

E. Jane Bradbury, Ph.D.**Curriculum vitae**

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SUMMARY OF INTERESTS AND EXPERIENCE

As an ethnobotanist, I pursue an interdisciplinary combination of research, teaching, and outreach activities that explore the complex relationships among plants and human societies and the emergent biocultural landscapes. Whereas my own research program has focused on domestication and agriculture, including the genetic processes of domestication, evolution and selection; effects of domestication on plant toxicity; human nutrition and food culture; and chemical agroecology, I am also dedicated to communicating understanding of key biological principles to broad audiences. With over fifteen years of research, teaching, and outreach experience, I excel at providing a global perspective to engage diverse audiences in integrating botany in the modern context. In addition to being experienced in a traditional academic research laboratory, I also succeed at applying botanical principles to develop community-based solutions to advance social justice initiatives, including equal rights, food and economic sovereignty, and resilience to climate change.

EDUCATION & PROFESSIONAL DEVELOPMENT**EDUCATION****Ph.D. in Botany from the University of Wisconsin-Madison**

Madison, WI. May 2014. GPA: 3.875

Doctoral Dissertation: *Understanding Toxic Domesticates: Biochemistry and Population Genetics of Manioc (Manihot esculenta) and Oca (Oxalis tuberosa).***B.Sc. cum laude, University of South Carolina Honors College**

Columbia, SC. May 2006.

Biology major; French minor. GPA 3.693.

McNair Scholar. President's List Fall 2002, All 2005, Spring 2006; Dean's List Fall 2004.

Senior Honors Thesis: *A Social History of Sabal palmetto and Its Contemporary Significance to South Carolinians*Howard Hughes Research Fellow Project: *A Survey of the Vascular Flora of Congaree Bluffs Heritage Preserve: the Effects of Burning on the Upper Coastal Plain***PROFESSIONAL DEVELOPMENT****Professional Certificate in Online Education, UW-Madison**

Received: May 2018

This certificate is awarded by the UW-Madison Department of Continuing and Distance Education to participants who have completed over 140 earned hours of curriculum and activities designed to develop engaging and effective online instructors.

National Science Foundation Delta Certificate in Research, Teaching, and Learning

Received: September 2012

This Certificate is awarded via the NSF-funded Center for the Integration of Research, Teaching, and Learning (CIRTL) to students who complete at least 2 courses in teaching & learning, participate actively in the campus learning community, conduct a Delta Teaching-As-Research internship project, and defend a teaching and learning portfolio.

EDUCATION & PROFESSIONAL DEVELOPMENT—CONT'D.

PROFESSIONAL DEVELOPMENT—CONT'D.

UW-Madison College of Letters & Science Teaching Fellow 2011-2012

Engaged in teaching development seminars throughout the 2011 – 2012 academic year; lead Teaching Assistant Training for all L&S TAs; and designed and implemented focused workshop titled “Teaching to Different Styles: Understanding Students and Learning Diversity.”

UW-Madison Botany Department Writing Fellow, Fall 2011

As “Writer in Residence” at the UW-Madison Writing Center, designed and implemented curriculum for writing skills enrichment for departmental graduate students. Projects included a 10-week seminar “How to Build a Botany Dissertation” and two workshop series of three workshops each: “Show Me the Money: Writing Successful Funding Applications” and “Life After Graduation: Finding and Securing a Job.”

