

Clark Richter

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PROFESSIONAL SUMMARY

Highly experienced in teaching biology and ecology college-level courses through a variety of pedagogical techniques including project-based and experiential learning, interdisciplinary collaboration, online learning and hybrid classrooms. Varied professional experience includes adult education and training, workshop facilitation, university admissions, field-based ecological research and non-profit environmental education for young children.

EDUCATION

PhD in Ecology (expected spring 2020): University of California – Davis, Davis, CA

Master of Biology (2015): Sonoma State University, Rohnert Park, California

Bachelor of Biology & History; English (minor) (2008): Albion College, Albion, Michigan

INSTRUCTOR EXPERIENCE & ORGANIZATIONAL LEADERSHIP

Instructor. General Ecology – University of California – Davis, Davis, California; 8/2019 to 9/2019 and Current

- Total enrollment 8/2019-9/2019: 40 students; Total enrollment Current: 120 students
- This course focuses on the theoretical and experimental analysis of the distribution, growth and regulation of species populations as well as predatory-prey and competitive interactions and the organization of natural communities with emphasis on the application of evolutionary and ecological principles to selected environmental problems.
- Deliver 1.25 to 1.5 hour lectures two to three times per week.
- Wrote all course materials as well as graded all exams and research proposal writing assignment.
- Managed 1 to 2 teaching assistants responsible for delivering discussion curriculum I wrote.

Co-instructor. Plant Ecology – University of California – Davis, Davis, California; 9/2018-12/2018

- This course provided 53 undergraduate students with focused lectures on the study of interactions between plants, plant population, vegetation types and their physical and biological environment with a special emphasis on California.
- Lectured on plant population structure and dynamics, functional types and life history strategies, plant communities, succession, disturbance and plant invasions.
- Organized 2 day-long field trips to California chaparral and mixed-conifer Sierra Nevada forest that included student participation in forest survey techniques and impromptu lectures on disturbance and forest management history.
- Overall student evaluations: 97% above average; 3% average; qualitative surveys also available by request.

Co-founder/Mentor. Davis Forest School, Davis, California; 3/2018 to 6/2019

- Forest School is a non-profit program for preschoolers that encourages imaginative, unstructured experiences in the outdoors to foster a deep connection between children and nature.
- Lead 6 – 10 students ages 4 to 8 in once-weekly afternoon sessions at Putah Creek Nature Reserve that encouraged interactions with nature through inquiry, questions, journaling and arts and crafts.
- Handled communication with parents through weekly digests of activities.

Co-instructor. Ecology and Evolution – University of California – Davis, Davis, California; 3/2018-6/2018

- This course presented 143 science-major undergraduate students with an overview of the foundations of ecology including history, major themes and hypotheses, surveying techniques and quantitative methodologies.
- Led 6 sections of 22 to 29 students in weekly discussions on course-relevant peer-reviewed primary ecological literature with a focus on summarizing, interpreting, and communicating the research.

- Instituted a variety of pedagogical techniques including affinity mapping, “conver-stations” and think-pair-share to encourage student participation regardless of learning style.
- Held weekly office hours to assist students on course material as well as provide mentoring advice on future courses and potential post-college activities.
- Led 2 pre-exam review sessions of ~80 students on course material and exam strategy.
- Overall student evaluations: 97% above average; 3% average; qualitative surveys also available by request.

Discussion Leader/Teaching Associate. Ecology and Evolution – University of California – Davis, Davis, California; 3/2016-6/2016

- This course presented 150 science major undergraduate students with an overview of the foundations of ecology that included history, major themes and ideas, surveying techniques and quantitative methodologies.
- Led 4 sections of 24 to 28 students in weekly discussions on course-relevant peer-reviewed literature focused on interpreting, communicating and conceptualizing the wider implications of ecological research.
- Instituted a variety of pedagogical techniques including affinity mapping, “conver-stations” and think-pair-share to encourage student participation regardless of learning style.
- Held weekly office hours to assist students on course material as well as provide mentoring advice on future courses and potential post-college activities.
- Led 2 pre-exam review sessions of ~80 students on course material and exam strategy.

