

Emily Slesinger, Ph.D.

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EDUCATION

- 2022 – Present National Research Council Associate Postdoc
Alaska Fisheries Science Center, NMFS, NOAA
Advisor: Dr. Thomas Hurst
- 2016 – 2022 Ph.D. in Oceanography, Rutgers University
Dissertation Topic: “Black sea bass physiology and life history in the context of seasonal variability and long-term climate change”.
GPA: 4.00
Advisor: Dr. Grace Saba.
- 2011 – 2015 B.S. in Marine Biology (Highest Honors) and B.A. in Environmental Studies (Honors), University of California Santa Cruz. Graduated Summa Cum Laude.
Senior Thesis: “Counting your krill before they hatch: a multiplex-PCR approach to distinguish species of *Thysanoessa spinifera* and *Euphausia pacifica* eggs (Euphausiacea) in Monterey Bay”
GPA: 3.94
Advisor: Dr. Baldo Marinovic

RESEARCH INTERESTS

Climate change, reproductive biology, ecology of fishes, fish physiology

PROFESSIONAL EXPERIENCE

- 2022 – Present National Research Council Associate Postdoc, Alaska Fisheries Science Center, National Marine Fisheries Service, NOAA
- 2016 – 2022 Graduate Research Assistant, Rutgers University
- 2015 – 2016 Fishery Research Volunteer, Southwest Fisheries Science Center, National Marine Fisheries Service, NOAA
- 2014 Research Experiences for Undergraduates NSF Fellow, Graduate School of Oceanography, University of Rhode Island
- 2013 International Research Student, University of Queensland, Australia (through the University of California Education Abroad Program: Terrestrial Ecology and Marine Biology)
- 2012 – 2015 Undergraduate Research Assistant, University of California Santa Cruz

PEER-REVIEWED PUBLICATIONS

*Indicates mentored undergraduate student

Nazzaro, L., **Slesinger, E.**, Kohut, J., Saba, G.K., Saba, V. (2021). Sensitivity of marine fish thermal habitat models to fishery data sources. *Ecology and Evolution*, 11(19), 13001-13013.

Slesinger, E., Jensen, O.P., and Saba, G. (2021). Spawning phenology of a rapidly shifting marine fish species throughout its range. *ICES Journal of Marine Science*, 78(3), 1010-1022.

Slesinger, E., Langan, J.A., Sullivan, B.K., Borkman, D., and Smayda, T. (2020). Multi-decadal (1972-2019) *Mnemiopsis leidyi* (Ctenophora) abundance patterns in Narragansett Bay, Rhode Island, USA. *Journal of Plankton Research* 42(5), 539-552.

Slesinger, E., Andres, A., Young, R.*, Seibel, B., Saba, V., Phelan, B., Rosendale, J., Wieczorek, D., and Saba, G. (2019). Effects of ocean warming on black sea bass (*Centropristis striata*) aerobic scope and hypoxia tolerance. *PLoS ONE* 14(6), e0218390.

OTHER PUBLICATIONS

Slesinger, E. (2020). Using physiology to guide proactive fisheries management. *Institute of Fisheries Management, FISH138(3)*, 10-11. (*available on request*)

PUBLICATIONS IN PREPARATION

Slesinger, E., Bates, K.*, Wuenschel, M., and Saba, G.K. (submitted). Regional differences in energy allocation of black sea bass (*Centropristis striata*) along the US Northeast Shelf (36°N-42°N) and throughout the spawning season. *Journal of Fish Biology*

Slesinger, E., DuProvince, H., Seibel, B., Kohut, J., and Saba, G.K. (in prep) Physiologically-based assessment of historical and future changes in metabolically available habitat for US Northeast Shelf fishes.

