

# NATASHA ANDREA HINOJOSA

updated November 2023

University of California at Santa Cruz (UCSC)  
Coastal Campus during July-September  
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Smithsonian Tropical Research Institute (STRI)  
Naos Research Station during September-June  
Edif. 359 Isla Naos, Calzada de Amador Ciudad de Panamá, Panamá

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## EDUCATION

<b>PhD</b>	PhD Candidate, Department of Ecology & Evolutionary Biology, UCSC – California, USA Advisors: Rita Mehta and Matthieu Leray <i>* Awarded the Cota Robles Fellowship</i>	2026
<b>MS</b>	UCSC, Department of Ecology & Evolutionary Biology – California, USA Advisors: Rita Mehta and Matthieu Leray	2022
<b>BS</b>	University of North Carolina at Wilmington (UNCW) – North Carolina, USA <b>Summa cum laude with Honors</b> (GPA: 3.917/4 – Major GPA: 3.989/4) Advisors: Thomas Lankford	2018
	James Cook University – Townsville, Australia Study Abroad	2017
	Duke University – North Carolina, USA Study Abroad <i>*Awarded the Marine Science and Conservation Scholarship</i>	2015

## PUBLICATIONS (48 citations since 2018)

4. Gilg, M. R., Kerns, E. V., Gutierrez-Bayona, N. E., Kooyomjian, C., & **Hinojosa, N. A.** (2022). Dynamic Cohort Analysis Reveals Fluctuating Patterns of Selection Within a Hybrid Zone Between the Killifish *Fundulus heteroclitus* and *F. grandis*. *Evolutionary Biology*, 49(1), 1-14.
3. Guzman, H. M., **Hinojosa, N.**, & Kaiser, S. (2020). Ship's compliance with a traffic separation scheme and speed limit in the Gulf of Panama and implications for the risk to humpback whales. *Marine Policy*, 120, 104113.
2. Shiffman, D.S., Ajemian, M.J., Carrier, J.C., Daly-Engel, T.S., Davis, M.M., Dulvy, N.K., Grubbs, R.D., **Hinojosa, N.A.**, Imhoff, J., Kolmann, M.A. and Nash, C.S. (2020). Trends in chondrichthyan research: An analysis of three decades of conference abstracts. *Copeia*, 108(1), 122-131.
1. Kessel, S. T., **Hinojosa, N. A.**, Wilson, H., Clementi, G., & Knapp, C. R. (2018). Varied response of garden eels to potential predators and other large-bodied organisms. *Matters*, 4(7), e201806000024

## CERTIFICATIONS & LICENSES

<i>Scuba Diving</i>	
SDI Divemaster	2018
SDI Rescue Diver	2017
AAUS Scientific Diver	2016
University of North Carolina at Wilmington Diver	
TDI Nitrox	
Smithsonian Scientific Diver	
PADI Enriched Air Diver	2015
PADI Advanced Open Water Diver	2014
PADI Open Water Diver	2012
<i>First Aid</i>	
Diving First Aid for Professional Divers	2022
DAN Diving Emergency Management Provider	2019

NAUI Oxygen Administration/CPR Training	2016
<i>Certifications</i>	
California Boater Card	2023
BoatU.S. Foundation's Online Boating Safety	2023
STRI Driving License	2022
Working with Fish, Institutional Animal Care and Use Committee (IACUC)	2021
RYA Power-Boating Level 2 – Cape Eleuthera Institute	2019
Working with Fish, Institutional Animal Care and Use Committee (IACUC)	2016
Investigators, Staff and Students, Institutional Animal Care and Use Committee (IACUC)	2016

## SCHOLARSHIPS, FELLOWSHIPS, GRANTS & AWARDS

<b>Scholarships (\$55,500+):</b>	
Merit Scholarship – UNCW (\$500)	2018
Marine Science and Conservation Scholarship – Duke University (tuition + insurance + field course + research funds = \$50,000)	2016
<b>Fellowships (\$89,400\$+):</b>	
UC Dornsife Fellow – University of Southern California (Accommodation in UC Dornsife)	2020
Cota-Robles Fellowship – UCSC (\$84,000 + insurance)	2018
Internship – STRI (\$3,000)	2016
Research Experience for Undergraduates (REU) – University of North Florida (\$5,000 + research expenses)	2014
Internship – STRI (\$2,400)	
<b>Grants (\$18,770):</b>	
Rohr Travel Grant – Rohr Foundation (\$6, 970)	2022
EEB Summer Funding – UCSC (\$5,300)	
EEB Summer Funding – UCSC (\$5,000)	2021
Dean's Travel Grant – UCSC (\$500)	
EEB Summer Funding – UCSC (\$1,000)	
<b>Awards (\$8,800+):</b>	
2nd in Wide-Angle Traditional – Backscatter Digital Shootout 2022 (\$500)	2022
Jim Watt Award – Backscatter Digital Shootout 2019 (\$5,000+)	2019
Marine Biology Achievement Award – UNCW	2018
Distinguished Undergraduate Research Scholar – UNCW	
Tracy Storer Award – American Society of Ichthyologists and Herpetologists (ASIH)(\$300)	2017
Multi-Cultural Program Award – Association for the Sciences of Limnology and Oceanography (\$3,000)	

