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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

CSUPERB (the California State University Program for Education and Research in Biotechnology) New Investigator Grant (2017-2018)	\$15,000
CSU, Fresno College of Science and Mathematics Scholarly and Creative Activity Awards (2017-2018)	\$20,960
CSU, Fresno College of Science and Mathematics Faculty Professional Development Awards (2016-2017)	\$2360
CSU, Fresno Biology Department Major and Minor Travel Awards (2016-17)	\$1500
CSU, Fresno Undergraduate and Graduate Student Awards for Research (cumulative, 2015-2017) from external or internal funding sources	\$6650
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.**, A. Boleda, and K.M. Olsen. A phylogeny of the genus *Amaranthus* (Amaranthaceae), based on several low-copy nuclear loci and chloroplast regions. In review at *Systematic Botany*.
- 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): 1726-1736.
- 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.**, M. Santiago, B. Heidel, M.H. Mayfield, and C.J. Ferguson. Genetic diversity of the Wyoming endemic *Phlox pungens* (Polemoniaceae), placed within a taxonomic context. In prep for submission to *Western North American Naturalist*.

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.**, 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

##### Bold denotes student co-authors

**Pathak, Ankit, Adam Avila**, and Katherine Waselkov. Evolution 2017 (annual meeting of the Society for the Study of Evolution, the American Society of Naturalists, and the Society of Systematic Biologists) (Poster). Investigating the genetic basis of glyphosate resistance in the San Joaquin Valley agricultural weed hairy fleabane (*Erigeron bonariensis*).

**Molina, Rigoberto, Ankit Pathak**, and Katherine Waselkov. Evolution 2017, CSUPERB 2017 (CSU Annual Biotechnology Symposium), and CCRS 2017 (Central California Research Symposium) (Poster). Investigating the genetic basis of glyphosate resistance in the San Joaquin Valley agricultural weed hairy fleabane (*Erigeron bonariensis*).

**Pathak, Ankit**, and Katherine Waselkov. CSUPERB 2017 and CCRS 2017 (Poster). Fitness cost of glyphosate resistance in hairy fleabane (*Erigeron bonariensis*) under drought conditions.

**Aguilar-Gutierrez, Estefania**, and Katherine Waselkov. Botany 2016 (annual meeting of the Botanical Society of America, American Society of Plant Taxonomists, and others), CSUPERB 2017, and CCRS 2017 (Poster). Does subspecific variation correspond to cytotypic variation in the widespread taxon *Phlox speciosa* (Polemoniaceae)?

**Santiago, Mercedes**, Katherine Waselkov, Bonnie Heidel, Mark H. Mayfield, and Carolyn J. Ferguson. Evolution 2016 and Botany 2016 (Poster). Genetic diversity of the Wyoming endemic *Phlox pungens* (Polemoniaceae), placed within a taxonomic context.

**Pano, Emeline**, John V.H. Constable, and Katherine Waselkov. CSU-LSAMP Fresno State Summer 2016 Research Program (Presentation). Modernizing the Fresno State Herbarium into an online resource.

Waselkov, Katherine, Shannon D. Fehlberg, L. Alan Prather, **Bethany Wright**, and Carolyn J. Ferguson. Botany 2015 (Presentation). Assessing allelic diversity in polyploid complexes of *Phlox* (Polemoniaceae) using next-generation amplicon sequencing.

**Santiago, Mercedes**, Katherine Waselkov, Bonnie Heidel, Mark H. Mayfield, and Carolyn J. Ferguson. Botany 2015 and Ecological Genomics Symposium 2014 (Poster). Genetic diversity of the rare plant species *Phlox pungens* (Polemoniaceae).

Waselkov, Katherine, **Bethany Wright**, Shannon D. Fehlberg, Mark H. Mayfield, and Carolyn J. Ferguson. Botany 2014 (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](https://twitter.com/nsf_bio/status/493942219967971328))

Waselkov, Katherine, **Bethany Wright**, Shannon D. Fehlberg, Mark H. Mayfield, and Carolyn J.