AWARDS & SCHOLARSHIPS

2022	National Research Council Fellowship (\$58,000)
2021	John E. Skinner Memorial Award (\$800)
2021	University and Louis Bevier Fellowship (\$25,000)
2020	Best Student Oral Presentation Mid-Atlantic Chapter Meeting (\$150)
2020	Graduate Women in Science National Fellowship (Honorable Mention)
2020	J. Frances Allan Scholarship, American Fisheries Society (Runner-up)
2020	George Burlew Scholarship (Manasquan River Marlin and Tuna Club) (\$1000)
2019	Best Student Oral Presentation Mid-Atlantic Chapter Meeting (\$150)
2019	Center for Fisheries and Ocean Sustainability Student Conference Travel Award (\$320)
2019	George Burlew Scholarship (Manasquan River Marlin and Tuna Club) (\$1500)
2018	Center for Fisheries and Ocean Sustainability Student Conference Travel Award (\$580)
2018	John E. Skinner Memorial Award Honorable Mention (\$250)
2018	Rutgers Off-Campus Dissertation Development Award (\$2,000)
2018	George Burlew Scholarship (Manasquan River Marlin and Tuna Club) (\$500)
2018	Rutgers TA/GA Professional Development Fund Award (\$936)
2015	Myers Trust Award for Outstanding Student Research in Monterey Bay (\$500)

2015	Leonardo daVinci Scholar Award for Cross-Disciplinary Education (\$100)
2014	UCSC Undergraduate Research in the Sciences Awards (\$2,000)
2014	Student Research and Education Award (\$850)
2014	Global Oceans Student Award

PRESENTATIONS

*Indicates mentored undergraduate student; #Indicates invited talk

Slesinger, E.[#] (2021). Black sea bass physiology and life history in the context of seasonal variability and long term climate change. Research Seminars, Graduate Women in Science, virtual.

Slesinger, E., Bates, K.^{*}, Wuenschel, M., and Saba, G.K. (2021). Regional differences in energy allocation of black sea bass (*Centropristis striata*) along the US Northeast Shelf (36°N-42°N) and throughout the spawning season. American Fisheries Society National Conference, Baltimore, MD.

Slesinger, E., Jensen, O.P., and Saba, G. (2020) *Spawning phenology of a rapidly shifting marine species throughout its range*. Mid-Atlantic Chapter, American Fisheries Society, virtual.
-Best student oral presentation

Bates, K.^{*}, **Slesinger, E.**, and Saba, G. (2020) *Sex-specific energetics of spawning black sea bass in New Jersey*. Mid-Atlantic Chapter, American Fisheries Society, virtual.

Slesinger, E., Jensen, O.P., and Saba, G. (2020) *Spawning phenology of a rapidly shifting marine species throughout its range*. Rutgers University Student Seminars, New Brunswick, New Jersey.

Slesinger, E. and Saba, G. (2020) *The Interaction between ocean warming and spawning latitude on U.S. Northeast Shelf black sea bass energetics and reproductive potential throughout the spawning season*. Association for the Sciences of Oceanography and Limnology (Ocean Sciences), San Diego, CA. *E-lightning presentation*

Slesinger, E. and Saba, G. (2019) *The interaction between ocean warming and spawning latitude on U.S. Northeast Shelf black sea bass energetics and reproductive potential throughout the spawning season*. Mid-Atlantic Chapter, American Fisheries Society, Lewes, DE.

-Best student oral presentation

Andres, A.M., Seibel, B., **Slesinger, E.**, Saba, G., Saba, V., Morris, J (2019). *How low can predators go?; hypoxia tolerance of coastal shark species of varying lifestyle*. Society for Integrative and Comparative Biology, National Meeting, Tampa, FL.

Andres, A., Seibel B.A., **Slesinger, E.**, Saba, G.E., Saba, V., Phelan, B., Young, R.^{*}, Wieczorek, D., Rosendale, J. (2018) *Hypoxia tolerance and aerobic scope in spiny dogfish, Squalus*

acanthias, as a function of temperature. Association for the Sciences of Oceanography and Limnology Conference (Ocean Sciences), Portland OR.

Slesinger, E. and Saba, G. (2018). *Spawning latitude and temperature impact black sea bass body condition and fecundity throughout the spawning season.* Rutgers University Student Seminars, New Brunswick, New Jersey.

