

# Alexander Rubin

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## EDUCATION

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University of Delaware, Newark, DE

May 2022

College of Earth Ocean and Environment | Honors College

Honors Bachelor of Science | Major: Marine Biology | Minor: Neuroscience | GPA: 3.734

CEOE Dean's List, General Honors Award, UD Outstanding Contributions to Marine Science Award

## WORK EXPERIENCE

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IBSS Corporation in support of NOAA/NMFS, Narragansett, RI

October 2022 – Present

FT-NIRS Biological Technician

- Biological science technician at the NOAA Northeast Fisheries Science Center, Population Biology Branch, Apex Predators Program to collect samples and data to study age and growth and life history of fisheries in the North Atlantic
- Develop Fourier transform near-infrared spectroscopy (FT-NIRS) as an experimental method to study life history of sharks, teleosts, and invertebrates
- Support NOAA Coastal Shark Bottom Longline Survey with field research and collection of biological and oceanographic samples and data
- Support NOAA COASTSPAN shark tagging survey with field sampling, logistics, and data analysis
- Develop quantitative models to determine age of unknown aging structures and contribute to Atlantic fisheries stock assessment and management

University of Delaware, Newark, DE and Lewes, DE

November 2019 – June 2022

Undergraduate Research Assistant

- Led research project to develop novel method of protein precipitation from shark blood plasma for stable isotope ecology
- Assist in animal husbandry, preparing food, maintaining tank systems, maintaining health and fitness of fish and sharks
- Led independent study to collect and analyze fisheries data to track the mechanisms of stock rebuilding as directed by the Magnuson-Stevens Act
- Worked with teams of researchers to annotate AUV images of scallop beds to collect data on scallop mortality

University of Delaware TrASER Lab, Lewes, DE

May 2021 – August 2021

Summer Scholars Researcher

- Performed field work to tag sharks in the Delaware Bay and to collect biological samples, environmental data, and live animals for future experimentation
- Analyzed C and N isotope composition of shark tissues using isotope ratio mass spectrometry and analyzed data in R

## RESEARCH AND PUBLICATIONS

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**Rubin, A. M.**, Shah Walter, S. R., Mohan, J. A. & Carlisle, A. B. (Submitted 2024). Using protein isolation on elasmobranch blood plasma for ecological research and stable isotope analysis. *Ecology and Evolution*. Publication Pending.

**Rubin, A. M.**, Passerotti, M. S., Robillard, E. M. (2024). Fourier Transform Near Infrared Spectroscopy Ageing of Finfish and Shark Species in the Northwest Atlantic. In Matta, M. E., Helser, T. E. (editors). Proceedings of the Fourth Research Workshop on the Rapid Estimation of Fish Age Using Fourier Transform Near Infrared Spectroscopy (pp. 83-92). AFSC Processed Report. Oral Presentation: Using FT-NIRS as a tool to age blue shark *Prionace glauca* from the northwest Atlantic Ocean. American Elasmobranch Society, Norfolk VA, 2023.

Poster Presentation: Accounting for lipids and urea when analyzing plasma for stable isotope analysis of elasmobranchs. American Elasmobranch Society, Norfolk VA 2023.

Oral Presentation: FT-NIRS ageing of finfish and shark species in the northwest Atlantic. WORKSHOP: Rapid Estimation of Fish Age Using Fourier-transform Near Infrared Spectroscopy (FT-NIRS), NOAA Fisheries, Seattle WA, 2023

Poster Presentation: Accounting for lipids and urea when analyzing plasma for stable isotope analysis of elasmobranchs. American Fisheries Society, Baltimore MD, 2021.

## PROFESSIONAL AFFILIATIONS

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Member, American Elasmobranch Society

Member, American Fisheries Society

## TECHNICAL SKILLS

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Microsoft Office, R, Google Suite, Delaware state boating license, SSI SCUBA certification, mass spectrometry, FT-NIRS, field specimen collection, animal husbandry, scientific writing, science communication, public education and outreach