

LUANNA PREVOST

Department of Integrative Biology,
University of South Florida
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EDUCATION **Ph D.** Plant Biology 2011. University of Georgia, Athens, GA

 M S. Plant and Environmental Science 2005. Clemson University, Clemson, SC

 B. S. Biology and Environmental Science 2002. Tuskegee University, Tuskegee, AL

APPOINTMENTS

2013 - present **Assistant Professor**, Integrative Biology, University of South Florida

 2011 – 2013 **Postdoctoral Research Associate**, Center for Engineering Education
 Research, College of Engineering, Michigan State University.

PUBLICATIONS

- Prevost, L.B., M.K. Smith, and J. Knight. In review. Using student writing and lexical analysis to reveal student thinking about the role of stop codons. *CBE Life Science Education*
- Prevost, L.B., and P.P. Lemons. In review. Step by step: Biology Undergraduate's Problem-Solving Steps During Multiple-Choice Assessment" by Luanna Prevost and Paula Lemons. *CBE Life Sciences Education*
- Hurt, M.E., L.R. Larson, **L.B. Prevost**, and M. Camus. In press. Facebook vs. the Institutionally-Sponsored Platform: A Comparative Analysis of Each Platform's Ability to Encourage Participation, Foster Learning, and Increase Course Performance through Online Discussion. *College Teaching*.
- Weston, M., K. C. Haudek, **L. Prevost**, M. Urban-Lurain, and J. Merrill. 2015. Examining the Impact of Question Surface Features on Students' Answers to Constructed-Response Questions on Photosynthesis. *CBE-Life Sciences Education* 14:ar19. doi:10.1187/cbe.14-07-0110
- Kim, H. S., **L. Prevost**, and P. P. Lemons. 2015. Students' usability evaluation of a Web-based tutorial program for college biology problem solving. *Journal of Computer Assisted Learning* 31:362–377
- Urban-Lurain, M., M.M. Cooper, K. Haudek, J.J. Kaplan, J.K. Knight, P.P. Lemons, C.T. Lira, R. Nehm, **L.B. Prevost**, M.K. Smith, and M.A. Sydlik. 2015. Expanding a national network for automated analysis of constructed response assessments to reveal student thinking in STEM. *Computers in Education Journal* 25 (2): 65-81.
- Urban-Lurain, M., **L. B. Prevost**, H. Campa III. 2013. STEM Doctoral Student Professional Development in Teaching: Outcomes of a High-Engagement Program. *Proceedings of the National Association for Research in Science Teaching*, Rio Grande, Puerto Rico.
- Prevost, L.B.**, H. Campa III. 2013. Student Writing Reveals Their Heterogeneous Thinking about the Origin of Genetic Variation in Populations. *Proceedings of the National Association for Research in Science Teaching*, Rio Grande, Puerto Rico.

Urban-Lurain, M., **L. B. Prevost**, H. Campa III. 2013. STEM Doctoral Student Professional Development in Teaching: Outcomes of a High-Engagement Program. Proceedings of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico.

Prevost, L.B., Haudek, K.C., Merrill, J.E., Urban-Lurain, M. 2012. Examining student constructed explanations of thermodynamics using lexical analysis. Proceedings Frontiers in Education, Seattle WA.

Haudek, K.C., **Prevost, L.B.**, Moscarella, R.A., Merrill, J., Urban-Lurain, M., 2012. What are they thinking? Automated analysis of student writing about acid/base chemistry in introductory biology. CBE - Life Sciences Education. 11:283-293

Hurt, M.E., Moss, G.S., Bradley, C.L., Larson, L.R., **Prevost, L.B.**, Riley, N., Domizi, D, Camus, M. 2012. The 'Facebook' Effect: College Students' Perceptions of Online Discussions in the Age of Social Networking. International Journal of Scholarship of Teaching and Learning 6:1-24.

Prevost, L.B., Haudek, K.C., Merrill, J.E., Urban-Lurain, M. 2012. Deciphering student ideas on thermodynamics using computerized lexical analysis of student writing. Proceeding of the American Society of Engineering Education Annual Conference, San Antonio, TX.

Prevost L.B. and P.P. Lemons. 2011. Mildred Using Plants: The Medicinal Value of Plants. National Center for Case Study Teaching in Science.

Prevost, L. B. and Bruns. B. 2010. Rocks and Minerals. PBIO/ISCI 2001Life and Earth Sciences Lab Manual.

Van Etten M.L., **Prevost, L.B.**, Deen, A.C., Ortiz, B.V., Donovan, L.A., and Chang, S. 2008. Gender differences in reproductive and physiological traits in a gynodioecious species, *Geranium maculatum* (Geraniaceae). International Journal of Plant Sciences. 169: 271–279.

