

CURRICULUM VITAE

Christopher Robert Malinowski, PhD
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PROFESSIONAL PREPARATION:

Ph.D. Biological Science, Florida State University, FL, 2019
M.Sc. Biological Science, Florida Atlantic University, FL, 2011
B.Sc. Biological Science (Major: Biology, Minor: Chemistry)
University of Wisconsin-Stevens Point, Stevens Point, WI, 2006

PROFESSIONAL APPOINTMENTS:

March, 2022-current **Director of Research and Conservation**, Ocean First Institute, Key Largo, FL.
Primary duties and accomplishments: Develop partnerships, maintain existing and develop new research programs, supervise staff, operate and maintain research vessel, secure funds through grant writing and fundraising.

Feb, 2021-Mar, 2022 **Senior Scientist**, South Florida Water Management District, Coastal Ecosystems Section, Applied Sciences Bureau, West Palm Beach, FL.
Primary duties and accomplishments: I research and manage effects of controlled water delivery (quality, quantity, timing of delivery) in South Florida to coastal ecosystems related to impacts on habitats, fishes and other aquatic organisms.

Mar, 2019-Feb, 2021 **Post-Doctoral Research Assistant**, Forestry and Natural Resources, Purdue University, IN
Primary duties and accomplishments: Currently I develop and publish independent research, synthesize data, statistically analyze data, mentor students, and instruct courses. Research includes fish community and population ecology; microplastics, mercury and other contaminant impacts on aquatic food webs and ecosystems; and fish gut microbiome association with diet and stable isotopes.

Sep, 2013-Aug, 2017 **Research Assistant**, Florida State University Coastal and Marine Laboratory, FL
Primary duties and accomplishments: While completing my PhD, I additionally worked to design, plan, implement, and oversee fieldwork related to deep sea and coastal reef fish ecology sampling and monitoring studies; collected samples and analyzed data; wrote technical reports, and managed multiple databases. I provided technical guidance to field station personnel regarding sampling techniques for environmental contaminants, diet, stable isotopes, and nutrients in water samples. I investigated the impacts of various contaminants on fish from a variety of coastal and offshore environments.

Jul, 2012-Aug, 2013 **Fish Ecology Database Manager**, Deep-C Research Consortium, Florida State University, Coastal and Marine Laboratory, FL
Primary duties and accomplishments: In response to the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, I collected samples and data for a multi-institutional and interdisciplinary consortium related to community ecology and various oil-related contaminants; organized and managed a relational database for all collected deep sea organisms and analytical data.

Jan, 2012-Jul, 2012 **Research Associate**, Fauna Concentration Project in the Florida Everglades, Florida Atlantic University, FL

Primary duties and accomplishments: Planned, implemented, and oversaw seasonal collection of wetland species related to the diet of wading birds, and recording of environmental data. The collection of samples and data required navigation to remote sites in the Florida Everglades via helicopter and air boat.

Jun, 2011- May, 2012 **Adjunct Faculty**, Florida Atlantic University, FL

Primary duties and accomplishments: Instructor of record for Anatomy and Physiology lab courses.

Jan, 2007- Aug, 2008 **Research Technician**, Fish Ecology Lab, School of Freshwater Sciences, University of Wisconsin-Milwaukee, WI

Primary duties and accomplishments: Participated and assisted in fieldwork planning and execution; worked on various projects related to fish diet, and invasive and native fish species population and community dynamics.

PUBLICATIONS:

Malinowski, C.R., A. Schaber, C. Searle, and T. Höök. Microplastics impact aquatic food web dynamics through reduced zooplankton feeding and potentially releasing algae from consumer control (in review).

Environmental Science and Technology.

Coleman, F.C., J.A. Nunes, A.A. Bertoncini, L.S. Bueno, M.O. Freitas, M. Borgonha, J.R. Leite, M.J. Lima-Júnior, B. Ferreira, B. Bentes, C.C. Koenig, **C.R. Malinowski**, E.G. Sanches, M. Hostim-Silva, C.L. Sampaio. (in revision). Opening a limited fishery for Atlantic Goliath Grouper in the United States: implications for their recovery. *Marine Policy.*

Perrault, J.P., S.E. Hirsch, **C.R. Malinowski**, I. Lackner, J.P. Buchweitz, S. Reboloso, A.F. Lehner (in review). Are fresh eggs needed for trace element monitoring in sea turtles? *Environmental Toxicology & Chemistry.*

Condini, M.V., **C.R. Malinowski**, D.J. Hoeninghaus, B.L. Harried, A.P. Roberts, B.K. Soulen, K.J. Roark et al. (2023). Spatial analysis of mercury and stable isotopes in the vulnerable Dusky Grouper *Epinephelus marginatus* along the Brazilian coast. *Marine Pollution Bulletin* 187: 114526.

