tr>
<tr>
<td>Cook, Aaron Richard, 17</td>
<td>Jamasbi, Roudabej, 17</td>
<td>Mills, Erin, 5</td>
<td>Wang, Joanne Helen, 27</td>
</tr>
<tr>
<td>Cunningham, Erica L, 31</td>
<td>Johnson, Asia Denise, 6</td>
<td>Mohaimani, Holleh M, 10</td>
<td>Ward, Ryan J, 18</td>
</tr>
<tr>
<td>Davidson, Keely Marie, 24</td>
<td>Johnson, Justin Scott, 8, 9</td>
<td>Mohney, Alexis, 24</td>
<td>Watson, Megan Paige, 39</td>
</tr>
<tr>
<td>Demitrack, Elise Susan, 11</td>
<td>Josif, Stacey L, 14</td>
<td>Morgan, Jennifer Anne, 35</td>
<td>William, Bryn N, 5</td>
</tr>
<tr>
<td>Donahue, Douglas A, 12</td>
<td>Kane, Douglas D, 32</td>
<td>Mulroy, Genevieve E, 6</td>
<td>Willoughby, Janna R, 19</td>
</tr>
<tr>
<td>Edmonds, Sarah L, 38</td>
<td>Kantosky, Rachel M, 39</td>
<td>Nuske, Sarah M, 37</td>
<td>Winslow, Christopher, 26</td>
</tr>
<tr>
<td>Ewing, Adam, 22</td>
<td>Kasturiratna, Dhanuja, 41</td>
<td>Ogorchick, Jessica E, 20</td>
<td>Wojtecik, Rudy James, 41</td>
</tr>
<tr>
<td>Fath, Natalie Anne, 9</td>
<td>Kelch, David O, 31</td>
<td>Olesen, Alyson A, 38</td>
<td>Wolin, Julie A, 31</td>
</tr>
<tr>
<td>Ferguson, Chad D, 30</td>
<td>Keller, Kimberly L, 12</td>
<td>Olexsak, Sarah, 25</td>
<td>Yaussey, Nathan Jacobs, 37</td>
</tr>
<tr>
<td>Fleming, John Samuel, 8</td>
<td>Kent, Allison Earll, 21</td>
<td>Perry, Sara M, 15</td>
<td>Zaluski, Katelin P, 16</td>
</tr>
<tr>
<td>Fudella, Laura Lynn, 24</td>
<td>Khan, Mariam, 26</td>
<td>Persely, Kelly M, 29</td>
<td>Zangmeisters, Jennifer L, 16</td>
</tr>
<tr>
<td>Galebauer, Mary Dyson, 33</td>
<td>Kim, Chankook, 33</td>
<td>Pillai, Lakshmi R, 12</td>
<td>Zhang, Gang, 10</td>
</tr>
<tr>
<td>Gertz, Melanie L, 38</td>
<td>Kimball, Todd, 19</td>
<td>Pontius, Kira E, 39</td>
<td></td>
</tr>
</tbody>
</table>
### Index to Fields of Interest