## CONFERENCES & PRESENTATIONS

<i>Conferences (* awarded)</i>	
Our Oceans – Panamá City, Panamá	2023
COLACMAR – Panamá City, Panamá	2022
Joint Meeting of Ichthyologists and Herpetologists (JMIH) – Snowbird, UT	2019
Sharks International – Joao Pessoa, Brazil	2018
JMIH – Austin, TX *	2017
ASLO – Honolulu, HI	
REU Symposium – Jacksonville, FL *	2016
JMIH – New Orleans, LA	
<i>Presentations (* invited presentations)</i>	
Women in Science Summer Camp – Panel * – Punta Culebra, Panama	2023
COLACMAR – Poster – Panama City, Panama	2022
Women in Stem – Virtual *	2020
JMIH – Poster – Snowbird, Utah	2019
Sharks International – Poster – Joao Pessoa, Brazil	2018

UNCW Honor Symposium – Poster – Wilmington, NC	
JMIH – Poster – Austin, TX	2017
ASLO – Poster – Honolulu, HI*	
UNF REU Student Symposium – Poster – Jacksonville, FL	2016

## TEACHING EXPERIENCE & SCIENTIFIC COMMUNICATION

Research Mentorship for Undergraduate Students	2022-2023
Fish Dissection Workshops	2021-2023
Pelagic Ecosystems	2019
Teaching Assistant, Cape Eleuthera Institute and Island School	
Fish Anatomy and Osteology	2019
Teaching Assistant, Cape Eleuthera Institute and Island School	
Scuba Instructor Assistant	2019
DiveBase Coiba, Pixvae Panamá	
Scientific Diver Instructor Assistant	2018
UNCW, Wilmington, NC	

## RESEARCH & WORK EXPERIENCE

<b>Doctorate Thesis</b> – Dr. Rita Mehta & Dr. Matthieu Leray – University California at Santa Cruz – Panama City, Panama	2021-2026
<ul style="list-style-type: none"> <li>- Conceptualizing, planning, and executing research with the goal of answering how feeding traits adapt to different environmental conditions. My research focuses on the morphological adaptations in reef fishes and how they respond to different environments</li> <li>- My research is in collaboration with the Leray Lab at the Smithsonian Tropical Research Institute</li> <li>- Collected various reef fish species across different size through pole spearing and nets</li> <li>- Performed ventral dissections to remove viscera and store samples</li> </ul>	2023
<b>Research Technician for the Long-term Moray Eel Monitoring Project</b> – Dr. Rita Mehta – USC – Wrigley, Santa Catalina, CA	
<ul style="list-style-type: none"> <li>- Deployed traps to collect moray eels for a long-term monitoring project established in 2010</li> <li>- Processed eels by collecting morphological measurements, diet data, and PIT tagging them</li> <li>- Mentoring an REU Student for the field portion of her project looking at moray eel growth rate</li> </ul>	
<b>Associate Pre-doctoral Fellow for the Rohr Reef Resilience (RRR) Project</b> – Dr. Matthieu Leray, Dr. Sean Connolly, and Dr. Mark Torchin – STRI – Panama City, Panama	2021-2022
<ul style="list-style-type: none"> <li>- Participated as a scientific diver for coral sampling, reef visual surveys, water sampling, and plankton towing to monitor reef health and resilience across the tropical eastern Pacific coast</li> </ul>	
<b>Species ID Curator for the Grand Blue Project</b> – Edi Frommewiler, The Pindito – Virtual	2020
<ul style="list-style-type: none"> <li>- Conceptualized, curated, and inventoried over 2,000 videos into a phylogenetic scheme</li> </ul>	
<b>Research Technician &amp; Teacher's Assistant</b> – Cape Eleuthera Institute – Eleuthera, The Bahamas	2019
<ul style="list-style-type: none"> <li>- Conducting research on: Sargassum biodiversity and its plastic aggregation, fish aggregation devices (FAD) and their effects on the pelagic environment, and VEMCO acoustic receiver arrays</li> <li>- Performing scientific photography to develop a Sargassum Biodiversity Catalogue</li> <li>- Assisting the FAD class for the Island School by preparing lessons and active class discussions</li> </ul>	
<b>Smithsonian Research Internship</b> – Dr. Hector Guzman – STRI – Panama City, Panama	2018-2019
<ul style="list-style-type: none"> <li>- Tagged billfish and currently monitored their movements and migratory patterns in Panama</li> <li>- Handled large Maritime Traffic Data to assess ship compliance along a Traffic Separation Scheme</li> </ul>	