Co-founder. Environmental Leadership Club – US Peace Corps & University of Santa Fe, Santa Fe, Romblon, Philippines; 8/2008-11/2010

- Created this organization as a Peace Corps volunteer in order to raise awareness of climate change and encourage environmental stewardship in the community.
- Recruited 35 young-adult volunteers from my site’s local college to teach elementary school children about climate change and environmental stewardship through simple demonstrations, engaging games/roleplay and community service projects.
- Wrote a proposal for and was awarded a Small Project Assistance grant to purchase equipment and other educational supplies.

TEACHING ASSOCIATE EXPERIENCE

Teaching Associate. Ecology and Evolution – University of California – Davis, Davis, California; 6/2018-8/2018 & 6/2019-8/2019

- This course presents 64 science-major undergraduate students with an overview of the foundations of ecology including major themes and hypotheses, surveying techniques and quantitative methodologies.
- Developed the curricula for and led 2 sections of student in weekly discussions and activities on course-relevant peer-reviewed primary ecological literature with a focus on summarizing, interpreting, communicating and conceptualizing the research.
- Instituted a variety of pedagogical techniques including affinity mapping, “conver-stations” and think-pair-share to encourage student participation regardless of learning style.
- Held weekly office hours to assist students on course material as well as provide mentoring advice on future courses and potential post-collegiate activities.
- Led 2 pre-exam review sessions of ~80 students on course material and exam strategy.
- Summer 2018 overall student evaluations: 95% above average; 5% average.
- Summer 2019 overall student evaluation: 95% above average; 5% average.

Teaching Associate. Population Biology of Plants and Weeds – University of California – Davis, Davis, California; 4/2017-6/2017 & 4/2019-6/2019

- This course is taken by 40 undergraduate students, and it concentrates on the origin, evolution, reproduction and dispersal of invasive plant species and weeds.
- Led weekly laboratory sessions involving exercises on population dynamics modeling, experimental design to examine competitive interactions and plant identification using a dichotomous key.
- Spring 2017 overall student evaluation: 85% above average; 12% average; 3% below average.
- Spring 2019 overall student evaluation: 95% above average; 6% average.

Teaching Associate. Introduction to Biology – University of California, Davis, Davis, California; 1/2019-3/2019

- This course provides undergraduate students with an introduction to the basic properties of ecology and evolutionary biology with a focus on the fundamental mechanisms that generate and maintain biological diversity across scales ranging from molecules and genes to global processes and patterns.
- Led 2 laboratory sections of 48 total students that reinforce and apply lecture material.
- Taught laboratory material through brief lectures, interactive demonstrations, class and group discussions, and straightforward experiments on population growth (*Blepharisma*), competition and natural selection (*Brassica rapa*), population genetics (*Drosophila*), and trophic interactions (*Gambusia* and mosquito larvae).
- Overall student evaluations: 98% above average; 2% average.

Teaching Associate. Plant Ecology – University of California – Davis, Davis, California; 9/2013,'15,'16,'17-12/2013,'15,'16,'17

- This course provided 55 undergraduate students with focused lectures on the study of interactions between plants, plant population, vegetation types and their physical and biological environment with a special emphasis on California.
- Assisted with four field trips to California chaparral and mixed-conifer Sierra Nevada forest that included student participation in field survey techniques and impromptu lectures on disturbance and forest management history.
- Overall student evaluation: 94% above average; 6% average.

Teaching Associate. Popular Science and Technology Writing – University of California – Davis, Davis, California; 1/2014-3/2014

- This course presented 60 undergraduate students with an overview of the rhetoric and techniques involved in popular science and technology writing.
- Led one section of 20 students in weekly discussions that examined popular science writing and practiced effective science communication strategies in writing and speaking.
- Rotated large and small-group discussion methods to encourage student participation.
- Held weekly office hours to assist students on course material as well as provide mentoring advice on future courses and potential post-collegiate activities.
- Graded weekly discussion section writing assignments and encouraged repeatedly under-achieving students to seek out support at Student Writing Center.

