

## JAMIE M. KNEITEL

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### PROFILE

My research interests focus on understanding the consequences of spatial and temporal environmental heterogeneity on species diversity and ecosystem functioning in seasonal wetlands, including vernal pools and rock pools. This research also encompasses food webs, metacommunities, spatiotemporal linkages, eutrophication, species invasions, and disturbance ecology. Courses taught include General Ecology, Population and Community Ecology, Quantitative Methods in Biology, and Introduction to Scientific Analysis.

### EDUCATION

**Ph.D.** Florida State University (2002) Biology  
**M.Sc.** California State University, Northridge (1997) Biology  
**B.A.** University of California, Santa Cruz (1992) Biology

### PROFESSIONAL EXPERIENCE

**Professor** (2015 - present) Department of Biological Sciences, CSU- Sacramento  
**Fulbright Scholar** (2017 - 2018) Department of Evolutionary & Environmental Biology, University of Haifa (Israel)  
**Assistant Chair** (2017) Department of Biological Sciences, CSU- Sacramento  
**Graduate Coordinator** (2012 - 2017) Department of Biological Sciences, CSU- Sacramento  
**Associate Professor** (2010 - 2015) Department of Biological Sciences, CSU- Sacramento  
**Assistant Professor** (2004 - 2010) Department of Biological Sciences, CSU- Sacramento  
**Tyson Postdoctoral Fellow** (2002 - 2004) Department of Biology, Washington University St. Louis

### PUBLICATIONS

(\*Graduate student, \*\*Undergraduate Student)

- Kneitel, J. M.**, Samiylenko, N.\*\*, Rosas-Saenz, L.\*\*, Nerida, A.\*\* 2017. California vernal pool endemic responses to hydroperiod, plant thatch, and nutrients. *Hydrobiologia*, *accepted*
- Kneitel, J. M.** 2016. Climate-driven habitat size determines the latitudinal gradient of diversity in California vernal pools. *Ecology* 97: 961-968.
- Boix D., **J. M. Kneitel**, C. Duchet, B. J. Robson, L. Zúñiga, J. Day, S. Gascón, J. Sala, X. D. Quintana and L. Blaustein. 2016. Invertebrates of temporary ponds in Mediterranean climates. *Invertebrates in Freshwater Wetlands*. D. Batzer and D. Boix, editors. Springer Publishing.
- Graffis, A.\* and **J. M. Kneitel**. 2015. A parasitic plant increases native and exotic plant richness in vernal pools. *AoB Plants* 7: plv100; doi:10.1093/aobpla/plv100.
- Anderson, I. J.\* and **J. M. Kneitel**. 2015. *Pseudacris regilla* tadpole density differentially affects periphyton and macrophytes in a California vernal pool community. *Aquatic Botany* 125: 23-30.
- Kneitel, J. M.** 2014. Inundation timing, more than duration, affects the community structure of California vernal pool mesocosms. *Hydrobiologia* 732: 71-83.
- Croel, R.\* and **J. M. Kneitel**. 2013. Final response to the letter. *Aquatic Botany* 104: 238-239.
- Croel, R.\* and **J. M. Kneitel**. 2013. Response to "Providing relevant context for fecal loading treat-