<table>
<thead>
<tr>
<th>Field of Interest</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Physiology</td>
<td>21</td>
</tr>
<tr>
<td>Aquatic Biology</td>
<td>25</td>
</tr>
<tr>
<td>Aquatic Ecology</td>
<td>25-26, 30-32, 38</td>
</tr>
<tr>
<td>Avian Ecology/Behavior</td>
<td>23</td>
</tr>
<tr>
<td>Behavioral Ecology</td>
<td>23-24</td>
</tr>
<tr>
<td>Bio Medical Engineering</td>
<td>21</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>6-7</td>
</tr>
<tr>
<td>Biology</td>
<td>5, 8-10, 14-15, 38, 41</td>
</tr>
<tr>
<td>Biology/Ecology</td>
<td>13</td>
</tr>
<tr>
<td>Biology/Entomology</td>
<td>6</td>
</tr>
<tr>
<td>Botany</td>
<td>6</td>
</tr>
<tr>
<td>Cell Biology</td>
<td>41</td>
</tr>
<tr>
<td>Chemical Ecology</td>
<td>38</td>
</tr>
<tr>
<td>Chemistry</td>
<td>13</td>
</tr>
<tr>
<td>Chemosensory Ecology</td>
<td>22</td>
</tr>
<tr>
<td>Climatology</td>
<td>35</td>
</tr>
<tr>
<td>Conservation Genetics</td>
<td>6</td>
</tr>
<tr>
<td>Conservation Science</td>
<td>25</td>
</tr>
<tr>
<td>Earth &amp; Environmental Sciences</td>
<td>34-35</td>
</tr>
<tr>
<td>Earth Science</td>
<td>25</td>
</tr>
<tr>
<td>Ecology</td>
<td>15-16, 36</td>
</tr>
<tr>
<td>Education</td>
<td>33</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>19</td>
</tr>
<tr>
<td>Entomology</td>
<td>22</td>
</tr>
<tr>
<td>Environmental</td>
<td>34</td>
</tr>
<tr>
<td>Environmental Engineering</td>
<td>41-42</td>
</tr>
<tr>
<td>Environmental Geology</td>
<td>10</td>
</tr>
<tr>
<td>Environmental Microbiology</td>
<td>8</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>34</td>
</tr>
<tr>
<td>Environmental Toxicology</td>
<td>12</td>
</tr>
<tr>
<td>Evolutionary Biology</td>
<td>41</td>
</tr>
<tr>
<td>Field Biology</td>
<td>9-10</td>
</tr>
<tr>
<td>Forest Ecology</td>
<td>37</td>
</tr>
<tr>
<td>Genetics</td>
<td>20-21, 40</td>
</tr>
<tr>
<td>Genomics</td>
<td>22</td>
</tr>
<tr>
<td>Geography</td>
<td>11, 21, 22</td>
</tr>
<tr>
<td>Geology &amp; History of the Civil War</td>
<td>35</td>
</tr>
<tr>
<td>Histology &amp; Reproduction</td>
<td>20-21</td>
</tr>
<tr>
<td>Immunology</td>
<td>22</td>
</tr>
<tr>
<td>Invertebrate Zoology</td>
<td>14</td>
</tr>
<tr>
<td>Marine Biology</td>
<td>13-14</td>
</tr>
<tr>
<td>Medicine</td>
<td>19-20, 33</td>
</tr>
<tr>
<td>Microbiology</td>
<td>17, 39</td>
</tr>
<tr>
<td>Molecular Biology</td>
<td>11-12, 40</td>
</tr>
<tr>
<td>Neurobiology</td>
<td>18-19</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>18-20</td>
</tr>
<tr>
<td>Oceanography</td>
<td>23</td>
</tr>
<tr>
<td>Ornithology</td>
<td>39</td>
</tr>
<tr>
<td>Physiology</td>
<td>10, 19-20</td>
</tr>
<tr>
<td>Plant Biology</td>
<td>24-25, 36-38</td>
</tr>
<tr>
<td>Plant Ecology/Biology</td>
<td>37</td>
</tr>
<tr>
<td>Plant Science</td>
<td>13</td>
</tr>
<tr>
<td>Protein Interactions</td>
<td>12</td>
</tr>
<tr>
<td>Science Education</td>
<td>33</td>
</tr>
<tr>
<td>Sensory Biology</td>
<td>18</td>
</tr>
<tr>
<td>Soil Conservation</td>
<td>35</td>
</tr>
<tr>
<td>Soil Quality</td>
<td>11</td>
</tr>
<tr>
<td>Statistics</td>
<td>41</td>
</tr>
<tr>
<td>Vector Ecology</td>
<td>7</td>
</tr>
<tr>
<td>Watershed</td>
<td>18</td>
</tr>
<tr>
<td>Wetland Ecology</td>
<td>35</td>
</tr>
<tr>
<td>Zoology</td>
<td>22-23, 37</td>
</tr>
</tbody>
</table>
Friday, April 1: Registration will not be open on Friday.

