

Curriculum Vitae

WILLIAM K. KROEN

Department of Sciences
Wesley College
Dover, Delaware 19901
(302) 736-2570
e-mail: William.Kroen@wesley.edu

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
CO₂."
- 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 CO₂-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). CO₂ 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