Teaching Associate. Biological Inquiry – Sonoma State University, Rohnert Park, California; 8/2011-12/2011, 1/2012-5/2012, 8/2012-12/2012, 1/2013-5/2013

- This course presented non-biology major undergraduate students with an overview of the ideas and structures that make up the current field of biology.
- Led weekly 3-hour laboratory sessions for 25 students that included brief lectures on material relevant to that week's exercises, monitoring and assisting students during laboratory exercises and providing feedback.
- Qualitative student evaluations available by request.

OTHER CLASSROOM EXPERIENCE

Reader. Civil War Era – University of California – Davis, Davis, California; 1/2018-3/2018

- This course presented undergraduate students with close examinations of the political and social history of the United States from the Compromise of 1850 to the end of the Civil War.
- Graded student essays on course readings of Blue-Eyed Child of Fortune: The Civil War Letters of Robert Gould Shaw and The California Gold Rush and the Coming of the Civil War.
- Graded comprehensive final student examinations (short answer/essay question formats).

WORKSHOP EXPERIENCE

Facilitator. Jepson Herbarium Fire Ecology Field Course, Hopland, California; April 2019

- The purpose of this course was to present attendees with basic fire ecology in chaparral, mixed-conifer, and serpentine ecosystems as well as discuss fire ecology application and management.

- Developed a 3-hour lecture on the fire as a physical process, fire as an ecological process and the novel fire regimes in California ecosystems.
- Gave lectures on USDA Forest Service Common Stand Exam sampling protocol as well as facilitated discussion in the field with 20 adult attendees.

Facilitator. USDA Forest Service Rx-310 Fire Science Workshop. USDA Forest Service Lake Tahoe Basin Management Unit, South Lake Tahoe, California; April 2019

- The purpose of this workshop was to train USDA Forest Service and CalFire adult personnel in the wildlife and plant ecology underlying fire and forest management.
- Led a 4-hour session on “Applications of Fire Science” that included lecture, affinity mapping and group activities.

Training and Workshop Organizer. USDA Forest Service/University of California – Davis, California; March-May 2017 & March-May 2018 & June 2019

- The purpose of this workshop was to train 15 adults with varying experience in vegetation surveys to be efficient and productive field crew employees working in post-fire environments.
- Scheduled two days of sessions on topics including forest ecology, safety in post-fire environments, and US Forest Service common stand exam/tree regeneration protocols.
- Recruited speakers for sessions on hazardous trees, BK radio operation, safety on US Forest Service property and wilderness first aid.
- Organized lodging and other small-details for workshop participants.

Facilitator. Looc Project Design and Management Workshop & US Peace Corps, Looc, Romblon, Philippines; 3/2009

- Led sessions on needs assessment, project planning and proposal writing for 30 community participants through group activities, short lectures and role-playing.

PROFESSIONAL EXPERIENCE (VOLUNTEER)

Coastal Resource Management/Environmental Education Specialist. US Peace Corps; Romblon Philippines; 8/2008-11/2010

- The purpose of this project was to collaborate with host county nationals in undertaking and completing projects that benefited the local community and provided for their future welfare and sustainable economy.
- Collaborated with host-county nationals to develop and undertake a fishing community-registration system for 1,429 people to ensure that their livelihoods were protected in the case of a natural or man-made disaster.
- Assisted in the training and empowerment of fishing members and community council members in survey methods for corals, fish, sea grasses and mangroves to be used in effective coastal resource management plans.
- Awarded two grants that provided funds for two environmental education programs.
- Completed an extensive coastal environmental profile that will be used to inform and define future coastal resource management decisions.

PROFESSIONAL EXPERIENCE (RESEARCH & ADMINISTRATIVE)

Research Chief. Department of Ecology & Evolution; University of California – Davis, California; 8/2014-Present

- The purpose of this project is to understand the dynamics and patterns of vegetation regeneration and succession after wildfire in the Sierra Nevada montane forests, California.
- Evaluated and hired three to four young adult, undergraduate field assistants for four months of field work and subsequent data entry for the summers of 2013, 2014 and 2015.
- Mentored and directed assistants while in the field on survey methodology and the theoretical basis behind research questions as well as encouraged discussion and critiques of these topics.
- Developed Geographic Information System maps of Sierra Nevada fire site locations and survey protocols, purchased necessary field equipment and completed data entry into US Forest Service Vegetation database.
- Produced annual reports of post-fire regeneration characteristics based on field work conducted each summer as well as a final report that described the spatial dynamics of post fire vegetation regeneration, surviving tree characteristics, fuels loading and understory plant composition for the Power Fire.