Saturday, April 2: Registration in Olscamp Hall (Bldg. 45) from 8:00AM-3:00PM. On-site registration is possible by check, VISA, or MasterCard. Cash is discouraged.

SATURDAY PARKING: From I-75 North or South turn onto (Exit 181) Wooster Street heading west. Turn right (north) on Mercer Street, then left on Ridge Street. Use Lot N on the left or Lot 1 on the right. Follow the signs. Disregard parking meters on Saturday.

Directions to Bowling Green State University
Bowling Green State University is located in Bowling Green, Ohio. It is a two and a half hour drive from Cleveland, about one and a half hours south of Detroit and three hours north of Cincinnati. Interstate 75 borders the eastern edge of the campus; the University is located at Exit 181. U.S. Route 6 bypasses the south side of the city. Interstates 80 and 90 (the Ohio Turnpike) are only twenty minutes to the north; turnpike exit 64 provides the most direct route to the campus. Toledo Express Airport is about a thirty minute drive northwest from campus.

Driving Directions
From the east or west via Ohio Turnpike Use Exit 64 (Perrysburg). Follow I-75 South to Exit 181.
From the north or south via Interstate 75 Use Exit 181.
From the east or west via U.S. Route 6 Stay on U.S. 6. At the I-75 Interchange, follow I-75 north to the next exit (Exit 181).
THE OHIO ENVIRONMENTAL SCIENCE & ENVIRONMENTAL ENGINEERING SCHOLARSHIP PROGRAM
Website: http://www.ohiosci.org/OESEESCHOLARSHIPS.htm

APPLICATION
Deadline: Mail First Class. Postmarked by June 1, 2005

$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 1 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 June 1, 2005:

Environmental Science Scholarships
The Ohio Academy of Science
PO Box 12519
Columbus OH 43212-0519
THE OHIO ACADEMY OF SCIENCE
Registration Form
114th Annual Meeting
April 1-2, 2005
Hosted by Bowling Green State University
Advance registration must be received by March 23, 2005

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.

Registration Fees
Please check appropriate categories. One fee covers the entire
meeting. Payment must be received by March 23, 2005 to
avoid higher rates. On-site registration will be accepted at the
higher rate by credit card or check ONLY. ONLY first authors
have pre-paid registration when they submitted their
abstracts and DO NOT NEED to return this form. First
authors are already registered for the meeting.

CURRENT MEMBER REGISTRATION RATE
☐ Professional $65 $70
☐ Retired $40 $45
☐ Student $25 $30

NON-MEMBER PROFESSIONAL AND RETIRED REGISTRATION
Includes membership
☐ Professional $140 $145
☐ Retired with Journal $ 80 $ 85
☐ Retired without Journal $ 65 $ 70

NON-MEMBER PRE-COLLEGE AND COLLEGE STUDENT
Includes Academy membership
☐ College Student with Journal $ 65 $70
☐ Student (17 & under) w/Jour. $ 65 $70
☐ Student (17 & under) w/o Jour. $ 50 $55

Does Not include Academy membership
☐ Pre-college student $20 $25
☐ College student $20 $25
☐ 5-10 students each $15 $20
☐ 11 or more students each $10 $15

NON-SCIENCE SPOUSE, PARENT OR A RELATIVE
OF A FIRST AUTHOR
☐ Spouse, parent or relative $10 $15
Please use a separate form for each.

MEMBERSHIP RENEWAL
☐ Family $85
☐ Regular Member $75
☐ Retired Member w/OJS $40
☐ College Student $40
☐ Student (Age 17 & under) w/OJS $40
☐ Retired Member w/o OJS $25
☐ Student (Age 17 & under) w/o OJS $25

TOTAL ENCLOSED $________

MAIL FORM WITH PAYMENT TO:
The Ohio Academy of Science
PO Box 12519
Columbus OH 43212-0519
FAX 614/488-7629

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 ________________________________________

Method of Payment
☐ NO REFUNDS AFTER March 23, 2005.
☐ 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
CardNumber
__________________________
Exp. Date ___/___/___

3-digit Security Code (last 3 digits on back of card in
signature panel) ___ ___ ___

Signature_____________________________
REGISTRATION POLICIES
The Ohio Academy of Science
114th Annual Meeting
Hosted by Bowling Green State University

April 1-2, 2005
Advance registration must be received by March 23, 2005

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.

