

Katherine E. Waselkov
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CURRENT POSITION

Assistant Professor – Biology, California State University, Fresno (2015-present)

EDUCATION

Postdoctoral Research Associate – Biology, Kansas State University (2013-2015)

Adviser: Dr. Carolyn Ferguson

Ph.D. - Evolution, Ecology, and Population Biology, Washington University (2006-2013)

Advisers: Dr. Kenneth Olsen and Dr. Barbara Schaal

B.S. - Botany, Summa Cum Laude, University of Florida (2002-2006)

Minor in Anthropology

HONORS, AWARDS, and FUNDING

National Geographic Society Committee for Research and Exploration Grant 9126-12, Phylogenetic Relationships and Conservation of the Plant Genus <i>Amaranthus</i> in the Galápagos Islands (2012)	\$10,000
National Geographic Society Committee for Research and Exploration Grant 8901-11, An Investigation of the Phylogeographic Origin and Conservation Status of Endemic <i>Amaranthus</i> Species in the Galápagos Islands (2011)	\$8780
HHMI Washington University Summer Undergraduate Research Fellowship To N. Regenold and K. Waselkov (2010)	\$4000
National Science Foundation Graduate Research Fellowship (2007-2010)	

PUBLICATIONS

- Waselkov, K.E.**, and K.M. Olsen. 2014. Population genetics and origin of the native North American agricultural weed waterhemp (*Amaranthus tuberculatus*; Amaranthaceae). *American Journal of Botany* 101(10): *in press*, doi: 10.3732/ajb.1400064
- Judd, W.S., N.C. Melvin III, **K. Waselkov**, and K.A. Kron. 2013. A taxonomic revision of *Leucothoë* (Ericaceae; tribe Gaultherieae). *Brittonia* 65(4): 417-438.
- Judd, W.S., N.C. Melvin III, **K. Waselkov**, and K.A. Kron. 2012. Taxonomic revision of *Eubotrys* (Ericaceae; tribe Gaultherieae). *Brittonia* 64(2): 165-178.
- Waselkov, K.**, and W. S. Judd. 2008. A phylogenetic analysis of *Leucothoë* s.l. (Ericaceae; tribe Gaultherieae) based on phenotypic characters. *Brittonia* 60(4): 382-394.
- Axsmith, B. J., M. Krings, and **K. Waselkov**. 2004. Conifer pollen cones from the Cretaceous of Arkansas: implications for diversity and reproduction in the Cheirolepidiaceae. *Journal of Paleontology* 78(2):402-409.

MANUSCRIPTS IN PREPARATION

- Waselkov, K.**, A. Boleda, A. Lawton-Rauh, K. Beard, and K.M. Olsen. A molecular phylogeny of the genus *Amaranthus* (Amaranthaceae). In prep for submission to *Systematic Botany*.
- Ferguson, C.J., **K. Waselkov**, S.D. Fehlberg, S.C. Strakosh and M.H. Mayfield. A phylogenetic framework for the genus *Phlox* (Polemoniaceae), including evidence for reticulating relationships based on ITS and cpDNA. In prep for submission to *Systematic Botany*.
- Waselkov, K.E.**, N.D. Regenold, and K.M. Olsen. Agricultural and local adaptation shape invasiveness

in waterhemp, *Amaranthus tuberculatus* (Amaranthaceae). In prep for submission to *Evolutionary Applications*.

