

Savannah H. Swinea

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Department of Applied Ecology, North Carolina State University,
100 Eugene Brooks Ave, Raleigh, NC 27607

EDUCATION

Northeastern University, College of Science 2020-2024
Ph.D. Student in Marine and Environmental Sciences Boston, MA
Concentration in Sustainability Sciences
Dissertation: Co-producing science through public participation in coastal social-ecological systems research
Advisor: Dr. Steven Scyphers

University of North Carolina at Chapel Hill 2015-2019
B.S. in Environmental Sciences, *Magna Cum Laude* Chapel Hill, NC
Honors Carolina Laureate, Minor in Marine Sciences
Thesis: Economic impacts of the *Deepwater Horizon* oil spill on Gulf fisheries
Advisor: Dr. Joel Fodrie

RESEARCH & PROFESSIONAL EXPERIENCE

Postdoctoral Researcher 2025-Present
North Carolina State University and the United States Geological Survey
Southeast Climate Adaptation Science Center
Advisors: Drs. Jaime Collazo, Corey Dunn, Mitchell Eaton, and Adam Terando

Rising TIDES Advisor 2023-2024
Rising TIDES (Toward an Inclusive, Diverse, and Enriched Society) Program
Coastal and Estuarine Research Federation
Advisor: Dr. Susan Park

Visiting Ph.D. Student, Marine and Environmental Sciences 2022-2024
University of South Alabama and Dauphin Island Sea Lab, Mobile, AL
Stokes School of Marine and Environmental Sciences
Advisor: Dr. Steven Scyphers

Ph.D. Student, Marine and Environmental Sciences 2020-2024
Northeastern University Marine Science Center, Nahant, MA
Department of Marine and Environmental Sciences
Advisor: Dr. Steven Scyphers

Student Member, Social Science and Environmental Health Research Institute 2020-2024
Northeastern University, Boston, MA
Department of Sociology
Advisors: Drs. Sharon Harlan and Laura Senier

Research Technician May 2019-Aug. 2020
UNC-Chapel Hill Institute of Marine Sciences, Morehead City, NC
Department of Marine Sciences
Advisor: Dr. Joel Fodrie

Honors Thesis in Marine Sciences UNC-Chapel Hill Institute of Marine Sciences, Morehead City, NC Department of Marine Sciences Advisor: Dr. Joel Fodrie	Aug. 2018-May 2019
Environment and Ecology Capstone UNC-Chapel Hill Institute of Marine Sciences, Morehead City, NC Environment, Ecology, and Energy Program Advisors: Drs. Stephen Fegley and Johanna Rosman	Aug. 2018-Dec. 2018
IDEA 2.0 Undergraduate Research Experience UNC-Chapel Hill, Chapel Hill, NC UNC Institute for the Environment Advisors: Drs. Jaye Cable and Kaylyn Gootman	May 2017-Aug. 2018
Mentorship Program NC School of Science and Mathematics and Duke University, Durham, NC Nicholas School of the Environment Advisor: Dr. Stuart Pimm	Aug. 2014-May 2015

HONORS AND AWARDS

2024	Dauphin Island Sea Lab Research Round-Up, Third Place (\$40)
2024	CERF Rising TIDES (Towards an Inclusive, Diverse, and Enriched Society) Advisor (\$6,000)
2024	Gulf Coast Graduate Student Symposium Best Oral Presentation, Honorable Mention
2024	You Are Welcome Here Workshop Facilitator Award (\$200)
2023	CERF Rising TIDES (Towards an Inclusive, Diverse, and Enriched Society) Advisor (\$6,000)
2022	GERS Biennial Conference Best Graduate Student Oral Presentation, Honorable Mention (\$75)
2022	You Are Welcome Here Workshop Facilitator Award (\$400)
2021	CERF Rising TIDES (Towards an Inclusive, Diverse, and Enriched Society) Recipient (\$1,000)
2021	National Science Foundation Graduate Research Fellowship, Honorable Mention
2020	Northeastern University Dept. of Marine & Environmental Sciences Fellowship (\$114,000)
2019	UNC-Chapel Hill Honors Thesis Completion with Highest Honors
2018	UNC-Chapel Hill Environment, Ecology, and Energy Program Scholarship (\$7,500)
2017	Increasing Diversity and Enhancing Academia (IDEA) 2.0 Undergrad Research Experience (\$3,600)

PUBLICATIONS

Peer-Reviewed:

8. Alemu I, J.B., Hughes, A.R., Osland, M.J., Swinea, S.H., Thorne, K.A., Bardou, R., Shepard, C.C., & Scyphers, S.B. 2025. Waterfront property owners' shoreline preferences amid salt marsh to mangrove transitions. *People and Nature*.