ONLY first authors have pre-paid registration when they submitted their abstracts and DO NOT NEED to return this form. First authors are already registered for the meeting.

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.

<table>
<thead>
<tr>
<th>Spouse, parent or relative of first author</th>
<th>After March 23rd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$10  $15</td>
</tr>
</tbody>
</table>

Discounted Rates for students who are not first author:

(Does not include membership)

<table>
<thead>
<tr>
<th></th>
<th>$20  $25</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4 from same institution</td>
<td></td>
</tr>
<tr>
<td>5-10 from same institution</td>
<td>$15  $20</td>
</tr>
<tr>
<td>11 or more from same institution</td>
<td>$10  $15</td>
</tr>
</tbody>
</table>

Please use a SEPARATE REGISTRATION FORM for each person.

Copy the form on the reverse side as needed.

MAIL FORM 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: March 23, 2005
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.


Form of citation: (Thomison 1988)

Books

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


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. Footnotes to tables 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.

The Ohio Journal of Science, Dr. KERRY L. CHEFSMAN, Editor, Biological Sciences Department, Battelle Hall, Capital University 1 College and Main, Columbus, OH 43209-2394
Phone 614-236-6951 (office) or 614-236-6520 (secretary)
Fax 614-236-6518 Email OJSeditor@capital.edu

Manuscript submission guidelines http://www.ohiosci.org/ojsinstruct.htm
F.T. Stone Laboratory, The Ohio State University's Island Campus on Lake Erie, offers over 30 college credit courses to undergraduate and graduate students, educators, and outstanding high school students every summer.

Learn how you can earn one to five science credits in just a few weeks at STONE LABORATORY.

**STONE LABORATORY'S SUMMER 2005 COURSE OFFERINGS**

### Introductory Courses
Open to college and select high school students. 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.

Week  (Offered June 5 - August 20)
3 quarter credits; classes meet daily for one week
- Aquatic Biology (offered four times)
- Field-Based Oceanography
- Insect Biology
- Local Flora
- Study of Birds

### Courses for Educators
For classroom teachers, non-formal educators, and education majors with junior rank or above by summer 2005.

Week  (Offered June 5 - August 20)
3 quarter credits; classes meet daily for one week
- Aquatic Environmental Science for Teachers
- Curriculum Development & Evaluations for Great Lakes and Environmental Education
- Field Ecology
- Geologic Setting of Lake Erie
- Global Change Education
- Great Lakes Education Workshop
- Insect Biology for Teachers
- Local Flora for Teachers
- 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 19 - July 20)
5 quarter credits; classes meet three days a week
- Field Zoology
- Herpetology
- Ichthyology

Term 2  Five weeks  (July 21 - August 20)
5 quarter credits; classes meet three days a week
- Aquatic Entomology
- Fish Ecology
- Limnology

Week  3 quarter credits; classes meet daily for one week
- Biocomplexity: Large Lake–Human Interactions
- Ecology and Management of Wetland Birds
- Field Ecology
- Lake Erie Sport Fishing

1-10 Days
- Current Topics in Environment & Engineering 1 quarter credit; 7-8 evening seminars
- Diagnostic Field Plant Pathology 3 quarter credits; 10 days
- Ichthyoplankton Identification Workshop 1 quarter credit; one day

**Lake Erie Islands Photography Workshop**
This is a special non-credit course (Digital camera required)
Open to the public (18 years and older), and college students as a non-credit course. Register directly through the Columbus Office.

### Plan now to attend STONE LAB in 2005.
For application materials, course descriptions, changes & updates, visit our web site or call 614.292.8949

F.T. Stone Laboratory
The Ohio State University
1314 Kinnear Rd.,
Columbus, OH 43212
Fax: 614.292.4364
Jeffrey M. Reutter, Ph.D., Director