

Katherine E. Waselkov
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Fresno, CA 93740

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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

CSU Agricultural Research Institute Grant: Biology, ecophysiology, genetics, and management of Central Valley populations of common waterhemp (<i>Amaranthus tuberculatus</i>) (2019-2022)	\$149,572
CSU, Fresno Instructionally Related Activity Award (2019-2020)	\$2,002
USDA NIFA AFRI: Using evolutionary genomics to probe agricultural invasiveness and adaptive evolution in <i>Amaranthus palmeri</i> (2019-2022)	\$189,106
USDA NPGS Plant Exploration for Crop Improvement: Plant exploration in California, Arizona, and New Mexico to collect <i>Amaranthus</i> germplasm for crop improvement (2019-2020)	\$9,936
NSF ADBC: Digitization TCN: Capturing California's Flowers: using digital images to investigate phenological change in a biodiversity hotspot (2018-2022)	\$56,706
CSU, Fresno College of Science and Mathematics Faculty Professional Development Awards (2015-2019)	\$4,763
CSU, Fresno Undergraduate and Graduate Student Awards for Research (cumulative, 2015-2020) from external or internal funding sources	\$19,961
CSUPERB (the California State University Program for Education and Research in Biotechnology) New Investigator Grant (2017-2018)	\$15,000
COAST (CSU Council on Ocean Affairs, Science and Technology) Rapid Response Grant (2017-2018)	\$7,500
CSU, Fresno College of Science and Mathematics Scholarly and Creative Activity Awards (2017-2018)	\$20,960
CSU, Fresno Biology Department Major and Minor Travel Awards (2016-17)	\$1500
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)	\$8,780
National Science Foundation Graduate Research Fellowship (2007-2010)	

PUBLICATIONS

- Avila, A.T., T.A. Van Laar, J.V.H. Constable, and **K. Waselkov**. 16S rRNA gene diversity of bacterial endophytes in parasitic *Cuscuta campestris* and its *Helianthus annuus* host. Accepted at *Microbiology Resource Announcements*.
- Waselkov, K.E.**, N.D. Regenold, R.C. Lum, and K.M. Olsen. 2020. Agricultural adaptation in the native North American weed waterhemp, *Amaranthus tuberculatus* (Amaranthaceae). *Plos One* 15(9): e0238861.
- Waselkov, K.**, M. Santiago, B. Heidel, M.H. Mayfield, and C.J. Ferguson. 2020. Population genetics of the Wyoming endemic *Phlox pungens* (Polemoniaceae). *Western North American Naturalist* 80(3): 369-380.
- Pearson, K.D., J.M. Yost, J. Alexander, E. Gilbert, et al. 2019. The California Phenology Collections Network: Using digital images to investigate phenological change in a biodiversity hotspot. *Madroño* 66(4): 130-141.
- Waselkov, K.E.**, A. Boleda, and K.M. Olsen. 2018. A phylogeny of the genus *Amaranthus* (Amaranthaceae), based on several low-copy nuclear loci and chloroplast regions. *Systematic Botany* 43(2): 439-458.
- 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.

FEATURED RESEARCH

- CSU Fresno College of Science and Mathematics Facebook Page (February 11, 2020): Women in Science highlight. <https://www.facebook.com/CSMFresnoState/>
- CSU Fresno Campus News (November 12, 2019): “Feature: Professors receive USDA grant to study problematic weed.” Article about collaborative USDA-funded research on Palmer amaranth population genomics. <https://campusnews.fresnostate.edu/>
- California Ag Today, podcast (February 24, 2019): “Fresno state student Priyanka Chaudhari is researching why hairy fleabane is glyphosate resistant.” <https://californiaagtoday.com/podcasts>
- CSU Fresno College of Science and Mathematics Elements Magazine (Fall 2019): “Dr. Katherine Waselkov to investigate flowering time shifts in the California flora.” Article about the NSF CAP-TCN grant and the Fresno State Herbarium’s involvement (along with associated social media posts on Facebook and Twitter). [CSM Elements Fall 2019](#)

