Kaylee Marie Hasina Arnold

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| Phone: (760) 583-5299Kaylee.arnold@uga.edu[arnoldkaylee.com](http://www.arnoldkaylee.com/) | 2165 S. Milledge Ave D9Athens, GA30605 |

# Education

**PhD** University of Georgia, Athens, GA 2016-Present Ecology, Interdisciplinary Disease Ecology Across Scales

 Advisor: Nicole Gottdenker, DVM, MS, PhD, Dipl. ACVP

**MS** TulaneUniversity 2015-2016

 Ecology and Evolutionary Biology

 Advisor: Sunshine Van Bael, PhD

**BS** University of Redlands, Biology 2009-2013

 Minored in Music

 Advisor: Brian Spitzer, PhD

# Fellowships

Howard Hughes Medical Institute Gilliam Fellowship, **Finalist** 2020

Ford Foundation Predoctoral Fellowship, **Honorable Mention** 2019

Ford Foundation Predoctoral Fellowship, **Honorable Mention** 2018

ARCS Foundation Fellowship, **Finalist** 2018

NSF Interdisciplinary Disease Ecology Across Scales Training Fellowship 2017-2020

**$68,000 awarded over 3 years**

UGA Graduation Recruitment Opportunity Fellowship 2016-2020

**$57,447 awarded over 2 years**

Ford Foundation Predoctoral Fellowship, **Honorable Mention** 2017

# Grant Support

Summer Research Travel Grant for Doctoral Students, 2020

Graduate School, University of Georgia

**$1100**

Travel Grant Award 2020

Odum School of Ecology, University of Georgia

**$500**

Travel Grant Award, 2019

Odum School of Ecology, University of Georgia

**$500**

Small Grant Award, 2018

IDEAS, Odum School of Ecology, University of Georgia

**$500**

Summer Research Travel Grant for Doctoral Students, 2018

Graduate School, University of Georgia

**$2000**

Small Grant Award 2017

Odum School of Ecology, University of Georgia

**$1000**

Innovative and Interdisciplinary Research Grant Award 2017

Graduate School, University of Georgia

**$1600**

Small Grant Award   2017

IDEAS, Odum School of Ecology, University of Georgia

**$1500**

Grant-in-Aid of Research Award  2017

Sigma Xi

**$1000**

Summer Research Travel Grant for Doctoral Students   2017

Graduate School, University of Georgia

**$1928**

Graduate Field Research Award  2017

Latin American and Caribbean Studies Institute, University of Georgia

**$650**

# Research Groups

**Vector B**ehavior **i**n **T**ransmission **E**cology  2019-Present

**R**esearch **C**oordination **N**etwork (**VectorBiTE RCN)**

Spatial Mapping Working group 2017-Present

Center for the Ecology of Infectious Diseases, University of Georgia

# Teaching Experience

**Teaching Assistant, University of Georgia Fall 2019**

**Topics in Ecology, PhD students**

**Lead Instructor, University of Georgia** Spring 2021

Tap Ⅱ

# Mentoring and Supervision of Undergraduate Interns

# (all compensated by college credit or research stipend)

**Olivia Wilson**, EcoReach outreach and service intern Spring 2020

University of Georgia

*Supervisor of Record*

**Brady Griggs**, EcoReach outreach and service intern Fall 2019

University of Georgia

*Supervisor of Record*

**Robi McGarvey**, EcoReach outreach and service intern Spring 2019

University of Georgia

*Supervisor of Record*

**Amelia Foley**, EcoReach outreach and service intern Spring 2019

University of Georgia

*Supervisor of Record*

**Duc Chu Kim**, EcoHealthNet Research Exchange Program Summer 2019

University of Georgia

*Primary Supervisor*

**Amaka Ananaba**, Public Health Research Intern 2018-2019

University of Georgia

*Primary Supervisor*

# Publications

## Journal Publications

1. Kieran, T.J., **Arnold, K.M.,** Thomas, J.C., Varian, C.P., Saldaña, A., Calzada, J.E., Glenn, T.C. and Gottdenker, N.L. Regional biogeography of microbiota composition in the Chagas disease vector Rhodnius pallescens. *Parasites & vectors*, *12*(1), pp.1-13. **2019**
2. Richards, R., Willoughby, A., **Arnold, K.M.**, Evans, M., Majewska, A., Suh, D., Schatz, A., Teitelbaum, C., Joy Vaz, J. The relative importance of environmental and host factors for the distribution of a multi-host, environmentally persistent, zoonotic parasite. *Philosophical Transactions B.* ***Accepted 2021.***

