

Lauren Eve Simonitis

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Education

Interdisciplinary Graduate Program in Marine Biology, Texas A&M University at Galveston, Galveston TX

August 2015- August 2021, Doctor of Philosophy in Marine Biology
GPA: 4.0

The Rosenstiel School of Marine and Atmospheric Science, The University of Miami, Coral Gables, FL

August 2011- May 2015, Bachelor of Science with General Honors
Double major in Marine Science and Biology, minor in Mathematics

Postdoctoral Fellowships

Marine Science Postdoctoral Scholar, Friday Harbor Labs at the University of Washington, Friday Harbor, WA

September 2021- Present
Supervisor: Dr. Adam Summers

Incoming National Science Foundation Postdoctoral Research Fellow in Biology

March 2022-March 2024

"The Behavioral, Neurophysiological, and Physical Mechanisms of Ink as an Antipredation Strategy"

Sponsoring Institution: Florida Atlantic University and University of Washington

Sponsoring Scientists: Dr. Marianne Porter, Dr. Steve Kajiura, Dr. Tricia Meredith, and Dr. Adam Summers

Publications

Shero, M. R., Reiser, P. J., **Simonitis, L.**, Burns, J. M. (2019). Links between muscle phenotype and life history: Differentiation of myosin heavy chain composition and muscle biochemistry in precocial and altricial pinniped pups. *Journal of Comparative Physiology B* 189.6 (2019): 717-734.

Faulkner, P. C., Burleson, M. L., **Simonitis, L.**, Marshall, C., Hala, D., & Petersen, L. H. (2018). Effects of chronic exposure to 12% saltwater on the endocrine physiology of juvenile American alligator (*Alligator mississippiensis*). *Journal of Experimental Biology* 221.14 (2018): jeb181172.

Oral Conference Presentations

Simonitis L.E., & Marshall C.D., (2021). *"Microstructure of the Bonnethead Olfactory Rosette"*. POSea Lightning Talk. Virtual.

Garza A, **Simonitis L.E.**, & Marshall C.D., (2021). *"Color and Viscosity Analysis of Aplysia californica ink-opaline mixture."* TAMUG Student Research Symposium. Galveston, TX

Simonitis, L. E., Gahn, M.B, Kaiser, K., Plön, S., McLellan, W., & Marshall, C., (2021). *A Tale of Three Inks: Comparison of free amino acid composition of ink from California sea hares, common cuttlefish, and pygmy sperm whales.* Virtual TAMU MARB Retreat. Galveston, TX

Simonitis, L. E., Gahn, M.B, Kaiser, K., Plön, S., McLellan, W., & Marshall, C., (2021). *A Tale of Three Inks: Comparison of free amino acid composition of ink from California sea hares, common cuttlefish, and pygmy sperm whales.* The Society for Comparative and Integrative Biology. Virtual Meeting. ***Nominated for the Division of Ecology and Evolution Huey Award**

Simonitis, L. E., & Marshall, C., (2020). *A Natural Occurring Shark Repellent: Ink has a Negative Effect on Shark Swimming Behavior.* TAMU MARB Retreat Lightning Talk. Galveston, TX

Simonitis, L. E., & Marshall, C., (2020). *A Natural Occurring Shark Repellent: Ink has a Negative Effect on Shark Swimming Behavior.* The Society for Comparative and Integrative Biology. Austin, TX

Simonitis, L. E., & Marshall, C., (2019). *A Natural Occurring Shark Repellent: Ink has a Negative Effect on Shark Swimming Behavior.* TAMUG Student Research Symposium. Galveston, TX

Oral Outreach Presentations

Simonitis, L.E. (2021). *Inking Animals: The Evolution and Function of a Unique Predator Defense.* Invited seminar for the Mount Holyoke Department of Biological Sciences.

Simonitis, L. E. (2020). *Exploring Shark Senses: A Tour Through a Shark's Sensory Systems.* Invited speaker for ElasmoWeek 2020. 158 views. <https://www.youtube.com/watch?v=GEdPRpZqhvo&t=638s>

Simonitis, L. E. (2020). *Exploring Shark Senses: A Tour Through a Shark's Sensory Systems.* Invited speaker for Texas Master Naturalist Chapter Meeting via Zoom. 105 attendees.