PUBLISHED ABSTRACTS: PRESENTATIONS and POSTERS

Bold denotes student co-authors

- Waselkov, Katherine, **Reece Riley**, Maria Peña, Katelin Pearson, and Jenn Yost. Annual meeting of the Society for the Preservation of Natural History Collections 2020 (Virtual Poster). Capturing the flowers of the Sierra Nevada mountains: the contribution of the Fresno State Herbarium (FSC) to the California Phenology Network. Poster available online at: <https://spnhc.biowikifarm.net/wiki/Posters>
- Gill, Pawanpreet, Savneesh Athwal, Monique Cantu**, and Katherine Waselkov. Northern California

- Botanists Symposium 2020 and CSM Virtual Research Showcase 2020 (accepted for the Central California Research Symposium, cancelled due to COVID-19 shutdown) (Poster). Population genetics of the widespread perennial wildflower *Phlox speciosa* using microsatellite markers.
- Lum, Romy**, Anil Shrestha, and Katherine Waselkov. CSM Virtual Research Showcase 2020 (accepted for the Central California Research Symposium, cancelled due to COVID-19 shutdown) (Poster). Testing for herbicide resistance in the native and invaded California range of *Amaranthus palmeri*.
- Bivins, Christopher, Josue Duque, Alexander Lopez, Brianna Mulvey, Reece Riley, Danielle Sublett, Franziska Wenger**, and Katherine Waselkov. CSU Fresno High-Impact Practices Symposium, Fall 2019 (Poster). Plant exploration in the Southwestern U.S. to collect germplasm for crop improvement.
- Figueroa, Norma, Paul Banayat Gonzales, Tshaaj Her, Kulvir Janjua, Benjamin Quatro, Karen Vasquez**. CSU Fresno High-Impact Practices Symposium, Fall 2019 (Posters). Six total posters from Biol 140 Plant Anatomy Fall 2019 independent research projects.
- Lum, Romy**, Katherine Waselkov, and Chance Riggins. Botany 2019 (annual meeting of the Botanical Society of America, American Society of Plant Taxonomists, and others) (Poster). Testing for herbicide resistance in the native and invaded California range of *Amaranthus palmeri*.
- Avila, Adam**, John V.H. Constable, Katherine Waselkov, and Tricia Van Laar. Botany 2019 and Central California Research Symposium (CCRS) 2019 (Poster). Investigating bacterial endophytes in parasitic *Cuscuta campestris* and its *Helianthus annuus* host.
- Lum, Romy**, Katherine Waselkov, and Chance Riggins. CCRS 2019 (Poster). Using evolutionary genomics to probe agricultural invasiveness in *Amaranthus palmeri*.
- Chaudhari, Priyanka, Diana Camarena Onofre**, and Katherine Waselkov. CSU Annual Biotechnology Symposium 2019 and California Weed Science Society (CWSS) Annual Conference 2019 (Poster and Lightning Talk). Characterizing the expression of candidate genes for herbicide resistance in the agricultural weed hairy fleabane (*Erigeron bonariensis*).
*Winner of 2nd place graduate student poster award at CWSS.
- Waselkov, Katherine. Botany 2018 (Presentation). “Wait, plants have insides?” Leading an undergraduate plant anatomy class from basics to independent research, in one semester.
- Benitez, Tomi, Aldo Chavira, Crystal Espindola, John Henry Fajardo, David Flores, Paritosh Gadra, Yesenia Gastelum, Daniel Gramajo, Isabella Heredia, Katherine Holm, Alexander Lopez, Alehi Mendoza, Darian Rodriguez, Masou See**, and Katherine Waselkov. CSU Fresno STEM Symposium for Course-Based Research and Projects 2018 (Poster). The impact of dredging on plant biodiversity at Morro Bay: Spring 2018 Biol 125 Plant Taxonomy Class research project.
- Aguilar-Gutierrez, Estefania**, and Katherine Waselkov. 60th Annual Maize Genetics Conference 2018 (Poster). Does subspecific variation correspond to genetic or cytotypic variation in the widespread taxon *Phlox speciosa* (Polemoniaceae)?
- Yang, May N.**, and Katherine Waselkov. CWSS 2018 (Poster). Herbicide resistance in the native range of the agricultural weed Palmer amaranth.
- Chaudhari, Priyanka, Diana Camarena Onofre**, and Katherine Waselkov. CWSS 2018 and CCRS 2018 (Poster). The genetic basis of glyphosate resistance in the Central Valley agricultural weed hairy fleabane (*Erigeron bonariensis* L.). *Winner of 3rd place student poster award at CWSS.
- Camarena Onofre, Diana**, Katherine Waselkov, Anil Shrestha, Balaji Sethuramasamyraja, Dave Goorahoo, Florence Cassel Sharma, and John Bushoven. Students of Agronomy, Soils and Environmental Sciences Annual Meeting 2017 and CCRS 2018 (Poster). Germination rate and glyphosate resistance of hairy fleabane (*Conyza bonariensis*): research from the 2017-2018 USDA-NIFA-NLGCA Research Internship. *Winner of outstanding poster presentation in CCRS poster section.
- 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, CSU Annual Biotechnology Symposium 2017, and CCRS 2017 (Poster). Investigating the genetic basis of glyphosate resistance in the San Joaquin Valley agricultural weed hairy fleabane (*Erigeron bonariensis*).
- Pathak, Ankit,** and Katherine Waselkov. CSU Annual Biotechnology Symposium 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, CSU Annual Biotechnology Symposium 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)
- 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 *Leucothoë* s.l. (Ericaceae; Gaultherieae) based on morphological characters.

