

Curriculum Vitae

James L. Bonczek

Soil and Water Science Department, University of Florida

G169 McCarty Hall
P.O. Box 110290
University of Florida
Gainesville, Florida 32608
(352) 392-1951 ext. 249

e-mail: bonczek@ ufl.edu

EDUCATION

Doctor of Philosophy (Ph.D.) in Soil and Water Chemistry.

Soil and Water Science Department, University of Florida

Dissertation: Multiple-Process Sorption of Nitrogen Heterocycles in Soils and Surfactant-Modified Clays. (2002)

Master of Science (M.S.) in Soil Physics.

Soil and Water Science Department, University of Florida

Thesis: Specific Gravity Effects on the Leaching of Nutrients from Surface-Applied Fertilizer Bands to Shallow Water Tables. (1993)

Bachelor of Arts (B.A.) in Education.

College of Education, University of Florida

Specialization in Secondary English Education

EMPLOYMENT

Employer	Position	Dates
Soil and Water Science Department University of Florida	Lecturer in Water Science	2005 – present
Soil and Water Science Department University of Florida	Academic Programs Coordinator	2000 – 2005
Soil and Water Science Department University of Florida	Research Associate	1995 – 2000
Soil and Water Science Department University of Florida	Water Sciences Research Fellow (USDA)	1992 – 1995

TEACHING

SOS 2007 The World of Water: Water in the Environment

Course addressing the roles of water in the environment. Topics range from basic properties of water to the importance of water to development of human civilizations. Subject matter also includes worldwide distribution of water and its importance to earth's ecosystems and to life. Examines the roles of water in human development as well as historical developments relative to water and water quality. (Physical Sciences General Education)

SOS 3022 Introduction to Soils in the Environment

Acquaints students with the importance of soils to plant productivity, humans, and the environment through study of their general occurrence, distribution, and morphology, as well as their physical, chemical, mineralogical, and biological characteristics. (Physical Sciences General Education)

SOS 3022L Introduction to Soils in the Environment Laboratory

Provides laboratory and field experience with common equipment and techniques used in soil and water science. Course examines physical, chemical and morphological properties of soils in relation to the environment and agriculture.

SOS 5050L Soils for Environmental Professionals Laboratory

Emphasizes the properties of soil as a medium for plant growth and a component in environmental systems. Course addresses agronomic and environmental aspects of soils through laboratory characterization and observation of soil physical, chemical and morphological properties.

SOS 6932 Soil and Water Science Methods

Course designed for distance education and other students requiring fundamental training in soil science laboratory methods and observations. Course provides theory and practice in relation to soil physics, chemistry, and microbiology. Team-taught.

SOS 6940 Supervised Teaching

Supervised teaching for Soil and Water Science Department graduate students. Includes fundamental theory, lesson planning, classroom, field and lab presentations, student evaluation, and direct student interaction.

SWS 6932 Teaching Large Classes

Designed for graduate students interested in teaching at the university level. Students learn techniques for preparation of effective lectures and how to focus their teaching to particular audiences. Techniques to engage students in the classroom, handle disruptive students, and provide for the needs of students with disabilities will be addressed. Students also become skilled with various online tools and become familiar with the various issues and regulations pertaining to student conduct in a university setting.

Soils for Professionals

Specialized course for environmental professionals, teachers, employees. Course addresses fundamental soil physical, chemical and morphological concepts related to agricultural and environmental management. Course provides field, laboratory and academic components addressing soil morphology, soil water, soil reactions, and land use.

RESEARCH

Intercalation of aliphatic organic cations in smectite clay interlayers

Assessment of the arrangement of organic cations in the interlayers of colloidal clays. Research emphasized the impact of organic cation concentrations on the arrangement and location of adsorbed cations. Provided a basis for creating independent sorption domains within surfactant-modified clays capable of retaining both neutral and ionic organic contaminants. Research funded by the Environmental Protection Agency.

Multiple-Process sorption of ionizable nitrogen heterocyclic contaminants

Examination of the contributions of the neutral and protonated species of three ionizable organic contaminants to overall sorption on natural and synthetic materials. Data were described using mathematical models permitting independent characterization of multiple sorption components for ionizable contaminants. Research funded by the Environmental Protection Agency.