- Ferguson. Evolution 2014 (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.** The evolutionary approach to weeds. Ecology, Evolution and Conservation Biology Seminar, San Francisco State University (Fall 2016).
- \***Waselkov, Katherine.** Perplexing polyploidy in the Polemoniaceae: patterns in *Phlox* phylogenies. Botany Lunch at the University and Jepson Herbaria, UC Berkeley (Fall 2016).
- \***Waselkov, Katherine.** The Evolutionary Approach to Weeds. Plant Health Society, CSU, Fresno (Spring 2016).
- \***Waselkov, Katherine.** Population genetics and herbicide resistance studies in waterhemp (*Amaranthus tuberculatus*). Guest lecture for CSU, Fresno, Biometrics in Agriculture class (AGRI 200) (Fall 2015).
- \***Waselkov, Katherine.** The young and the restless: evolutionary explorations in the plant genera *Amaranthus* and *Phlox*. Wichita State University, Department of Biological Sciences Seminar Series (Spring 2015), and Rancho Santa Ana Botanic Garden Botany Seminar Series (Fall 2015).
- \***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 125 – Plant Taxonomy, CSU-Fresno (Spring 2016, Spring 2017)
- BIOL 105 – Evolution, CSU-Fresno (Fall 2016)
- BIOL 140 – Plant Anatomy, CSU-Fresno (Fall 2015, Fall 2016)
- BIOL 189T – Biology Colloquium, CSU-Fresno (Spring 2016)
- BIOL 281 – Graduate Seminar in Biological Science, CSU-Fresno (Fall 2015)

### *Course co-leader*

- BIOL 870 – Advanced Plant Systematics, Kansas State University (Spring 2014)
- BIOL 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*

- Priyanka Chaudhari, CSU-Fresno M.S. in Biotechnology (Spring 2017-present)  
Project: RNA-Seq analysis of genes underlying glyphosate resistance in hairy fleabane
- Diana Camarena, CSU-Fresno Plant Science undergraduate, USDA-NIFA intern (Spring 2017-present)  
Project: Fitness costs of glyphosate resistance at multiple stages in hairy fleabane
- Adam Avila, CSU-Fresno Biology undergraduate (Spring 2017-present)  
Project: Detecting hybridization between two weedy *Erigeron* species in the Central Valley
- Ankit Pathak, CSU-Fresno M.S. in Biotechnology (Fall 2015-present)  
Project: Fitness costs of glyphosate resistance under drought conditions in hairy fleabane

Result: Final project report for master's degree  
Emeline Pano, CSU-Fresno LSAMP Biology undergraduate (Summer 2016-present)  
Project: Digitizing the Fresno State Herbarium collections  
Rigoberto Molina, CSU-Fresno Biology undergraduate (Spring 2016-present)  
Project: Genetic basis of glyphosate resistance in hairy fleabane  
Estefania Aguilar-Gutierrez, CSU-Fresno Biology Honors undergraduate (Spring 2016-present)  
Project: Population genetics of diploid and polyploid *Phlox speciosa*  
Result: Poster at the 2016 Botany Meetings in Savannah, GA  
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**

Tulare County Expanding Your Horizons Conference (2015)  
--Ran three workshops for girls in grades 4 and 5, with hands-on activity about invasive species,  
to introduce them to scientific research and potential careers in STEM  
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**

Staffing and Scheduling Committee, CSU-Fresno Biology Department, (2016-present)

Scholarship Committee, CSU-Fresno Biology Department (2015-present)

Graduate/Research Committee, CSU-Fresno Biology Department, (2015-2016)

Association for Women in Science, St. Louis Chapter Secretary (2009-2010)

Co-organizer, Washington University EEPB Student Seminar Series (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, Canadian Journal of Plant Science, Molecular Ecology Notes, Molecular Phylogenetics and Evolution, 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

National Science Teachers Association

California Science Teachers Association

California Native Plant Society

California Botanical Society

Southern California Botanists

Northern California Botanists