PUBLISHED ABSTRACTS: PRESENTATIONS and POSTERS

- Waselkov, Katherine**, Bethany Wright, Shannon D. Fehlberg, Mark H. Mayfield, and Carolyn J. Ferguson. Botany 2014 (annual meeting of the Botanical Society of America, American Society of Plant Taxonomists, and others) (Presentation). Perplexing polyploidy in the Polemoniaceae: patterns in *Phlox* phylogenies.
- Wright, Bethany, Matt Chansler, **Katherine Waselkov**, Noah Busch, Shannon D. Fehlberg, Alan Prather, and Carolyn J. Ferguson. Botany 2014 (Poster). Engaging students in scientific discovery through a collaborative, multidisciplinary research project on polyploidy and plant biodiversity. (see tweet by NSF: https://twitter.com/nsf_bio/status/493942219967971328)
- Waselkov, Katherine**, Bethany Wright, Shannon D. Fehlberg, Mark H. Mayfield, and Carolyn J. Ferguson. Evolution 2014 (annual meeting of the Society for the Study of Evolution) (Presentation). Disentangling phylogenetic relationships complicated by polyploidy in the genus *Phlox* (Polemoniaceae).
- Waselkov, Katherine**, Bethany Wright, L. Alan Prather, Shannon D. Fehlberg, and Carolyn J. Ferguson. Ecological Genomics Symposium 2013 (Poster). Polyploidy and diversity in the genus *Phlox*: Development of polyploid assemblages as study systems for phylogenetic and phylogeographic work.
- Waselkov, Katherine**, Kenneth Olsen, and Barbara Schaal. Botany 2013 (Presentation). Opportunists in the lava fields: Diversification of the genus *Amaranthus* in the Galápagos Islands.
- Waselkov, Katherine**, Kenneth Olsen, and Barbara Schaal. Botany 2012 (Presentation). Molecular phylogenetics and weed evolution in the genus *Amaranthus* (Amaranthaceae).
- Waselkov, Katherine**, Kenneth Olsen, and Barbara Schaal. Evolution 2011 (Presentation). Weeding through the evolutionary past: genetic evidence for the origin of the Midwestern agricultural weed *Amaranthus tuberculatus* (waterhemp).
- Waselkov, Katherine**, Kenneth Olsen, and Barbara Schaal. Botany 2011 (Presentation). How does a weed arise? Genetic evidence for the origin of the Midwestern agricultural weed *Amaranthus tuberculatus* (Amaranthaceae).
- Waselkov, Katherine E.**, Kenneth M. Olsen, and Barbara A. Schaal. Botany 2010, and Ecological Genomics Symposium 2010 (Poster). Phenotypic and genetic differentiation across the range of the Midwestern agricultural weed *Amaranthus tuberculatus* (Amaranthaceae).
- Waselkov, Katherine E.**, Kenneth M. Olsen, and Barbara A. Schaal. Botany and Mycology 2009 (Poster). Population genetics and weed evolution in the genus *Amaranthus* (Amaranthaceae).
- Waselkov, Katherine E.**, Eleanor A. Pardini, and Tiffany M. Knight. Botany 2008 (Poster). A preliminary assessment of the approach of Missouri and Illinois land managers to controlling the invasive species *Alliaria petiolata* (garlic mustard).
- Judd, Walter S., and **Katherine Waselkov**. Botany 2006 (Presentation). A phylogenetic analysis of *Leucothoe* s.l. (Ericaceae; Gaultherieae) based on morphological characters.

SEMINARS (*invited)

- ***Waselkov, Katherine**. Bethany Wright, Shannon D. Fehlberg, Mark H. Mayfield, and Carolyn J. Ferguson. Perplexing polyploidy in the Polemoniaceae: patterns in *Phlox* phylogenies. Ecological Genomics Research Forum, Kansas State University (2014).
- Waselkov, Katherine**. Population genetics and phylogenetic context of weed evolution in the genus *Amaranthus*. Washington University Evolution, Ecology, and Population Biology Dissertation Defense (2013).
- Waselkov, Katherine**. Population genetics and phylogenetic context of weed evolution in the genus *Amaranthus*. Kansas State University (2013).

- *Waselkov, Katherine, Kenneth Olsen, and Barbara Schaal.** Go east, young weed: Population genetics of the invasion of weedy waterhemp across the Mississippi River. St. Louis Ecology, Evolution and Conservation Retreat. (2012)
- Waselkov, Katherine.** Population genetics and herbicide-resistance dynamics of a native Midwestern agricultural weed. Washington University Plant Biology Program Seminar Series. (2012)
- Waselkov, Katherine.** Phylogenetic relationships of weeds and their mild-mannered relatives in the genus *Amaranthus*. Washington University Evolution, Ecology, and Population Biology Student Seminar Series. (2012)
- Waselkov, Katherine.** Agricultural adaptation and gene flow in the Midwestern weed waterhemp (*Amaranthus tuberculatus*). Washington University Evolution, Ecology, and Population Biology Student Seminar Series. (2011)
- Waselkov, Katherine.** In search of “natural” waterhemp: population genetics across the range of an agricultural weed. Washington University Evolution, Ecology, and Population Biology Student Seminar Series. (2010)
- *Waselkov, Katherine.** Population genetics and phylogenetic context of weed evolution in the genus *Amaranthus*. University of Illinois Urbana-Champaign. (2009)
- Waselkov, Katherine.** Population genetics and phylogenetic context of weed evolution in the genus *Amaranthus*. Washington University Evolution, Ecology, and Population Biology Student Seminar Series. (2009)