Slesinger, E., Young, R.*, Andres, A., Seibel, B., Saba, V., Phelan, B., Rosendale, J., Wieczorek, D., and Saba, G. (2018). *Effects of ocean warming on black sea bass (Centropristis striata) aerobic scope and hypoxia tolerance.* American Fisheries Society National Conference, Atlantic City, New Jersey.

Andres, A.M., **Slesinger, E.,** Saba, G., Saba, V., Phelan, B., Rosendale, J., Wieczorek, D., and Seibel, B. (2018). *An investigation of the effects of rising temperature on metabolic scope in the spiny dogfish (Squalus acanthias).* American Fisheries Society National Conference, Atlantic City, New Jersey.

Andres, A.M., Seibel, B., **Slesinger, E.,** Saba, G., Saba, V., Phelan, B., and Young, R. (2018). *An investigation of the effects on rising temperature on metabolic scope in the spiny dogfish (Squalus acanthias).* Association for the Sciences of Oceanography and Limnology Conference (Ocean Sciences), Portland, Oregon.

Phelan, B., **Slesinger, E.,** Andres, A., Rosendale J., Wieczorek, D., Young, R.*, Seibel, B., Saba, V., and Saba, G. (2017). *Using controlled laboratory experiments to improve fisheries management in response to climate change.* Mid-Atlantic Chapter, American Fisheries Society, Dover, Delaware.

Slesinger, E., Young, R.*, Saba, G., Andres, A., Seibel, B., Phelan, B., Saba, V., Wieczorek, D., Rosendale, J. (2017). *Effects of temperature on black sea bass (Centropristis striata) metabolic rate and aerobic scope.* ICES Annual Science Meeting, Fort Lauderdale, Florida.

Slesinger, E., Young, R.*, Andres, A., Seibel, B., Phelan, B., Saba, V., Wieczorek, D., Rosendale, J., and Saba, G. (2017). *Effects of temperature on black sea bass (Centropristis striata) metabolic rate and aerobic scope.* Rutgers University Student Seminars, New Brunswick, New Jersey.

Slesinger, E., Smayda, T., and Borkman, D. (2015). *Multi-decadal variability of Mnemiopsis leidyi abundance in Narragansett Bay: climate change or prey mediated?* Association for the Sciences of Oceanography and Limnology Conference (Ocean Sciences), Granada, Spain.

POSTERS

Nazzaro, L.J., **Slesinger, E.,** Kohut, J.T. (2020). *Comparison of thermal niche model development methods for black sea bass.* Association for the Sciences of Oceanography and Limnology (Ocean Sciences), San Diego, CA.

Slesinger, E., Young, R., Andres, A., Seibel, B., Saba, V., Phelan, B., Wieczorek, D., Rosendale, J., Saba, G. (2018). *The effect of ocean warming on black sea bass aerobic scope and hypoxia tolerance*. Rutgers Climate Symposium, New Brunswick, New Jersey.

Slesinger, E., Young, R., Saba, G., Andres, A., Seibel, B., Phelan, B., Saba, V., Wieczorek, D., Rosendale, J. (2016). *Effects of temperature on black sea bass (Centropomus striata) metabolic rate and aerobic scope*. Rutgers Climate Symposium, New Brunswick, New Jersey.

Slesinger, E., Carrion, C.N., and Marinovic, B. (2015). *Counting your krill before they hatch: a multiplex PCR approach to distinguish between species of Thysanoessa spinifera and Euphausia pacifica eggs (Euphausiacea) in Monterey Bay*. Undergraduate Research in the Sciences Awards Symposium, Santa Cruz, California.