SEMINARS (*invited)

- Lum, Romy, and **Katherine Waselkov**. Agricultural invasions and “superweeds”: characterizing herbicide resistance in Palmer amaranth. CSU, Fresno Biology Colloquium (Fall 2019).
- Waselkov, Katherine**. Hidden in plain sight: The natural history collections of the Fresno State Biology Department. CSU, Fresno Biology Colloquium (Fall 2018).
- ***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 105 – Evolution, CSU-Fresno (Fall 2016, Spring 2018, Spring 2019, Fall 2019, Fall 2020)
BIOL 251 (260T) – Experimental Design for Biologists, CSU-Fresno (Fall 2017, Fall 2018, Spring 2020, Fall 2020)
BIOL 125 – Plant Taxonomy, CSU-Fresno (Spring 2016-Spring 2020)
BIOL 189T – Collection and Curation of Plant Biodiversity, CSU-Fresno (Fall 2019)
BIOL 140 – Plant Anatomy, CSU-Fresno (Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2019)
BIOL 113H – Biology Honors Colloquium, CSU-Fresno (Spring 2019)
BIOL 189T – Biology Colloquium, CSU-Fresno (Spring 2016)
BIOL 281 – Graduate Seminar in Biological Science, CSU-Fresno (Fall 2015)

Course-based Undergraduate Research Experiences (CUREs)

BIOL 189T – Plant exploration in the Southwestern U.S. to collect germplasm for crop improvement (Fall 2019)
BIOL 140 – Independent investigations into anatomy, ecology, and climate change impacts on native and invasive Central California plants (Fall 2017, Fall 2018, Fall 2019)
BIOL 125 – The impact of dredging on plant biodiversity at Morro Bay: Plant Taxonomy class research project (Spring 2018)
BIOL 140 – Comparative plant anatomy independent projects (Fall 2016)

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

Kristine Fajardo, CSU-Fresno M.S. in Biology (Fall 2020-present)
Project: Population genomics of the cross-continental invasion of Palmer amaranth
Josue Duque, CSU-Fresno M.S. in Biology (Fall 2019-present)
Project: Population genomic diversity and structure of Palmer amaranth in the native and invaded California range
Reece Riley, CSU-Fresno Biology undergraduate, now M.S. in Biology (Fall 2018-present)
Projects: Digitizing the Fresno State Herbarium collections; molecular phylogeny of *Helianthella*
Alexander Lopez, CSU-Fresno Biology undergraduate, now M.S. in Biology (Fall 2018-present)
Projects: Digitizing the Fresno State Herbarium collections; describing a new species of *Fritillaria* from Southern California; population genomics of the California invasion of

waterhemp (*Amaranthus tuberculatus*)

Christopher Bivins, CSU-Fresno M.S. in Biology (Spring 2019-present)--co-advised with Dr. Alija Mujic
Project: The mycorrhizal ecology of four mycoheterotrophic plant species in California

Savneesh Athwal, CSU-Fresno Biology undergraduate (Summer 2018-present)
Project: Population genetics of diploid and polyploid *Phlox speciosa*

Pawanpreet Gill, CSU-Fresno Biology undergraduate (Summer 2018-present)
Project: Population genetics of diploid and polyploid *Phlox speciosa*; digitizing the Fresno State Herbarium collections