Malinowski, C.R., J.C. Doll and T.O. Höök (2022). Nearshore fish assemblage dynamics in southern Lake Michigan: 1984–2016, *Journal of Great Lakes Research*, <https://doi.org/10.1016/j.jglr.2022.04.018>.

Stevens, P. W., Paperno, R., Beal, J. L., MacDonald, T. C., Miller, H. N., Klarmann, P. A., & **Malinowski, C. R.** (2022). Identification of fish habitat hotspots for use in prioritizing conservation and restoration projects in coastal rivers. *Environmental Biology of Fishes*, 1-15.

Malinowski, C.R., F.C. Coleman, C.C. Koenig (2021). Four reasons that Goliath Grouper fishery should remain closed. Letter to FWC Commissioners. Published on website: <https://www.chrismalinowski.org/goliath-grouper-conservation>.

Liu, Z., **Malinowski, C. R.**, & Sepúlveda, M. S. (2021). Emerging trends in nanoparticle toxicity and the significance of using *Daphnia* as a model organism. *Chemosphere*, 132941.

Perrault, J. R., Barron, H. W., **Malinowski, C. R.**, Milton, S. L., & Manire, C. A. (2021). Use of intravenous lipid emulsion therapy as a novel treatment for brevetoxicosis in sea turtles. *Scientific reports*, 11(1), 1-12.

Malinowski, C.R., N.I. Stacy, F.C. Coleman, J.A. Cusick, C.M. Dugan, C.C. Koenig, N.K. Ragbeer, and J.R. Perrault (2021). Mercury offloading in gametes and potential adverse effects of high mercury concentrations in blood and tissues of Atlantic Goliath Grouper *Epinephelus itajara* in the southeastern United States. *Science of the Total Environment*, 146437.

Malinowski, C.R., J.R. Perrault, F.C. Coleman, C. Cray, C.C. Koenig, J.M. Stilwell, N.I. Stacy (2020). The iconic Atlantic Goliath Grouper (*Epinephelus itajara*): A comprehensive assessment of health indices in the southeastern United States population. *Frontiers in Veterinary Science*, 7, 635.

Koenig, C.C., F.C. Coleman, and **C.R. Malinowski** (2020). Atlantic Goliath Grouper of Florida: To Fish or Not to Fish. *Fisheries* 45(1):20-32. *Feature article for January issue.*

- Malinowski, C.R.** (2019) High mercury concentrations in Atlantic Goliath Grouper: spatial analysis of a vulnerable species. *Marine Pollution Bulletin* 143: 81-91.
- Malinowski, C.R.,** J. Cavin, J. Chanton, L. Chasar, F.C. Coleman, C. Koenig (2019). Trophic relationships and niche partitioning of Red Drum *Sciaenops ocellatus* and Common Snook *Centropomus undecimalis* in coastal estuaries of South Florida. *Estuaries and Coasts* 42(3): 842-856.
- Malinowski, C.R.,** F.C. Coleman, C.C. Koenig, J. Locascio, D. Murie (2019). Are Atlantic goliath grouper, *Epinephelus itajara*, establishing more northerly spawning sites? Evidence from the northeast Gulf of Mexico. *Bulletin of Marine Science* 95(3): 371-391. *Feature article for July issue.*
- Malinowski, C.R.** (2017). From field notes to field guide: a descriptive and picturesque look into the marine fishes of Florida. Review of “Marine Fishes of Florida”, by D. Snyder and G. Burgess. *Environmental Biology of Fish*: 889-891.
- Koenig, C.C., F.C. Coleman, **C.R. Malinowski**, et al. (2017). Diel, lunar, and seasonal spawning patterns of the Atlantic goliath grouper, *Epinephelus itajara*, off Florida, United States. *Bulletin of Marine Science* 93(2):39-406.
- Levine, E.A., J.S. Gosnell, E.M. Goetz, **C.R. Malinowski** (2016). Natural cultch type influences habitat preference and predation, but not survival, in reef-associated species. *Restoration Ecology* 25(1): 101-111.
- Malinowski, C.R.,** Herzing, D.L. (2015). Differences in prey and nutrient use between reproductive states and age classes in Atlantic spotted dolphins (*Stenella frontalis*). *Marine Mammal Science* 31(4): 1471-1493.