7. Swinea, S.H., Hughes, A.R., Osland, M.J., Shepard, C.C., Thorne, K.B., Alemu I, J.B., Bardou, R., and Scyphers, S.B. 2025. Marshes to mangroves: Residential surveys reveal perceived wetland trade-offs for ecosystem services. *Landscape and Urban Planning*.

6. Bardou, R., Osland, M.J., Alemu I, J.B., Feher, L.C., Harlan, D., Scyphers, S., Shepard, C.C., Swinea, S.H., Thorne, K., Andrew, J.E., & Hughes, A.R. 2024. Projected changes in mangrove distribution and vegetation structure under climate change in the southeastern United States. *Journal of Biogeography*.

5. Prasky, E.G., Drymon, J.M., Karnauskas, M., Anderson, A.Q., Gibbs, S.L., Grabowski, J.H., Jargowsky, A.E., McAree, D.M., Osowski, A.R., Swinea, S.H., and Scyphers, S.B. 2023. Depredation influences anglers' perceptions on coastal shark management and conservation in the United States Gulf of Mexico. *Frontiers in Conservation Science*.

4. Bardou, R., Osland, M.J., Scyphers, S., Shepard, C., Aerni, K.E., Alemu I, J.B., Crimian, R., Day, R.H., Enwright, N.M., Feher, L.C., Gibbs, S.L., O'Donnell, K., Swinea, S.H., ... and Hughes, A.R. 2023. Rapidly changing range limits in a warming world: critical data limitations and knowledge gaps for advancing understanding of mangrove range dynamics in the southeastern USA. *Estuaries and Coasts*.

3. Zhang, Y.S., Swinea, S.H., Roskar, G., Trackenberg, S.N., Gittman, R.K., Jarvis, J.C., Kenworthy, W.J., Yeager, L.A., and Fodrie, F.J. 2022. Tropical cyclone impacts on seagrass-associated fishes in a temperate/subtropical estuary. *PLoS ONE*.

2. Osland, M.J., Hughes, A.R., Armitage, A.R., Scyphers, S.B., Cebrian, J., Swinea, S.H., Shepard, C.C., Allen, M.S., Feher, L.C., ... and Bardou, R. 2022. The impacts of mangrove range expansion on wetland ecosystem services in the southeastern United States: current understanding, knowledge gaps, and emerging research needs. *Global Change Biology*.

1. Swinea, S.H. and Fodrie, F.J. 2021. Gulf fisheries supported resilience in the decade following unparalleled oiling. *Ecosphere*.

Non-Peer Reviewed:

2. Drymon, J.M., Osowski, A., Jefferson, A., Anderson, A., McAree D., Scyphers, S.B., Prasky, E., Swinea, S.H., Gibbs, S., Karnauskas, M., and Gervasi, C. 2022. Co-producing a shared characterization of depredation in the Gulf of Mexico reef fish fishery: 2022 Workshop summary report. *Southeast Data, Assessment & Review (SEDAR)*.

1. Scyphers, S.B., Swinea, S.H., Gibbs, S., and Heyman, W. 2021. Stakeholder assessment and concept mapping in support of Fishery Ecosystem Planning for the Gulf of Mexico: Summary project report. Gulf of Mexico Fishery Management Council Contract Award No. NA15NMF4410011.

TEACHING

Instructor

Environment and Society, University of South Alabama, Mobile, AL

Fall 2023 & 2024

Guest Lecturer

U.S. Environmental Policy and Justice. University of South Alabama, Mobile, AL

Spring 2024

PRESENTATIONS

Conferences:

2025 Swinea, S.H.* The future of climate adaptation is Indigenous. North Carolina Postdoc Research Symposium. Durham, NC. Flash talk presentation.