# Conference and Symposium Presentations

**Arnold, K.,** Kieran, T., Varian, C., Saldana, A., Calzada, J., Samudio, F., Glenn, T., and Gottdenker, N. The Entomological Society of America. The gut microbial diversity of a Chagas disease vector varies across single and coinfection status throughout central Panama. **Oral Presentation.** Virtual. November 2020*. \*First place session winner for best student paper competitions*

**Arnold, K.,** Kieran, T., Varian, C., Saldana, A., Calzada, J., Samudio, F., Glenn, T., and Gottdenker, N. The Ecological Society of America. The gut microbial diversity of a Chagas disease vector varies across coinfection status and habitat type throughout central Panama. **Oral Presentation.** Virtual. August 2020.

**Arnold, K.,** Kieran, T., Varian, C., Saldana, A., Calzada, J., Samudio, F., Glenn, T., and Gottdenker, N. The gut microbial diversity of a Chagas disease vector varies across coinfection status and habitat type throughout central Panama. **Poster Presentation Accepted.** July 2020. (Did not present due to in-person conference cancellation).

**Arnold, K.,** Kieran, T., Varian, C., Saldana, A., Calzada, J., Samudio, F., Glenn, T., and Gottdenker, N. The gut microbial diversity of a Chagas disease vector varies across habitat type, region, and infection status in central Panama. **Poster Presentation Accepted.** March 2020. (Conference cancelled due to COVID-19).

**Arnold, K.M.,** Gottdenker, N.L. The Entomological Society of America. The gut microbial diversity of a Chagas disease vector varies across habitat type, region, and infection status in central Panama. **Oral presentation**. St. Louis, MO. November 2019. *\*Second place session winner for best student paper competitions*

**Arnold, K.M., Gottdenker, N.L.** Arthropod vector microbiota and infectious disease transmission across scales. Center for the Ecology of Infectious Diseases Retreat at University of Georgia. **Oral presentation.** Athens, GA. 2019.

Solomon, K., Tomczyk, N., Cummins, C., LaVere, A., and **Arnold, K.** Freshwater based community engagement at the departmental level: EcoReach at the Odum School of Ecology. Society for Freshwater Science. **Session presentation**. 2019.

**Arnold, K.,** Kieran, T., Varian, C., Saldana, A., Calzada, J., Samudio, F., Glenn, T., and Gottdenker, N. A multi-scale study of the whole-body microbiota of a Chagas disease vector. Ecological Society of America. **Poster Presentation.** New Orleans, LA. 2018.

**Arnold, K.,** Kieran, T., Varian, C., Saldana, A., Calzada, J., Samudio, F., Glenn, T., and Gottdenker, N. A multi-scale study of the whole-body microbiota of a Chagas disease vector. Society for Advancements of Chicanos/Hispanics and Native Americans in Science. **Poster Presentation.** San Antonio, TX. 2018.

**Arnold, K.,** Solomon, K., Adams, K., and Cummins, C. EcoReach: Environmental Outreach for K-12 students. 6th Annual ComSciCon Workshop. **Poster Presentation.** Boston, MA. 2018.

**Arnold, K.** and Gottdenker, N. A multi-scale study of the gut microbiota of a Chagas disease vector. 24th Annual Graduate Student Symposium at Odum School of Ecology. **Oral Presentation.** Athens, GA. 2018.

**Arnold, K.** and Gottdenker, N.Characterizing the gut microbial community composition of a Chagas disease vector. 3rd Annual Front Range Computational and Systems Biology Symposium. **Poster Presentation.** Fort Collins, CO. 2017.

**Arnold, K.**, Spitzer, B. Examining the effects of reservoirs on the population structure of the mayfly *Baetis tricaudatus* by analyzing microsatellite DNA. Senior Thesis Defense. **Oral Presentation.** University of Redlands. 2013.

**Arnold, K.**, Spitzer, B. Examining the effects of reservoirs on the population structure of the mayfly *Baetis tricaudatus* by analyzing microsatellite DNA. Southern California Conference for Undergraduate Research. **Poster Presentation.** University of California, Channel Islands. 2013.