- ment rates applied to vernal pool mesocosms". *Aquatic Botany* 104: 234-235.
- Kneitel, J. M.** 2012. Are trade-offs among species' ecological interactions scale dependent? A test using pitcher-plant inquiline species. *PLoS* 7(7): e41809. doi:10.1371/journal.pone.0041809
- Yee, D. A., D. Allgood, **J. M. Kneitel** and K.A. Kuehn. 2012. Constitutive differences between natural and artificial container mosquito habitats: vector communities, resources, microorganisms, and habitat parameters. *Journal of Medical Entomology* 49: 482-491.
- Croel, R.\*\* and **J. M. Kneitel**. 2011. Cattle waste reduces plant diversity in vernal pool mesocosms. *Aquatic Botany* 95: 140-145.
- Estrella, S.\* and **J. M. Kneitel**. 2011. Invasion age and invader removal alter species composition at the Suisun Tidal Marsh, California, USA. *Diversity* 3: 235-251.
- Holyoak, M. and **J. M. Kneitel**. 2011. Metacommunities. *Sourcebook of Theoretical Ecology*, University of California Press, in press.
- Croel, R.\*\* and **J. M. Kneitel**. 2011. Ecosystem-level effects of bioturbation by the tadpole shrimp *Lepidurus packardii* in temporary pond mesocosms. *Hydrobiologia* 665: 169-181.
- Kneitel, J. M.** 2010. Successional Changes in Communities. *Nature Education Knowledge* 1: 36.
- Kneitel, J. M.** and C. L. Lessin\*. 2010. Ecosystem-phase interactions: aquatic eutrophication decreases terrestrial plant diversity in the California vernal pool ecosystem. *Oecologia* 163: 461-469.
- Yee, D. A., **J. M. Kneitel**, and S. A. Juliano. 2010. Environmental correlates of abundances of mosquito species and stages in discarded vehicle tires. *Journal of Medical Entomology* 47: 53-62.
- Reuman, D. C., C. Mulder, C. Banašek-Richter, M.-F. C. Blandenier, A. M. Breure, H. D. Hollander, **J. M. Kneitel**, D. Raffaelli, G. Woodward, and J. E. Cohen. 2009. Allometry of body size and abundance in 166 food webs. *Advances in Ecological Research* 41: 1-40.
- Kneitel, J. M.** 2008. Gause's Principle of Competitive Exclusion. *Encyclopedia of Ecology*, Elsevier Publishing.
- Yee, D. A., S. H. Yee, **J. M. Kneitel**, and S. A. Juliano. 2007. Richness-productivity relationships between trophic levels in a detritus-based system: significance of abundance and trophic linkage. *Oecologia* 154: 377-385.
- Kneitel, J. M.** 2007. Intermediate-consumer identity and resources alter a food web with omnivory. *Journal of Animal Ecology* 76: 651-659.
- Miller, T. E., J. H. Burns, P. Munguia, E. L. Walters, **J. M. Kneitel**, P. M. Richards, N. Mouquet, and H. L. Buckley. 2007. Evaluating support for the resource-ratio hypothesis: a response to Wilson et al. *American Naturalist* 169: 707-708.
- Kneitel, J. M.** and D. Perrault\*\*. 2006. Disturbance-induced compositional changes increase species invasion success. *Community Ecology* 7: 245-252.
- Ostman, O., **J. M. Kneitel**, and J. M. Chase. 2006. Disturbance alters the effects of habitat isolation on biodiversity in aquatic microcosms. *Oikos* 114: 360-366.
- Mouquet, N., T. E. Miller, T. Daufresne, and **J. M. Kneitel**. 2006. Consequences of varying regional heterogeneity in source-sink metacommunities. *Oikos* 113: 481-488.
- Miller, T. E., J. H. Burns, P. Munguia, E. L. Walters, **J. M. Kneitel**, P. M. Richards, N. Mouquet, and H. L. Buckley. 2005. A critical review of twenty years' use of the resource-ratio theory. *American Naturalist* 165: 439-448.
- Miller, T. E. and **J. M. Kneitel**. 2005. Pitcher-plant inquiline community as a prototypical metacommunity. Pages 122-145 in: *Metacommunities* (M. Holyoak, R. Holt and M. Leibold, eds.), University of Chicago Press, Chicago, IL.
- Buckley, H. L., J. H. Burns, **J. M. Kneitel**, E. L. Walters, P. Munguía and T. E. Miller. 2005. Small-scale patterns in community structure of *Sarracenia purpurea* inquiline communities. *Community Ecology* 5: 181-188.

- Kneitel, J. M.** and J. M. Chase. 2004. Disturbance, predator, and resource interactions alter container community composition. *Ecology* 85: 2088-2093.
- Kneitel, J. M.** and J. M. Chase. 2004. Trade-offs in community ecology: linking spatial scales and species coexistence. *Ecology Letters* 7: 69-80.
- Walters, E. L. and **J. M. Kneitel**. 2004. Use of water-filled red-cockaded woodpecker cavities by other organisms. Pages 492-498 in: *Red-cockaded woodpecker: road to recovery* (R. Costa and S. J. Daniels, eds.), Hancock House Publishers, Blaine, Washington.
- Mouquet, N., P. Munguia, **J. M. Kneitel**, and T. E. Miller. 2003. Community assembly time and the relationship between local and regional species richness. *Oikos* 103: 618-626.
- Kneitel, J. M.** and T. E. Miller. 2003. Dispersal rates affect species composition in metacommunities of *Sarracenia purpurea* inquilines. *American Naturalist* 162: 165-171.
- Ellison, A. M., N. J. Gotelli, J. S. Brewer, D. L. Cochran-Stafira, **J. M. Kneitel**, T. E. Miller, A. C. Worley, and R. Zamora. 2003. The evolutionary ecology of carnivorous plants. *Advances in Ecological Research* 33: 1-74.
- Miller, T. E., **J. M. Kneitel**, and J. H. Burns. 2002. Effect of community structure on invasion success and rate. *Ecology* 83: 898-905.
- Kneitel, J. M.** and T. E. Miller. 2002. Resource and top-predator regulation in the pitcher plant *Sarracenia purpurea* inquiline community. *Ecology* 83: 680-688.