2025 Swinea, S.H.*, Terando, A., Hiers, J.K., Kupfer, J., Reich, B., Majumder, R., Nastase, E., Dunn, C., and Collazo, J. 2025. RxFire Engine – A climate-informed prescribed fire optimization tool. North Carolina Coop Unit Cooperator's Meeting. Raleigh, NC. Poster presentation.

2024 Swinea, S.H.*, Smith, H., and Scyphers, S.B. From shore to table: Shore-based fishermen provide

- food and strengthen community in coastal Alabama. Restore America's Estuaries Coastal & Estuarine Summit. Washington, DC region. Oral presentation.
- 2024 Swinea, S.H.*, Drymon, J.M., Albins, M.A., Powers, S.P., and Scyphers, S.B. Fishermen's knowledge elicited through social methods informs co-management of reef fish species. American Fisheries Society Annual Meeting. Honolulu, HI. Oral presentation.
- 2024 Swinea, S.H.* and Scyphers, S.B. Fishing for food: Diverse motivations impact subsistence fishing across a coastal Alabama landscape. Gulf Coast Graduate Student Symposium. Dauphin Island, AL. Oral presentation.
- 2023 Swinea, S.H.*, Hughes, A.R., Osland, M.J., Shepard, C.C., Thorne, K.B., and Scyphers, S.B. Climate-driven nearshore habitat change influences mental models of waterfront resident coastal social-ecological systems. Biannual Conference for the Coastal and Estuarine Research Federation. Portland, OR. Oral presentation.
- 2023 Swinea, S.H., Albins, M.A., Powers, S.P., Smith, H.* , and Scyphers, S.B. Spatially-explicit fishermen's knowledge elicited through participatory mapping informs co-management of reef fish species. 2023. Gulf and Caribbean Fisheries Institute 76th Annual Meeting. Nassau, Bahamas. Oral presentation.
- 2023 Prasky, E.* , Drymon, J.M., Anderson, A., Gibbs, S.L., Jargowsky, A., McAree, D.A., Osowski, A., Swinea, S.H., and Scyphers, S.B. Characterizing anglers' responses to reported increases in shark depredation across the Gulf of Mexico. American Elasmobranch Society Annual Meeting. Norfolk, VA. Oral presentation.
- 2023 Osowski, A.R.* , Jefferson, A.E., Anderson, A.Q., McAree, D.M., Scyphers, S.B., Swinea, S.H., Prasky, E., Gibbs, S., Karnauskus, M., and Drymon, J.M. Co-producing a shared characterization of depredation in the Gulf of Mexico reef fish fishery. Bays & Bayous Symposium. Mobile, AL. Oral presentation.
- 2022 Osowski, A.R.* , Jefferson, A.E., Anderson, A.Q., McAree, D.M., Scyphers, S.B., Swinea, S.H., Prasky, E., Gibbs, S., Karnauskus, M., and Drymon, J.M. Co-producing a shared characterization of depredation in the Gulf of Mexico reef fish fishery. Gulf and Caribbean Fisheries Institute Annual Meeting. Fort Walton Beach, FL. Oral presentation.
- 2022 Swinea, S.H.*, Hughes, A.R., Osland, M., Shephard, C., Thorne, K., and Scyphers, S.B. Place-based nearshore interactions drive perceptions of marsh and mangrove fisheries production and access. Gulf Estuarine Research Society Biennial Conference. Ocean Springs, MS. Oral presentation.
- 2022 Prasky, E.* , Drymon, J.M., Anderson, A., Gibbs, S.L., Jefferson, A.E., Karnauskas, M., McAree, D.A., Osowski, A., Swinea S.H., and Scyphers, S.B. Exploring recreational anglers reported depredation incidence and the impact on the perceptions of sharks. Sharks International. Valencia, Spain. Poster presentation.
- 2022 Prasky, E.* , Drymon, J.M., Anderson, A., Gibbs, S.L., Jefferson, A.E., Karnauskas, M., McAree, D.A., Osowski, A., Swinea S.H., and Scyphers, S.B. Quantifying angler perceptions about shark depredation through stakeholder engagement. Sharks International. Valencia, Spain. Oral presentation.
- 2022 Prasky, E.* , Drymon, J.M., Jefferson, A.E., Karnauskas, M., Gray, S., Swinea S.H., and Scyphers, S.B. Identifying shark depredation in the Gulf of Mexico by analyzing historical trends and current interactions. American Fisheries Society Annual Meeting. Spokane, WA. Oral presentation.
- 2022 Drymon, J.M.* , Jefferson, A.E., Karnauskas, M., Gray, S., Swinea, S.H., Prasky, E., and Scyphers, S.B. Capturing fishermen's knowledge to better characterize shark depredation in the US Gulf of Mexico. American Elasmobranch Society Annual Meeting. Spokane, WA. Oral presentation.
- 2022 Drymon, J.M.* , Jefferson, A.E., Karnauskas, M., Gray, S., Swinea, S.H., Prasky, E., and Scyphers, S.B. Capturing fishers' experiential knowledge to better characterize shark depredation in the US Gulf of Mexico. International Council for the Exploration of the Sea Annual Science Conference. Dublin, Ireland. Oral presentation.
- 2022 Swinea, S.H.*, Hughes, A.R., Osland, M., Shephard, C., and Scyphers, S.B. Social-ecological