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- Monitored seabird nesting on Bona Island, Panama with hand-held and drone photography
  - Worked with R-Program, ArcGIS, satellite tagging, and Wildlife Computers
- 2017-2019
- Scientific Expedition aboard the R/V Coral Reef II** – Dr. Steven Kessel – Shedd Aquarium – Exuma Cays, The Bahamas
- Assessed shark and ray populations using acoustic telemetry and Baited Remote Underwater Video surveys (BRUVs). Led to first peer-reviewed publication
  - Setup longlines and drum lines.
  - Learned to extract blood ventrally from the peduncle of sharks and fishes, and followed strict protocols and procedures to process blood and plasma samples
  - Installed, retrieved and re-deployed VEMCO Receivers
  - Handled large sharks while working in teams on small boats
- 2017-2018
- Departmental Honors Thesis** – Dr. Thomas Lankford – UNCW – Wilmington, NC
- Sequenced mitochondrial DNA (D-Loop region) to determine the population of origin in a white shark (*Carcharodon carcharias*) that stranded on Wrightsville Beach, NC on December 7th, 2015
  - Uploaded the genetic sequence to GenBank with accession number MH282855
  - Applied the basics of Sequencher & Geneious to clean GenBank samples and Haploview to create a Haplotype Network Diagram
- 2016
- Research Experience for Undergraduates (REU)** – Dr. Matthew Gilg – UNF – Jacksonville, FL
- Assessed the genetic composition of the hybridization zone between the mummichog (*Fundulus heteroclitus*) and Gulf killifish (*Fundulus grandis*) through a series of genomic techniques
  - Recognized as best presenter within the University of North Florida REU 2016 cohort
  - Identified and counted a variety species of plankton using a gridded microscope slide
- 2016
- Smithsonian Research Internship** – Dr. Matthieu Leray – STRI – Panama City, Panama
- Participated in a BioBlitz project quantifying the biodiversity living within lettuce coral (*Agaricia agaricites*) and the surrounding biota
  - Used techniques such as scientific diving, sifters, photography, and manual collection
  - Collected lettuce coral samples and other marine life through scuba
- 2016
- Undergraduate Research** – Dr. Robert Condon – UNCW – Wilmington, NC
- Performed an independent research project looking at ichthyoplankton species diversity inside eddies in the Sargassum Sea using Bermuda Atlantic Time-Series plankton tows
  - Performed plankton tows and drove Remote Operated Vehicle (ROV) and ran chemosynthetic experiments with moon jellyfish (*Aurelia aurita*) polyps
- 2015
- Tropical Marine Ecology Course** – Dr. Humberto Diaz – Duke University Marine Lab
- Traveled to Bocas del Toro, Panama and conducted chemosensory experiments, ocean acidification experiments, coral transects, and behavioral and observational experiments on hermit crabs and fiddler crabs (*Uca burgersi*)
- 2015
- Chemosensory Research** – Dr. Daniel Rittschof – Duke Marine Lab, Duke University – Beaufort, NC
- Assessed the chemosynthetic abilities of the mud snail (*Ilyanassa obsoleta*) using bioassays
  - Quantified the responses of the mud snail by exposing the individual to a variety of fish odors
  - Conducted night fishing to catch fishes, crustaceans, and other animals
- 2015
- Hybridization Research** – Dr. Thomas Schultz – Duke Marine Lab, Duke University – Beaufort, NC
- Worked on the hybridization between the southern flounder (*Paralichthys lethostigma*) and the summer flounder (*Paralichthys dentatus*) by fishing, extracting DNA, and building the data sets
  - Cut and preserved tissue samples for RAD libraries and other DNA processes
- 2015
- Photo ID Research** – Dr. Andrew Read – Duke Marine Lab, Duke University – Beaufort, NC