## **PUBLICATIONS (Non Peer Reviewed)**

- Kneitel, J. M.** 2016. Aquatic Life of the Bushy Lake Ecosystem. *Educational flyer for the Bushy Lake Restoration & Education Project*
- Kneitel, J. M.** 2014. Evolutionary Rebels: Parasitic Plants. *Hibiscus: California Native Plant Society Newsletter (Sacramento Valley Chapter)*

## **DEPARTMENTAL SEMINARS**

- University of California- Davis, Ecology and Evolution Seminar Series, 2016
- CSUS, Department of Biological Sciences, 2014, 2016
- University of Colorado, Department of Ecology & Evolutionary Biology, 2013
- CSUS Biological Sciences-Geology-USGS-USFWS-CALCC Colloquium Series, 2013
- National Science Foundation, Division of Environmental Biology, 2012
- University of California- Merced, School of Natural Sciences, 2011
- Moss Landing Marine Laboratory, 2011
- University of Southern Mississippi, Department of Biology, 2009
- University of Central Florida, Department of Biology, 2006
- University of Tennessee, Department of Ecology and Evolutionary Biology, 2005
- California State University- Northridge, Department of Biology, 2005
- San Francisco State University, Department of Biology, 2005
- Illinois State University, Department of Biology, 2004
- California State University- Sacramento, Department of Biology, 2003
- Saint Louis University, Department of Biology, 2003
- Washington University in St. Louis, Department of Biology, 2002
- Florida State University, Department of Biological Science, 1999, 2002

## **INVITED SYMPOSIUM PRESENTATIONS**

- Kneitel, J. M.** *It's time for time: aquatic-terrestrial linkages in California vernal pools*. CA Society of Freshwater Science Meeting 2016, University of California, Davis.

- Kneitel, J. M.**, Croel, R.C., and S.K. Collinge. *The effects of excessive nutrients in California vernal pools*. California Aquatic Bioassessment Workgroup Annual Meeting 2010, University of California, Davis.
- Kneitel, J. M.** *Species diversity and associations in California rock pools*. Natural Resources Symposium, Sacramento-Shasta Chapter of the Wildlife Society Natural Resources Symposium 2010, Sacramento, CA.
- Kneitel, J. M.** *Eutrophication in California vernal pools*. Natural Resources Symposium, Sacramento-Shasta Chapter of the Wildlife Society Natural Resources Symposium 2009, Sacramento, CA.
- Kneitel, J. M.** *Spatial ecology of vernal pools: new insights and implications*. Collaborative Learning at the Interface of Biology and Mathematics (CLIMB) Workshop 2007, Population Ecology in Vernal Pool Systems: Implications for Management and Restoration, University of California, Davis.
- Kneitel, J. M.** *Spatial ecology of vernal pools: new insights and implications*. Floodplains and Vernal Pools Session, Sacramento-Shasta Chapter of the Wildlife Society Natural Resources Symposium 2006, Sacramento, CA.
- Kneitel, J. M.** *The effects and responses of mosquito larvae as the top predator in container food webs*. Using Principles of Ecology to Understand Populations and Communities of Container Mosquitoes Symposium, Entomological Society of America 2004 Meeting, Salt Lake City, UT.
- Kneitel, J. M.** and T. E. Miller. *The effects of prey and top-predator addition on the inquiline community of the pitcher plant, Sarracenia purpurea*. Carnivorous Plants as Model Ecological Systems Symposium, Ecological Society of America 2000 Meeting, Snowbird, UT.
- Miller, T. E. and **J. M. Kneitel**. *Evidence of evolution in bacterial populations from the pitcher plant Sarracenia purpurea: is competition an important evolutionary force?* Carnivorous Plants as Model Ecological Systems Symposium, Ecological Society of America 2000 Meeting, Snowbird, UT.

## MEETING PRESENTATIONS

(\*Graduate student, \*\*Undergraduate Student)

- Rosas-Saenz, L.\*\* and **J. M. Kneitel**. 2016. *Hydro-regime, Thatch, and Nutrient Effects on California Vernal Pool Crustaceans*. Society of Freshwater Science Annual Meeting, Sacramento, CA
- Kneitel, J. M.** 2016. *Hydroregime interacts with spatial and temporal subsidies in California vernal pools*. Society of Freshwater Science Annual Meeting, Sacramento, CA
- Kneitel, J. M.** 2015. *Hydroperiod interacts with spatial and temporal subsidies in California vernal pools*. Ecological Society of America's Annual Meeting, Baltimore, MD
- Kneitel, J. M.** 2014. *Latitudinal patterns of alpha, beta, and gamma diversity in California vernal pools*. Ecological Society of America's Annual Meeting, Sacramento, CA
- Kneitel, J. M.** 2014. *Aquatic-terrestrial interactions in time: temporal subsidy effects in California vernal pools*. Joint Aquatic Sciences Meeting, Portland, OR.
- Kneitel, J. M.** 2013. *The effects of hydroperiod duration and timing on California vernal pool communities*. Wildlife Society (Sacramento-Shasta Chapter) Symposium, Sacramento, CA.
- Kneitel, J. M.** 2013. *The effects of hydroperiod duration and timing on California vernal pool communities*. Ecological Society of America Meeting, Minneapolis, MN.
- Kneitel, J. M.**, Croel, R.\* and H. Stiles\*. 2013. *Many paths to the dark side: context dependent turbidity effects in California vernal pools*. Natural Resources Symposium, Sacramento-Shasta Chapter of the Wildlife Society Natural Resources Symposium, Sacramento, CA.
- McCarten, N. F, Christoherson, K., **Kneitel, J. M.** and R. Rosas. 2011. *Ecology of vernal pools*. Natural Resources Symposium, Sacramento-Shasta Chapter of the Wildlife Society Natural Resources Symposium, Sacramento, CA.
- Fehm-Sullivan, E.\* and **J. M. Kneitel**. 2011. *Global patterns of freshwater fish communities in Mediterranean*