# Invited Seminars and Panels

**San Diego Zoo Global’s Beckman Center for Conservation Research Seminar Series.** Gut microbial communities of wildlife hosts and disease vectors across disturbed habitats. October 2020. Virtual seminar.

**Black in Microbiology (**[**https://blackinmicrobiology.org)**](https://blackinmicrobiology.org/)**: A vibrant celebration of Black Microbiologists.** Featured speaker. September 2020.

**Veterinary Pathology Research Seminar.** Gut microbial communities of co-infected disease vectors across anthropogenically disturbed landscapes.February 2020, University of Georgia.

**Enthusiasts of Diversity, Genetics, and Evolution Seminar.** Gut microbial communities of infectious disease vectors in anthropogenically disturbed landscapes. October 2019, University of Georgia.

# Awards

**2021 Trailblazing Student Awardee** 2021

Ecological Society of America

**Student competition for president’s prize – First place** 2020

**Graduate 10-minute paper presentation for Vector-Microbe**

**and Disease Associations,** Entomological Society of America, Virtual

**Student competition for president’s prize – Second place** 2019

**Graduate 10-minute paper presentation for Molecular and**

**Cellular Biology,** Entomological Society of America, St. Louis, Missouri

**Graduate Student Award for Advancing Diversity in Ecology**, 2018

University of Georgia, Odum School of Ecology

# Professional Service

**Symposium Co-Organizer** November 2020

International Society for Microbial Ecology, Virtual Summit.

**Symposium Co-Organizer** January 2020

Graduate Student Symposium, Odum School of Ecology,

University of Georgia

**Workshop Organizer** November 2019

Entomological Society for America Conference, ComSciCon Workshop

* A group of graduate students and I designed and organized a modified ComSciCon science communication workshop for the Entomological Society for America Conference in November 2019

# Professional Training and Workshops

***Fellow*** January 2018-December 2018

**Yale Ciencia Academy for Career Development**

* A small selective group of graduate students are provided with mentoring, networking and skills development via monthly virtual meetings led by science professionals around the world

***Attdenee***

**ComSciCon**

National Science Communication Workshop for Graduate Students

* 3-day workshop held annually in Boston, MA, for a small selective group of graduate students to further develop their communication and networking skills.

# Justice, Equity, Diversity, and Inclusion Outreach and Service

**EcoReach,** Environmental Education Outreach organization,

University of Georgia

**Coordinator 2018 – 2020**

Secretary 2017 **–** 2018

Member 2016 – Present

* During my first year as president, I increased our membership by including faculty, staff, and undergraduates into the organization and I started a two internship positions for undergraduates
* In both 2018-2019 and 2019-2020, EcoReach attended over 30 events around North Georgia, including community events, university-sponsored events, and public-school lessons
* During my final year as coordinator, I worked to increase our membership, worked with more underservered communtities in Athens, GA, and increased faculty participation
* As secretary, I managed the social media accounts, and helped plan and organize events

**Gender, the Body, and Fieldwork Across Disciplines Symposium,** April 2019

University of Georgia

* Co-organized a faculty-student mentoring session at this

2nd annual symposium

**MythBusters: Graduate School Edition**, February 2019

University of North Georgia

* I was invited by University of North Georgia to give a presentation to their undergraduate students about my research experiences during my undergraduate years, during my gap years, and once I entered graduate school
* I also spoke with the students about my research experiences that motivated me to continue into a career in the sciences

**Enhancing Human Diversity in the Pursuit of Research in** 2018-2019

**Ecology, Evolution, and Environmental Science**,

University of Georgia

* I served as a co-leader to organize and facilitate a new diversity recruitment weekend for the Odum School of Ecology graduate program. During this weekend, we organized a networking event with potential faculty mentors and organize a panel on applying for external funding such as the NSF-GRFP or Ford Fellowship

**Odum School of Ecology’s 50/10 Diversity Panel:** 2018

**Moving Forward with a Stronger, More Diverse and Inclusive Ecology**

University of Georgia

* I volunteered as one of the graduate student co-organizers for a diversity panel at the Odum School of Ecology’s 50/10 celebration by selecting panelists who have engaged actively with diversity and inclusion issues in Ecology