Nitrate Movement and Retention in Manure-Impacted Soils

Groundwater nitrate monitoring and data analysis related to field application of dairy lagoon effluent to agricultural soils in the Suwannee River watershed. Florida Department of Environmental Protection

Nitrogen Leaching and Economic Analysis Package (NLEAP)

Evaluation of computer software designed to assist agricultural producers in environmentally and economically sound decision-making. Research sponsored by the Natural Resources Conservation Service (NRCS).

Leaching of surface-banded fertilizers in seepage-irrigated vegetable production

Examination of specific gravity-induced, rapid leaching of ammonium and potassium fertilizers in raised bed, plastic-mulched vegetable production systems in central Florida. United States Department of Agriculture (USDA), Lake Manatee Florida Demonstration Project

COURSE DEVELOPMENT

- SWS 2007, The World of Water: Water in the Environment
- SWS 5050L, Soils for Environmental Professionals Laboratory
- SWS 6932, Soil and Water Science Methods (co-developed).
- Soils for Professionals (specialized course)
- SWS 3XXX Essential Tools for the Environment (proposed)
- SWS 4XXX Water Quality (under development)

COURSE MATERIAL DEVELOPMENT

- Introduction to Soils in the Environment Laboratory Manual
- Soils for Environmental Professionals Laboratory Manual
- Soils for Professionals course guide and CD
- Graduate Teaching Assistant Handbook

UNDERGRADUATE ADVISEMENT AND MENTORING

Coordinator and advisor for the Water Science specialization in the Soil and Water Science Department (SWSD), University of Florida

Faculty advisor for the Agronomy/Soils Club at the University of Florida. The club is an award-winning academic, service, and social organization.

Faculty advisor for IDEAS (Intellectual Decisions on Environmental Awareness Solutions) at the University of Florida. The club is a newly formed academic, service, and social organization.

2010, Director of Undergraduate Programs, Soil and Water Science Department (SWSD), University of Florida

STUDENT RECRUITMENT AND RETENTION

Chair SWSD Recruitment and Publicity Committee. Closely involved in student recruitment efforts on behalf of the Soil and Water Science Department since 2000. Responsible for developing all materials including graphics and text for recruitment posters, direct mailings, and special events. Attendance at and preparation of all display materials for all sponsored recruiting events.

Attendance and production of recruitment materials for the Future Farmers of America convention in 2005 and 2006. State Land Judging Competition in 2006 and 2007.

CREATIVE WORKS AND ACTIVITIES

- 2009 Fundamentals of the Floridan Aquifer. Articulate/Adobe Presenter presentation
- 2009 Soil Mineral Colloids. Articulate/Adobe Presenter presentation
- 2009 Determination of Soil Particle Size. Articulate/PowerPoint presentation
- 2008 Articulate-based distance education module for SWS 2007, The World of Water
- 2005-2008 Soils for Environmental Professionals Laboratory Manual
- 2002-2008 Introduction to Soils in the Environment Laboratory Manual
- 2000-2008 Design and production of posters, brochures and flyers for TailGator
- 2000-2008 Design and production of posters and brochures for Gator Encounter
- 2000-2007 Design and production of recruitment material for Gator Days at Santa Fe
- 2004-2008 Reception area graphics and poster design, SWSD Research Forum
- 2005 Graphics, brochures, flyers for Future Farmers of America state convention
- 2005 Video - Soil Organic Matter Determination
- 2005 Design and production of SWS teaching assistant handbook
- 2004 Design of direct-mailing postcards for Soil and Water Science recruiting

Design and Maintenance of websites for Introduction to Soils in the Environment, The World of Water, Soils in the Environment Laboratory, and Soils for Environmental Professionals Laboratory

UNIVERSITY GOVERNANCE AND SERVICE

- 2009 Peer review committee chair for SOS 2008, *Land and Life*
- 2009 Search and Screen Committee, Lecturer Position, Soil and Water Science
- 2009 College of Agricultural and Life Sciences (CALS) Commencement Marshal
- 2008-2009 SWSD Undergraduate Programs Committee
- 2008-2009 SWSD Water Science Specialization Development Committee
- 2005-2007 SWSD Distance Education Committee
- 2005-2009 SWSD Undergraduate and Graduate Teaching Committee
- 2004-2009 Chair, SWSD Recruitment and Publicity Committee

INTERNATIONAL ACTIVITIES

Provided approximately 30 hours of instructional material to Dr. Daniel Herrera at EARTH University for educational programs in Costa Rica. The effort is related to fundamental education in soil and water science in humid tropical regions.