- biomes*. American Fisheries Society Annual Meeting, Seattle, WA.
- Kneitel, J. M.**, Croel, R.\* and H. Stiles\*. 2011. *Many paths to the dark side: context dependent turbidity effects in California vernal pools*. Ecological Society of America Meeting, Austin, TX.
- McCarten, N. F, Christoherson, K., **Kneitel, J. M.** and R. Rosas. 2011. *Ecology of vernal pools at three military bases in California*. Western Chapter of the Wildlife Society's Annual Meeting, Riverside, CA.
- Paris, S.\*\*, Gonzalez, E. T., , and **J. M. Kneitel**. 2010. *Bacterial Diversity at Mather vernal pools*. Annual CSU Biotechnology Symposium, Orange County, CA.
- Carper, D.\*\*, Davis, M. W.\*\*, Gonzalez, E. T., and **J. M. Kneitel**. 2010. *Bacterial diversity in California vernal pools*. Annual CSU Biotechnology Symposium, Orange County, CA.
- Davis, M. W.\*\*, Gonzalez, E. T., Carper, D.\*\*, and **J. M. Kneitel**. 2010. *Bacterial diversity in California vernal pools*. Annual Biomedical Research Conference for Minority Students (ABRCMS), Charlotte, NC.
- Croel, R.\*\* and **J. M. Kneitel**. 2010. *Aquatic eutrophication from cattle waste has contrasting effects on zooplankton and terrestrial plant communities of vernal pools*. California Botanical Society Conference, San Jose, CA.
- Alford, J.\*\* and **J. M. Kneitel**. 2010. *Plant competitive interactions along a moisture gradient in Sierra Nevada sub-alpine meadows*. California Botanical Society Conference, San Jose, CA.
- Alford, J.\*\* and **J. M. Kneitel**. 2010. *Plant competitive interactions along a moisture gradient in Sierra Nevada sub-alpine meadows*. Northern California Botanists Conference, Chico, CA.
- Kneitel, J. M.** and C. Lessin\*. 2009. *Ecosystem phase interactions: Aquatic nutrient addition alters terrestrial plant diversity*. Ecological Society of America Meeting, Albuquerque, NM.
- Alford, J.\*\* and **J. M. Kneitel**. 2009. *Corn Lily (Veratrum californicum) presence structures sub-alpine meadows in the Sierra Nevada*. Ecological Society of America Meeting, Albuquerque, NM.
- Kachorek, E. E.\*, J. M. V. Fragoso, K. M. Silvius, J. Read, S. Giery, J. Luzar, L. Flamarion de Oliveira, J. Gibbs, **Kneitel, J. M.** and Stevens, M. L. 2009. *Biological conservation through integrated conservation and development: Has Inwokrama been successful?* Ecological Society of America Meeting, Albuquerque, NM.
- Kneitel, J. M.** and C. Lessin\*. 2009. *Nutrient addition alters plant composition in vernal pool mesocosms*. California Native Plant Society Conservation Conference, Sacramento, CA.
- Alford, J.\*\* and **J. M. Kneitel**. 2009. *Corn Lily (Veratrum californicum) presence structures sub-alpine meadows in the Sierra Nevada*. California Native Plant Society Conservation Conference, Sacramento, CA.
- Kneitel, J. M.** 2007. *Community structure and spatial ecology of natural and restored California vernal pools*. Ecological Society of America Meeting, San Jose, CA.
- Mayberry, D.\*\* and **J. M. Kneitel**. 2005. *Spatial patterns of invertebrate species diversity in California vernal pools*. Annual Biomedical Research Conference for Minority Students, November, Atlanta, GA.
- Mouquet, N., T. E. Miller, T. Daufresne, and **J. M. Kneitel**. 2005. *Consequences of varying regional heterogeneity in source-sink metacommunities*. Ecological Society of America Meeting, Montreal, Quebec, CA.
- Yee, D., S. Harrell Yee, **J. M. Kneitel**, and S. A. Juliano. 2005. *It's not easy being brown: linking productivity, nutrients, and species richness across spatial scales in ephemeral aquatic detritus-based microcosms*. Ecological Society of America Meeting, Montreal, Quebec, CA.
- Mayberry, D.\*\* and **J. M. Kneitel**. 2005. *Spatial patterns of invertebrate species diversity in California vernal pools and pitcher plants, Darlingtonia californica*. The Science Educational Equity Undergraduate Student Research Symposium, California State University, Sacramento.
- Yates-White, C.\*\*, **J. M. Kneitel**, and J. M. Chase. 2004. *Affect of landscape on food web interactions and community composition in artificial treeholes*. Howard Hughes Research Symposium, Washington

University, St. Louis, MO.