Simonitis, L.E., (2019). *Animals that ink: cute Finding Nemo characters or agents of chemical warfare?* TAMUG GGSA GradComm Outreach Event. Galveston, TX.

Poster Presentations

Garza, A., **Simonitis, L.E.,** Gahn, M.B., Kaiser, K., Marshall, C.D., (2020) *Chemical Analysis of Aplysia californica Ink-Opaline Mixture Over Time.* TAMUG Student Research Symposium. Galveston, TX

Muñoz, S., **Simonitis, L. E.,** & Marshall, C., (2019). *Ink Has Immediate Effects on Bonnethead Swimming Behavior.* TAMUG Student Research Symposium. Galveston, TX

Simonitis, L. E., & Marshall, C., (2019). *Preliminary Data on the Effect of Ink on Shark Swimming Behavior.* Southern Division of the American Fisheries Society. Galveston, TX

Simonitis, L. E., & Marshall, C., (2019). *Preliminary Data on the Effect of Ink on Shark Swimming Behavior.* The Society for Comparative and Integrative Biology. Tampa, FL

Adams, K. E., Marshall, C. D., **Simonitis, L.,** Drymon, M. J., Falterman, B., Wells, R. J. D., (2018). *Reproductive Biology of Carcharhinus limbatus in the Northern Gulf of Mexico.* TAMUG Student Research Symposium. Galveston, TX

Simonitis, L. E., & Fieber, L., (2015). *The response of Aplysia californica nervous cells to D-Aspartate.* Poster session presented at the Rosenstiel School of Marine and Atmospheric Science Undergraduate Thesis Symposium. Key Biscayne, FL

Simonitis, L. E., Shero, M., & Burns, J., (2013). *Difference in muscle fiber types in harp and hooded seals of different age classes.* Poster session and oral presentation at the University of Alaska, Anchorage NSF REU Research Symposium. Anchorage, AK

Research Experience

Graduate Research Assistant

Texas A&M University at Galveston

PI: Dr. Christopher Marshall, August 2015- Present

Dissertation Title: "The Neurobehavioral Mechanisms of Ink as an Antipredation Strategy"

- Conducted research on shark chemoreception and chemically mediated defenses
- Histologically analyzed (paraffin and frozen sectioning) a variety of tissues including pinniped whiskers, gator tongues, and shark skin, gonads, and olfactory tissue
- Captained a boat and assisting during in-water turtle research including acoustic tagging, blood draws, flipper and pit tagging, and biopsies
- Supervised undergraduate researchers in independent projects over a variety of topics including shark reproductive histology, *Aplysia* inking behavior, shark swimming kinematics, and more.

Undergraduate Researcher

The Rosenstiel School of Marine and Atmospheric Science at the University of Miami

PI: Dr. Lynne Fieber, May 2012- May 2015

- Conducted research on the nervous system of *Aplysia californica*
- Studied cultured nerve cell growth in response neurotransmitter presence in the medium
- Studied electrophysiological responses of neuron in situ to serotonin

Research Assistant

Florida Department of Environmental Protection & Biscayne Bay Aquatic Preserve

May- July 2014

- Assisted with intercept surveys in boating marina for a colleague's Professional Masters thesis
- Translated survey materials into Spanish and conducted surveys with Spanish speakers

UGalapagos Program

Study abroad program through the University of Miami

January- April 2014

- Coursework in anthropology, ecology, biology, and geology on Isla Isabela in the Galapagos Islands
- Participated in field-work intensive research projects

Undergraduate Researcher

University of Alaska, Anchorage

PI: Dr. Jennifer Burns, May-August 2013

- Participant in University of Alaska, Anchorage's NSF Research Experience for Undergraduates (REU) program
- Conducted physiological research on myosin heavy chains in harp and hooded seal locomotory muscles

Lab Aide

University of Miami Biology Department

PI: Dr. Isaac Skromne, January- May 2012

- Carried out zebra fish husbandry procedures
- Prepared brine shrimp and fed fish
- Tested water quality and maintained tanks

Teaching Experience

Visiting Instructor

Imaging Biology: Techniques, Technology, and Tools, Friday Harbor Labs at the University of Washington

Sept 2021- Present

- Guided students through various biological imaging techniques including scanning electron microscopy, CT scanning, and histology