SERVICE TO SCHOOLS

Consultations and materials provided to faculty at Williston Middle School for agricultural education activities, 2008-2009.

SCHOLARLY REVIEWS

Miyittah, M.K., C.D. Stanley, C. Mackowiak, and J.E. Rechcigl. Developing a remediation strategy for P immobilization: effect of co-blending an Al-residual and Ca-Mg amendments in a manure-impacted spodosol. 2009. SWS Dept. Manuscript Review

Marras, S.I., A. Tsimpliaraki, I. Zuburtikudis, and C. Panayiotou. Thermal and Colloidal Behavior of Amine-Treated Clays: The role of Amphiphilic Organic Cation Concentration. Langmuir. 2007. (currently unpublished).

Weiss, Z, M. Valásková, M. Krístková, P. Capková, and M. Pospíšil. Intercalation and grafting of vermiculite with octadecylamine using low temperature melting. Clays and Clay Min. 2003. 51:555–565.

ABSTRACTS

Collins, M.E., and **J.L. Bonczek**. 2009. Teaching Large Classes. ASA-CSSA-SSSA International Annual Meetings, Pittsburg, PA

Collins, M.E., and **J.L. Bonczek**. 2009. Joys and Constraints of Teaching Large Soil and Water Science Classes. ASA-CSSA-SSSA International Annual Meetings, Pittsburg, PA

REFEREED PUBLICATIONS

Bonczek, J.L., L. Unruh-Snyder, and L.R. Ellis. 2007. An Academic Club Service Project as a Demonstration of Experiential Teaching Tools. J. Nat. Res. Life Sci. Ed. 36: 107-11.

Bonczek J. L. and P. Nkedi-Kizza. 2007. Using surfactant-modified clays to determine sorption mechanisms for a representative organic base, quinoline. J. Environ. Qual. 36: 1803-1810.

Bonczek, J.L., W.G. Harris, and P. Nkedi-Kizza. 2002. Monolayer to bilayer transitional arrangements of hexadecyltrimethylammonium cations on sodium montmorillonite. Clays and Clay Min. 50:11-17.

Bonczek, J.L. and B.L. McNeal. 1996. Specific gravity effects on fertilizer leaching from surface sources to shallow water tables. Soil Sci. Soc. Am. J. 60:978-985.

MEMBERSHIP AND ACTIVITIES IN THE PROFESSION

Member, Soil Science Society of America

Member, Florida Association of Environmental Soil Scientists

HONORS

Nominee, College of Agricultural and Life Sciences Annual Teaching Award (2009-2010)

USDA Graduate Fellow in Water Sciences 1992-1995

REFERENCES

Dr. Mary Collins, Professor of Soil and Water Science
2169 McCarty Hall
P.O. Box 110290
University of Florida
Gainesville, FL 32611
mec@ufl.edu

Dr. Andrew Ogram, Professor of Soil and Water Science
2169 McCarty Hall
P.O. Box 110290
University of Florida
Gainesville, FL 32611
aogram@ufl.edu

Dr. John Leader, Assistant Professor of Biology, Wor-Wic College
P.O. Box 648
514 S. Main St
Hebron MD 21830
jleader@worwic.edu

Dr. Rex Ellis, Research Assistant Professor of Soil and Water Science
2169 McCarty Hall
P.O. Box 110290
University of Florida
Gainesville, FL 32611
rexellis@ufl.edu

Dr. Gina M. Kertulis-Tartar, Assistant Professor of Biology
Department of Natural Sciences and Mathematics
Dalton State College
650 College Drive
Dalton GA 30720
gkertulistartar@daltonstate.edu