AWARDS, RECOGNITION, & FUNDING:

- Batchelor Foundation Grant – Co-PI, awarded for FT-IR (Fourier-transform infrared spectroscopy) microscopy and imaging system (\$145,000) – 2023
- Guy Harvey Ocean Foundation – PI, awarded for Goliath Grouper monitoring project (\$30,000/3 years) – 2023, 2024, 2025
- The Curtis & Edith Munson Foundation – PI, awarded for Goliath Grouper monitoring project (\$30,000/2 years) – 2023, 2024
- Ocean Conservancy grant – PI, awarded for microplastic monitoring project in Key Largo, FL (\$20,000) – 2023
- Project funding through South Florida Water Management District – PI, budget period of 2022-2023 (\$94,000)
- NOAA OER Grant (2022) – PI, grant submitted through OFI (\$713,000) – proposed budget period 30 Sep 2023 – Oct. 1 2025
- Global Photo Associates (GPS USA), Japanese Television Production Company, scholarship (\$5000)- 2017
- PADI Foundation Grant (\$5475)- 2017
- FSU Congress of Graduate Students (COGS) Travel Grant (\$200)- 2017
- FSU Biological Science Travel Award (\$580)- 2017
- FSUCML Scholarship Award (\$4000)- 2014, 2015, 2016, 2017
- Florida State University’s William R. Mote Research Assistantship (Summer Term)- 2016, 2017
- Gramling Marine Biology Award (\$4000)- 2016
- Robert B. Short Zoology Scholarship (\$1000)- 2015
- Guy Harvey Scholarship (\$5000)- 2015
- FAU Private Donor Marsh Scholarship (\$500)- 2011
- Society for Marine Mammalogy Student Travel Grant (\$500)- 2011
- Florida Atlantic University Graduate Student Association Travel Grant Award (\$600)- 2011
- Charles E. Schmidt College of Science Travel Grant Award (\$600)- 2011
- Florida Atlantic University Graduate Student Association Travel Grant Award (\$500)- 2010

INTERVIEWS, NEWSPAPER, BLOGS, AND DOCUMENTARIES:

- **Featured research documentary of white sharks in South Africa**
 - “Where have all the Great Whites gone? (A South African Shark Expedition)”

- <https://youtu.be/12hZL0GQ9N0>
- **Featured interview in Science Magazine**
 - <https://www.science.org/content/article/overruling-scientists-florida-commission-authorizes-fishing-vulnerable-goliath-grouper>
 - October 13, 2021
- **Featured interview in National Geographic Magazine**
 - [Goliath grouper fishing may be allowed in Florida again after 30-year ban](#)
 - July 30, 2021
- **Featured research on National Geographic Channel**
 - *Monster Fish* [Television series], *Shark Eating Goliath* (Season 6, episode 4, Jan 22, 2016). Documentary about research by myself and colleagues with the Atlantic Goliath Grouper.
- **Featured research on Amazon Prime**
 - *Goliaths in the Stream* (2020). Documentary about the conservation ecology work by myself and colleagues with the Atlantic Goliath Grouper.
- Featured research documentary on Global Photo Associates (GPA USA)
 - Japanese television program documentary on Goliath Grouper (in Japanese) (air date: Nov.22, 2017)
- Featured research documentary on Tokyo Broadcasting systems
 - Japanese television program “Amazing Animals: Doubustu Kisoutengai (in Japanese) (air date: September 21, 2016)
- Online blog post (September 28, 2018) for American Fisheries Society FL Student Chapter
 - [Misperceptions of a giant: impact of the recovering Goliath Grouper on Florida reefs](#)
- Featured research in popular journal: Malinowski, C R. “High on Mercury.” *Underwater Journal*, 12 June 2017.
 - [article link here](#)
- Featured newspaper article
 - Byrne, E. (2015, Dec. 17). Brillion native studying mercury in fish. *The Brillion News*, pp.1-2.
- Online blog post (June 6, 2016) for The FSU Coastal & Marine Laboratory
 - [Goliath Grouper in nearshore mangrove estuaries: researching effects and patterns of mercury toxicity](#)
- Online blog post (Jan. 12, 2015) for Teens4Oceans (non-profit organization)
 - [Mercury Contamination in Atlantic Goliath Grouper-Part 1: Are High Levels Dampening Recovery Potential?](#)
- Interactive online live chat through Explore.org and Teens4Oceans
 - Published Feb.4, 2015: <https://www.youtube.com/watch?v=aZ4YbpC4D8M>

SYNERGISTIC ACTIVITIES:

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| 2021-present | Member of SSC Grouper and Wrasse Specialist Group, International Union for the Conservation of Nature (IUCN). Responsible for assessing the status of species in this group, and for reassessing the red list status of the vulnerable Atlantic Goliath Grouper <i>Epinephelus itajara</i> . |
| 2018–2019 | Committee Member, Biological Sciences Diversity Committee, Florida State University. Developed and organized a diversity committee that has led to better departmental messaging of inclusion, and has led to more rigorous training. |
| 2016–2018 | Florida State University Diving Control Board, Graduate Student Representative. Continued development of our research diving program. |
| 2015–2016 | Treasurer, Ecology and Evolution Research Discussion Grouper (EERDG), Florida State University graduate student organization |
| 2006 | President-Tri-Beta Biological Honors Society, University of Wisconsin-Stevens Point, WI |