- implications of climate-driven nearshore habitat change for fisheries in the northern Gulf of Mexico. Gulf of Mexico Conference. Baton Rouge, LA. Oral presentation.
- 2022 Drymon, J.M.*, Ajemian, M., Collins, A., Duffin, B., Fluech, B., Gibbs, S., Goethel, D., Gray, S., Jefferson, A., Karnauskas, M., Lively, J., Osowski, A., Prasky, E., Sagarese, S., Swinea, S.H., and Scyphers, S.B. Characterizing cryptic mortality in GoM reef fish: Evaluating the nature and extent of depredation. Gulf of Mexico Conference. Baton Rouge, LA. Oral presentation.
- 2022 Thorne, K.*, Scyphers, S.B., Swinea, S.H., Shepard, C., Osland, M., and Hughes, A.R. Stakeholder perceptions of mangrove expansion in the northern Gulf of Mexico. Gulf of Mexico Conference. Baton Rouge, LA. Oral presentation.
- 2022 Bardou, R.*, Hughes, A.R., Osland, M., Scyphers, S.B., Shepard, C., Crimian, R., Swinea, S.H., Thorne, K., Truskey, S., and Alemu I, J. Assessing the distribution of mangroves in the northern Gulf of Mexico. Gulf of Mexico Conference. Baton Rouge, LA. Oral presentation.
- 2021 Swinea, S.H.*, Hughes, A.R., Osland, M., Shepard, C., and Scyphers, S.B. Social-ecological implications of climate-driven nearshore habitat change for fisheries in the northern Gulf of Mexico. American Fisheries Society Annual Meeting. Baltimore, MD. Poster presentation.
- 2021 Swinea, S.H.*, Hughes, A.R., Osland, M., Shepard, C., and Scyphers, S.B. Social-ecological implications of climate-driven nearshore habitat change for fisheries in the northern Gulf of Mexico. Biannual Conference for the Coastal and Estuarine Research Federation. Poster presentation.
- 2019 Swinea, S.H.* and Fodrie, F.J. Resilience or vulnerability of Gulf fisheries economies to *Deepwater Horizon* oil spill? Biannual Conference for the Coastal and Estuarine Research Federation. Mobile, AL. Oral presentation.
- 2018 Swinea, S.H., Gootman, K.S.*, and Cable, J.E. Application of state-space models to forecast fine particle disturbance response in a recirculating laboratory flume. 2018 Fall Meeting, American Geophysical Union. Washington, D.C. Poster presentation.

Invited Talks:

- 2022 Hamdan, L., Swinea, S.H., and Foster, E. Rising TIDES Panel. Gulf Estuarine Research Society Biennial Meeting. Ocean Springs, MS. Invited panelist.
- 2022 Swinea, S.H.*, Hughes, A.R., Osland, M., Shepard, C., and Scyphers, S.B. Social-ecological implications of climate-driven nearshore habitat change for fisheries in the northern Gulf of Mexico. The Nature Conservancy/Northeastern University Coastal Sustainability Workshop. Oral presentation.