**Diversity Committee in the Odum School of Ecology** 2018-2019

University of Georgia

* I served as a liaison between the graduate students and the diversity committee at the Odum School of Ecology by informing the school of inclusion challenges that need to be address as well as advocating for various programs, like a workshop on microaggressions, that the students would like to have hosted at the school

**Providing Outreach & Inspiration through Sisterhood** 2017

**and Education (POISE)**

Athens, GA 2017

* A semester long outreach mentoring program and curriculum designed by a PhD student in Counseling Psychology
* I was selected as a volunteer facilitator and mentor to work with African-American middle-school aged girls to provide a space for discussions on self-esteem, body-image, and societal perceptions of Black women and girls

**Girls in STEM (GiST) at Tulane University**

New Orleans

* A bi-annual day-long program at Tulane University which was designed to bring local school-aged girls on campus to visit research laboratories and complete STEM activities with graduate students
* I volunteered as a group leader during my time at Tulane, by leading group 5th graders (2015) and middle schoolers (2016) around various labs on Tulane’s main campus to learn about STEM and engage in STEM activities

# Previous Work and Research Experience

**Research Internship**  2015-2016

Tulane University, New Orleans, LA

* Analyzed samples of baldcypress tree (*Taxodium distichum*) roots and soil for next generation sequencing (NGS) to characterize the bacterial and fungal communities across salinity gradient

**Fish Technician** 2014-2015

Hubbs-SeaWorld Research Institute, Marine Fish Hatchery, Carlsbad, CA

* Monitored the growth rates and health of white seabass (*Atractoscion nobilis*) from larval stage to young juveniles prior to their release for Southern California stock enhancement

**Wildlife Disease Laboratory Volunteer** 2014-2015

San Diego Zoo Safari Park, Escondido, CA

* Isolated and extracted DNA and RNA from water samples obtained throughout the hoof stock animal exhibits to analyze and calculate the concentrations of specific water-borne pathogens
* Assisted with desert tortoise (*Gopherus agassizii*) tissue trimming to prepare for histological analyses

**Intern** 2014

Bottlenose Dolphin Research Institute, Sardinia Island (Italy)

* Surveyed resident bottlenose dolphins (*Tursiops truncatus*) at sea to further study their behavioral ecology, including diving rates, population composition, communication, and relationship with a local fish farm in the Mediterranean Sea

**Senior Research Thesis**, 2 semesters 2012-2013

University of Redlands, Redlands, CA

* Collected and analyzed mayflies (*Baetis tricaudatus*) in the San Bernardino Mountains to determine whether or not reservoirs increase the genetic differentiation between separated populations

# Professional Affiliations

American Society for Microbiology 2020-Present

Entomological Society of America 2019-Present

Ecological Society of America 2018-Present

Sigma Xi 2018-2019

American Association for the Advancement of Science 2018-2019

Society for Advancements of Chicanos/Hispanics 2018-2019

and Native Americans in Science

# References

Nicole Gottdenker, D.V.M, M.S., Ph.D., DACVP, *Associate Professor of Anatomic Pathology* *at College of Veterinary Medicine,*

*University of Georgia*

gottdenk@uga.edu; 706-542-6360

Katherine Adams, Ph.D., *Assistant Professor of Teacher Education,*

*University of North Georgia*

katherine.adams@ung.edu; 678-717-3519

Sunshine Van Bael, Ph.D., *Associate Professor of Ecology and Evolutionary Biology,*

*Tulane University*

Svanbael@tulane.edu; 504-862-8291

Josephine Braun, D.V.M., Ph.D., *Senior Scientist, Wildlife Disease Laboratory,*

*San Diego Zoo Institute for Conservation Research*

jbraun@sandiegozoo.org; Office: 760-291-5471

Jennifer Burchell, *Research Coordinator, Wildlife Disease Laboratory,*

*San Diego Zoo Institute for Conservation Research*

jburchell@sandiegozoo.org; Office: 760-291-5471 ext. 5471

Lei Lani Stelle, Ph.D., *Associate Professor of Biology,*

*University of Redlands*

Leilani\_Stelle@redlands.edu; 909-748-8628

Brian Spitzer, Ph.D., *former Associate Professor of Biology,*

*University of Redlands*

brian.w.spitzer@gmail.com