Ryan A. Peek

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EDUCATION

University of California, Davis, Ph.D. candidate Ecology — expected 2018
University of San Francisco, M.S. Biology — 2010
University of California, Davis, B.S. Wildlife, Fish, & Conservation Biology — 2002

EMPLOYMENT

Center for Watershed Sciences, UC Davis:

Graduate Student Researcher — 2014–present

Jr. Research Specialist — 2011–2014

USDA Forest Service, Pacific Southwest Research Station:

Biological Science Technician — 2010

University of California, Berkeley:

Research Assistant II — 2009–2010

University of California, Davis:

Research Assistant II — 2009

Stillwater Sciences:

Fish & Wildlife Biologist — 2002—2011

National Park Service (Sequoia & Kings Canyon):

Biological Science Technician — 2001

TEACHING

Instructor, Data Wrangling for Ecologists, GGE 298, University of California Davis Winter Quarter 2017

Teach 25+ graduate students in ecology how to use R to interact with data including: data structure, version control, and programming for data manipulation, analysis, and visualization. Built website and made course materials openly available on github. (https://gge-ucd.github.io/wRangling-Ecology/) (https://github.com/gge-ucd/wRangling_Seminar).

Instructor, Introduction to R at DIBSI 2017

Data Intensive Biology Summer Institute at UC Davis is a series of week-long workshops for biologists to learn bioinformatics and data science. The Introduction to R course was built as an interactive, week-long introduction to the programming language R. Taught the basics of R by writing code together to understand input, organization, and summarization of data in R. Also covered data visualization and creation of publication-quality plots and dynamic documents that combine descriptive writing with the results of your code. (https://mikoontz.github.io/data-carpentry-week/)

Instructor, Software/Data Carpentry 2016

Teach researchers in science, engineering, medicine, and related disciplines the computing skills they need to get more done using open source and reproducible tools. Specifically, have taught ecology/natural science workshops at UC Davis, UC Berkeley, and University of Rhode Island Coastal Institute. (http://software-carpentry.org/) (http://www.datacarpentry.org/)

Co-Instructor, Ecogeomorphology, University of California Davis 2015

Taught advanced undergraduate students to multidisciplinary collaborative watershed and stream analysis through combined laboratory and field study of a selected stream system. Educated students from diverse backgrounds to work in interdisciplinary research teams to collect and analyze field data from the Tuolumne River system. Guided, lectured, and taught in classroom, lab, and field, including a 3 day rafting trip on the Tuolumne River.

Lab Instructor/Teaching Assistant, General Biology, University of San Francisco 2009–2010

Lab instructor for undergraduate general biology lab; planned and conducted lab activities and led discussions for two semesters (molecular biology fall semester, organismal biology spring semester). Gave weekly lecture to the class. Wrote weekly quizzes, graded students reports and exams

PUBLICATIONS

Journal Articles

Milner, V.S., R.A. Peek, S.M. Yarnell. 2017. "The ecological importance of unregulated tributaries to benthic invertebrate communities in a regulated river." *Hydrobiologia* ***in review***

Steel, A.E., R.A. Peek, R.A. Lusardi, S.M. Yarnell. 2017. "Associating Metrics Of Hydrologic Variability With Benthic Macroinvertebrate Communities In Regulated And Unregulated Snowmelt-Dominated Rivers." *Freshwater Biology* ***in press***.

Yarnell, S., R. Peek, G. Epke and A. Lind. 2016. "Management of the Spring Snowmelt Recession in Regulated Systems." *JAWRA Journal of the American Water Resources Association* 52(3): 723–736.

Grantham, T., K. Fesenmeyer, R. Peek, E. Holmes, A. Bell, R. Quiñones, N. Santos, J. Howard, J. Viers, P. Moyle. 2016. "Missing the boat on freshwater fish conservation in California." *Conservation Letters* 10.1111/conl.12249.