Romy Lum, CSU-Fresno M.S. in Biology (Spring 2018-present)
Project: Testing for herbicide resistance in the native and invaded California range of *Amaranthus palmeri*

Tyrren Parrish, CSU-Fresno Biology undergraduate (Spring 2019; Spring 2020-present)
Project: Population genomics of the cross-continental invasion of Palmer amaranth

Adam Avila, CSU-Fresno M.S. in Biology (Spring 2018-Fall 2020)—co-advised with Dr. John Constable
Project: Investigating bacterial endophytes in parasitic *Cuscuta campestris* and its *Helianthus annuus* host

Monique Cantu, CSU-Fresno Biology undergraduate (Spring 2019-Spring 2020)
Project: Digitizing the Fresno State Herbarium collections; population genetics of *Sidalcea keckii* in the Central Valley; population genetics of diploid and polyploid *Phlox speciosa*

Harneet Kaur, CSU-Fresno Biology undergraduate (Summer 2018-Spring 2020)
Projects: Digitizing the Fresno State Herbarium collections; population genetics of *Sidalcea keckii* in the Central Valley

Catherine Prieto, CSU-Fresno Biology undergraduate (Spring 2019)
Project: Digitizing the Fresno State Herbarium collections

Chyann Stiles, CSU-Fresno Biology undergraduate (Summer 2018-Fall 2018)
Project: Fitness costs of glyphosate resistance under drought conditions in hairy fleabane

Priyanka Chaudhari, CSU-Fresno M.S. in Biotechnology (Spring 2017-Fall 2018)
Project: RNA-Seq analysis of genes underlying glyphosate resistance in hairy fleabane

Diana Camarena, CSU-Fresno Plant Science undergraduate, USDA-NIFA intern (Spring 2017-Fall 2018)
Project: Fitness costs of glyphosate resistance at multiple stages in hairy fleabane

Gurkiran Bains, CSU-Fresno Biology undergraduate (Spring 2018)
Projects: Digitizing the Fresno State Herbarium collections

May Yang, CSU-Fresno Plant Science undergraduate (Fall 2017-Spring 2018)
Project: Population genomics of the cross-continental invasion of Palmer amaranth

Adam Avila, CSU-Fresno Biology undergraduate (Spring 2017-Summer 2017)
Project: Detecting hybridization between two weedy *Erigeron* species in the Central Valley

Ankit Pathak, CSU-Fresno M.S. in Biotechnology (Fall 2015-Spring 2017)
Project: Fitness costs of glyphosate resistance under drought conditions in hairy fleabane

Emeline Pano, CSU-Fresno LSAMP Biology undergraduate (Summer 2016-Fall 2017)
Projects: Digitizing the Fresno State Herbarium collections, and Population genetics of diploid and polyploid *Phlox speciosa*

Rigoberto Molina, CSU-Fresno Biology undergraduate (Spring 2016-Fall 2017)
Project: Genetic basis of glyphosate resistance in hairy fleabane

Estefania Aguilar-Gutierrez, CSU-Fresno Biology Honors undergraduate (Spring 2016-Spring 2018)
Project: Population genetics of diploid and polyploid *Phlox speciosa*

Mercedes Santiago, Kansas State University undergraduate (Fall 2013/Summer-Fall 2014)
Project: Population genetics of the Wyoming endemic *Phlox pungens*

Alexis Boleda, Washington University undergraduate (Spring 2012)
Project: Phylogenetic relationships of endemic Galápagos *Amaranthus*.

Sharon Jia, Washington University undergraduate (Spring 2012)
Project: Herbicide resistance in natural populations of *Amaranthus tuberculatus*.

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.
David Vera-Vazquez, Washington University undergraduate (Summer 2009)
Project: Field and lab work on *Amaranthus tuberculatus*.