TEACHING EXPERIENCE:

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| 2019 | Purdue University
<u>Co-Instructor</u> |
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- Sumer Field Practicum (FNR 37100)
Emphasis: ecology of freshwater fishes
- 2018 Florida State University
Teaching Assistant
Animal Diversity, Lab (ZOO 3141L) (3 credits)
- 2018, 2019 Florida State University
Teaching Assistant
Introduction to Environmental Science, Lecture and Laboratory (EVR1001) (3 credits)
- 2016, 2017 Florida State University
Teaching Assistant
Environmental and Ecological Physiology (BSC 3402L) (3 credits)
- 2015, 2017 Florida State University
Teaching Assistant
General Ecology Lecture (PCB3043-0002) (3 credits)
- 2012 Florida Atlantic University
Adjunct Instructor
Anatomy and Physiology 1 Lab (BSC 2085) (1 credit)
Anatomy and Physiology 2 Lab (BSC 2086) (1 credit)
- 2010 Florida Atlantic University
Teaching Assistant
Comparative Vertebrate Morphogenesis (ZOO 4690L) (1 credit)
Anatomy and Physiology 1 Lab (BSC 2085) (1 credit)
- 2008-2011 Florida Atlantic University
Teaching Assistant
Anatomy and Physiology 1 Lab (BSC 2085) (1 credit)
Anatomy and Physiology 2 Lab (BSC 2086) (1 credit)
- 2009-2013 Boca Raton, FL
Private Tutor. Tutored and taught accredited private courses at college, high school, and grade school levels, including: Comparative Vertebrate Morphology, Physics, AP Chemistry, AP Biology, AP Environmental Science, Geometry, Algebra, and various other subjects.

TECHNICAL SKILLS:

- Experienced small boat (< 25-ton) captain
 - Inland lakes, Great Lakes, Gulf of Mexico, and the Atlantic
 - From nearshore environments (*e.g.*, mangroves) to >95 km offshore
 - Vessels have ranged in size from 16' Carolina Skiff to 26' Calcutta catamaran
- AAUS Scientific Diver certified (over 500 dives logged, both AAUS and non-AAUS)
 - I have been diving for ~20 yrs and have logged dives around the world, from frigid waters of the Great Lakes to murky waters of the northern Gulf of Mexico, and to clear and warm waters of South Atlantic and off Southeast Asia and Australia
 - I often dive to depths of 100-120', often with strong currents and other hazards
- CPR, First Aid Certified, AED, and Oxygen Administration trained and certified
- Tekran 2700 Mercury (Hg) Analysis System—to measure methyl- and inorganic mercury concentrations in tissues and materials
- Multi-collector ICP-MS (ThermoFinnigan Neptune) using a cold vapor generator (CETAC HGX-200) as an introduction system—for measuring Hg isotopes

- R statistical software, ArcGIS, Adobe Photoshop, Adobe Illustrator, and Microsoft Access
- Certified remotely operated vehicle (ROV) operator for FSUCML's Seamor 300T ROV
- Brazilian Jiu-Jitsu (BJJ) gold medalist

SEA EXPERIENCE: (> 1000 days at sea)

- Nearshore and offshore, day trips and offshore trips lasting weeks, small vessels to >100' research vessels

MENTORING AND SUPERVISION:

- Undergraduate and graduate student research mentor, FSU & Purdue University 2015-2020
 - mentored >10 undergraduate students,
 - currently mentoring 4 students
- Graduate Committee member, 1 student, FIU current
- Oversight of technicians and staff on field and laboratory research projects, FSU 2015-2020
- Graduate Teaching Assistant mentor, FAU 2011, 2012

OUTREACH:

- Ocean First Institute
 - Developed and instruct summer camp and re-occurring marine conservation courses and experiences in Key Largo, FL 2023-present
- Instructor, Saturday-at-the-Sea outreach program and summer camps, FSU 2014-2019
- Host, Florida State University Coastal & Marine Lab Biennial Open House, St. Teresa, FL 2013, 2015, 2017
- Judge, First Annual Deep-C Consortia ROV Competition, Tallahassee, FL 2013
- Judge, Sturgeon Bowl Science Competition, Great Lakes WATER Institute, Milwaukee, WI 2007, 2008
- Instructor, Marine Biology Summer Camp, Discover World Museum, Milwaukee, WI 2008