TEACHING EXPERIENCE

Course leader

- BIOL 140 – Plant Anatomy, CSU-Fresno (Fall 2015)
 BIOL 281 – Seminar in Biological Science, CSU-Fresno (Fall 2015)

Course co-leader

- BIOL 870 – Advanced Plant Systematics, Kansas State University (Spring 2014)
 BIO 493 – Students in the Garden Seminar, Washington University (Spring 2011)

Teaching assistant

- BIO 3501 – Evolution, Washington University (Fall 2010 and 2012)
 Instructor: Dr. Kenneth Olsen
- BIO 4181 – Population Genetics, Washington University (Fall 2008)
 Instructor: Dr. Alan Templeton
- BIO 381 – Introduction to Ecology, Washington University (Spring 2008)
 Instructor: Dr. Ellen Damschen
- PCB 3063 – Genetics, University of Florida (Spring 2006)
 Instructor: Dr. Michael Miyamoto
- BOT 2710 -- Practical Plant Taxonomy, University of Florida (Fall 2004)
 Instructor: Dr. Walter Judd

Research mentor

- Mercedes Santiago, Kansas State University undergraduate (Fall 2013/Summer-Fall 2014)
 Project: Population genetics of the Wyoming endemic *Phlox pungens*
 Result: Poster at the 2013 Ecological Genomics Symposium
- Alexis Boleda, Washington University undergraduate (Spring 2012)
 Project: Phylogenetic relationships of endemic Galápagos *Amaranthus*.
 Result: Research paper for Bio500 Undergraduate Research Course.
- Sharon Jia, Washington University undergraduate (Spring 2012)
 Project: Herbicide resistance in natural populations of *Amaranthus tuberculatus*.
 Result: Research paper for Bio200 Undergraduate Research Course.

Drew Wetherington, Lindbergh High School intern (Fall 2011)
Project: Lab training and fieldwork on *Amaranthus tuberculatus*.
Asha Clark, Clyde C. Miller Career Academy high school intern (Spring 2011)
Project: Lab training and genetic work on *Amaranthus tuberculatus*.
Amal Al-Lozi, Washington University undergraduate (Summer 2010)
Project: Tyson Research Center fieldwork on *Amaranthus tuberculatus*.
Nathan Regenold, Washington University undergraduate (Summer 2010)
Project: Evaluating the origins of the agricultural weed *Amaranthus tuberculatus*
in the Great Plains.
Result: Poster at Washington University Undergraduate Research Symposium.
David Vera-Vazquez, Washington University undergraduate (Summer 2009)
Project: Field and lab work on *Amaranthus tuberculatus*.

Science education outreach

EIDRoP, NSF-Funded GK-12 Program at Kansas State University (2013-2014)
--Designed educational materials for a module on *Phlox* polyploid research, which was implemented in high school classrooms by the graduate student Bethany Wright.
Shaw Institute for Field Training and Tyson Environmental Research Fellowship (2010-2011)
--Sophomores and juniors from St. Louis high schools learned about and participated in my dissertation field work at Washington University's Tyson Research Center.
Young Scientist Program (Washington University) (2007-2010)
--Created and implemented interactive modules on evolutionary and ecological theory in St. Louis middle and high schools, as a member of the Evolution and Ecology teaching teams.
Washington University Women in Science Day (Assoc. for Women in Science and YSP) (2007-2012)
--Planned events in which young women from urban St. Louis high schools came to the Washington University campus to interact with professional women scientists in a variety of disciplines and at various career stages.
St. Louis Science Center "Future Trek" Science Career Exploration Days (2007-2010)
--Introduced middle school students to the career option of field biology with fun activities.
Fairhope Intermediate School Bioblitz (2009, Fairhope, AL) and St. Louis Forest Park Bioblitz (2012)
--Taught 10-11 year-olds and the general public about the plant diversity in natural areas in their own communities.

SERVICE

Association for Women in Science, St. Louis Chapter Secretary (2009-2010)
Co-organizer, Washington University EEPB Student Seminar (2008-2009)
Graduate Student Representative, Washington University Biology Chair Search Committee (2008-2009)
Reviewer: American Journal of Botany, Annals of the Missouri Botanical Garden, Botanical Journal of the Linnean Society, Molecular Ecology Notes, Plant Genetic Resources, Plant Molecular Biology Reporter, Systematic Botany.
Grant reviewer: National Geographic Society.

PROFESSIONAL ORGANIZATIONS

Society for the Study of Evolution
The American Society of Plant Taxonomists
Botanical Society of America
Society for Economic Botany
California State University, Fresno Women's Association
National Science Teachers Association
California Science Teachers Association