Guest Lecturer

Natural History of Vertebrates, Texas A&M University at Galveston

August 2015- May 2021

- Guest lectured when main instructor was unavailable
- Lectured on the topics of evolutionary history of fish, evolutionary history of amphibians, and adaptations to life in water

Teaching Assistant

Natural History of Vertebrates, Texas A&M University at Galveston

August 2016- December 2016; August 2017- May 2020

- Arranged and guided student through weekly dissections and diversity labs
- Wrote and graded lab practicals

Teaching Assistant

Marine Botany (Writing Intensive), Texas A&M University at Galveston

January 2017- May 2017

- Arranged and guided students through weekly labs dealing with phytoplankton identification, chlorophyll analysis, and marsh fieldwork
- Graded lab reports and worked with students to improve scientific writing techniques

Teaching Assistant and Community Assistant

University of Miami's Summer Scholars Program

June- July 2015

- Set up and assisted in conducting labs
- Graded lab reports and worked with students on improving writing techniques
- Served as a residence hall supervisor

Marine Mammal Stranding Response and Conservation Educator

Marine Mammal Rescue Team at the University of Miami

January 2012- May 2015

- Led marine mammal stranding response trainings
- Educated club members at weekly meetings on marine mammal conservation, research, and ethics

Service

Minorities in Shark Science Events Committee

Sept 2021- Present

- Planned social and professional development events for MISS members

POSea Conference Workshop Leader and Panelist

July 2021- October 2021

- Created and led a networking workshop for BIPOC Preview Day
- Served as a panelist for the "Meet A Scientist" workshop

Sea Turtle Nesting Patrol and Response

Texas A&M University at Galveston

January 2016- August 2021

- Weekly UTV patrols looking for sea turtles and signs of nesting
- Respond to nesting turtles by flipper and pit tagging them, taking blood and tissue samples, and transporting to rehab facilities if necessary
- When nests are located, they are excavated and eggs are counted, collected, and transported

Graduate Student Representative for the Strategic Planning Subcommittee: Grow and Support World Class Faculty

Texas A&M University at Galveston, Spring 2020

Galveston Campus Representative for the Center for the Integration of Research, Teaching, and Learning Advisory Board

Texas A&M University

Fall 2019- Summer 2021

- Advised on how to offer CIRTL resources to the Galveston campus
- Represented the Galveston campus graduate student body

TAMUG Graduate Ambassadors

Texas A&M University at Galveston

Fall 2018- Spring 2019

- Helped plan campus events with Research and Graduate Studies Office
- Volunteered to lead campus tours for prospective students
- Represented the graduate student community
- Participated in panel discussion with undergraduates

Skype-A-Scientist

Spring 2020 - Present

- Video conferenced with elementary and middle school classrooms to answer their questions about marine biology or science in general
- Created introduction and follow up video content to share with classrooms

Galveston Graduate Student Association

Texas A&M University at Galveston

President (Summer 2019- Summer 2020); Secretary (Summer 2018-Spring 2019)

Fall 2015- Summer 2021

- Represented the graduate student community
- Organized monetary grants, social events, professional development events, volunteer opportunities, and fundraising for active members

TAMUG Student Research Symposium Judge

Texas A&M University at Galveston

Spring 2017- August 2021

- Scored undergraduate researchers on their poster presentations based on a standardized rubric
- Gave feedback on project design, presentation, and delivery

Graduate Student Panel Member

Texas A&M University at Galveston

Spring 2018- August 2021

- Sat on a panel to advise undergraduate club members about applying to graduate school
- For organizations including Beta Beta Beta, LSAMP scholars, and NSF REU scholars and campus events such as "Thinking About Grad School"

Galveston County Science Fair Judge

Galveston, TX

February 2016

- Judged science projects of local middle and high school students

Marine Mammal Rescue Team

University of Miami

August 2011- May 2015

President (Fall 2014- Spring 2015), Vice President (Fall 2013), Treasurer (Spring 2012- Spring 2013)

- Served as a liaison for the University of Miami to the South Florida Stranding Network
- Responded to mass and single strandings
- Performed necropsies with NOAA
- Assisted in marine mammal rehabilitation with the Marine Mammal Conservancy
- Coordinated field trips for club members to aquariums and rehab centers
- Created budgets and lobbied for club funding with the University of Miami's Student Funds Allocation Committee