RESEARCH & CURATORIAL POSITIONS

- 2015 **Director of Research** – Herbal Anthropology Project. Managed the Research & Projects Department, encompassing the Domestic and International Projects Divisions, Intellectual Property Protection Division, and the Biological Resources Conservation Division, including both internal (organizational) development and external (community project) development. All projects support the organization goal of supporting grassroots community initiatives to preserve and protect traditional knowledge (TK), thereby sustaining all aspects of culture, including cultural expression, community health and medicine, nutrition and food sovereignty, economic security, environmental conservation, and resilience to climate change. July 2015 – June 2018.
- 2014 **Collections Manager** – Emory University Herbarium. Managed collections with primary goal of revitalizing facility after ten years of inactivity. Revitalization efforts revolved around two main aims: 1) collection security and 2) collection accessibility. Responsibilities towards 1) included developing and implementing an integrated pest management plan, specimen repair, cabinet maintenance, and fundraising/grant writing for facility improvements. Responsibilities towards 2) included building a digital database of collection, specimen imaging, website design and improvement, creating an accession catalogue, collection organization, specimen annotation and correction, and outreach initiatives on campus and in Atlanta community. June 2014 - July 2015.
- 2008 **Research Assistant** – Botany Department, University of Wisconsin-Madison. Dr. Eve Emshwiller, supervisor. Worked to generate additional nuclear sequences for contribution to the *Oxalis tuberosa* alliance systematics research project on the investigation of the origins of *O. tuberosa*; worked to research and write a review article on the role of oxalic acid in ethnobotany and domestication of *O. tuberosa*. July through August.
- 2008 **Research Assistant** – National Center for Scientific Research, Center for Functional and Evolutionary Ecology, Montpellier, France. Dr. Doyle McKey, supervisor. Researched the population genetics of bitter and sweet varieties of cassava. This work was supported by a NSF FACE grant. January through May.
- 2007 **Delta Intern** – Delta Program for Integrating Research, Teaching, and Learning, University of Wisconsin, Madison. Developed and evaluated the efficacy of specific learning materials and pedagogical approaches to teaching introductory botany life cycles. September through December.
- 2007 **Pre-doctoral Researcher**– El Centro Internacional de la Papa, Lima, Peru. Dr. Carlos Arbizu, supervisor. Performed preliminary analyses of oxalic acid levels in nine varieties of *Oxalis tuberosa* and one closely related unnamed wild tuber-bearing *Oxalis*. This work was supported by a UW-Madison LACIS Award and UW-Madison Botany Department Davis Research Grant. July/August.
- 2006 **Research Assistant** – A. C. Moore Herbarium, curator Dr. John Nelson. Collaborated with the South Carolina Department of Natural Resources to investigate effects of burning and farming on *Pinus palustris* ecosystem. This work was supported by a University of South Carolina Biology Department Belser Award for Undergraduate Excellence in Botany and a USC Howard Hughes Fellowship. University of South Carolina.

RESEARCH & CURATORIAL POSITIONS—CONT'D

- 2005 **Collections Manager** – A. C. Moore Herbarium, curator Dr. John Nelson. Managed Herbarium collections. Duties included plant specimen collection, pressing, drying, mounting, identifying, and cataloguing; specimen shipment and exchange; correspondence with other herbaria. This work was supported by a South Carolina Honors College Undergraduate Research Fellowship. August 2004 – May 2005.
- 2004 **Research Technician** – Midlands Master Gardener Association and the A. C. Moore Herbarium. Catalogued plant species, cultivated and wild, growing in and around the Riverbanks Botanical Gardens, Columbia, SC.

PUBLICATIONS

- Lyles, J T, P J Tyler, **E J Bradbury**, K Nelson, C F Brown, S T Pierce, and C L Quave. **2017**. Comparative Phytochemical Analysis of *Schisandra* spp. (Chinese and Bay Starvine). *Journal of Dietary Supplements* 14 (6).
- Kiefer, D, **E J Bradbury**, and P. Tellez-Girón, **2014**. Herbal Medicine Use in the Latino Community in Madison, Wisconsin. *Wisconsin Medical Journal* 113 (2): 64 – 71.
- Bradbury, E J**, A Duputié, M Delêtre, E Emshwiller, C Roullier, A Narvaez-Trujillo, J A Manu-Aduening, D McKey, **2013**. Geographical differences in genetic differentiation between sweet and bitter cassava (*Manihot esculenta* Crantz). *American Journal of Botany* 100 (5): 857–866.
- Bradbury, E J** and E Emshwiller, **2011**. The Role of Organic Acids in the Domestication of *Oxalis tuberosa*: A New Model for Studying Domestication Resulting in Opposing Crop Phenotypes. *Economic Botany* 65 (1): 76 – 84.

PUBLICATIONS—IN PREPARATION

- Bradbury, E J**, K Keefover-Ring, R Reinart, D Tay, and E Emshwiller, *in review*. The Role of Organic Acids in the Domestication of *Oxalis tuberosa*: (2) Differences in Tuber Oxalic Acid Content in Ocas from Traditional Use-Categories in Quechua and Aymara Communities. *Journal of Agriculture and Food Chemistry*.
- Bradbury, E J**, A G Gardner, and E Emshwiller, *in preparation*. New Approaches to Teaching Plant Life Cycles: Pedagogy Innovations and an Interactive Life Cycles Explorer. *Journal of College Science Teaching*. Anticipated submission: Jul 2022.
- Bradbury, E J**, I Manrique, L Moscoe, and E Emshwiller, *in preparation*. The Role of Organic Acids in the Domestication of *Oxalis tuberosa*: (3) Genetic Differentiation of Traditional Use-Categories in Quechua and Aymara Communities. *Genetic Resources & Crop Conservation*. Anticipated submission: Sep 2022.
- Bradbury, E J**, P Gregg, E Kebbekus, K Vivanco, and E Emshwiller, *in preparation*. The Role of Organic Acids in the Domestication of *Oxalis tuberosa*: (4) Inconsistent ploidy in *Oxalis tuberosa* and its Effects on Oxalic Acid Production. *Journal of Evolutionary Biology*. Anticipated submission: Dec. 2022.