- Wrote 3 letters of recommendation for former field assistants towards entry into graduate programs and other field research positions.

Admissions Committee Member – Graduate Group in Ecology; University of California – Davis, Davis, California; 1/2019

- The purpose of the Admissions Committee is to engage in unbiased, holistic review of potential candidates' applications for admission into the UC Davis Graduate Group in Ecology.
- Committee members engaged in workshop on unconscious bias and holistic review and review 14 applications.
- Ratings were recorded in Slate and Qualtrics software.

Research Assistant. Department of Ecology & Evolution; University of California – Davis, California; 8/2014-12/2017

- The purpose of this project is to understand the dynamics and patterns of vegetation regeneration and succession after wildfire in the Sierra Nevada montane forests, California.
- Developed a large-scale Access database of post-fire vegetation characteristics collected using US Forest Service Common Stand Exam and Regeneration protocols from 6 different fires of varying size and heterogeneous burn-severity and intensity patterns.

Research Assistant. Department of Biology; Sonoma State University, California; 8/2011-8/2013

- The purpose of this project was to understand the long-term effects of re-introducing a once-extirpated large mammal (Tule elk, *Cervus elaphus nannodes*) on native and exotic plant vegetation in a coastal prairie ecosystem.
- Hired two undergraduate field assistants and mentored in the field on survey techniques and theoretical basis for research questions.

Staff Research Associate. Department of Plant Sciences; University of California – Davis; Davis, California; 6/2013-9/2013, 6/2012-9/2012 & 6/2011 – 10/2011

- Quantified and classified the vegetative regeneration of mixed forests 5 to 6 years after a major forest fire.
- Established and completed USFS Common Stand Exams and Regeneration Plots in 9 forests that had recently burned on various terrains at elevations ranging from 1,000 ft. to 7,200 ft.
- Worked extensively with Trimble GPS units, TerraSync software, Microsoft Access, and National Forest Service software.

Research Assistant. PIRE Project, University of the Philippines – Diliman; Diliman, Philippines; 3/2009-4/2009

- The purpose of this project was to test the hypothesis that the Philippines could be considered center of the center" of marine diversity by analyzing the genetic makeup of marine species.
- Trained and organized local fisherfolk to assist with the scientific field collection of *Acanthochromis polyacanthus* and additional marine species.
- Extracted DNA and ran PCR on marine organisms.

Research Intern. Sleeping Bear Dunes National Lakeshore; Empire, Michigan; 5/2007-8/2007 & 5/2008-8/2008

- The purpose of my position was to develop a data-based protocol to more effectively manage and direct the efforts of the park's invasive plant control teams.
- Surveyed the abundance and distribution of federally threatened *Cirsium pitcheri* (Pitcher's thistle) to identify conservation policy and invasive plant management areas of the dune lakeshore.
- Used GPS and GIS technology to survey the location of work being performed by the *Gypsophila paniculata* (baby's breath) invasive plant control teams to mark progress for a private grant.
- Assisted in the control of major invasive plants including *Gypsophila paniculata*, *Alliaria petiolata*, and *Robinia pseudoacacia*.
- Surveyed for 3 bald eagle nests, beaver effects on 2 small inland ponds, and nesting habits of a population of federally endangered *Charadrius melodus* (piping plover).
- Assisted with the development and implementation of programs to educate park visitors on the dangers of importing firewood and other tree diseases into the National Lakeshore.

PUBLICATIONS

Richter, Clark, M. Rejmánek, J. E. D. Miller, J. Weeks, K. Welch, and H. D. Safford. 2019. "The species diversity x fire severity relationship is hump-shaped in semiarid yellow pine and mixed conifer forests." *Ecosphere* 10(10).