FIELD EXPERIENCE

2019	<i>R/V Rudee Angler</i> , Recreational Fishing Vessel Black sea bass sampling for body condition project
2019	<i>R/V Laurence M. Gould</i> National Science Foundation CTD deployments and processing in Long-term Ecological Research project in Antarctica
2018	<i>R/V Bounty Hunter</i> , <i>R/V/ Free Spirit</i> , Recreational Fishing Vessel Black sea bass sampling for body condition project
2017	<i>R/V The Tagged Fish</i> , Recreational Fishing Vessel Black sea bass collections for laboratory physiology project
2016 – 2018	<i>R/V Roccus</i> , Rutgers University Black sea bass trap survey (during summer and fall months)
2016	<i>R/V Reuben Lasker</i> , NOAA Rockfish Recruitment and Ecosystem Assessment Sorted mid-water trawl catch by species (fish and invertebrates), CTD deployment, chlorophyll sampling
2016	<i>R/V Huli Cat</i> , NOAA Early Life History Chilipepper rockfish collections for fecundity studies
2014	<i>R/V Cap'n Bert</i> , University of Rhode Island, Fish and Plankton Trawl Surveys Sorted trawl samples by species (fish and invertebrates), deployed vertical net tows for <i>Mnemiopsis leidyi</i> sampling
2014	<i>R/V Ocean Starr</i> , NOAA Rockfish Recruitment and Ecosystem Assessment Sorted mid-water trawl catch by species (fish and invertebrates), krill identification and collections, bongo net deployment
2013	<i>R/V Ocean Starr</i> , NOAA Rockfish Recruitment and Ecosystem Assessment Sorted mid-water trawl catch by species (fish and invertebrates), krill identification and collections

PROFESSIONAL ACTIVITIES & PUBLIC OUTREACH

Academic Service

2020 – 2021	President, Rutgers University Student Subunit, American Fisheries Society
2020 – 2021	Distinguished Speaker Committee, Oceanography Graduate Student Association, Rutgers University
2019 – 2021	Co-founder of Beyond Academia Lecture Series, Rutgers University

- Inviting science professionals for a day at Rutgers to talk with graduate students and post docs about careers outside of academia
- 2019 – 2020 President, Oceanography Graduate Student Association, Rutgers University
- 2019 – 2020 Vice President, Rutgers University Student Subunit, American Fisheries Society
- 2018 – 2019 President, Oceanography Graduate Student Association, Rutgers University
- 2018 – 2019 Secretary, Rutgers University Student Subunit, American Fisheries Society
- 2017 – 2018 Secretary, Oceanography Graduate Student Association, Rutgers University

Professional Service

- 2020 – Present Member, State of the Ecosystem Body Condition/Fish/Protected Species Indicators Subgroup, NOAA NEFSC
- 2019 – Present Social Media Director, Board of Directors, American Institute of Fishery Research Biologists

Manuscript Reviewer

- Scientific Reports
- PLoS ONE
- Conservation Physiology
- Environmental Biology of Fishes

Professional Membership

- 2020 – Present Society for Women in Marine Science
- 2020 – Present American Society of Ichthyologists and Herpetologists
- 2019 – Present Association for the Sciences of Oceanography and Limnology
- 2019 – Present Graduate Women in Science
- 2018 – Present American Institute of Fishery Research Biologists
- 2017 – Present American Fisheries Society
 - Mid-Atlantic Chapter
 - Rutgers University Student Subunit

Invited Workshops (invited workshops led by myself in **bold**)

- 2019 **How to Improve Your Curriculum Vitae**
 - Workshop focused on professional development for undergraduate and graduate students to create and improve CVs
 - Rutgers University Student Subunit, American Fisheries Society
- 2019 Black Sea Bass Researcher Meeting
 - Regional workshop from scientists in academia, state and federal governments to discuss current state of black sea bass research and outline plans for future collaborative research
- 2017 Changing Ocean Conditions Workshop
 - Workshop focused on gathering input on the existing resources and future direction for considering changing ocean conditions in fisheries management

Community Outreach

- 2021 Intrepid Girls in Science and Engineering Day
 - Planned a workshop on uses of STEM fields in oceanography for youth/teens