PRESENTATIONS, GRANTS, AND AWARDS

PRESENTATIONS AT SCIENTIFIC CONFERENCES

- 2014 **Tuber Oxalic Acid Content and Ploidy Levels in Oca (*Oxalis tuberosa*) Use-Categories**. Oral Presentation. Meeting of the Society for Economic Botany and the Society for Ethnobiology. Cherokee, NC.
- 2012 **Invited Speaker at Annual Meeting of Sigma Delta Epsilon, Graduate Women in Science**. Oral presentation in the “pecha kucha” style titled “The Making of a Botanist.” GWIS Conference. Madison, WI.
- 2011 **The Role of Organic Acids in the Domestication of *Oxalis tuberosa*: (2) Organic Acid Accumulation in Oca Tubers**. Oral presentation. Botany 2011 Conference, St. Louis, MO.

PRESENTATIONS, GRANTS, AND AWARDS—CONT'D

PRESENTATIONS AT SCIENTIFIC CONFERENCES—CONT'D

- 2011 **Genetic Differentiation of Bitter and Sweet Cassava (*Manihot esculenta* Crantz): New Analyses Distinguish Between Competing Hypotheses of Genetic Drift and Migration.** Oral presentation. Botany 2011 Conference, St. Louis, MO.
- 2009 **Genetic Differentiation of Bitter and Sweet Cassava (*Manihot esculenta* Crantz): an Introductory Analysis at the Global and Continental Levels.** Oral presentation. Annual Meeting; Society for Economic Botany, Charleston, SC.
- 2009 **Oxalic Acid and the Tuber pH of Oca (*Oxalis tuberosa* Molina): an initial investigation into the role of organic acids in the domestication of oca.** Poster. Annual Meeting; Society for Economic Botany, Charleston, SC. Received Honorable Mention for the Julie F. Morton Award for best student poster.
- 2007 **Communicating Understanding of Introductory Botany Life Cycles: Visual and Verbal Approaches.** Oral presentation. Botany 2007 Conference (joint congress of the Botanical Society of America, American Fern Society, American Society of Plant Taxonomists, and American Society of Plant Physiologists), Chicago, IL.
- 2006 **A Survey of the Vascular Flora of Congaree Bluffs Heritage Preserve: the Effects of Burning on the Upper Coastal Plain.** Oral presentation. Annual Meeting of the Association of Southeastern Biologists, Gatlinburg, TN.

RESEARCH GRANTS & FELLOWSHIPS

- 2011 **Adele Lewis Grant Research Fellowship** – \$7,985.00 awarded by the National Graduate Women in Science.
- 2011 **Eldon Newcomb Summer Research Fellowship** –\$4,000 in summer support and \$700 in research funds awarded by the University of Wisconsin-Madison Botany Dept. to graduate students with demonstrated excellence in teaching.
- 2010 **Ruth Dickie Scholarship** – \$1,500 awarded by the Beta Chapter of Graduate Women in Science.
- 2010 **Judy Croxdale Award for Women in Science** – \$500 awarded by the UW-Madison Botany Department.
- 2010 **Vilas Travel Grant** – \$1,000 awarded by the University of Wisconsin-Madison Graduate School.
- 2009 **Davis Research Grant** – \$1,200 awarded by the UW-Madison Botany Department as support for graduate research at the International Potato Center (CIP) in Lima and Huancayo, Peru May 2009.
- 2008 **Research Assistantship and Travel Stipend Award for Research Abroad** – \$7,565 funded through the National Science Foundation France-American Cultural Exchange. Provided support for research with Dr. Doyle McKey at CNRS, Montpellier, France, Spring.
- 2007 **Latin-American, Caribbean, and Iberian Studies Tinker Nave Travel Grant** – Award totaling \$950 granted by the University of Wisconsin Latin American, Caribbean, and Iberian Studies Department.
- 2007 **Davis Research Grant** – Award totaling \$1190 granted by the University of Wisconsin Botany Department as support for preliminary graduate research at the International Potato Center (CIP) in Lima & Huancayo, Peru.
- 2005 **Howard Hughes Undergraduate Research Fellowship** – \$1,000 in support for research on Congaree Bluffs Heritage Preserve. August 2005 - May 2006.
- 2005 **Belser Award for Undergraduate Excellence in Botany** –\$500 awarded by the University of South Carolina Biology Department for continued work at the A.C. Moore Herbarium. August 2005 - May 2006.

