David Clark

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Research Interests:

Disease eco-evolutionary dynamics, Host-parasite interactions, Climate change

Education:

Spring 2016-Current	University of Puerto Rico-Río Piedras, **M.S. Biology**, (GPA=4.0), San Juan, Puerto Rico
Fall 2011- Spring 2015	Louisiana State University, **B.S. Biological Sciences**, (GPA=3.2), Baton Rouge, Louisiana

Research Experience:

Spring 2016- Current — **University of Puerto Rico, Rio Piedras**, *Ecological Graduate Research:* Disease Ecology, Department of Biology, (Research Advisor: Dr. Miguel Acevedo)

- The role of malaria parasites mediating intraspecific interactions in a Caribbean lizard host
- Behavioral and physiological impacts of malaria infection with anole species.
- Long term prevalence monitoring in Anole lizard *Plasmodium* within the El Yunque forest
- Long term mark recapture of Anole lizards within the El Yunque forest

Spring 2014-Fall 2015 — **Louisiana State University**, *Ecological Undergraduate Research*: Diseases Ecology, Department of Biological Sciences
(Research Advisor: Dr. Brett Elderd)

- Effect of non-consumptive and consumptive effects on disease transmission
- Plant diversity as a mediating factor in disease baculovirus disease transmission in gypsy moths.
- Prey mimicry evolution on predator behavior
- Impact of cannibalism on disease spread within organisms.

Spring 2013-Falll 2015 — **Louisiana State University,** *Evolutionary Undergraduate Research*: Ichthyology department,
(Research Advisor: Dr. Prosanta Chakrabarty)
Eco-morphology of *Astyanax aeneus* in Rio Patuca, Honduras

- Body shape divergence among the widespread populations of *Astyanax aeneus* using geometric morphometric techniques to show morphological differences.

Publications:

Cruz-Hernández, V., Peña, J., **Clark, D. R.**, Martínez-Llaurador, N., & Acevedo, M. A.,. 2017. ANOLIS GUNDLACHI (Yellow-Chinned Anole). CANNIBALISM. Nautral History Notes-Herpetological Review, 48 (3), 636-637. PDF

Van Allen, B. G., Dillemuth, F. P., Flick, A. J., Faldyn, M. J., **Clark, D. R**., Rudolf, V. H., & Elderd, B. D. 2017. Cannibalism and Infectious Disease: Friends or Foes?. The American Naturalist, 190(3), 299-312. PDF

Media coverage: Moment of Science, ScienceDaily

Conference Presentations:

Clark, D., Acevedo, M., 2018. *Plasmodium azurophilum* infection status on fitness parameters of *Anolis gundlachi*. Ecological Society of America, August 5.

Clark, D., Acevedo, M., 2017. Parasite mediated coexistence: the case for *Plasmodium azurophilum* and *Anolis gundlachi.* Ecology and Evolution of Infectious diseases meeting, June 26.

Clark, D., Acevedo, M., 2017. Parasite mediated coexistence through intraspecific interactions: the case of *Plasmodium azurophilum* and *Anolis gundlachi.* LTER-Luquillo NSF site review, June 7.

Clark, D., McMahan, C., Matamoros, W.A., Chakrabarty, P. 2014. Intradrainage body shape variation of the tetra *Astyanax aeneus* (Characiformes:Characidae) in the Rio Patuca, Honduras. *Joint Meeting of Ichthyologists and Herpetologists* (American Society of Ichthyologists and Herpetologists) - Chattanooga, Tennessee, Aug 1.

Clark, D., McMahan, C., Matamoros, W.A., Chakrabarty, P. 2014. Intradrainage body shape variation of the tetra *Astyanax aeneus* (Characiformes:Characidae) in the Rio Patuca, Honduras. GeauxScience Welcome, Museum of Natural Science, August 24.

Technical Skills:

Software – Jmoprh, tpsDIG, R statistical software, and ImageJ

Laboratory - PCR reaction, Blood smearing and staining, microscopy, phytohaemagglutinin immunological assay, virus sample standardization, *Lepidoptera* rearing, data management, and storage.

Field- Animal blood and tissue collection, Animal housing, Behavior analysis, satellite holding site construction, field site construction, Animal mark-recapture techniques, plant rearing, Seine and cast netting.

Grants:

Society for the Study of Evolution (December 2017) small grant, $500
Animal Behavior Society (December 2017) small grant, $800

Teaching experience:

General Biology II (**Lab TA),** University of Puerto Rico, Spring 2018– Lectured and prepared presentations and activities on ecology, evolution, botany, and zoology.

General Biology I (Lab TA), University of Puerto Rico, Fall 2017- Lectured and prepared presentation and activities on microbiology, biochemistry, and genetics.

Mentoring experience:

Fall 2017- Current — **University of Puerto Rico- Río Piedras -** Mentoring five undergraduate students. Responsibilities include teaching:

- molecular techniques for diagnosis
- visual techniques for diagnosis
- lizard husbandry
- field practices to determine behavior and physiological components of our research
- Mentoring an undergraduate student on her own independent project
- Developing a lab publication with this group on *Plasmodium* impact on sexual signaling

Summer 2015-Fall 2015 – **Louisiana State University,** Supervised four undergraduates within the Elderd lab at LSU. Responsible for teaching:

- lab practices
- growth of host plant species
- caterpillar rearing
- baculovirus extraction and diagnosis.

Outreach:

Fall and Spring 2018 — **University of Puerto Rico-Río Piedras,** Workshop for first year undergraduates on how to build a CV, search for research positions, and how to approach researchers about working on potential research projects.

Fall and Spring 2017 — **El Yunque National Forest,** Anole lizard identification workshop for visitors and volunteers in the park.

Summer 2014 — **Louisiana State University,** Participated in Biological intensive orientation for students, a program dedicated to immersing first year students in general biology classes before they start the university, and introduce the students to research on campus.

Reviewer for:

Conservation Physiology

References:

Dr. Miguel Acevedo, Assistant Professor in the Department of Wildlife Ecology and Conservation, University of Florida, maacevedo@ufl.edu

Dr. Bret Elderd, Associate Professor in the Department of Biology, Louisiana State University, elderd@lsu.edu

Dr. Prosanta Chakrabarty, Associate Professor in the Department of Biology, Louisiana State University, prosanta@lsu.edu