- 2020 – 2021. Community College Outreach
-Working with local community colleges to inform and excite students to pursue a degree in Marine Science
- 2020 Girl Scouts of Missouri speaker
-Spoke to a Girl Scout troop from Missouri about marine biology research and careers, and different ecosystems found throughout the ocean
- 2017 – 2021 Shore Bowl volunteer (science judge)
-Regional high school competition for National Ocean Science Bowl
- 2017 – 2019 Rutgers Day volunteer
-Set-up and ran the Jersey Shore animal touch tank exhibit
- 2018 Rutgers Alumni Day
-Spoke to alumni about my and other graduate student research at DMCS
- 2016 NOAA NMFS James J. Howard Open House
-Spoke to the public about my graduate research conducted at the NOAA labs
- 2015 UCSC Women in Science and Engineering volunteer
-Facilitated hands-on science experiments in science classrooms at low-income high schools in the Monterey Bay region.

TEACHING EXPERIENCE AND MENTORING

Teaching Experience

- 2020 Instructor for undergraduate course The Water Planet (11:628:204), Rutgers University
- 2018 Teaching Assistant for undergraduate course Dynamics of Marine Ecosystems (11:628:320), Rutgers University

Guest Lectures

- 2020 – 2021 “Behavioral and Chemical Ecology”, Biological Oceanography (11:628:461), Rutgers University
- 2020 – 2021 “Higher Trophic Levels and Fisheries”, Biological Oceanography (11:628:461), Rutgers University
- 2018 “Careers in Ocean Science”, Dynamics of Marine Ecosystems (11:628:320), Rutgers University
- 2018 “Animal Metabolism and Oxygen Consumption”, Ocean Methods and Data Analysis (11:628:363), Rutgers University

Mentored Undergraduate Researchers (24 total, including 15 females, 6 underrepresented students)

- 2020 – 2021 Aviva Lerner, “*Estimating spawning synchrony in US Northern black sea bass with histological analysis*” Rutgers University
- 2020 Anthony Renner, Rutgers University
- 2020 Sophia Berezin, Rutgers University
- 2020 Jillian Devita, Rutgers University
- 2020 Jacob Dale, Rutgers University
- 2020 Zakqary Roy, Rutgers University
- 2019 – 2021 Emma Huntzinger, for School of Environmental and Biological Sciences Honors program, Rutgers University

- 2019 – 2020 Timothy Stolarz, “*Development of protein extraction protocol in US Northern black sea bass tissues*”, Rutgers University
- 2019 Catherine McTighe, Rutgers University
- 2019 Gil Osofsky, Virginia Institute of Marine Science
- 2019 Ailey Sheehan, Fisheries Practicum Project “*Female size effects on gonadosomatic indices of black sea bass (Centropomus striata)*”, Rutgers University
- 2018 – 2021 Kiernan Bates, “*Lipid composition of spawning black sea bass throughout their range*”, NOAA Work Study Student (2018-2019), Rutgers University
- 2018 – 2019 Karolina Zbaski, Rutgers University
- 2018 Mamadou Nbaye, Rutgers University
- 2018 Juan Osario, Rutgers University
- 2018 Kimberly Aldana, Rutgers University
- 2018 Shiyue Zhao, Rutgers University
- 2018 Maura Doscher, Rutgers University
- 2017 – 2018 Kasey Walsh, Douglass College Project SUPER, Rutgers University
- 2017 Meridian Mathes, Rutgers University
- 2017 Luis Rodriguez-Mendoza, Rutgers University
- 2017 Shawn Hazlett, Rutgers University
- 2017 Grace Chung, Rutgers University
- 2016 – 2018 Rachael Young, Rutgers University

REFERENCES

Dr. Thomas Hurst (Postdoc Advisor)

Alaska Fisheries Science Center, NOAA, Program Manager,
thomas.hurst@noaa.gov, 541-737-7022

Dr. Grace Saba (PhD Advisor)

Rutgers University, Department of Marine and Coastal Sciences, Assistant Professor,
saba@marine.rutgers.edu, 848-932-3466.

Dr. Brad Seibel

University of South Florida, College of Marine Science, Professor,
seibel@usf.edu, 727-553-3403

Dr. Olaf Jensen

University of Wisconsin Madison, Center for Limnology, Associate Professor,
ojensen@wisc.edu