PRESENTATIONS, GRANTS, AND AWARDS—CONT'D

RESEARCH GRANTS & FELLOWSHIPS—CONT'D

- 2004 **Honors College Undergraduate Research Fellowship** – \$3,000 awarded by the University of South Carolina Honors College as support for research at A.C. Moore Herbarium. August 2004 - May 2005.
- 2002 **McNair Scholarship** – \$60,000 over four years awarded by the University of South Carolina Honors College as support for undergraduate study. August 2002 – May 2006.

HONORS AND AWARDS

- 2010 **Second Place, Graduate Women in Science (Beta Chapter) Seminar Competition**
- 2009 **Julia F. Morton Award, Second Place** – For the best student poster contributed to the Society for Economic Botany 2009 Annual Meeting, Charleston, SC.
- 2008 **NSF Graduate Research Fellowship, Honorable Mention**
- 2007 **NSF Graduate Research Fellowship, Honorable Mention**

TEACHING AWARDS

- 2021 **COVID-19 Transformational Online Instruction Contributions Award** – Awarded by The University of Texas at Austin in recognition of exceptional innovation and excellence in the creation of broadly-impactful pedagogical resources, systems, and programs for the transformation of online instruction to support enhanced student engagement and community while maintaining inclusive and equitable access for all learners. Spring.
- 2019 **Instructors Supporting Students with Disabilities Award** – Awarded by The University of Texas at Austin Services for Students with Disabilities to instructors who are nominated by students as being particularly supportive of student needs and diversity accommodations on campus. Fall.
- 2009 **Honored Instructor Award** – Granted by the University Housing Services based on student nominations.
- 2008 **Eldon Newcomb Teaching Award for Excellence in Teaching Botany** – Granted by the University of Wisconsin Botany Department for excellence in teaching.

TEACHING EXPERIENCE

POSITIONS AS PRIMARY INSTRUCTOR

- 2021 **Ethnobotany Online** (Botany 474) – Converted previously-taught in-person semester-length BOT 474 to online 8-week summer session course, including complete course design and instruction. Responsibilities include course design, construction, implementation, and teaching team management (one graduate teaching assistant). Topics covered included definition and history of ethnobotany, culture and humanity, botany and evolution, agriculture and domestication, cognitive ethnobotany, folk taxonomy, ecological knowledge, traditional resource management, and ethics. Enrollment 17. UW-Madison. Summer.
- 2021 **Climate Change & Biotechnology** (Biology 302G) – Designed for non-Biology majors, two sections of 35 students. Responsibilities included course design, construction, implementation, and teaching team management (one graduate and three undergraduate TA's). Implemented online due to COVID-19 pandemic. Course scope designed to encompass broad spectrum introductory biology topics, including the molecular basis for life through ecology, evolution, and population genetics and including both marine and terrestrial systems biology. Content organized in under the overarching umbrella of understanding the biology of climate change and exploring biotechnology solutions to the challenge climate change presents. Spring.