- Ryberg, W. A., J. M. Chase, and **J. M. Kneitel**. 2004. *Connectivity, scale-dependence, and the productivity-diversity relationship*. Ecological Society of America Meeting, Portland, OR.
- Liang, C.\*\* and **J. M. Kneitel**. 2003. *Plant community structure at Tyson Research Center*. Howard Hughes Research Symposium, Washington University, St. Louis, MO.
- Kneitel, J. M.** 2003. *Intermediate-consumer identity and resources alter omnivore food web*. Ecological Society of America Meeting, Savannah, GA.
- Walters, E. L. and **J. M. Kneitel**. 2003. *Use of water-filled red-cockaded woodpecker cavities by other organisms*. Red-cockaded Woodpecker Conference IV, Savannah, GA.
- Kneitel, J. M.** 2002. *Trade-offs among coexisting species in *Sarracenia purpurea* inquiline communities*. Ecological Society of America Meeting, Tucson, AZ.
- Miller, T. E. and **J. M. Kneitel**. 2002. *Effects of migration, predators, and resources on metacommunity patterns*. Ecological Society of America Meeting, Tucson, AZ.
- Kneitel, J. M.** 2000. *The effects of prey and top-predator addition on the inquiline community of the pitcher plant, *Sarracenia purpurea**. Florida Ecological and Evolutionary Symposium, Archibald Biological Station, FL.
- Schiffman, P.M. and **J. M. Kneitel**. 1997. *Erratic rainfall, small mammals, and the annual lifestyle in southern California valley grasslands*. Ecological Society of America Meeting, Albuquerque, NM.
- Kneitel, J. M.** and P.M. Schiffman. 1996. *The effects of fire and pocket gopher (*Thomomys bottae*) disturbance on a California annual grassland*. Ecological Society of America Meeting, Providence, RI.

## MISCELLANEOUS TALKS

- Latitudinal patterns of alpha, beta, and gamma diversity in California vernal pools*. United States Fish and Wildlife Service, Sacramento Office, December 2014
- Carnies and Vampires, or how I learned to stop worrying and love the alternative lifestyles of plants*, California Native Plant Society (Sacramento Valley Chapter) Monthly Meeting, October 2014
- The Ecology of California vernal pools*, The Renaissance Society, Sacramento, 2014
- A Drop in the Bucket: Vernal Pool Ecology and Conservation Implications*, Sierra College Natural History Museum, 2013.
- The ecology of California vernal pools: threats and conservation implications*. NatureBridge, Golden Gate National Park, CA 2013.
- Vernal pool threats, or how I learned to stop worrying and love the buckets*. The Wildlife Society Brown Bag Seminar Series, Sacramento, CA 2012.
- Eutrophication in California vernal pools*. CSUS Celebration of Research and Creative Activity Symposium, 2010.
- Vernal pools at local and regional scales: new insights and conservation implications*. California Environmental Protection Agency, Sacramento, CA, 2008.
- The spatial ecology of vernal pools*. Ecological and Environmental Issues Seminar. California State University, Sacramento, 2007, 2008.
- Ecosystem Management*. Pacific Forest Institute, Sierra Nevada, CA, 2007.
- Ecosystems*. Pacific Forest Institute, Sierra Nevada, CA, 2006.
- Species diversity in space and time, or how I learned to stop worrying and love the niche*. College of Natural Sciences and Mathematics Winter Retreat, 2006.
- The ecology, evolution, and conservation of carnivorous plants*. Ecological and Environmental Issues Seminar, California State University, Sacramento, 2005, 2006.
- The ecology, evolution, and conservation of carnivorous plants*. Sacramento Bromeliad and Carnivorous Plant Society Meeting, 2005.

*The relevance of the metacommunity concept to conservation: is there a new kid in town?* Ecological and Environmental Issues Seminar, California State University, Sacramento, 2004.  
*Treeholes of Tyson: subtle, shy, and bloody*, Friends of Tyson Monthly Meeting, Tyson Research Center, 2003.