Allen, C., J. La Bram, A. Garmestani, A. Peck, and **L. Prevost**. 2006. When landscaping goes bad: the incipient invasion of *Mahonia bealei* in the southeastern United States. Biological Invasions 8:169-176.

Smith, E.J., Shi L., **Prevost, L.**, Drummond, P., Ramlal, S., Smith, G., Pierce, K., Foster, J. 2001. Expressed sequence tags for the chicken genome from a normalized, ten-day-old white leghorn whole embryo cDNA library. 2. Comparative DNA sequence analysis of guinea fowl, quail, and turkey genomes. Poultry Science 80:1263-1272.

INVITED SEMINARS

Prevost, L.B. 2015. Assessing Student Writing Using Text Analysis: Understanding the Central Dogma. Virginia Tech. Blacksburg, VA.

CONFERENCE PRESENTATIONS

Carter, K., & Prevost, L. Assessing student understanding of core principle structure and function. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.

McCourt, J., Andrews, T., Crumbs, T., Knight, J., Merrill, J., Merrill, S., Nehm, R., Pelletreau, K., Prevost, L., Smith, M., Urban-Lurain, M., & Lemons, P. Using faculty learning communities to promote the development of student-centered biology instructors. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.

- Moscarella, R., Park, M., Steele, M., Pelletreau, K., Prevost, L., Smith, M., Knight, J., & Urban-Lurain, M. Insights into students' thinking about the central dogma from the automated analysis of constructed response questions. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.
- Romero, M., Carter, K., & Prevost, L. Assessing writing about matter and energy: Comparing text analysis and machine learning. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.
- Hurt, N.E., M. Camus, L.R. Larson, and L Prevost. 2015 "Embracing Facebook as an Online Discussion Medium: Is it Worth the Effort?" Paper to be presented at the National Communication Association Convention, Las Vegas, NV.
- Prevost L.B. 2015. Assessing student biological understanding using text analysis and machine learning. "Undergraduate Biology Education Research" Gordon Research Conference. Lewiston, ME
- Prevost, L.B. 2014. Assessing student understanding of matter and energy transformation: Lexical analysis of student writing. Life Discovery Conference. San Jose, CA
- Prevost, L.B. 2014. Exploring students' mental models of matter and energy transformation through lexical analysis of written assessments. Ecological Society of America 99th Annual Meeting. Sacramento, CA
- Prevost, L.B. 2014. Automated Text Analysis Facilitates Using Written Formative Assessments for Just-in-Time Teaching in Large Enrollment Courses. Maine Research in STEM Education (RiSE) national conference, Bangor, ME.
- Prevost, L.B. 2014. Automated Text Analysis Facilitates Using Written Formative Assessments for Just-in-Time Teaching in Large Enrollment Courses. Maine Research in STEM Education (RiSE) national conference, Bangor, ME. (Invited)
- Prevost, L.B. 2014. Assessing students' ability to trace matter and energy using lexical analysis of written assessments. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.
- Prevost, L. B., Haudek, K.C., and M. Urban-Lurain. 2014. Computerized Lexical Analysis of Students' Written Interpretations of Chemical Representations. National Association for Research in Science Teaching, Pittsburgh, PA.
- Prevost, L.B., H. Campa III. 2013. Student Writing Reveals Their Heterogeneous Thinking about the Origin of Genetic Variation in Populations. National Association for Research in Science Teaching, Rio Grande, Puerto Rico.
- Urban-Lurain, M., L. B. Prevost, H. Campa III. 2013. STEM Doctoral Student Professional Development in Teaching: Outcomes of a High-Engagement Program. National Association for Research in Science Teaching, Rio Grande, Puerto Rico.
- Prevost L. B., Haudek, K.C., Merrill, J.E., Urban-Lurain, M. 2012. Examining student constructed explanations of thermodynamics using lexical analysis. Frontiers in Education. Seattle, WA.
- Prevost, L.B., Haudek, K.C., Merrill, J.E., Urban-Lurain, M. 2012. Lexical Analysis of Writing Reveals Heterogeneous Student Thinking in STEM. Transforming Research in Undergraduate STEM Education (TRUSE) Conference. St. Paul, MN
- Prevost, L.B., J.K. Knight, M.K. Smith, R.A., Merrill, J., Haudek, K.C., Urban-Lurain, M. 2012. Using

