

*Curriculum Vitae*

**WILLIAM K. KROEN**

Department of Sciences  
Wesley College  
Dover, Delaware 19901

**EDUCATION**

- Ph.D. 1989 Botany, Duke University  
Dissertation Title: Physiology and Carbon Metabolism of the unicellular red alga  
*Rhodella reticulata* related to exocellular polysaccharide synthesis.  
(Advisor: Joseph S. Ramus)
- M.S. 1984 Botany, Washington State University  
Thesis Title: Extracellular Polysaccharide Production by the Green Soil Alga  
*Chlamydomonas mexicana*. (Advisor: William R. Rayburn)
- B.S. 1981 Biology, The Pennsylvania State University

**PROFESSIONAL EXPERIENCE**

- Professor of Biology. Wesley College, Dover DE. August 2002 - present
- Associate Professor of Biology. September 1997 - August 2002
- Assistant Professor of Biology. September 1991 - August 1997
- Instruction in General Biology (science majors), Introductory Biology (non-majors), Plant Biology, Plant Physiology, Invertebrate Zoology, Cell Biology, Genetics, Human Sexuality, Delaware Coastal Issues, Limnology, Biochemistry, college-wide interdisciplinary seminar, first-year seminars (majors and nonmajors). Additional duties include student advising and committees.
- Program Director of Biology and Laboratory Sciences September 1998- May 2003  
Duties included oversight of lab budgets, supplies, scheduling, and laboratory personnel.
- Chairperson, Division of Natural Sciences and Mathematics July 1996-May 1998  
Duties included program oversight, coordinating budget requests and expenditures, scheduling of courses, hiring and evaluating full-time and adjunct faculty.
- Adjunct Assistant Professor and NASA Postdoctoral Research Associate, collaborating with Dr. Mary Peet, North Carolina State University. October 1990-August 1991  
"Root and Fruit Demands for Carbohydrates and Nutrients in Tomatoes Grown under Elevated CO<sub>2</sub>."
- Post-Doctoral Research Associate with Drs. Mason Pharr and Steven C. Huber, North Carolina State University. October 1989-September 1990  
"Flooding and environmental stress on photosynthetic physiology and ripening in muskmelons."
- Teaching Assistant, Duke University Marine Laboratory. Spring, Summer 1989  
Biological Oceanography
- Instructor, Talent Identification Program, Duke University (at Marine Laboratory).  
Biology (3-week course at the first-term level) July 1987, 1988  
Coastal Biology (weekend field course) November 1987, April 1989

- Research Assistant to Dr. Joseph Ramus, Duke University Marine Lab. September 1986-August 1988  
"Extracellular polysaccharides of the unicellular red algae: production and cell physiology."
- James B. Duke Graduate Fellow, Duke University. September 1984-August 1986
- Instructor, Washington State University. Summer 1984  
Introductory Biology (majors)
- Teaching Assistant, Washington State University. September 1981-May 1984  
General Biology (non-majors), Introductory Biology I and II (majors), Plant Physiology

## PUBLICATIONS

- Kroen, W. K. (2015). Using Authentic Environmental Data to Enhance Biology Understanding. American Biology Teacher (in press).
- D'Souza, M. J., W. K. Kroen, C. B. Stephens, and R. J. Kashmar (2015). Strategies and Initiatives That Revitalize Wesley College STEM Programs. Journal of College Teaching & Learning 12(3):195-207.
- Kroen, W. K. (2004). Modeling the Process of Scientific Writing Using an Authentic Data Set. Journal of College Science Teaching 34(3):50-53.
- Kroen, W. K. (2004). Educational Review of 'Plant Cell Biology on CD'. Journal of Phycology 40:800-802.
- Kroen, W. K. (1998). A Simple End-Point Assay for Starch-Degrading Enzymes. American Biology Teacher 60:140-143.
- Tripp, K. E., W. K. Kroen, M. M. Peet, and D. H. Willits (1992). Fewer Whiteflies Found on CO<sub>2</sub>-enriched Greenhouse Tomatoes with High C:N Ratios. HortScience 27:1079-1080.
- M. M. Peet, D. H. Willits, K. E. Tripp, W. K. Kroen, D. M. Pharr, M. A. Depa, and P. V. Nelson (1991). CO<sub>2</sub> Enrichment Responses of Chrysanthemum, Cucumber and Tomato: Photosynthesis, Growth, Nutrient Concentrations and Yield. In "Impact of Global Climate Changes on Photosynthesis and Plant Productivity". Proceedings of the Indo-U.S. Workshop on January 8-12, 1991 at New Delhi, India. [Y.P. Abrol, P.N. Wattal, A. Gnanam, Govindjee, D.R. Ort, and A. H. Teramura, eds.] Oxford and IBH Publishing Co. Pvt. Ltd. New Dehli. pp. 193-212.
- Kroen, W. K. and J. Ramus (1991). Allocation of Newly-Fixed Carbon in the Red Alga *Rhodella reticulata*. Journal of Plant Physiology 138:528-532.
- Kroen, W. K., D. M. Pharr, and S. C. Huber (1991). Root Flooding of Muskmelon (*Cucumis melo* L.) Affects Fruit Sugar Concentration but not Leaf Carbon Exchange Rate. Plant and Cell Physiology 32:467-473.
- Kroen, W. K. and J. Ramus (1990). Viscous Polysaccharide and Starch Synthesis in *Rhodella reticulata* (Porphyridiales). Journal of Phycology 26:266-271.
- Parrish, J. K. and W. K. Kroen (1988). Sloughed Mucus and Drag Reduction in a School of Atlantic Silversides, *Menidia menidia*. Marine Biology 97:165-169.
- Kroen, W. K. (1984). Growth and Polysaccharide Production by the Green Alga *Chlamydomonas mexicana* (Chlorophyceae) on Soil. Journal of Phycology 20:615-617.
- Kroen, W. K. and W. R. Rayburn (1984). Influence of Growth Status and Nutrients on Extracellular Polysaccharide Synthesis by the Soil Alga *Chlamydomonas mexicana* (Chlorophyceae). Journal of Phycology 20:253-257.

