

Anthony A. Snead

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EDUCATION

Ph.D. Biology	Fall 2018 - Present
University of Alabama, Tuscaloosa, AL	
Dissertation: Integrative Approaches to Estimate Abundance and Illuminate Factors Governing Population Connectivity in the mangrove rivulus fish, <i>Kryptolebias marmoratus</i>	
Committee Members: Ryan L. Earley, Julia Cherry, William Ellis, Paige Ferguson, Jeff Lozier	
GPA: 4.0	
B.S. Environmental Biology	Fall 2016 - Summer 2018
University of South Florida	
GPA: 3.75	

PUBLICATIONS

- X. **Snead A**, Earley RL, Quackenbush CR, Trojahn S, McDonald A, Lins L, Cornelius C, Adams PE, Ma D, Haag E, Silvestre F, Kanamori A, Kelley JL (202X) Plasticity in Gene Expression in Response to Embryonic Environment. In Prep.
- X **Snead A**, Marson K, Earley RL (202X). Disentangling the Impact of Biotic and Abiotic Variables on Species Abundance within the Intertidal. Manuscript draft available – anticipated submission date, January 2022.
- X. **Snead A** & Earley RL (202X). Dispersal in New World Mangrove Forests: Diverse Strategies and Limitations Imposed by History and the Matrix Between Patches. Manuscript draft available – anticipated submission date, December 2021.
- X. **Snead A** & Earley RL (202X). Predicting the In-Between: Estimating Habitat Suitability of a Coastal Euryhaline Fish (*Kryptolebias marmoratus*), Present and Future. Under Review.
1. Davidson J, Summerfelt S, Espmark AMO, Mota V, Marancik D, Earley RL, **Snead A**, Good C (2021). Effects of ozone on post-smolt Atlantic salmon (*Salmo salar*) performance, health, and maturation in freshwater recirculation aquaculture systems. *Aquaculture* 533: 736208.

GRANTS AND FELLOWSHIPS

(\$31,449.50 total)

8. RCN 2020 Call for Working Groups	\$9762.50
<i>Implications of Methodology on Temporal Genomic Inferences</i> (One of Three Project Leads out of 9 Collaborators)	
7. RCN for Evolution in Changing Seas	\$500
<i>2020 Virtual Lab Meeting Training Program</i>	
6. 25 th Summer Institute in Statistical Genetics Scholarship	\$900
<i>Module 9, 14, & 17</i>	
5. E.O. Wilson Biodiversity Fellowship Summer 2020	\$6944
<i>Population Genetic and Environmental DNA Sampling in the Florida Keys</i>	
4. Bishop-Stackman Marine Science Endowed Scholarship	\$500
<i>Environmental DNA Sampling in the Florida Keys</i>	
3. Office of Research and Economic Development Small Grant Program	\$5844
<i>Validating a Non-Invasive Method for Estimating Abundance in Threatened or Cryptic Marine Fishes.</i>	
2. Sigma Xi Grants In Aid of Research	\$1000
<i>Escaping the Patch: The Role of Ocean Currents in Determining Population Connectivity in <i>Kryptolebias marmoratus</i>.</i>	
1. The College Academy of Research, Scholarship, and Creative Activity Grant	\$5999

If You Can't See It, It Doesn't Exist. Or Does It? Validating a Technique to Estimate Abundance in a Vulnerable, Highly Enigmatic Marine Fish.

TALKS AND SEMINARS

Organized **2021**

Temporal Genomics Lecture Series (Virtual)
Funded by RCN-ECS

Invited

Crossing Disciplines: An Integrative Approach to Evolutionary Ecology **2021**
Saint Leo University (Virtual; February 9th, 2021)

PRESENTATIONS

Poster **2021**

Validating a non-invasive method for estimating abundance in threatened or cryptic marine fishes
Ryan L. Earley & **Anthony A. Snead**
University of Alabama Faculty Research Day

WORKSHOPS ATTENDED

25th Summer Institute in Statistical Genetics- Funded (\$900) **2020**

Module 9: Quantitative Genetics
Module 14: Association mapping: GWAS and Sequencing Data
Module 17: Computational Pipeline for WGS Data

