RYAN PEEK

I have worked in many rivers and aquatic systems in California, and continue to strive to find ways to apply research to conservation management. I am particularly interested in using a confluence of disciplines such as genomics, hydrology, ecology, and geomorphology to better understand current and future impacts to our freshwater ecosystems.

I am a strong advocate for open science, and education; and giving voices, training, and space for folks who support and foster a supportive community with diverse questions and views.

EDUCATION

2018 | 2014

Ph.D., Ecology (with certificate in Conservation Management)

UC Davis — Davis, CA

- Population genetics of a sentinel stream-breeding frog (*Rana boylii*)

2010 | 2008

M.S., Biology

University of San Francisco — San Francisco, CA

- Thesis: Landscape Genetics of Foothill Yellow-Legged Frogs (*Rana boylii*) in regulated and unregulated rivers: Assessing connectivity and genetic fragmentation

2002 | 1998

B.S., Wildlife, Fish & Conservation Ecology

UC Davis — Davis, CA

- Emphasis in Behavioral Ecology

SELECTED POSITIONS

2021 | 2018

Post-doctoral Researcher

Center for Watershed Sciences — UC Davis

- Data scientist and aquatic ecologist. Linking ecological indicators to functional flows in California river. Conservation genonics of threatened and endangered frogs in CA, NV, and AZ to inform conservation management.
- Analysis of floodplain foodwebs for salmon to better understand connectivity and seasonality for management.
- Research and functional flow analysis on how to link ecological bioassessment data with environmental flow management.

2011 | 2002

Fish & Wildlife Biologist

Stillwater Sciences — Davis CA

- Field and Project Manager, conducted research in aquatic, terrestrial, and riparian ecosystems. Assisted in the development of restoration, conservation, and management strategies in various watersheds throughout California and Oregon for amphibian and fisheries related projects.
- Extensive experience completing watershed analyses. Successfully worked independently and collaboratively on various projects including leading field crews, managing budgets, conducting meetings, analyzing data, and writing comprehensive reports.
- Watershed Experience: Alameda Creek (San Francisco Public Utilities Commission), Upper American River (Sacramento Municipal Utility District), South Fork Feather River (South Feather Water & Power), Yuba River (North, Middle, and South) (CH2MHill), Napa River and Floodplain (US Army Corp of Engineers), Santa Clara River (California State Coastal Conservancy), McKenzie River (Eugene Water and Electric Board), Upper Merced River (Merced Alliance), Butte Creek and West Branch Feather River (PG&E), McCloud and Pit Rivers (PG&E)

CONTACT

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riverpeek
github.com/ryanpeek
ryanpeek.org
https://orcid.org/0000-0002-9577-6885

LANGUAGE SKILLS

- R
- Bash
- Python
- css
- javascript

OPEN SOURCE CONTRIBUTIONS

All projects available at `github.com/ryanpeek/<name>`

- `www.r4wrds.com`: R course for water resources data science
- `{aggiedown}`: R package for writing dissertations at UC Davis
- `R-DAVIS`: grad course in data science and visualization
- `mapping-in-R-workshop`: R short course for spatial/GIS topics

MORE INFO

See full CV at ryanpeek.org/cv

for complete list of positions & publications.

*Made w/ **pagedown**.*
Source code: github.com/ryanpeek/cv.
Last updated on 2021-07-28.

2010

Biological Science Technician

USDA Forest Service, Pacific Southwest Research Station — Davis, CA

- Developed and designed website on ecology, river regulation and conservation of the foothill yellow-legged frog (*Rana boylii*), including GIS synthesis and development of a distribution map showing over 6,000 records from multiple sources (http://gis.fs.fed.us/psw/topics/wildlife/herp/rana_boylii/).
- Conducted 1-D RHABSIM modeling and analysis. Coordinate field research, data collection, and writing.

2010 | 2009

Research Assistant II

UC Berkeley — Berkeley, CA

- As part of a California Energy Commission study of regulated flow effects on foothill yellow-legged frog (*Rana boylii*) breeding habitat, led field research crews for extensive field data collection.
- Collaborated with Sarah Yarnell and Amy Lind on field methodology and integrating graduate research with the grant research.

2001

Biological Science Technician

National Park Service — Sequoia & Kings Canyon, CA

- Part of a 2-person backcountry crew working on a federally threatened Sierra/Mountain yellow-legged frog (*Rana sierrae*) conservation and restoration project during the initial year of the project.
- This position involved extensive backpacking and hiking experience while living in remote and rugged terrain at 10,000-12,000 feet for multiple weeks at a time. Required the ability to work independently, efficiently, and safely.
- Conducted amphibian surveys of mountain lakes and identified amphibian species in larval and adult stages, habitat assessment, data collection, and non-native fish removal.