Howard, J.K., K.R. Klausmeyer, K.A. Fesenmyer, J. Furnish, T. Gardali, T. Grantham, J.V. Katz, S. Kupferberg, P. McIntyre, P.B. Moyle, P.R. Ode, R. Peek, R.M. Quinones, A.C. Rehn, N. Santos, S. Schoenig, L. Serpa, J.D. Shedd, J. Slusark, J.H. Viers, A. Wright and S.A. Morrison. 2015. "Patterns of Freshwater Species Richness, Endemism, and Vulnerability in California." *PLoS One* 10(7): e0130710.

Other Publications

Yarnell, S.M, R.A. Peek, D.E. Rheinheimer, A.J. Lind, and J.H. Viers. 2013. "Management of the Spring Snowmelt Recession: An Integrated Analysis of Empirical, Hydrodynamic, and Hydropower Modeling Applications." Final Report. California Energy Commission. Publication number: CEC-500-2013. 137 pp.

Viers, J.H., SE Purdy, R.A. Peek, A. Fryoff-Hung, N.R. Santos, J.V.E. Katz, J.D. Emmons, D.V. Dolan, and S.M. Yarnell. 2013. "Montane Meadows in the Sierra Nevada: Changing Hydroclimatic Conditions and Concepts for Vulnerability Assessment." Center for Watershed Sciences Technical Report (CWS-2013-01), University of California, Davis. 63 pp.

Yarnell, S., A. Lind, C. Bondi, R. Peek, and J. Mount. 2011. "Validation of Regional Habitat Suitability Criteria and Instream Flow Modeling Applications for the Foothill Yellow-Legged Frog (*Rana boylii*)." Final Report. California Energy Commission, PIER. Publication number: CEC-500-2011.

Peek, R. 2010. "Landscape Genetics of Foothill Yellow-legged Frogs (*Rana boylii*) in regulated and unregulated rivers: Assessing connectivity and genetic fragmentation." Master's Thesis, Biology Department. University of San Francisco, CA. 69 pp.

Acknowledged

Catenazzi, A., S. J. Kupferberg. 2017. Variation in thermal niche of a declining river-breeding frog: From counter-gradient responses to population distribution patterns. *Freshwater Biology* 62(7):1255–1265. DOI: 10.1111/fwb.12942

Thomson, R.C., A.N. Wright, H.B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. University of California Press.

Dodd, C.K.J. 2013. Frogs of the United States and Canada, 2-vol. set. Baltimore: The Johns Hopkins University Press.

Bondi, C.A., S.M. Yarnell, and A.J. Lind. 2013. "Transferability of habitat suitability criteria for a stream breeding frog (*Rana boylii*) in the Sierra Nevada, California." *Herpetological Conservation and Biology* 8(1):88—103.

Kupferberg, S.J., W.J. Palen, A.J. Lind, S. Bobzien, A. Catenazzi, J. Drennan, and M.E. Power. 2012. "Effects of Flow Regimes Altered by Dams on Survival, Population Declines, and Range-Wide Losses of California River-Breeding Frogs." *Conservation Biology* 26(3): 513–524.

Knapp, R.A., D.M. Boiano, V.T. Vredenburg. 2007. "Removal of nonnative fish results in population expansion of a declining amphibian (mountain yellow-legged frog, *Rana muscosa*)." *Biological Conservation* 135(1): 11–20.

PRESENTATIONS

2017. Peek, R. A., M. R. Miller. "Application of new genomic sequencing methods to assess effects of river regulation on population structure and diversity in a hydrologically sensitive species (Rana boylii)." Amphibian Population Task Force (APTF), Santa Barbara, 12–13 Jan.

2016. Peek, R., S. Yarnell, D. Waetjen, D. Weixelman. "Using and Updating the UC Sierra Nevada Meadows Data Clearinghouse: Leveraging Remote Sensing and Field Data to Assess Resiliency." Natural Areas Conference, Davis 18–20 Oct.