TEACHING EXPERIENCE – CONT'D
POSITIONS AS PRIMARY INSTRUCTOR – CONT'D

- 2021 **Introductory Biology I** (Biology 311C) – First semester introductory biology, one section of 27 students. Responsibilities included course design, construction, lecture implementation, and supervising a team of two graduate teaching assistants. Implemented online due to COVID-19 pandemic. Topics covered include the molecular basis for life, molecular bonding and bonding interactions, water chemistry, biological macromolecules, prokaryotic and eukaryotic cellular structure and function, mitosis, meiosis, DNA synthesis, transcription and translation, cell signaling, respiration, and photosynthesis. UT-Austin. Spring.
- 2020 **Climate Change & Biotechnology** (Biology 302G) – Designed for non-Biology majors, two sections of 40 students. Responsibilities included course design, construction, implementation, and teaching team management (one graduate and three undergraduate TA's). Implemented online due to COVID-19 pandemic. Further description under 2021 implementation. Fall.
- 2020 **Ethnobotany Online** (Botany 474) – Scope of the course described above under Summer 2021. Online course during the 8-week summer session, enrollment 46. UW-Madison. Summer
- 2020 **Advanced Plant Anatomy** (Biology 374 & 174L) – Upper division, one section of 14 undergraduate and graduate students. Responsibilities included course design and lecture and laboratory implementation. Topics paired anatomical-physiological systems: leaves and photosynthesis, stems and water transport, roots and water absorption, reproductive structures and plant life cycles, and secretory structures and secondary chemistry. The University of Texas at Austin. Spring.
- 2020 **Introductory Biology I** (Biology 311C) – First semester introductory biology, one section of 102 students. Responsibilities included course design, construction, lecture implementation, and supervising a team of one graduate and two undergraduate teaching assistants. Topics covered are the same as Spring 2021. UT-Austin. Spring.
- 2019 **Genetics** (Biology 325) – One semester general genetics course contributing to the Biology major and Pre-Medical Track degree requirements. Responsibilities included course design, construction, lecture implementation, and supervising one graduate and one undergraduate teaching assistant. Topics covered include the molecular foundation for genetics; inheritance: Mendelian, non-Mendelian, linked, sex-linked, and epigenetic; Hardy-Weinberg and population genetics; phylogenetics; the genetics of cancer; and ethics. Enrollment 162. UT-Austin. Fall.
- 2019 **Ethnobotany Online** (Botany 474) – Scope of the course described above under Summer 2021. Online course during the 8-week summer session. UW-Madison. Summer. Enrollment 54. UW-Madison. Summer.
- 2019 **Advanced Plant Anatomy** (Biology 374 & 174L) – Upper division plant anatomy, one section of 15 students. Responsibilities included course design, construction, and lecture and laboratory implementation. Further description under 2020 implementation. Spring.
- 2019 **Introductory Biology I** (Biology 311C) – First semester introductory biology, one section of 116 students. Responsibilities included course design, construction, lecture implementation, and supervising a team of one graduate and two undergraduate teaching assistants. Topics covered same as Spring 2020. UT-Austin. Spring.

TEACHING EXPERIENCE – CONT'D

POSITIONS AS PRIMARY INSTRUCTOR – CONT'D

- 2018 **Introductory Biology I** (Biology 311C) – First semester introductory biology, three sections of 120 – 130 students each. Responsibilities included course design, construction, lecture implementation, and supervising a team of 7 graduate and undergraduate teaching assistants. Topics covered same as Spring 2019. UT-Austin. Fall.
- 2018 **Ethnobotany Online** (Botany 474) – Scope of the course described above under Summer 2021. Online course during the 8-week summer session, enrollment 35. UW-Madison. Summer.
- 2017 **Food-as-Medicine Seminar Series** – A course hosted for educating the general public on the physiology of human diet. Each workshop consisted of a brief lecture followed by hands-on, experiential activities, such as tea tastings or microscope use. Topics covered include fermentation and the microbiome; aromatic foods and plant biochemistry; psychoactive foods and neurobiology basics; glycemic regulating foods and metabolic syndrome; and ecosystemic nutrient flow in our food supply. Fall 2017 – Spring 2018.
- 2013 **Ethnobotany** (Botany 474) – Graduate-level course with one section of 45 students. Responsibilities included course design, instruction, student evaluation, and supervision of one graduate teaching assistant. Topics covered included history of ethnobotany, culture and humanity, botany and evolution, agriculture and domestication, archaeobotany/paleobotany, folk taxonomy, biochemistry of plant compounds, foods-as-medicines, ethics, traditional ecological knowledge, traditional resource management, and conservation of plants and culture. UW-Madison. Fall.
- 2011 **Writing Seminar for Botany Dissertators** (Botany 930) – Graduate-level seminar course with one section of 12 students in the active-phase of dissertation construction. Responsibilities included de novo construction of the course content, design, and syllabus creation; lecturing and discussion facilitation; and evaluation of student learning. Topics covered included writing process and structure; improving writing style; maintaining clarity, concision, and completeness in science writing; grammar and punctuation; proof-reading and editing skills; and effective peer review. Spring.