In preparation

Richter, Clark, M. Rejmánek, and H. Safford. 2019. "Shrub responses to wildfire severity and their influences on understory plant communities." *Expected journal/date of submission: Forest Ecology & Management/November 2019*

Non-peer reviewed

Richter, Clark and H. Safford. 2016. "Inventory and Monitoring of Current Vegetation Conditions, Forest Stand Structure, and Regeneration of Conifers and Hardwoods in the Power Fire Burn Area – Final Report: 2014 & 2015 Field Seasons." USDA Forest Service.

PRESENTATIONS

- 2018. "Shrub responses to wildfire severity and their influences on understory plant communities." Ecological Society of America Annual Meeting, New Orleans, Louisiana.
- 2018. "Effects of fire severity on understory diversity in the Sierra Nevada, California." International Association of Wildland Fire/Association for Fire Ecology Fire Continuum Conference, Missoula, Montana.
- 2018. "Inventory of vegetation surveys conducted in the Power Fire burn area (2013, 2014 & 2015)." USDA Forest Service Region 5 Ecology Program Ecology Meetings, UC Davis. *Invited*.
- 2018. "Mixed-conifer understory plant diversity patterns across wildfire severity classes and associated ecological characteristics of the Sierra Nevada, CA." California Native Plant Society 2018 Conservation Conference, Los Angeles, California.
- 2017. "Inventory and Monitoring of Current Vegetation Conditions, Forest Stand Structure, and Regeneration of Conifers and Hardwoods in the Power Fire Burn Area." Amador-Calaveras Consensus Group Monitoring & Science Symposium, Jackson, California. *Invited*.
- 2017. "Mixed conifer understory plant diversity patterns across wildfire severity classes and associated ecological characteristics of the Sierra Nevada, California." Ecological Society of America Annual Meeting, Portland, Oregon.
- 2016. "Factors Driving Understory Species Diversity and Species Response to Post-fire Conditions." Oral examination for PhD candidacy, UC Davis.
- 2015. "Influence of Functional Traits, Shrub Neighbors and Habitat Types on Plant Responses to Herbivores." Oral defense for Master's in Biology, Sonoma State University.
- 2015. "The Importance of Functional Traits and Neighbors for Understanding Plant Responses to Herbivory." Graduate Group in Ecology Student Symposium, UC Davis.
- 2012. "The capacity for Tardigrade survival in extreme environments." Biology 500s class presentation, Sonoma State University.
- 2011. "Herbivore-Mediated State Transitions and Invader Facilitation in Shrub-Dominated Grasslands." Oral examination for Master's candidacy, Sonoma State University.

HONORS, AWARDS & CERTIFICATIONS

- 2019. Graduate Teaching Community Certificate of Participation, UC Davis.
- 2018. Travel, Research and Educational Experience Grant, Association for Fire Ecology. \$400
- 2012. Graduate Equity Fellowship, Sonoma State University. \$1,200
- 2011. Edgar and Beulah Dryden Scholarship, Sonoma State University. \$750.
- 2008. Steven D. Reed Excellence in Biological Laboratory Teaching Award, Albion College. \$1000.
- 2004. Trustee Scholarship, Albion College.
- 2001. Eagle Scout, Boy Scouts of America.

RESEARCH GRANTS

2013. US Forest Service/University of California – Davis. “Post-fire vegetation regeneration inventory and monitoring of the Power Fire in the Sierra Nevada.” \$290,000; PI: Marcel Rejmánek
2012. Northern California Botanists. Joe Kohn Scholarship. “Herbivore-mediated state transitions involving native shrubs in a coastal prairie ecosystem.” \$500.
2011. California Native Plant Society. Milo Baker Chapter Merit Scholarship. “Impact of Reintroduced Tule Elk on an Invasive Thistle and the Coastal Grassland Community.” \$500.
2011. California Native Plant Society. “Impact of Reintroduced Tule Elk on an Invasive Thistle and the Coastal Grassland Community.” \$500.