SELECTED WRITING

2020

Drawing Boundaries with DNA to Improve Conservation

California Water Blog

- Story about using genetics to draw boundaries for conservation management

2019 | 2015

The Aggie Brickyard. A Student Run Magazine

Co-Founder & Design Editor — UC Davis

2016

Cue the Frogs! Water signatures, environmental cues and climate change

California Water Blog

- Story about environmental cues for amphibians in rivers

2015

Time Lapse Photos Expose Nature in the Raw

California Water Blog

- Story about using game cameras to monitor the environment

TEACHING EXPERIENCE

2021 | 2016

Data Carpentry Workshops

Various

- 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 genomics/ecology/geospatial workshops at Stanford, UC Davis, UC Berkeley, and University of Rhode Island Coastal Institute. (http://software-carpentry.org/) (http://www.datacarpentry.org/)

2020 | 2019

Strategies & Techniques for Analyzing Microbial Population Structures

Marine Biological Laboratory — Woods Hole, MA

- Research facilitator/teacher for the STAMPS course on analysis of metagenomic data. Provided interdisciplinary bioinformatic and statistical training to practitioners of molecular microbial ecology and genomics.
- Topics covered included acquisition and organization of next generation sequence data; principles of quality control of sequence data and data management; methods of taxonomic assignment and clustering of targeted gene data. Also an introduction to the Linux command-line and R statistical environments. (https://www.mbl.edu/education/courses/stamps/)

2019 | 2017

R for Data Analysis and Visualization in Science

UC Davis — Davis, CA

- Lead instructor and creator of graduate course teaching R and version control for 25+ students. Course designed to train students in toolsets applicable to the entire process of reproducible data-driven research and encourage the use of open-source tools.
- Built website and made course materials openly available on github. (https://gge-ucd.github.io/R-DAVIS/).
- now a required graduate course in Ecology

2018

Intro to Genomics (Data Carpentry)

DIBSI — Davis, CA

- Co-instructor. Data Intensive Biology Summer Institute at UC Davis is a series of two-day or week-long workshops for biologists to learn bioinformatics and data science. The Intro to R course was built as an interactive, week-long introduction to the programming language R. Following Carpentry workshop content, taught basics of R by live-coding with participants
- (https://dib-lab.github.io/2018-06-27-DIBSI-Genomics/)

2017

Intro to R

DIBSI — Davis, CA

- Co-Instructor. Data Intensive Biology Summer Institute at UC Davis is a series of two-day or week-long workshops for biologists to learn bioinformatics and data science. The Intro to R course was built as an interactive, week-long introduction to the programming language R. Following Carpentry workshop content, taught basics of R by live-coding with participants
- (https://mikoontz.github.io/data-carpentry-week/)

SELECTED PUBLICATIONS

2021

Actinemys marmorata (Northwestern Pond Turtle) Feeding on Dicamptodon tenebrosus (Coastal Giant Salamander)

Northwestern Naturalist, 102 (3).

- Peek, R.A. , S.J. Kupferberg, A.C., Catenazzi, P. Georgakakos, M. E. Power

2021

Flow regulation associated with decreased genetic health of a river–breeding frog species

Ecosphere, 12 (5). — DOI: 10.1002/ecs2.3496

- Peek, R.A., S.M. O'Rourke, M.R. Miller.

2020

Understanding community assembly rules in managed floodplain food–webs

Ecosphere, 12 (2). — DOI: 10.1002/ecs2.3330

- Corline, Nicholas J., Ryan A. Peek, Jacob Montgomery, Jacob V.E. Katz and Carson A. Jeffres.

2020

A functional flows approach to selecting ecologically relevant flow metrics for environmental flow applications

River Research and Applications, 36 (2), 318-324. DOI: 10.1002/rra.3575

- Yarnell, S. M., Stein, E. D., Webb, J. A., Grantham, T., Lusardi, R. A., Zimmerman, J., Peek, R. A., Lane, B. A., Howard, J., & Sandoval-Solis, S.

2019

Hybridization between two sympatric ranid frog species in the northern Sierra Nevada

Molecular Ecology, 28 (20), 4636–4647. DOI: 10.1111/mec.15236

- Peek, R., M. Bedwell, S. O'Rourke, G. Wengert, C. Goldberg, M. Miller.

2016

Missing the boat on freshwater fish conservation in California.

Conservation Letters 10(1), 77–85. DOI: 10.1111/conl.12249

- Grantham, T., K. Fesenmeyer, R. Peek, E. Holmes, A. Bell, R. Quiñones, N. Santos, J. Howard, J. Viers, P. Moyle.

SERVICE & LEADERSHIP

2021 | 2015

Coordinator

Davis R-Users Group

- https://d-rug.github.io/

2021 | 2016

Software & Data Carpentry Instructor

Carpentries

- https://carpentries.org/instructors/

2021 | 2016

Data Lab Affiliate

UC Davis Data Lab

- https://datalab.ucdavis.edu/affiliated-students-and-postdocs/

2021 | 2020

National Center for Ecological Analysis and Synthesis (NCEAS) workgroup

Bay Delta Science Program

- Collaborative multi-agency and academic workgroup formed to focus on data synthesis of long-term trends in the San Francisco Estuary food webs critical to supporting multiple endemic fish species of conservation concern.

2020 | 2019

Center for Watershed Science Executive Committee

UC Davis

- Liaison between researchers and academic faculty conducting research, representative for represents postdocs and non-academic senate researchers.

I am a strong advocate and supporter of building an inclusive and open community, and strive to learn from and adapt to whatever community I am a part of.