CURRICULUM DEVELOPMENT

- 2021 **Faculty Innovation Grant for Climate Change Curriculum** – Selected for a university-wide grant to construct, compile, and refine interdisciplinary teaching modules on climate change. Developed Canvas modules organized around learning objectives for distribution to instructors across the University of Texas at Austin for importation and incorporation into their course designs. Summer.
- 2021 **Genetics Course Redesign Initiative** – Participated in an initiative to redesign the fundamental Genetics course at the University of Texas at Austin to incorporate Departmental Skills Primary Learning Outcomes. Participated in bi-weekly meetings of a Genetics faculty focus group to discuss 8 skills PLOs and current ways these PLOs are incorporated in our various classrooms and obtain consensus on two PLOs to make a primary focus for Fall 2021 curriculum development. Spring.
- 2020 **Interdisciplinary Faculty Learning Community on Teaching Climate Change** – Participated in a faculty learning community composed of faculty members from seven different departments and three colleges across campus to discuss strategies for effectively teaching about climate change and develop interdisciplinary course modules for broad-scale distribution at UT-Austin and beyond. Fall.

TEACHING EXPERIENCE – CONT'D **CURRICULUM DEVELOPMENT – CONT'D**

- 2019 **Biology for Non-Majors Course Redesign Initiative** – Participated in an initiative to redesign the Biology for Non-Majors course suite at the University of Texas at Austin. Redesigned the course “Biotechnology and the Future” to incorporate Departmental Skills Primary Learning Outcomes around three main modules: Climate Change and Biotechnology, Agricultural Biotechnology, and Medical Biotechnology. Summer 2019.
- 2019 **Introductory Biology Course Redesign Initiative** – Participated in an initiative to redesign Introductory Biology for Majors I at the University of Texas at Austin to incorporate Departmental Skills Primary Learning Outcomes. Designed curriculum and activities to support the skills PLO “Students should be able to direct their own learning.” Summer 2019.
- 2015 **Brown Elementary Interactive STEM Transformation** – Brown Elementary School, Jackson, MS. Developed a detailed plan for 29 interactive STEM displays to install at Brown Elementary as part of the Museum School STEM Transformation collaboration with the Center for Education Innovation and the Toyota USA Foundation.
- 2015 **Introductory Biology Laboratories (BIOL 141/142)** – Emory University. Designed a laboratory module to allow students to explore the concepts of molecular genetics and botany by investigating the utility of differently evolving portions of plant genomes for providing taxonomic identification of a plant specimen. Students should be able to explain how rates of evolution vary in the genome and how this affects their ability to distinguish evolutionary histories of plants.
- 2015 **The Interactive Herbarium**– Designed for the Emory Herbarium for use in community STEM outreach events with a target audience of K – 12. Exhibit includes the “Botanist’s Toolkit”, “How to Press a Plant”, “Mount Your Own Herbarium Specimen”, “What’s that Smell?” botanical matching game, “Smell the World: Origins of Aromatic Plants” map game, and “Medicinal Plants of the Southeast Coloring Sheets”. Exhibit included in Fernbank National History Museum’s “Power of Poisons” event March 14, 2015 and the Atlanta Science Festival March 28, 2015.
- 2010 **Crop Evolution Exploratory** – Interactive exhibit to communicate understanding of the evolutionary processes of crop domestication to a target audience of K – 12. Exhibit included live teosinte (maize wild progenitor) and maize plants, “Selecting for Variety” crop diversity bean sorting game, “Where’d That Come From?” crop origins map game, “Accidental Selection” magnet harvest game, and “Taste the Difference” wild melons versus domesticated. Exhibit included in UW-Madison’s Darwin Day Feb. 13, 2010.
- 2009 **Botanical Life Cycles Interactive Explorer** – Undergraduate learning module for botany lectures and labs. Curriculum includes learning goals and pedagogy strategies, life cycle diagrams for use in lectures and laboratories in conjunction with dissection and microscopy, and a web-based explorer with roll-over effects and self-quizzes.

WORKSHOPS FACILITATED

- 2013 **Understanding, Designing, and Creating Your Teaching Portfolio** – Delta Program, University of Wisconsin-Madison. The Delta Program offers a two-part workshop series each year to help future faculty members create their teaching portfolios. In this second session, the focus is on how to create a teaching portfolio, covering three portfolio elements: the teaching and learning philosophy, artifacts, and reflective statements. Participants engage in activities and group discussions, explore examples of successful portfolios, and create draft materials for artifacts and reflective statements.