- Lexical Analysis to Explore Students' Written Responses to Genetics Concept Assessment-Derived Items. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.
- Kim H., L. Prevost and P. Lemons. 2012. A self-directed online tutorial to teach problem-solving skills in an introductory biology course. Society for the Advancement of Biology Education Research Annual Meeting. Minneapolis, MN.
- Prevost, L.B., Haudek, K.C., Merrill, J.E., Urban-Lurain, M. 2012. Deciphering student ideas on thermodynamics using computerized lexical analysis of student writing. American Society of Engineering Education Annual Conference, San Antonio, TX.
- Prevost, L. B. 2012. Beyond Multiple-Choice: Automated Analysis of Student Writing Reveals Heterogeneous Student Thinking in STEM. Disciplinary Base Education Research Seminar. University of Colorado – Boulder. Boulder, CO
- Prevost, L. B. 2011. Increasing the Impact of Educational Innovation in STEM. College of Engineering Brown Bag Discussion. Michigan State University. East Lansing, MI
- Lemons, P. and L. Prevost. 2011. Documented Problem Solving in Biology: Understanding students' cognitive processes during multiple-choice assessments. Graduate Teaching Assistant Pedagogy Conference, Center for Teaching and Learning, Georgia Tech University. Atlanta, GA.
- Bradley, C., M. Camus, N. Hurt, L. Larson, M. Lovelace, G. Moss, L. Prevost, and N. Riley. 2011. Teaching within Social Networks: Assessing the Relative Value of Facebook as an Online Discussion Forum in College Courses. Graduate Teaching Assistant Pedagogy Conference, Center for Teaching and Learning, Georgia Tech University. Atlanta, GA.
- Prevost, L.B. and C Peterson. Island Biogeography Theory as a Predictor of Species Diversity in Tropical Premontane Forest Fragments. 2010. Sigma Xi Annual Meeting, Raleigh, NC.
- Prevost, L., P. McMillan, and T. Spira. 2004. A new species of *Ambrosia* L. from the Blue Ridge Escarpment of South Carolina. Association of Southeastern Biologist 65th Annual Meeting. Memphis, TN
- Prevost L., P. McMillan, and T. Spira. 2004. Characterization of rock outcrop populations of ragweed (*Ambrosia* L.) from the Blue Ridge Escarpment of South Carolina. 2004. South Carolina Native Plant Society. Charleston, SC.
- Prevost, L., P. McMillan, and T. Spira. 2004. Morphological and ecological adaptations of a new species of *Ambrosia* L. from the Blue Ridge escarpment of South Carolina. Southeastern Ecology and Evolution Conference. Atlanta, GA.
- La Bram, J., A. Garmestani, A. Peck, C. Allen, and L. Prevost. 2004. When landscaping goes bad: the incipient invasion of *Mahonia bealei* in the southeastern United States. Southeastern Ecology and Evolution Conference. Atlanta, GA
- Prevost, L., J. Perry, J. Woodward. 2001. Assessing the relationship between habitat and fish communities in determining stream water quality. Ecological Society of America. Madison, WI

WORKSHOPS

USF Mathematics and Science Partnership Middle School Teachers Workshop. 2015. Tampa Florida

Writing to Reveal Learning. 2014. Maine Research in STEM Education (RiSE) national conference, Bangor, ME.

GRANTS

PI: Collaborative Research: A Community of Enhanced Assessment Facilitates Reformed Teaching, NSF DUE. 2013-2015. \$55, 481

Co-PI: Robert Noyce Teacher Scholarship Program for University of South Florida Science Majors, NSF Robert Noyce Teacher Scholarship Program. 2014-2019.

Co-PI: K-12 Math & Science Partnership: Osceola, Okeechobee, Volusia & the University of South Florida. Florida Department of Education. 2014-2017. \$2.26 M

COURSES TAUGHT

BOT3152C. Field Botany. USF Spring 2014, 2015

BSC6931. Data mining in science education. USF Fall 2015

PBIO 8840 Plant Ecology Seminar – Community Ecology. Spring 2009. Co-Instructor

PBIO. Plant Taxonomy. Spring 2008, Spring 2009. TA

PBIO. Botanical Illustration. Fall 2008. TA

PBIO1220L. Introduction to Plant Biology Lab, UGA. Fall 2007, Fall 2008, Guest Lecturer, TA

BIOL 1140 Plants and the Environment. College of Coastal Georgia. Summer 2007.

STUDENTS MENTORED

Dissertation Supervisor for Kelli Hayes, PhD. Student, 2014-present

Thesis Supervisor for Margarete Romero, Masters Student, 2014-present

Graduate Committee member for Li Yi, 2014-present

Graduate Committee member for Benjamin VanNorman, 2014- present

Mentor to Kirsti Martinez, Undergraduate Research Assistant, 2014- present

Mentor to Andrea Espina, Undergraduate Research Assistant, 2014- present

Honors' Thesis Supervisor, Elizabeth Rodriguez, 2014- 2015

PROFESSIONAL MEMBERSHIPS

- Society for the Advancement of Biology Education Research (SABER)
- National Association for Research in Science Teaching (NARST)
- Ecological Society of America (ESA)