Campus Talks:

- 2024 Swinea, S.H.* and Scyphers, S.B. Fishing for food: Diverse motivations impact subsistence fishing across a coastal Alabama landscape. Northeastern Marine and Environmental Sciences Graduate Student Symposium. Boston, MA. Oral presentation.
- 2023 Swinea, S.H.*, Hughes, A.R., Osland, M.J., Shepard, C.C., Thorne, K.B., and Scyphers, S.B. A multi-region study of perceptions surrounding marsh and mangrove fisheries ecosystem services. Northeastern Marine and Environmental Sciences Graduate Student Symposium. Boston, MA. Oral presentation.
- 2022 Swinea, S.H.*, Hughes, A.R., Osland, M., Shepard, C., and Scyphers, S.B. Social-ecological implications of climate-driven nearshore habitat change for fisheries in the northern Gulf of Mexico. Northeastern Marine and Environmental Sciences Graduate Student Symposium. Boston, MA. Oral presentation.
- 2021 Swinea, S.H.* and Scyphers, S. Understanding the dynamics of fisheries social-ecological systems. Northeastern Marine and Environmental Sciences Graduate Student Symposium. Boston, MA. Oral presentation.
- 2019 Swinea, S.H.* and Fodrie, F.J. Economic impacts of the *Deepwater Horizon* oil spill on Gulf

- fisheries. Institute for Marine Sciences and Institute for the Environment Morehead City Field Site Honors Research Symposium. Morehead City, NC. Oral presentation.
- 2018 Swinea, S.H.* and Fodrie, F.J. Economic impacts of the *Deepwater Horizon* oil spill on Gulf fisheries. Morehead City Field Site Independent Research Symposium. Morehead City, NC. Oral presentation.
- 2018 Booze-Hall, A.*, Brown, C.*, Cooper, R., Duprey, A., Dolberry, A., Evans, F., Malone, J.*, McGuirt, E., Richardson, C., Saklad, Z., Schoolfield, S., Swinea, S.H.*, and Tsai, E. A multifaceted analysis of processes influencing water quality within the Atlantic Beach, NC canal system. 2018 Capstone Presentation of the UNC-CH Morehead City Field Site. Morehead City, NC. Oral presentation.
- 2017 Swinea, S.H.*, Gootman, K.S., and Cable, J.E. Investigating streambed clogging in a laboratory flume. Summer Undergraduate Pipeline Research Symposium. Chapel Hill, NC. Poster presentation.
- 2015 Swinea, S.H.* and Pimm, S. Carnivore conservation around roadways. NC School of Science and Mathematics Research Symposium. Durham, NC. Oral presentation.
- 2015 Swinea, S.H.* and Pimm, S. Carnivore conservation around roadways. NC School of Science and Mathematics Research Symposium. Durham, NC. Poster presentation.
- 2014 Swinea, S.H.* and Brisk, M. Comparing washing and synthesis methods of biodiesel. NC School of Science and Mathematics Research Symposium. Durham, NC. Poster presentation.

*Presenter

SERVICE AND OUTREACH

Peer Review:

Ecosphere
 Environmental Biology of Fishes
 Indo Pacific Journal of Ocean Life
 Journal for Nature Conservation
 Landscape and Urban Planning
 Scientific Data

Departmental:

College of Science Diversity, Equity, and Inclusion Graduate Representative	2024-2025
Dauphin Island Sea Lab Discovery Day Volunteer	2023-2024
You Are Welcome Here Campaign Workshop Facilitator	2021-2024
High School Marine Science Symposium Volunteer	2021

Community:

Dauphin Island Sea Lab Volunteer Fisheries Scientist	2022-2024
Alabama Deep Sea Fishing Rodeo	
Girls Exploring Science and Technology Student Mentor	2019
UNC-Chapel Hill Institute of Marine Sciences	
Education Day Demonstration Leader	2019
North Carolina Seafood Festival	
Homework Club Science and Math Tutor	2015
East Chapel Hill High School	

MEMBERSHIPS

American Sociological Association, 2023-Present
Gulf Estuarine Research Society, 2022-Present
Coastal and Estuarine Research Federation, 2021-Present
American Fisheries Society, 2020-Present

CERTIFICATIONS

Inclusive STEM Teaching Project, certified 2024
North Carolina Boater Education Card, certified 2020

SKILLS

Esri Products (ArcGIS Pro, ArcGIS Online, ArcGIS Survey123)
IBM Statistical Package for Social Sciences
Python Programming Environment
Qualtrics XM
R Programming Environment