TEACHING EXPERIENCE – CONT'D

WORKSHOPS FACILITATED

- 2012 **Writing Your Teaching Philosophy** – Delta Program, University of Wisconsin-Madison. The Delta Program offers a two-part workshop series each year to help future faculty members create their teaching portfolios. The focus of this workshop (Part I) is on developing a teaching philosophy. The workshop was designed for graduate students and postdoctoral researchers from any discipline, including individuals with working philosophies, as well as those who have never developed one.
- 2011 **Teaching to Different Styles: Understanding Students and Learning Diversity** – University of Wisconsin-Madison. Each year L&S Teaching Fellows work to develop specialized workshops for teaching development in teaching assistants and teaching post-doctoral fellows from 75 departments in the college. This workshop focused on helping instructors facilitate many types of learners in their classrooms, with special emphasis on adapting existing curricula without restructuring courses.

MENTORING EXPERIENCE

- 2020 **Undergraduate Thesis Mentor** – Mentored undergraduate Plant Biology senior in her senior honors thesis at the University of Texas at Austin: “The Effects of Botany Education on Consumer Choice and Food System Participation.” Fall 2019 to Spring 2020.
- 2015 **Undergraduate Research Mentor at Emory University** – Mentored 16 undergraduate students and one high school intern at Emory University Herbarium. Supervised five independent research projects: two Biology Department Independent Studies (BIOL 499); one Scholarly Research and Inquiry at Emory (SIRE) Program project “Medicinal Plants of the Civil War”; and two Summer Undergraduate Research Experience (SURE) projects “Climate Change and the Granite Outcrop Ecosystem of Arabia Mountain” and “Bioactive Compounds in Civil War Medicinals and their Efficacy on Antibiotic Resistant Bacteria”.
- 2013 **Undergraduate Research Mentor at University of Wisconsin-Madison** – Over the course of four years, mentored six undergraduate students in the Emshwiller lab, including one visiting student participating in the UW-Madison Integrated Biological Sciences Summer Research Program and three Senior Honors Theses: “Investigating the Maternal Progenitor of *Oxalis tuberosa* Using Chloroplast Loci”, “The Biochemical Composition of Sepal Calli in *Oxalis*”, and “Inconsistent Ploidy in *Oxalis tuberosa* as Inferred Through Flow Cytometry”.

TEACHING ASSISTANTSHIPS

- 2013 **Survey of Botany** (Botany 100) – University of Wisconsin-Madison. Summer session I.
- 2013 **Biological Interactions and Scientific Thinking** (Biocore 333) – University of Wisconsin-Madison. Spring.
- 2012 **Organismal Physiology** (Biocore 323) – University of Wisconsin-Madison. Fall.
- 2012 **Survey of Botany** (Botany 100) – University of Wisconsin-Madison. Summer session I.
- 2012 **Plant Physiology** (Botany 500) – University of Wisconsin-Madison. Fall.
- 2011 **Introductory Botany** (Botany 130) – University of Wisconsin-Madison. Spring.
- 2010 **Ethnobotany** (Botany 435) – University of Wisconsin-Madison. Fall.
- 2010 **Survey of Botany** (Botany 100) – University of Wisconsin-Madison. Summer session I.

TEACHING EXPERIENCE—CONT'D TEACHING ASSISTANTSHIPS – CONT'D

- 2010 **Introductory Botany** (Botany 130) – University of Wisconsin-Madison. Spring.
- 2009 **Introductory Botany** (Botany 130) – University of Wisconsin-Madison. Fall.
- 2009 **Survey of Botany** (Botany 100) – University of Wisconsin-Madison. Spring.
- 2008 **Algae** (Botany 330) – University of Wisconsin-Madison. Fall.
- 2008 **Botany Department Teaching Assistant Trainer** – University of Wisconsin-Madison. AY 2008 – 2009.
- 2007 **Introductory Botany** (Botany 130) – University of Wisconsin-Madison. Fall.
- 2007 **Survey of Botany** (Botany 100) – University of Wisconsin-Madison. Spring.
- 2006 **Introductory Biology** (Biology 151) – University of Wisconsin-Madison. Fall.
- 2006 **Spring Flora** (Biology 527) – University of South Carolina, Columbia. Spring.

