

# René D. Clark

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## EDUCATION

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**Rutgers University**, New Brunswick, NJ

**Cumulative GPA:** 4.00/4.00

*Ph.D. in Ecology & Evolution (Expected May 2022)*

- **Advisor:** Malin Pinsky, Ph.D.

**Saint Joseph's University**, Philadelphia, PA

**Cumulative GPA:** 3.95/4.00

*M.S. in Biology – with Thesis (May 2017)*

- **Thesis Title:** The Effect of Microtopography on Black Fly Larval Settlement & An Analysis of Female Postcopulatory Behavior in *Drosophila suzukii*
- **Thesis Advisor:** Jonathan Fingerut Ph.D.

**Pennsylvania State University**, University Park, PA

**Cumulative GPA:** 3.98/4.00

*B.S. in Biology – Ecology Option (May 2014)*

- Graduated with Highest Honors (top 10 students in program)

## PROFESSIONAL & RESEARCH EXPERIENCE

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**Ph.D. Student**, Global Change Ecology & Evolution Lab

2017 – Present

*Environmental & Natural Resource Sciences Building, Rutgers University*

- Analyzed the population structure and identified signatures of local adaptation for three distinct clownfish populations from Japan, Indonesia, and the Philippines
- Conducted field work collecting various tropic marine fish species in the Philippines as part of an NSF-funded PIRE project
- Led portion of bioinformatics & genomics workshop on molecular ecology analyses

**Graduate Student**, Fingerut Lab

2015 – 2017

*Science Center, Saint Joseph's University*

### Black Fly Larval Settlement Project

- Designed distinct microtopography surfaces and a system for their placement/rearrangement in a flume using a 3D printer
- Characterized the flow of water over the settlement plates using a Laser Doppler Velocimeter (LDV) to create boundary layer profiles
- Collected black fly larvae from field sites and was responsible for all incubation/maintenance in the laboratory
- Created a video monitoring system to observe all black fly larval settlement behavior

### D. suzukii Postcopulatory Behavior Project

- Maintained active stocks for 3 distinct fly populations
- Conducted behavioral assays to determine the sexual attractiveness and receptiveness of virgin and mated flies

**Research Assistant**, Baums Lab

August 2012 – January 2014

*Biology Department, Pennsylvania State University*

- Utilized image analysis to determine the relationship of coral, mussels, and triggerfish

- Analyzed DNA sequences of multiple coral colonies with microsatellite markers to identify clones
- Determined population structures of 4 reefs surrounding the Galapagos Islands

**Animal Husbandry Intern**, Sea Turtles & Seahorses

June – August 2012

*Pittsburgh Zoo & PPG Aquarium, Pittsburgh PA*

- Maintained all tank filtration and life support systems for 6 different exhibits
- Designed enrichment opportunities/devices for sea turtle use
- Gained experience caring/working with penguins, pufferfish, coral, cuttlefish, and cownose rays

**Laboratory Intern**, Telecardia Inc.

May – August 2011

*Pittsburgh PA*

- Fabricated and tested iridium oxide electrodes for use in pH meters
- Analyzed and assembled a review on competitor pH meters

## TEACHING EXPERIENCE

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**Ecology Teacher**, Little Owls Enrichment

2018-Present

*Cranbury, NJ*

- Led an after-school ecology hour engaging early elementary school children in ecology and natural life science-based topics

**GeoKids Fellow**, Saint Joseph's University

2015 – 2017

*Philadelphia School District, Philadelphia PA*

- Developed curriculum to educate elementary age students on topics including: wetland ecosystems, insect orders, ecology field methods, and cloud formation
- Taught 3<sup>RD</sup> & 4<sup>TH</sup> grade classrooms in science with an emphasis on ecosystems and earth science; lessons were brought into the students' regular classrooms and done on a weekly basis for 1.5 hrs. at a time
- Led field trips to Saint Joseph's and to field sites across the Greater Philadelphia Area to facilitate hands-on learning

**Science Camp Teacher**, Ross Twp. Summer Program

June – July 2014, 2015 & 2017

*Ross Township, Pittsburgh PA*

- Developed lessons (incorporating a mixture of hands-on experiments, lectures, and games) to educate elementary age students on topics ranging from ocean ecosystems to sports science and astronomy
- Taught classrooms of 10-20 students ranging from 3<sup>RD</sup> to 6<sup>TH</sup> grade for 3 hrs., 4 days/week

**AmeriCorps Member**, City Year

August 2014 – June 2015

*Philadelphia School District, Philadelphia PA*

- Dedicated one year of service to a low-income public middle school, focused on improving academic performance, decreasing behavioral incidents, and increasing student attendance
- Co-taught 6<sup>TH</sup> grade classroom (all subjects) 5 days/week and gave direct/individualized attention to 9 students with special education requirements
- Managed several school-wide events and initiatives to promote a more positive learning environment, including an Anti-Bullying event and a Math Jeopardy "tournament" (both with over 60 attendees)

**Teaching Assistant**, Biology 427 (Evolution)

August – December 2013

Biology Department, Pennsylvania State University

- Held office hours 1 day/week to answer students' questions about course
- Wrote all midterms and the final exam questions
- Acted as a liaison between the students and the professor

