

SOFIA RAYE PRADO-IRWIN

PhD Candidate ◇ Dept. of Organismic and Evolutionary Biology ◇ Harvard University
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EDUCATION

Harvard University *2015 - Present*
PhD Candidate, Dept. of Organismic and Evolutionary Biology

San Francisco State University *2013 - 2016*
Master of Science, Physiology and Behavior

Barnard College, Columbia University *2009 - 2013*
Bachelor of Arts, Biology, *magna cum laude*, Phi Beta Kappa

PEER-REVIEWED PUBLICATIONS

Prado-Irwin SR, AK Bird, AG Zink, VT Vredenburg. 2017. Intraspecific variation in the skin-associated microbiome of a terrestrial salamander. *Microbial Ecology* doi: 10.1007/s00248-017-0986-y.

Winchell KM, RG Reynolds, **SR Prado-Irwin**, AR Puente-Roln, LJ Revell. 2016. Phenotypic shifts in urban areas in the tropical lizard *Anolis cristatellus*. *Evolution* 70 (5): 1009-1022.

PRESENTATIONS

Prado-Irwin SR, A Zink, V Vredenburg. 2016. Characterizing the skin-associated microbiome of the yellow-eyed ensatina. American Society of Naturalists Conference, Asilomar, CA.

SR Prado-Irwin. 2013. Honey Bee Gut Immune Responses to Pathogenic Microbes. Barnard College. Biology Department Senior Thesis Presentation Series, New York, NY.

POSTERS

Prado-Irwin SR, A Zink, V Vredenburg. 2016. Skin microbiome composition across a salamander hybrid zone. Evolution Conference, Austin, TX.

SR Prado-Irwin, KM Winchell, RG Reynolds, LJ Revell. 2012. Preliminary investigation of urban adaptation in *Anolis cristatellus*. University of Massachusetts. Boston Summer Research Symposium, Boston, MA.

SR Prado-Irwin. 2011. Does herbicide use in knapweed-invaded areas affect pollination of native plants? University of Montana OREOS Undergraduate Research Symposium, Missoula, MT.

OTHER PUBLICATIONS

Prado-Irwin SR, and A Bird. 2015. "The Amphibian Skin Microbiome." *Microbiome of Amphibian Skin*. Amphibiaweb: The Regents of University of California. Web.

RESEARCH EXPERIENCE

Harvard University. *2015-present*
PhD Thesis Research. Adviser: Dr. Jonathan Losos
Ecology and evolution of mainland and island anoles.

- Investigating differences in ecological and evolutionary patterns between closely related mainland and island species of *Anolis* lizards
- Constructing a robust phylogeny of a poorly known mainland clade

- Using preserved museum specimens and field surveys to explore geographic variation with and between species distributed in mainland and island environments

San Francisco State University.

2013-2016

Master's Thesis Research. Advisers: Dr. Andrew Zink and Dr. Vance Vredenburg

*Variation in skin-associated microbial communities and disease dynamics in the ring species *Ensatina eschscholtzii*.*

- Researched variation in skin-associated microbial communities of *Ensatina eschscholtzii xanthoptica* using NextGen sequencing techniques
- Characterized skin microbiome composition across an *Ensatina* hybrid zone
- Used preserved museum specimens, field surveys, and experimental lab trials to explore the history and effects of the fungal pathogen *Batrachochytrium dendrobatidis* on *Ensatina*

Barnard College, Columbia University.

2012-2013

Undergraduate Thesis Research. Adviser: Dr. Jonathan Snow

Preliminary investigation of honey bee gut immune mechanisms

- Used quantitative PCR to observe changes in immune gene regulation in response to foreign bacteria in the honey bee gut (*Apis mellifera*)
- Developed assays to characterize reactive oxygen species within the honey bee gut and in hive pollen
- Examined changes in enterobacterial gut communities over time

Barnard College, Columbia University.

2012, 2013

Field Assistant. Supervisor: Dr. Paul Hertz

- Assisted in data collection for an ongoing project investigating thermoregulation in several Puerto Rican *Anolis* lizard species
- Used copper models and light meters to record environmental variability

University of Massachusetts, Boston.

Summer 2012

National Science Foundation Research Experience for Undergraduates. Adviser: PhD candidate Kristin Winchell, M.S. and Dr. Liam Revell

Urban adaptation in Puerto Rican crested anoles.

- Assisted in field work for an ongoing project examining morphological adaptation in *Anolis cristatellus* in urban environments
- Captured, measured, and X-rayed lizards in urban and natural environments
- Performed and independent project investigating changes in tail morphology

University of Montana, Missoula.

Summer 2011

National Science Foundation Research Experience for Undergraduates. Adviser: PhD candidate Jennifer Palladini

Effects of pesticide application on native pollinator communities in knapweed-invaded sites.

- Performed vegetation surveys and pollinator observations in montane meadows invaded by spotted knapweed
- Analyzed differences in plant condition and pollinator visitation rates between sites with different pesticide treatment regimes

TEACHING EXPERIENCE

Harvard University.

Teaching Fellow, OEB 10: Foundations of Biological Diversity

*Fall 2016***San Francisco State University.**

Mentorship Advancement Program

*Spring 2014***Barnard College.**

Tutor, Nutrition and Bioenergetics

Summer 2013

Teaching Assistant, Introduction to Cellular and Molecular Biology (Lecture)

Spring 2012 & 2013

Teaching Assistant, Introduction to Organismal and Evolutionary Biology (Lecture)

Fall 2012

Teaching Assistant, Introduction to Cellular and Molecular Biology (Lab)

Spring 2011 & 2012

Teaching Assistant, Introduction to Organismal and Evolutionary Biology (Lab)

*Fall 2010***LEADERSHIP POSITIONS**

Member, OEB Departmental Seminar Graduate Student Committee.*2017-present***Manager**, Ecology Journal Club. *Harvard University Center for the Environment.**2016-present***Organizer**, OEB Student Seminar.*Spring 2017***GRANTS, HONORS, AND AWARDS**

Graduate Prize Fellowship. Harvard University.*2015-2020***Graduate Research Fellowship.** National Science Foundation.*2014-2019***Travel Grant.** Rockefeller Center for Latin American Study. Harvard University.*2017***Distinguished Graduate Student Award.** San Francisco State University.*2015***Honorable Mention, Sally Casanova Scholars Program.** California Pre-Doctoral Program. *2014***Grants in Herpetology Award.** Society for the Study of Amphibians and Reptiles.*2014***Instructionally Related Activities Award.** San Francisco State University.*2013***Research Initiative for Scientific Advancement Fellow.** National Institutes of Health, San Francisco State University. *2013-2014***Provost Scholar.** San Francisco State University.*2013-2014***Grace Potter Fellowship.** Barnard College.*2013***Vera Joseph Scholar.** Barnard College.*2011-2013***Dean's List.** Barnard College.*2009-2013*