Recent science education outreach

Notes from Nature: Fresno State Herbarium (3 expeditions, 2019-2020)
--Coordinated online citizen science data transcription for Fresno State Herbarium specimens
(<https://www.zooniverse.org/projects/md68135/notes-from-nature-capturing-californias-flowers>)
Fresno County Science Fair (March 11, 2019 and March 16, 2020)
--Judge for high school and middle school student posters in the Plant Science division; head
judge in the Plant Science division in 2020
CSU Fresno CSM Stars, Science, and Birthday Party for Galileo Reception for San Joaquin River
Parkway organization (February 15, 2020)
--Display of herbarium specimens, ornithological specimens, and advertisement of natural history
volunteer activities to SJRP members (with student R. Riley)
CSU Fresno CSM Science Fair (Day of Giving, November 7, 2019)
--Display of herbarium specimens and “make an herbarium specimen” activity for community
members (with students C. Bivins, D. Sublett, and R. Riley)
Central California Research Symposium (May 1, 2019)
--Judge for posters in Session IV
Feria de Educación/Day of Discovery (October 20, 2018)
--Faculty co-leader (with Tricia Van Laar) of public outreach event teaching Fresno-area kids and
their parents about DNA extraction, on the CSU-Fresno campus
Botanical Society of America PLANTS (Preparing Leaders and Nurturing Tomorrow’s Scientists)
program (Summer 2018)
--Senior mentor to an underrepresented undergraduate in STEM as part of the Botany 2018
annual meeting
Reinvigorating the Fresno State Herbarium (Fall 2017-present)
--Digitizing current plant biodiversity collections in the Fresno State Herbarium and adding new
collections through specimen preparation. Involves federal work-study students as well as
research students and other volunteers. Community volunteer partners in the Fresno area: Fresno
Women Scientists; California Native Plant Society, Sequoia Chapter; USDA Natural Resources
Conservation Service; Caltrans; California Department of Food and Agriculture. An associated
Instagram account can be found at @fresnostateherbarium with regular updates about herbarium
activities.
Central Valley Café Scientifique (October 3, 2016)
--“The Great Invasive Species Debate”, with Dr. Brian Tsukimura and Dr. Ulrike Müller. Radio
interview on KFCF 88.1 FM and public talk at Santa Fe Basque Restaurant as part of the Café
Scientifique public lecture series presented by CSU, Fresno.
Tulare County Expanding Your Horizons Conference (2015, 2018)
--Ran three workshops for girls in grades 4 and 5, with hands-on activity about invasive species
and DNA extraction, to introduce them to scientific research and potential careers in STEM

SERVICE

Restarting Research During COVID-19 Committee, CSU-Fresno Biology Department (Summer 2020)
M.S. Biotechnology Application Review Committee, CSU-Fresno College of Science and Mathematics (Spring 2018-present)

Institutional Biosafety Committee, CSU-Fresno University Committee (Spring 2019-present)

Search Committee for Biology Department Administrative Analyst/Specialist, CSU-Fresno College Committee (Summer 2019, Summer 2020)

College Research Committee, CSU-Fresno College of Science and Mathematics (Fall 2019)

Dog Days Advising Volunteer, CSU-Fresno Department of Biology (Summer 2017, 2018, 2019)

Tri Beta Biology Honors Society, CSU-Fresno Faculty Advisor (Fall 2018-present)

Arboretum Committee, CSU-Fresno University Committee (2017-present)

Assessment Committee, CSU-Fresno Biology Department (2017-present)

Graduate/Research Committee, CSU-Fresno Biology Department, (2015-2016, Fall 2018-present)

Staffing and Scheduling Committee, CSU-Fresno Biology Department (2016-Spring 2018)

Scholarship Committee, CSU-Fresno Biology Department (2015-2017)

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, Biodiversitas Journal of Biological Diversity, Botanical Journal of the Linnean Society, Canadian Journal of Plant Science, Evolutionary Applications, Frontiers in Plant Science, Journal of Heredity, Molecular Ecology Notes, Molecular Phylogenetics and Evolution, PeerJ, Plant Genetic Resources, Plant Molecular Biology Reporter, PLoS One, Systematic Botany, Taiwania.

Grant reviewer: National Geographic Society, National Science Foundation (2020).

PROFESSIONAL ORGANIZATIONS

The Society of Herbarium Curators (joined 2018)

California Native Plant Society, Sequoia Chapter (joined 2015): Conservation Chair as of June 2019
Society for the Study of Evolution (joined 2011)

The American Society of Plant Taxonomists (joined 2012): Website Committee since September 2020

Botanical Society of America (joined 2006)

Society for Economic Botany (joined 2006)

California Botanical Society (joined 2015)

Southern California Botanists (joined 2015)

Northern California Botanists (joined 2015)