## **AWARDS AND HONORS**

CSU-COAST Grant Development Program (2017-18): *Chemical tracers of human activities and ecological associations in California vernal pools*

Sacramento State's 2017 University Award for Research, Scholarship, and Creative Activity for Senior Faculty

Fullbright Scholarship (2017-2018) University of Haifa (Israel)

Bureau of Reclamation/US Fish & Wildlife Service Central Valley Project Conservation Program: *Longhorn Fairy Shrimp (Branchinecta longiantenna) Habitat Research in Contra Costa and Alameda Counties, California* (2016-19)

National Science Foundation RUI: *Spatial and Temporal Subsidies in Seasonal Environments* (2014-16)

CSUS College of Natural Sciences and Mathematics Outstanding Scholarship Award (2013-14)

CSUS Provost Research Fellow (2013-14)

CSUS-UEI Faculty Grant (2013)

Faculty Promotion Development Funds (2012-2013)

CSUS Research and Creative Activity Award Program (2011-2012): *Climate change effects on California vernal pools*

East Bay Regional Park District (2009-present): *Branchiopoda associations in rock pools*

California State University Program for Education and Research in Biotechnology (CSUPERB; 2010-2011) Co-PI with Enid Gonzalez: *Metagenomic and metabolic study of bacteria in California vernal pools*

CSUS Research and Creative Activity Capstone Award 2010

United States Department of Defense Environmental Security Technology Certification Program (ESTCP) (2009-2014): *Implementation of technology to measure hydrological functioning of vernal pool wetlands and their watersheds for use with base-wide evaluation of project impacts, regulatory permitting, and future mitigation through habitat restoration* (Contractor and contributed methodology)

CSUS Probationary Faculty Development Grant (Spring 2010): *The Effects of Eutrophication in the California Vernal Pool Ecosystem*

CSUS Department of Biological Sciences Goethe Fund (2009-10) PI with Enid Gonzalez: *Functional and Genetic Diversity Analysis of Bacterial Populations in California Vernal Pools*

CSUS College of Natural Sciences and Mathematics, Summer Undergraduate Research Experience (SURE) Program (Summer 2009): *3 funded projects*

CSUS STEM (Science, Technology, Engineering, and Mathematics) Faculty Fellowship (2008-9): *The Spatial Ecology and Ecosystem Functioning of Vernal Pools: Integrating Research into Undergraduate Education.*

CSUS Research and Creative Activity Award Program (2008-9): *Keystone Predation in Sub-Alpine Meadow Communities? Indirect Effects of a Specialist Herbivore on Plant Biodiversity*

CSUS College of Natural Sciences and Mathematics Project Grant (Summer 2008): *Testing Island Biogeography in Sub-Alpine Meadows: Do Invading Trees Facilitate the Invasion of Forest Species in Meadows?*

United States Department of Agriculture- Forest Service (2006-7): *Restoration of sub-alpine meadows in Eldorado National Forest, CA*

CSUS Department of Biological Sciences Goethe Fund (2005-6): *Spatial and temporal patterns of*

*invertebrate biodiversity in Darlingtonia californica inquiline communities*

ArtSci Council Faculty Award (Nominee), Washington University in St. Louis, 2004

Magaret Menzel Endowed Award (for outstanding graduate student), Florida State University, 2002

Department of Biological Science Faculty Publication Award (for best student publication), Florida State University, 2001-2

Office for Graduate Studies, Research and International Programs Graduate Fellowship, California State University, Northridge, 1996

Office for Graduate Studies, Research and International Programs Research Grant, California State University, Northridge, 1995

California State University, Northridge, University Fee Waiver, 1995

## **WORKSHOP/WORKING GROUP PARTICIPANT**

California State University Water Resources and Policy Initiatives (WRPI) Conferences, 2009, 2010

Living in the KnowlEdge Society (LIKES) Workshop, Villanova University, 2009

Ecological Society of America's Faculty Development Workshop: *Using Continental-Scale Data to Teach Undergraduate Ecology*, Washington D.C., 2008

Science Environment for Ecological Knowledge (SEEK): *Early Career Faculty and Postdoctoral Training in Ecoinformatics*, University of New Mexico, 2005

National Science Foundation Biocomplexity-Incubation Activity (A. Ellison, N. Gotelli, T. Miller, PIs): *A Synthetic Approach to Phytotelmata Communities* Workshop, Wakulla Springs, FL, 2001

## **STUDENTS ADVISED**

### **Current Graduate students (Master's Candidates, CSUS)**

Terry Adelsbach, Rebekah Bergkoetter, Kharla Chavez-Kendall, Erin Ferguson (co-advised with Rob Titus), Angela Haas, Peter Harman, Kevin Marr, Christine Mellon, Robin Shin, Ian Yates