## NATIONAL MEETINGS ATTENDED and \*PAPERS PRESENTED (while at Wesley College)

- 2015\* American Association for the Advancement of Science Annual Meeting, San Jose Convention Center, San Jose, CA, "Strategies and Initiatives To Revitalize the Undergraduate STEM Programs at Wesley College"

- 2014\* National Association of Biology Teachers Professional Development Conference, Cleveland Convention Center, Cleveland, OH. “Using Authentic Environmental Data to Enhance Biology Understanding”
- 2013\* National Association of Biology Teachers Annual Meeting. Hyatt Regency, Atlanta, GA. “Business and Biology Do Mix: Course-Embedded Travel Experience in Barbados”
- 2012\* National Association of Biology Teachers Professional Development Conference, Hyatt Regency, Dallas, TX. “Authentic Environmental Data Can Enhance Science Understanding and Improve Math Skills”
- 2011\* National Association of Biology Teachers Professional Development Conference, Anaheim Marriott, CA. “Authentic Environmental Data Can Enhance Science Understanding and Improve Math Skills”
- 2010\* National Association of Biology Teachers Professional Development Conference, Hyatt Regency Minneapolis, MN. “Using Environmental Data to Enhance Science and Math Skills”
- 2009\* National Association of Biology Teachers Professional Development Conference, Sheraton Denver, CO. “Case Studies on Local Land Use Change”
- 2008\* National Association of Biology Teachers Professional Development Conference, Cook Convention Center, Memphis, TN. “Get Organized! Digitize your Photos for Classroom Use”
- 2007\* National Association of Biology Teachers Annual Meeting. Hyatt Regency, Atlanta, GA. “Get Organized! Digitize your Photos for Classroom Use”
- 2006\* National Association of Biology Teachers Annual Meeting. Albuquerque Convention Center, Albuquerque, N.M. “Summer Intensive Program in complex Environmental Systems”
- 2005\* National Association of Biology Teachers Annual Meeting. Midwest Airlines Center, Milwaukee, WI. “Graphing Skills Influence Biology Understanding.”
- 2004\* National Association of Biology Teachers Annual Meeting. Hyatt Regency, Chicago, IL. “The Intangibles: First-Year Student Success Shows Little Relationship to Previous Quantitative Measurements.”
- 2003\* National Association of Biology Teachers Annual Meeting. Oregon Convention Center, Portland, OR. “Student Understanding of Research Results: The Results.”
- 2002\* National Association of Biology Teachers Annual Meeting. Cincinnati Convention Center, Cincinnati, OH. “Student Understanding of Research Results: An Experiment.”
- 2000\* National Association of Biology Teachers Annual Meeting. Hyatt Orlando, Orlando FL. “Using Laboratory Reports to Improve Writing Skills.”
- 1999\* National Association of Biology Teachers Annual Meeting. Tarrant County Convention Center, Ft. Worth, TX. “Beginning Science Seminars for College Students.”
- 1996\* National Association of Biology Teachers Annual Meeting. New Charlotte Convention Center, Charlotte, NC. "Misunderstood Concepts: Integrating Information Using Concept Maps and Essays."
- 1996\* Biology in Action: New Approaches to Teaching and Learning Science. Radford University, Radford VA. "Integrating Biology Information Using Concept Maps and Essays" and "Physiology Lab Exercises Promote Learning Beyond Biology: Increasing Critical Thinking and Analytical Skills."
- 1994 American Society of Limnology and Oceanography and Phycological Society of America joint meeting, James L. Knight Convention Center, Miami FL.

### **PROFESSIONAL SOCIETIES**

National Association of Biology Teachers  
Sigma Xi, The Scientific Research Society

### **PROFESSIONAL DEVELOPMENT ACTIVITIES** (while at Wesley College)

Nationally-Certified Train-the-Trainer for Basic and Advanced Protocols, The GLOBE Program,  
December 2000 and May 2001

Review Panelist. Research Experiences for Undergraduates Program (REU Sites) – Biological Sciences. National Science Foundation, Arlington, VA. December 1998, November 1999.

Participant – Chautauqua short course "Changing Science Courses to Promote Critical Thinking", University of Dayton, Ohio. May 1995

Participant – Chautauqua short course "Tropical Rocky Intertidal Ecology", Bellairs Research Institute, BARBADOS. June 1992

**INSTITUTIONAL and NATIONAL WORK** (recent)

Faculty Recording Secretary, Wesley College 2011-13

Curriculum Committee member, Wesley College 2013-14

International Programs Committee member, Wesley College 2009 - present; developed and led travel course to Barbados March 2010 and 2013

Liaison with Miyagi University of Education, JAPAN, July 2007-April 2014: hosted four students for a two-week visit each March (making all arrangements, scheduling, etc.); visited Sendai, JAPAN July 2009 to represent Wesley College in university and public school classrooms; tsunami relief fundraising coordination at Wesley April 2011; additionally, worked with ESL staff to host 55 students from Hachinohe Institute of Technology in June 2008

National Association of Biology Teachers, Four-Year College/University Section Conference Planning Chairperson 2003-2008: scheduling guest speakers, securing corporate sponsors, overseeing events

NABT Four-Year College & University Section: Secretary/Treasurer 2008, Chairperson 2010, Awards Committee Chairperson 2011

NABT Long-Range Planning Committee 2012 – present