University of Washington

5th edition Population Genomics **2020**

Physalia

Southeastern Computational School: eDNA and QIIME 2 Software Training **2018**

University of Chattanooga

RESEARCH EXPERIENCE

Graduate Researcher **Fall 2018 - Present**

The Earley Lab, University of Alabama

- Quantifies the impact of abiotic variables on levels of gene flow and divergence between populations of *Kryptolebias marmoratus*
- Investigates eDNA concentration's relation to density over time as a proxy for traditional measures of species abundance.
- Evaluates the abiotic and biotic factors which impacts occupancy and abundance in *Kryptolebias marmoratus* through ecological niche modeling and Bayesian hierarchical models.
- Manages animal husbandry aspects of over 3,000 individually housed fish with over 64 isogenic lineages maintained.

Undergraduate Researcher **Fall 2016 - Summer 2018**

Freshwater Ecology Lab, University of South Florida

- Surveyed and identified benthic invertebrates from ponds throughout the Tampa Bay area to assess urban pond health.
- Sampled, identified, and measured over 5,000 fish to assess the difference between urban pond types for direct application within urban planning.
- Assessed differences between pond types for both benthic invertebrate and littoral fish community composition and biodiversity.
- Completed geospatial analysis to derive pond characteristics from satellite imagery.

Undergraduate Researcher **Fall 2012 - Spring 2013**

Saint Leo University, Saint Leo, FL

- Quantified mangrove forest health throughout Tampa Bay using quartile plots along the shores of Tampa Bay.
- Measured the abundance and distribution of galls located on red mangrove trees throughout Tampa Bay.
- Investigated the relationship between salinity and gall formation on red mangroves.

- Aided in artificial oyster reef experiments to quantify the abiotic factors affecting reef success.

Research Volunteer

Fall 2012 - Spring 2013

Mangrove Watch, Tampa, FL

- Conducted mangrove forest surveys throughout Tampa Bay.
- Employed video surveillance of shoreline habitat throughout Tampa Bay to assess mangrove forest health.
- Quantified mangrove forest health through individual tree tagging and measurements.
- Lead groups of volunteers in collected key data to serve as mangrove forest health baselines used in long-term monitoring programs.

TEACHING EXPERIENCE

University of Alabama

Instructor of Record

Fall 2018 - Present

- Biology II Laboratory
- Biology II Laboratory for Non-majors
- Introduction to Principles of Biology

*Instructor of Record indicates that the individual formatted, developed, and presented instructional material in compliance with department and course guidelines, while also being solely responsible for grading and course management.

Graduate Teaching Assistant

Spring 2021 - Present

- Research Seminars in Biology
- Biological Sciences Seminar

PROFESSIONAL MEMBERSHIPS

The Research Coordinate Network for Evolution in Changing Seas (RCN-ECS)	2020 - Present
The Society for the Study of Evolution (SSE)	2020 - Present
Sigma Xi	2020 - Present
The American Association for the Advancement of Science (AAAS)	2018 - Present
The Fisheries Society of the British Isles (FBSI)	2018 - Present
University of Alabama Biology Graduate Student Association	2018 - Present

OUTREACH

Meet a Bama Biologist Scientific Volunteer	Spring 2021 - Present
University of Alabama Undergraduate Research & Creative Activity Conference Volunteer Judge	Spring 2021
University of Alabama STEM Showcase Volunteer Judge	Spring 2021
Letters to a Pre-Scientist Scientific Volunteer	Fall 2020 - Present
UA SafeZone Ally/Trainer	Fall 2019 - Present
The University of Alabama's Night at the Museum Volunteer Biology Instructor	Spring 2019
Skype a Scientist Scientific Volunteer	Spring 2018 - Present

REFERENCES

Dr. Ryan Earley Box 870344 300 Hackberry Lane Tuscaloosa, AL 35487 (559) 451 - 6800 rlearley@ua.edu	Dr. Thomas Crisman SCA 108 4202 E Fowler Ave Tampa, FL 33620 (813) 974 - 5134 tcrisman@usf.edu	Dr. William Ellis MC 2188 33701 State Rd 52 St. Leo, FL 33574 (727) 480 - 5472 william.ellis04@saintleo.edu	Dr. Larry Braue ALN 130 4202 E Fowler Ave Tampa, FL 33620 (813) 974 - 2291 lbraue@usf.edu
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