### **Current Undergraduate students**

Alyssa Nerida, Luis Rosas, Trisha Velasquez, Nestor Samiylenko

### **Former Graduate Students**

#### Graduated 2015

Jessica Alexander: *Pollination ecology in vernal pools*

Lindsey Peterson: *Invasive species management in vernal pools*

#### Graduated 2014

Russell Croel: *Tadpole shrimp bioturbation*

#### Graduated 2013

Andrea Graffis: *Cuscuta ecology in vernal pools*

Ian Anderson: *Anuran effects in vernal pools*

Michael Cardwell: *Rattlesnake ecology*

Dana Carper (co-advised with Enid Gonzalez): *Bacterial diversity in vernal pools*

#### Graduated 2011

Angela Calderaro: *Connectivity and water quality effects on California vernal pools*

Heather Stiles: *The role of vegetation in eutrophication of California vernal pools*

Katherine Marquez: *Connectivity of urban coyote populations to surrounding rural populations*

#### Graduated 2010

Elif Fehm-Sullivan: *Fish community ecology in Mediterranean climate biomes*

Chris Carr: *Insect species diversity in sub-alpine meadow metacommunities*

Emily Kachorek: *An analysis of the integrated conservation and development paradigm: a case study from Guyana*



Carrie Lessin: *Nutrient effects in California vernal pools*

Graduated 2009

Kevin Aceituno: *Mercury bioaccumulation in San Francisco Bay*

Sarah Estrella: *Community response to invasive plant removal (Lepidium latifolium at Suisun Marsh)*

Graduated 2008

Marcus Yee : *Evaluating and mitigating avian collisions with distribution power lines at Cosumnes River Preserve.*

Michelle D. Beachley (co-advised with Sharon Lawler, UC Davis): *Pesticide effects on non-target terrestrial insect populations.*

Clara Matallana (Fullbright Scholar): *Use of systematic site selection to design a marine reserve network along Oregon's coast.*

Katy Washburn: *Habitat characteristics and community composition changes associated with the New Zealand Mudsnaill invasion of the lower Mokelumne River, California*

Graduated 2007

Zach Simmons: *Bird and mammal resource use sub-alpine meadow microhabitats*

Ryan Henning: *Nest success of urban waterfowl using artificial "ben house<sup>m</sup>" structures*

### **Former Undergraduate Students**

CSUS: Lisa Calhoun (STAR Research Fellow 2015), Korena Hendryx (STAR Research Fellow 2014, 2015), Katelyn Oxford, Mariah Thomas, Christine McNally; Alison Furler; Candace Aguilar; Amber Easterwood; Russell Croel (SURE Grant Recipient 2009 and 2010); Jim Alford (SURE Grant Recipient 2009); Jennifer Rossiter (SURE Grant Recipient 2008, 2009); Mike Memeo (Summer 2008); Kasie Barnes (2007- 8); David McNabb (Summer 2006); Demetrius Mayberry (CSUS Science Educational Equity Program's Summer Scholar Summer 2006); Aaron Langenbeck (Honors Research 2005-6); Demetrius Mayberry (CSUS-Los Rios Science Transfer Project Fellow Summer 2005); Amy Harris, (Spring 2005)

Washington University: Crystal Yates-White (Washington University Linnette Environmental Research Fellow, Summer 2004 (co-advised with Jon Chase); Daniel Perrault (Senior Honors Thesis,

Washington University in St. Louis, 2003 - 4) **Winner of the Department of Biology's 2004**

**Spector Prize for Outstanding Undergraduate Research and Honors Thesis;** Chris Liang

(Tyson Undergraduate Research Fellow, Washington University in St. Louis, Summer 2003);

Mentor: 9 other undergraduate researchers 2002 – 2004

### **Committee member:**

*Master's Thesis Committee, California State University, Sacramento*

**Current:** 3

**Graduated:** 31 students total

## **CURRENT COLLABORATIONS**

Andres Aguilar (CSU- Los Angeles): *Vernal pool community ecology*

Sharon Kay Collinge (University of Colorado): *California vernal pool ecosystem ecology*

Enid Gonzalez (CSU Sacramento): *Metagenomic and metabolic study of bacteria in California vernal pools*

Justin Miller-Schulze (CSU Sacramento): *Tracer elements in California vernal pools*

Donald Yee (University of Southern Mississippi): *Geographical variation in treehole community composition*

## **REVIEWS**

**Editorial Board Member:** *Oecologia* (2013 – present); *Limnology* (2017 – present)

**Journal Articles:** *American Naturalist* (6), *Annals of Forest Science*, *Aquatic Ecology*, *Aquatic Sciences*,

*Biological Journal of the Linnean Society, Canadian Journal of Zoology, Community Ecology* (3), *Diversity and Distributions, Ecography* (2), *Ecological Entomology, Ecology* (8), *Ecology Letters* (13), *Freshwater Science, Functional Ecology, Hydrobiologia, Israel Journal of Ecology and Evolution* (2), *Journal of Animal Ecology* (7), *ISRN Ecology* (5), *Journal of Medical Entomology, Journal of Applied Ecology* (2), *Journal of Vector Ecology, Natural Areas Journal, Nature Education, Nature Scientific Reports, Oecologia* (14), *Oikos* (6), *PLoS ONE* (2), *Philosophical Transactions B, Proceedings of the Royal Society B* (2), *Quarterly Review of Biology*

