Dr. Jordan Ruybal

707-738-7677 jordanruybal@gmail.com

EDUCATION

Ph.D. Ecology and Evolutionary Biology, University of California, Santa Cruz, 2016
B.S. Marine Biology, University of California, Santa Cruz, 2008

ACADEMIC POSITIONS

2016-2017 Lecturer, Biology Department, The University of Scranton

PUBLICATIONS

Ruybal J, Kramer LD, and Kilpatrick AM. 2016. Local Environment Shapes the Response of *Culex pipiens* Life History Traits to Temperature. Parasites and Vectors 9 (116).

Serbus LR, Landmann F, Bray W, White PM, **Ruybal J**, Lokey RS, Debec A, and Sullivan W. 2012. A cell-based screen reveals that the Albendazole metabolite, Albendazole sulfone, targets *Wolbachia*. PLoS Pathogens 8 (9): e1002922.

HONORS AND AWARDS

NIH Initiative for Maximizing Student Diversity Fellowship — Winter-Fall 2015
NIH Initiative for Maximizing Student Diversity Fellowship — Summer 2014
NIH Initiative for Maximizing Student Diversity Fellowship — Summer 2013-Winter 2014
NSF Bridge to Doctorate Fellowship Program — Sept. 2010-2012

TEACHING EXPERIENCE

Lecturer at The University of Scranton

- General Biology (BIOL 141 & 142), fall 2016 & spring 2017
  - General Biology is a two-part course, required for all Biology majors
  - Used assessment-driven techniques to design both 15 week courses
  - Designed these courses to be half traditional lecture and half experiential learning (e.g. case studies, worksheets, poster presentations, etc.)

- Ecology (BIOL 371), spring 2017
  - Ecology is an upper division, elective course for Biology majors
  - Used assessment-driven techniques to design this 15 week course
  - Also designing this course to be half traditional lecture and half experiential learning (e.g. case studies, worksheets, poster presentations, etc.)

- Ecology Lab (BIOL 371L), spring 2017
  - Ecology Lab meets once a week, for 15 weeks, for three hours a week
  - My learning objectives for this course are to have students develop focused/testable hypotheses, test these hypotheses using experiments and observations, create graphical representations of the data collected, and interpret/summarize their collected data

- General Physiology Lab (BIOL 245L), fall 2016 & spring 2017
    - General Physiology is required for Exercise Science majors and meets once a week, for 15 weeks, for three hours a week
    - Provide a hands-on learning experience with topics discussed in the main lecture course

Lecturer at the University of California, Santa Cruz

- Community Ecology (BIOE 147), spring 2016
    - Community Ecology, is an upper division, elective course for Ecology and Evolutionary Biology majors
    - Used assessment-driven techniques to design this ten week course
    - Implemented a "flipped" course with 75% of class time being experiential learning (e.g. case studies, worksheets, poster presentations, etc.) with limited lecturing
    - Also designed weekly course sections which were carried out by two Graduate Assistants

- Ecology (BIOE 107), summer 2015
    - Ecology is a required upper division, writing intensive, course for all Ecology and Evolutionary Biology majors
    - Used assessment-driven techniques to design this five week course
    - Implemented a "flipped" course with 95% of class time being experiential learning (e.g. case studies, worksheets, poster presentations, etc.) with very limited lecturing

Guest lecturer at the University of California, Santa Cruz

- Institute for Science and Engineer Educators & Howard Hughes Medical Institute, UCSC, March 30, 2015, and July 22, 2015
    - Designed and implemented an inquiry-based curriculum on meiosis for UCSC's modified introductory biology series (BIOE 20A)

- UCSC Women in Science and Engineering, Seaside High School, February 3, 2015
    - Taught an Ocean Acidification lesson to three high school Earth Science classes

- UCSC Initiative for Maximizing Student Diversity Journal Club, UCSC: Fall 2013, Spring 2014, Winter 2015
    - Oral presentation and class discussion on: *The Effects of Temperature on Mosquito Trait Evolution and Future Pathogen Transmission*

Teaching Assistant at the University of California, Santa Cruz

- Cell and Molecular Biology (BIOE 20A-02), winter 2016.
    - UCSC received a $1.5 million grant from the Howard Hughes Medical Institute to revamp its introductory biology, chemistry and physics courses with a more active learning approach.

    - This course was the first of the modified series to enter the classroom, and stressed interactive learning through peer discussions and problem solving during class sessions.
- Evolution (BIOE 109), fall 2014
- Marine Mammals (BIOE 129), spring 2014
- UCSC Initiative for Maximizing Student Diversity Summer Research Institute: July 2008, 2010, 2011
    - Collected wild *Drosophila* from UC Santa Cruz Big Creek reserve
    - Guided students in the proper execution of PCR, gel electrophoresis, and gel imaging

MENTORSHIP/LEADERSHIP ROLES

Graduate student coordinator, Small Mammal Undergraduate Research in Forests (SMURF) program, UCSC, April 2015- August 2016

- Mentored three undergraduate students on senior thesis projects
- Assisted two students in writing grants to fund their senior thesis research, both were accepted
- Trained dozens of undergraduate students to safely conduct field-based research

Mentor for undergraduate researchers

- Heer Purwal (2013-2014), Alan Droeger (2013-2014) & Ajuni Sohota (summer 2014)—these undergraduate students assisted me with my PhD research, general skills taught to them were: mosquito maintenance, hypothesis testing, and general lab techniques
- Katelyn Sprofera (2012-2013)— helped guide the design and execution of her senior research project titled: The effect of fluctuating temperatures on *Aedes aegypti* life-history traits
- Misty Peterson (Fall-Winter quarter 2012)—taught her extraction, PCR amplification and gel imaging protocol for *Anopheles gambiae*– now in a PhD program at Kent in Canterbury

Graduate student coordinator for WiSE Up: Reading and Discussion group on equity in STEM, Women in Science and Engineering (WiSE), UCSC, October 2015- August 2016

- A monthly reading and discussion group on the gender and racial diversity in Science, Technology, Engineering, and Math (STEM) education and career fields
- We read and discussed primary literature and population press articles that explored the latest research and solutions to inequity in: higher education, research, and STEM careers

RESEARCH SKILLS (partial list)

- Course assessment—both direct (instructor evaluation of students) and indirect (student self-evaluation) assessment of student mastery of course learning outcomes
- Data manipulation and statistical analysis in R and Excel
- Mathematical modelling

- DNA extraction, PCR amplification and gel electrophoresis
- Field collection and laboratory maintenance of mosquito colonies
- Mark-release-recapture techniques for small mammals
- Small mammal tissue sampling
- Mosquito dissection