2016. Peek, R., H. Dahlke, and S. Yarnell. "Linking Water Source Signatures with Native Amphibian Breeding Timing in a Northern Sierra Nevada Watershed." Society for Freshwater Science Annual Meeting, Sacramento 21–26 May.

2014. Viers, J.H. and R.A. Peek. "Hydroclimatic Vulnerability Assessment of Sierra Nevada Montane Meadows." Abstract 14639, Joint Aquatic Sciences Meeting, Portland, OR, 16–23 May.

2013. Yarnell, S.M. and R.A. Peek. "Management of the Spring Snowmelt Recession in Regulated Systems." Abstract EP54A-03, Fall Meeting, AGU, San Francisco, CA, 3–7 Dec.

2013. Peek, R.A. and S.M. Yarnell. "Science Informing Monitoring." Invited Speaker. Sacramento River Watershed Program Watershed Management Workshop. Santa Cruz, CA. September, 2013.

2013. Null, S.E., M. Akhbari, S.T. Ligare, D.E. Rheinheimer, R.A. Peek, S.M. Yarnell, J.H. Viers. "Modeling climate change effects on stream temperatures in regulated rivers." Abstract GC23C-0951, Fall Meeting, AGU, San Francisco, CA, 3–7 Dec.

2013. Rheinheimer, D.E., M. Akhbari, R.A. Peek, S.M. Yarnell, S.E. Null, J.H. Viers. "Incorporating climate change in flow regime alteration studies in hydropower licensing." Abstract H52G-04, Fall Meeting, AGU, San Francisco, CA, 3–7 Dec.

2013. Peek, R.A. and S.M. Yarnell. "Plasticity of Breeding in Foothill Yellow-legged Frogs (*Rana boylii*) Relating to the Spring Snowmelt Recession in the Sierra Nevada." Invited Speaker. Amphibian Population Task Force, Arcata, CA, Jan.

2013. Peek, R.A., S.M. Yarnell and J.H. Viers. "Management of the Spring Snowmelt Recession. Inter-agency workshop on flow management in the Yuba watershed." Coordinated by Yuba County Water Agency and US Forest Service, 10 June.

2013. Yarnell, S.M., C.A. Jeffres, R.A. Peek, and J.H. Viers. "What is a natural hydrograph in regulated rivers? The science of natural flows to the Delta." Ecological response to the unregulated flow regime in California's Sierra Nevada: Center for Aquatic Biology & Aquaculture Seminar and Workshop. Davis, CA, Jan.

2012. Yarnell, S.M., R. A. Peek, J.H. Viers. "Effects of the spring snowmelt recession on abiotic and biotic conditions in northern Sierra Nevada CA rivers with varying flow regimes." Abstract EP23C-0840, Fall Meeting, AGU, San Francisco, CA, 3–7 Dec.

2012. Viers, J.V., R.A. Peek, S.E. Purdy, J.D. Emmons, S.M. Yarnell. "Hydroclimatic alteration increases vulnerability of montane meadows in the Sierra Nevada, California." Abstract GC11B-0986, Fall Meeting, AGU, San Francisco, CA, 3–7 Dec.

2012. Peek, R., J. Viers, and S. Yarnell. "Using sensitive montane species as indicators of hydroclimatic change in meadow ecosystems of the Sierra Nevada, California." Invited Speaker.

Abstract GC11A-0972, Fall Meeting, AGU, San Francisco, CA, 2–7 Dec.

2011. Peek, R.A. and J. Dever. "Landscape genetics of foothill yellow-legged frogs (*Rana boylii*) in regulated and unregulated watersheds: assessing genetic fragmentation and habitat connectivity." Invited Speaker. Amphibian Population Task Force, Yosemite National Park, Yosemite Valley, CA, Jan.