**Grant Proposals:** National Science Foundation (14), United States Department of Agriculture, Netherlands Organization for Scientific Research (2), South Africa's National Research Foundation (2), Austrian Science Fund, U.S.-Israel Binational Science Foundation, California State University, Sacramento Research and Creative Activities Grant Program, National Geographic Society, The Research Foundation – Flanders (FWO)(4)

**Books and Book Chapters (Ecology and Conservation Biology):** Roberts and Company Publishers, Benjamin Cummings, McGraw-Hill, Blackwell Publishing, University of Chicago Press, Holt, Reinhart and Winston, W. H. Freeman & Company, John Wiley & Sons, Oxford University Press, Waveland Press

**Panel Member:** National Science Foundation, Division of Environmental Biology- Ecological Biology Cluster, 2006-2009, 2014

## **SERVICE**

### **Board Member (previous):**

*Mather Stewardship Committee, Climate Cents, Hima Mesopotamia*

### **Conference:**

Session Moderator, Ecological Society of America's Annual Meeting 2015, Baltimore, MD  
Session Organizer, Ecological Society of America's Annual Meeting 2014, Sacramento, CA  
Session Moderator, Ecological Society of America's Annual Meeting 2014, Sacramento, CA  
Session Moderator, Ecological Society of America's Annual Meeting 2013, Minneapolis, MN  
CSUS Water Resource and Policy Initiative Conference Organizing Committee, 2013  
Symposium Organizer with M. Stevens, T. Horner and D. Kelly. *Hima Mesopotamia: Restoring the ancient system of story, place and culture in the Tigris Euphrates Watershed*, EcoSummit 2012, Columbus, OH  
Session Moderator, Ecological Society of America's Annual Meeting 2009, Albuquerque, NM

### **CSUS University Committees:**

CSUS Graduate Education Task Force (2017)  
CSUS Graduate Council (2016 -2017)  
Juror for the California State University, Sacramento Student Research Competition, 2005, 2007, 2016, 2017  
Biology representative, Organizing committee, Ecology-Geology Colloquium Series  
*Chair*, College of Natural Sciences and Mathematics Undergraduate/Graduate Research Symposium Committee  
Chancellor's Office/Council for Undergraduate Research (CUR)/CSUS Committee to Institutionalize Undergraduate Research  
CSUS Faculty Hearing Committee  
California State University, Sacramento Representative to the California State University Biodiversity,

Field Sites, and Conservation Committee

**CSUS Department of Biological Sciences:**

*Committees:* Graduate, Budget/Equipment/Space, Website (Information Technology), Library, Motor Pool, Executive, Scholarship

*Committee Chair,* Animal Conservation Biologist Search Committee, Fall 2006

Biology Minor Advisor

Department Organizer:

- Department of Biological Sciences Seminar Series (2006-2008)
- Ecology, Evolution, and Conservation (EEC) Journal Club (2006 - present)
- EEC Job/Internship/Graduate School Listserv (2006 – present)

**K-12 Science Service:**

Career Day (Professor career and ecological research), 7<sup>th</sup> grade science classes, Winston Churchill Middle School

*Plant Adaptations,* 7<sup>th</sup> grade science classes, Winston Churchill Middle School

Science Olympiad Coach (Winston Churchill Middle School Team, 2014 - present): Ecology, Invasive species, Bio-processes, and presentations on: experimental design, aquatic ecology, sampling techniques, and invertebrate identification

Del Paso Manor Elementary School (2013): 6<sup>th</sup> Grade Science Day, *Carnivorous plants, Insect behavior, Coral Reefs* activities

Del Paso Manor Elementary School (2010-13): *Insects, Amphibians, and Snakes, Carnivorous Plants, Animal Adaptations*

Nature Bowl Coach, Del Paso Manor Elementary School (2010-13)

Shalom School Walkathon Charity Event (2008): *Ecology, food webs, and predator morphology*

Starr King Elementary School- The Lights On Celebration (2007): *Predator plants and the prey they eat*

Deterding Elementary School (2007): *Carnivorous plants and Insects; Spiders; Reptiles* (Brides Program)

Phoebe Hearst Elementary School (2006): *Carnivorous plants and Insects*

Shalom School (2005 – 2009): *Carnivorous plants, Insects, Amphibians, Snakes, and Playful plants*

Coordinated Workshop at Expanding Your Horizons Conference. *The secret world of carnivorous plants.* California State University, Sacramento 2007, 2008

**MEMBERSHIP**

Ecological Society of America (1995 – present)

American Society of Naturalists (1998 – present)

Society of Freshwater Science (2016 – present)

Union of Concerned Scientists (2004 - present)