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**GRANTS, HONORS, & AWARDS**

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Conference Travel Award (\$500)	2019
Ecology & Evolution Small Grant (\$1000)	2018
SEBS Graduate School Excellence Fellowship	2017 - 2018
Sigma Xi Honors Society	2017
Outstanding Student Presentation, NABFA	2017
Saint Joseph Travel Award (\$300)	2017
GeoKids Fellowship, Saint Joseph's University	2015 – 2017
Phi Kappa Phi Honors Society	2013 – 2015
Evan Pugh Scholar Senior Award, Pennsylvania State University	2014
Undergraduate Research Grant, Pennsylvania State University	2013 & 2014
Evan Pugh Scholar Junior Award, Pennsylvania State University	2013
Dean's List, Pennsylvania State University	2010 – 2014

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**PAPERS**

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**Rene Clark**, Matthew Aardema, Jennifer Hoey, Akhihisa Hattori, Paul Barber, Peter Andolfatto, Molly Schumer & Malin Pinsky. (2019) Genomic signatures of spatially divergent selection in *Amphiprion clarkii* populations across a thermal gradient. (*in prep*)

**Rene Clark**, Marissa DiPiero, Jonathan T. Fingerut, & Scott P. McRobert. (2019) An analysis of female postcopulatory behavior in *Drosophila suzukii* and *Drosophila biarmipes*. (*in review*)

**Rene Clark**. (2017) The effect of micro-topography on *Simulium tribulatum* larval settlement and recruitment & An analysis of female postcopulatory behavior in *Drosophila suzukii* and *Drosophila biarmipes*. Saint Joseph's University, Philadelphia, PA. (Master's Thesis – print edition)

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**PRESENTATIONS**

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**Rene Clark** & Malin Pinsky. Genomic signatures of spatially divergent selection in *Amphiprion clarkii* populations across a thermal gradient. *Ecological Society of America Conference*, Louisville KY. August 2019 (poster presentation)

**Rene Clark** & Malin Pinsky. Genomic signatures of spatially divergent selection in *Amphiprion clarkii* populations across a thermal gradient. *Rutgers Ecology & Evolution Graduate Student Association Seminar*, New Brunswick NJ. April 2019

**Rene Clark**. A tale of two flies: The effect of micro-topography on *Simulium tribulatum* larval settlement and recruitment & An analysis of female postcopulatory behavior in *Drosophila suzukii* and *Drosophila biarmipes*. *Master's Thesis Public Defense*, Saint Joseph's University, Philadelphia, PA. June 2017 (presentation)

**Rene Clark** & Marissa DiPiero. Reproductive behavior in *Drosophila suzukii* (update). *Sigma Xi Research Symposium*, Saint Joseph's University, Philadelphia, PA. April 2017 (poster presentation)

**Rene Clark**. The effect of micro-topography on *Simulium tribulatum* larval settlement and recruitment. *North American Black Fly Association Conference*, Harrisburg, PA. March 2017 (student presentation)

**Rene Clark**, Nicole Sullivan, Mark Tingey. Small but powerful: what can we learn from flies, worms, and yeast? *Science on the Hill*, Saint Joseph's University, Philadelphia, PA. October 2016. (invited speakers)

**Rene Clark**, Hannah Bartling, Marissa Diorio, & Marissa DiPiero. Reproductive behavior in *Drosophila suzukii*. *Sigma Xi Research Symposium*, Saint Joseph's University, Philadelphia, PA. April 2016. (poster presentation)

**Rene Clark**. The effect of triggerfish and mussel interactions on coral reproduction. *Undergraduate Research Symposium*, Pennsylvania State University, University Park, PA. April 2013. (poster presentation)

## **ACADEMIC & COMMUNITY SERVICE**

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**Treasurer**, Ecology & Evolution Graduate Student Association Board 2018-Present

- Managed accounts to fund all graduate student body activities and events

**Vice President**, Biology Graduate Student Council 2016 – 2017  
*Saint Joseph's University, PA*

- Planned and organized events for all biology graduate students and faculty
- Counseled incoming graduate students on courses, workload, and time management skills

**Rules & Regulations Captain**, IFC/Panhellenic Dance Marathon (THON) 2014  
*Pennsylvania State University*

- Lead a committee of 50 volunteers in various events throughout the year
- Managed the fundraising of over \$1,000 dollars to go to the total fundraising amount of \$13,5 million
- Developed a Digital Line Management System to help over 10,000 guests enter and exit the Dance Marathon
- Worked with co-captains to protect volunteers, donors, and children at several major events leading up to the Dance Marathon Weekend

**Rules & Regulations Committee Member**, THON 2011 – 2013  
*Pennsylvania State University*

- Acted as security to protect all attendees during the Dance marathon Weekend
- Facilitated flow of attendees into and out of the event

## **SKILLS & INTERESTS**

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Certified in Adult/Child CPR & AED Administration • Certified PADI Open Water Diver • Experienced in R, STRUCTURE, Unix, RegEx, ImageJ, GeneMapper, Plink1.9 & OpenBUGS • Member of Phi Kappa Phi Honors Society & Sigma Xi Honors Society