<ul style="list-style-type: none"> <li>- Critiqued photographs based on exposure, focus, lighting, and clarity to be used in a Photo Identification database for shortfin pilot whales (<i>Globicephala macrorhynchus</i>)</li> </ul>	2014
<p><b>Smithsonian Research Internship</b> – Dr. William Owen McMillan – STRI – Panama and Ecuador</p> <ul style="list-style-type: none"> <li>- Worked in the Butterfly Project breeding and caring for Heliconius butterflies and caterpillars as well as their host plants and food source</li> <li>- Applied butterfly catching skills to provide graduate students varieties of butterfly species needed for their research projects and traveled to the mountainous regions of Ecuador for two weeks on an expedition to capture multiple butterfly species</li> </ul>	2013
<p><b>Internship</b> – Marine Dynamics &amp; Dyer Island Conservation Trust – Kleinbaai, South Africa</p> <ul style="list-style-type: none"> <li>- Identified individual great white sharks (<i>Carcharodon carcharias</i>) by measuring and recording body marks</li> <li>- Conducted research on shark eggs by collecting, measuring, and creating a data set</li> <li>- Acted as crew member while boat was used for tourist groups</li> </ul>	
<p><b>VOLUNTEER, SERVICE &amp; ENGAGEMENT</b></p>	
<p>Language Exchange – STRI IDEA</p> <ul style="list-style-type: none"> <li>- Helped found the Language Exchange program at Naos Laboratories with Carmen Schloeder and Olivia Milloway to promote the diversity of languages in science</li> <li>- Meet every other Wednesday to talk and practice a language each person is trying to learn through a series of activities</li> </ul>	2023
<p>Naos Reading and Writing – STRI – Panama City, Panama</p> <ul style="list-style-type: none"> <li>- Founded the Reading and Writing group at the Naos Laboratories to promote practice with English literacy in reading and writing science</li> <li>- Meet every Wednesday from 12-4pm to discuss peer-reviewed articles and reserve time for writing work</li> </ul>	2022
<p>Photography Club – STRI – Panama City, Panama</p> <ul style="list-style-type: none"> <li>- Founded the STRI Photography Club with the support of Steve Paton to offer wildlife photography experiences in the STRI community</li> <li>- Led photographic excursions, planned workshops, and reviewed photographic techniques</li> </ul>	2019
<p>Volunteer – Global FinPrint – Dr. Colin Simpfendorfer – James Cook University</p> <ul style="list-style-type: none"> <li>- Reviewed BRUV video surveys across Oceania</li> </ul>	2017
<p>Field Research Assistant – Dr. Charles Banglely – Smithsonian Environmental Research Center (SERC)</p> <ul style="list-style-type: none"> <li>- Deployed drum lines, gill nets, and long lines to capture sharks for physiological studies in the Pamlico Sound, NC and the Cape Fear River, NC</li> <li>- Handled sharks and rays while tagging</li> </ul>	2015,2017
<p>Volunteer – Panama Amphibian Rescue and Conservation Project – STRI – Panama City, Panama</p> <ul style="list-style-type: none"> <li>- Cared for various frog species at different life stages, especially <i>Atelopus</i> spp. frogs, by cleaning their enclosures, feeding them, providing adequate supplements, and creating breeding enclosures</li> <li>- Worked under strict quarantine for frogs infected with <i>Batrachochytrium dendrobatidis</i> and performed necropsies on deceased individuals</li> <li>- Raised and cared for feeders including crickets, mealworms and cockroaches</li> </ul>	2014
<p>Sloth Handler – “<i>The Antibiotic Hunters</i>” Documentary by Dreamfilm Productions – The Nature of Things with David Suzuki, Canadian Broadcast Corporation CBC</p> <ul style="list-style-type: none"> <li>- Assisted the film crew for the Panama portion of the episode “The Antibiotic Hunters”</li> <li>- Participated as an extra within the documentary</li> </ul>	

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Volunteer – Summit Zoo (Animal refuge) – Gamboa, Panama	
<ul style="list-style-type: none"> <li>- Cared for and interacted with a large variety of endemic Panamanian species that have been confiscated by poachers or misplaced by construction or deforestation</li> <li>- Handled medium-sized felines, sloths, otters, small monkeys, birds and medium-sized reptiles</li> </ul>	2013-2014
Volunteer – Lion Park – Johannesburg, South Africa	
<ul style="list-style-type: none"> <li>- Cared for young lion cubs and other native African species and maintained rigorous schedules that included feeding and exercising animals</li> <li>- Supervised and guided tourists</li> </ul>	2013
Animal Husbandry – SamGeckos – Panama City, Panama	
<ul style="list-style-type: none"> <li>- Rehabilitated and cared for a variety of reptiles by providing proper feeding, medical treatments and appropriate maintenance</li> <li>- Learned how to breed and care for feeders: crickets, mealworms, rainbow mealworms, and Dubia roaches</li> </ul>	2013
Volunteer – Punta Culebra Smithsonian Aquarium – STRI – Panama City, Panama	
<ul style="list-style-type: none"> <li>- Applied effective people skills as a Tourist Guide to school-aged tour groups</li> <li>- Oversaw student interactions with the touch tank</li> <li>- Handled marine species for educational purposes to site visitors</li> </ul>	2011-2012