2011. Shepley, H., R. Peek, C. Champe, and A. Herman. "Evaluating Potential Habitat and Temperature Limiting Factors for Foothill Yellow-Legged Frogs (*Rana boylii*) in the McCloud River Downstream of McCloud Dam." Stillwater Sciences and PG&E. Amphibian Population Task Force, Yosemite National Park, Yosemite Valley, CA, Jan.

2010. Peek, R. and J. Dever. "Landscape genetics of foothill yellow-legged frogs (*Rana boylii*) in regulated and unregulated watersheds: assessing genetic fragmentation and habitat connectivity." Invited Speaker. University of San Francisco, CA. Annual Joint Meeting of Ichthyologists and Herpetologists.Providence, RI, Jul.

2010. Peek, R. and J. Dever. "Landscape genetics of foothill yellow-legged frogs (*Rana boylii*) in regulated and unregulated watersheds: assessing genetic fragmentation and habitat connectivity." Invited Speaker. Bay Area Conservation Biology Symposium, San Francisco State University, CA, Dec.

2009. Orr, B.K., C.S. Riebe, and R.A. Peek. "Linking biological responses to river processes: a focal species approach to restoration and management of the Sacramento River." National Conference on Ecosystem Restoration, Los Angeles, California, 20–24 Jul.

2006. Peek, R. and S. Khandwala. "*Rana boylii* Plasticity and Management Under Dam-Controlled Flows in the Northern West-Slope Sierra Nevada." Stillwater Sciences. Invited Speaker. Declining Amphibian Populations Task Force, Arcata, CA, 2006, Jan.

PUBLIC MEDIA

"The Aggie Brickyard." Co-Founder & Design Editor, 2015–present.

https://aggiebrickyard.github.io

"Nature's Confluence Blog" Contributing Writer, 2015–present.

http://www.naturesconfluence.com

"A Watershed Moment." UC Davis Magazine, Spring 2014.

http://ucdavismagazine.ucdavis.edu/issues/sp14/watershed_momentum.html

"Cool and Collected." College of Agricultural and Environmental Sciences Outlook, Spring 2013.

http://www.caes.ucdavis.edu/news/publications/outlook

"A Summer Spent Saving Frogs." Sierra Nature Notes. 2002.

http://sierranaturenotes.com/naturenotes/SavingFrogs.htm

AWARDS

2016 *Best Oral Presentation for Basic Research*, Society for Freshwater Science Annual Conference, Sacramento CA

2015 *Henry A. Jastro Research Award*, UC Davis College of Agricultural and Environmental Sciences

2014 *Ecology Fellowship*, UC Davis Graduate Group in Ecology

PROFESSIONAL AFFILIATIONS & TRAINING

- CDFW Scientific Collecting Permit #6881
- Software & Data Carpentry Instructor
- Davis R-Users Group - Co-Administrator
- American Society of Ichthyologists and Herpetologists (ASIH)
- Society for Study of Amphibians and Reptiles (SSAR)
- Ecology Society of America (ESA)
- Society for Freshwater Science (SFS)
- Whitewater Rafting Guide, Outdoor Adventures, UC Davis, 2013–present
- Wilderness First Aid, Outdoor Adventures, UC Davis, 2015
- River Rescue Certification, Sierra Rescue/Rescue 3 International, Coloma CA, 2013
- Rare Pond Species (Western Pond Turtle, California Red-Legged Frog, and California Tiger Salamander) Survey Techniques Workshop (Laguna Foundation), April 2012
- Biology and Management of the California Red Legged Frog Workshop, Santa Cruz County Resource Conservation and Elkhorn Slough Coastal Training Program, Santa Cruz, CA, March 2007
- Western Pond Turtle Workshop: Ecology and Conservation, The Wildlife Society, San Francisco Bay Area Chapter, Sonoma State, CA, April 2005
- Giant Garter Snake Workshop, The Wildlife Society, Sacramento-Shasta Chapter, Elk Grove, CA. September 2003

REFERENCES

Available upon request