Ocean Awareness Week

University of Miami

January 2012- May 2015

Public Relations Chair (Fall 2014- Spring 2015), Treasury Chair (Fall 2013)

- Educated the campus and local community on ocean conservation
- Spoke at local high schools about ocean conservation
- Planned educational events, volunteer opportunities, and fundraisers

Ocean Kids

University of Miami

April 2012, April 2014

- Helped coordinate this event where elementary school students from local underprivileged schools are invited to the University of Miami to learn about marine science and conservation
- Worked with fellow volunteers at the Marine Mammal Station to teach kids about marine mammal biology and strandings

Memberships and Affiliations

Minorities in Shark Science (MISS)

July 2020- present

American Elasmobranch Society

January 2017- December 2017

Latinx in Marine Science

August 2020- present

Rho Rho Rho Marine Honor Society

University of Miami

Society for Integrative and Comparative Biology

December 2017- Present

August 2011- May 2015

Grants and Awards

The National Academies of Science, Engineering, and Medicine

Ford Foundation Predoctoral Fellowship- Honorable Mention (Spring 2017)

Hispanic Scholarship Fund Scholarship Program

HSF Scholar (Fall 2017, Fall 2018, Fall 2020)

American Elasmobranch Society

Young Professional Recruitment Fund Diversity Scholarship (Spring 2017)

Society for Integrative and Comparative Biology

Charlotte Mangum Student Support (Annual Meeting 2019, 2020, 2021)

Texas A&M University at Galveston

MARB Mini Grant (2015, 2016, 2017, 2018)

Mooney Travel Grant (Fall 2016, 2018)

TAMUG MARB IDP Graduate Assistantship Award (Fall 2015- Summer 2016)

Bernice E. Powell Maritime Education Scholarship (Fall 2019- Spring 2020)

SeaSpace MARS Graduate Award (Fall 2016- Spring 2019; Fall 2020- Spring 2021)

University of Miami

Dean's List (Spring 2015, Spring 2012, Fall 2012)

University Scholarship (Fall 2011- Spring 2015)

Miami Grant (Fall 2011- Spring 2015)

Coral Grant (Fall 201- Spring 2012)

Beneath the Sea

Sea of Tomorrow Scholarship (Spring 2013)

Skills, Certificates, and Qualification

Teaching Certificates

- Aggie Disability Awareness Teaching Workshop, TAMU Center for Teaching Excellence
- Mentoring Undergraduate Researchers: A Workshop for Graduate Students, TAMUG Undergraduate Research
- An Introduction to Evidence-Based Undergraduate STEM Teaching, Center for the Integration of Research, Teaching, and Learning

Marine Mammal Stranding Response Training

*Marine Mammal Conservancy
Marine Animal Rescue Society*

Marine Mammal Necropsy Training

*Marine Mammal Conservancy
Marine Animal Rescue Society
NOAA*

Sea Turtle Nesting and Stranding Response Instructor Training

Padre Island National Seashore, NPS

Sea Turtle Nesting Response Training

*Padre Island National Seashore, NPS
NOAA*

Sea Turtle Handling Training

NOAA

TAMUG Waterfront Operations Vessel Operator Certification

Texas A&M University at Galveston

Texas Parks and Wildlife Department's Boater Education Course

Boating Safety Course- Texas

Boat U.S. Foundation

Fluent in Spanish

PADI Advanced Open Water SCUBA Certified

**R, Python, ArcGIS, SOFA Stats, SPSS
Adobe Photoshop, InDesign, Illustrator
FIJI Image J
Microsoft Word, Excel, PowerPoint**

References

Dr. Christopher D. Marshall

Professor at Texas A&M University at Galveston

Email: marshalc@tamug.edu / **Phone:** (409) 740- 4884

Dr. Lene Petersen

Instructional Assistant Professor at Texas A&M University at Galveston

Email: petersel@tamug.edu / **Phone:** (409) 421- 4906

Dr. Lynne Fieber

Associate Professor at the Rosenstiel School of Marine and Atmospheric Science at the University of Miami

Email: lfieber@rsmas.miami.edu / **Phone:** (305) 421- 4906

Dr. Gary Hitchcock

Associate Professor at the Rosenstiel School of Marine and Atmospheric Science at the University of Miami

Email: ghitchcock@rsmas.miami.edu / **Phone:** (305) 421- 4926