SERVICE AND OUTREACH COMMUNITY OUTREACH

- 2015 **Atlanta Science Festival** – Directed Emory Herbarium’s “Interactive Herbarium” exhibit at the Atlanta Science Festival. Exhibit includes the “Botanist’s Toolkit”, “How to Press a Plant”, “Mount Your Own Herbarium Specimen”, “What’s that Smell?” botanical matching game, “Smell the World: Origins of Aromatic Plants” map game, and “Medicinal Plants of the Southeast Coloring Sheets”. March 28.
- 2015 **“Power of Poisons” at Fernbank Natural History Museum** – Directed Emory Herbarium’s “Interactive Herbarium” exhibit. March 14.
- 2014 **Elementary STEM Teacher Training** – Hosted 6 STEM teachers from E. L. Bouie Elementary for Common Core Curriculum training at Emory Herbarium. July 8.
- 2011 **Volunteer Vision Screener** – Volunteered with Delta Gamma Fraternity and Prevent Blindness Wisconsin to conduct vision screenings for and educate children and parents on common vision problems at preschools.
- 2009 **Family Science Night Facilitator** – Facilitated “Bottle Biology: Discovery Cup Necklaces and Soda Bottle Greenhouses” at Hawthorne Elementary School’s Family Science Night, Tuesday February 3.
- 2008 – 2009 **After School Science Club Facilitator** – Volunteer at Orchard Ridge Elementary in Madison, WI to facilitate a weekly after school science club for the YMCA after school care program for 3rd – 5th grade students. Three semesters.
- 2002 – 2004 **First Mentors Program** – Volunteered at the University of South Carolina campus liaison program with Big Brothers/Big Sisters. Mentored an underprivileged student at A.C. Moore Elementary School. Academic Years 2002 – 03 and 2003 – 04.
- 2009 – 2011 **Graduate Representative to Colloquium Committee** – Primary duties included organizing visiting speaker’s schedules, organizing graduate student pizza luncheons with visiting speakers, choosing and inviting speakers to give talks, and leading the process for speaker selection, invitation, and hosting for the annual Graduate Student Invited Scholar Symposium.

SERVICE AND OUTREACH—CONT'D

COMMUNITY OUTREACH—CONT'D

- 2009 **Diversity Recruiter** – Served as a volunteer recruiter for the UW Graduate School at the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Annual Meeting.
- 2008 – 2009 **Graduate Representative to Space Committee** – Primary duties included attending meetings to discuss management, upkeep, and expansion of facilities.
- 2007 **Graduate Representative to Technology Committee** – Primary duties included organizational work to aid the building's transition into participation in the campus-wide wireless network and generation of the new departmental website interface.
- 2006 **Graduate Representative to Social Committee** – Primary duties included organizing the annual departmental Winter Party and Garden Party, as well as coordinating receptions for visiting scholars and job candidates.

NON-ACADEMIC MENTORING

- 2008 – 2011 **Advisory Team Chairman** – Mentored president, vice president: social standards, and vice-president finance in leadership and large-group organization; functioning of Honor Board to uphold Delta Gamma values of accountability, social responsibility, and personal integrity; creating annual Chapter budgets of over \$500,000; and managing over 75 different expense and income accounts. Also managed team of alumnae advisers to oversee all areas of Chapter operations to achieve the mission and goals of Delta Gamma Fraternity.
- 2006 – 2008 **Programming and Education Adviser** – Directly mentored chapter officers vice president: programming and vice president: member education in creating annual calendar, including initiatives to enrich members' lives through service, cultural appreciation, health and safety, financial planning, and social activities. Mentored vp: member education in setting and achieving new scholarship goals for the Chapter.

PROFESSIONAL SOCIETIES

Society of Economic Botany (SEB), Society of Ethnobiology (SoE), Botanical Society of America (BSA), Sigma Delta Epsilon—Graduate Women in Science, Teaching Assistants Association, National Honors Society, National Society of Collegiate Scholars, National Forensics League, Delta Gamma Fraternity.

REFERENCES

- Dr. John B. Nelson** – Director and curator of the A.C. Moore Herbarium at the University of South Carolina; undergraduate adviser. **Phone:** (803) 777-8196 **Address:** A.C. Moore Herbarium; Coker Life Sciences Building; 715 Sumter Street; Columbia, SC 29208 **email:** nelson@sc.edu
- Dr. Eve Emshwiller** – Associate Professor of Botany, University of Wisconsin-Madison; graduate adviser. **Phone:** (608) 890-1170 **Address:** Botany Department—Birge Hall; 430 Lincoln Dr.; Madison, WI 53706 **email:** emshwiller@wisc.edu
- Dr. David Baum** – Professor of Botany, UW-Madison. **Phone:** (608) 265-5385 **Address:** same as E. Emshwiller **email:** dbaum@wisc.edu
- Dr. Ken Cameron** – Director of Wisconsin State Herbarium, UW-Madison. **Phone:** (608) 265 – 9237 **Address:** same as E. Emshwiller **email:** kmcameron@wisc.edu