

Dr. Robert Nowicki
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Professional Appointments

- 2020-** Director, Data Science
Morning Consult
San Francisco, CA
- 2017-2020** Postdoctoral Research Fellow
International Center for Coral Reef Research and Restoration
Mote Marine Laboratory, Summerland Key, FL

Education

- 2016** Florida International University (FIU), PhD and MS in Biology
Advisor: Dr. Michael Heithaus
Dissertation title: “The effects of climate disturbance, overfishing, and their interaction on the structure and resilience of a model seagrass ecosystem.”
- 2010** University of North Carolina Wilmington, BS Marine Biology, Summa Cum Laude with honors
Advisor: Dr. Richard Satterlie
Capstone Thesis title: “Links between wing mechanoreceptors and sub-epithelial neurons in the peripheral nervous system of pteropod mollusc *Clione limacina*.”

Grants, Fellowships, and Awards (\$507,528 awarded total, 32 submitted, 10 funded, 2 pending)

- 2019** Nowicki, R., Koch, H., Clark, A., Page, H. ‘Protect Our Reef’ Grants program, **\$18,537**: “Development of Long Term High Frequency (LTHF) cameras to increase coral monitoring quality and evaluate genotypic variability in susceptibility to Stony Coral Tissue Loss Disease (SCTLD).”
- Nowicki, R. ‘Protect Our Reefs’ Grants program, **\$12,852**: “Proposal to develop a Versatile Ambient Replicated Mesocosm (VARM) capability at Mote’s International Center for Coral Reef Research and Restoration.”
- 2018** Nowicki, R. Florida Coastal Everglades LTER, **\$1,687**: Travel support to host a workshop entitled “Evaluating the influence of predator risk effects on ecological processes across multiple scales.”
- Hueter, R., Nowicki, R., and Morris, J. Dutch Elasmobranch Society (NEV), **\$8,182**: “Investigating methods to reduce nurse shark bycatch in the spiny lobster fishery of Saba, Dutch Caribbean”
- Nowicki, R. and Muller, E. PADI Foundation, **\$7,500**: “Determining whether and how Florida’s seagrass ecosystems can reduce coral disease and increase coral health in the Florida Reef Tract”
- 2017** Nowicki, R. Mote Marine Laboratory Postdoctoral Research Fellowship, **\$296,777**.
- 2016** Nowicki, R. FIU Dissertation Year Fellowship, **\$16,600**: “The effects of climate disturbance, overfishing, and their interaction on the structure and resilience of a model seagrass ecosystem.”
- Churchill, D., and Nowicki, R. Save Our Seas Foundation, **\$7,000**: “Calibrating an emerging trophic ecology tool for wild elasmobranch populations using aquarium held animals.”
- 2013** Nowicki, R. PADI Foundation, **\$5,284**: “Determining the contribution of healthy tiger shark populations to the resilience of seagrass ecosystems.”
- 2011** Nowicki, R. NSF Graduate Research Fellowship, **\$134,000**: “Interactions of competition and predation in a simplified coastal Carolina ecosystem.”

Peer Reviewed Publications (article titles link to PDFs)

Graham, E., Averill, C., Bond-Lamberty, B., Knelman, J., Krause, S., Peralta, A., Shade, A., Smith, P., Cheng, S., Fanin, N., Freund, C., Garcia, P., Gibbons, S., Van Goethem, M., Guebila, B., Kemppinen, J., **Nowicki, R.**, Pausas, J., Reed, S., Rocca, Sengupta, A., Sihi, D., Simonin, M., Slowinski, M., Spawn, S., Sutherland, I., Tonkins, J., Wisnoski, N., Zipper, S., Contributor Consortium. Submitted. “Towards a unifying framework of disturbance ecology through crowdsourced science”. *Global Change Biology*.

Nowicki, R., Thomson, J., Fourqurean, J., Wirsing, A., and Heithaus, M. In Review. “An extreme climatic event and experimental loss of predation risk accelerates herbivore-driven seagrass loss and tropicalization”. *Journal of Animal Ecology*.

Matich, P., **Nowicki, R.**, Davis, J., Mohan, J., Plumlee, J., Strickland, B., TinHan, T., Wells, R., Fisher, M. 2020. “Does proximity to freshwater refuge affect the size structure of an estuarine predator (*Carcharhinus leucas*) in the north-western Gulf of Mexico?” *Marine and Freshwater Research*.

Nowicki, R., Heithaus, M., Thomson, J., Burkholder, D., Gastrich, K. and Wirsing, A., 2019. “Indirect legacy effects of an extreme climatic event on a marine megafaunal community”. *Ecological Monographs*, p.e01365.

Kendrick, G.A., **Nowicki, R.**, Olsen, Y.S., Strydom, S., Fraser, M.W., Sinclair, *et al.* 2019. “A Systematic Review of How Multiple Stressors From an Extreme Event Drove Ecosystem-Wide Loss of Resilience in an Iconic Seagrass Community”. *Frontiers in Marine Science*, 6, p.455.

Nowicki, R., Heithaus, M., Fourqurean, J. 2018. “The role of consumers in structuring seagrass ecosystems: direct and indirect mechanisms”. *Biology of Seagrasses, Second edition. Springer*.

Nowicki, R., Burkholder, D., Thomson, J., Fourqurean, J., Heithaus, M. 2017. “Predicting seagrass recovery times and their implications following an extreme climate event”. *Marine Ecology Progress Series* 567:79-93.

Ferreira, L., Thums, M., Heithaus, M., Barnett, A., Abrantes, K., Holmes, B., Zamora, L., Frisch, A., Pepperel, J., Burkholder, D., Vaudo, J., **Nowicki, R.**, Meeuwig, J., and Meekan, M. 2017. “The trophic role of a large marine predator, the tiger shark *Galeocerdo cuvier*”. *Scientific Reports* 7(1): 7641.

Stroud, J.T., Bush, M., Ladd, M., Lemoine, N., **Nowicki, R.**, Shantz, A., Sweatman, A. 2015. “Is a community still a community? Reviewing definitions of key terms in community ecology”. *Ecology and Evolution* 5(21): 4757-4765.

Other Publications or reports (titles link to PDFs when applicable)

Nowicki, R., Hueter, R. 2019. “Reduction of nurse shark bycatch in the Saba Bank lobster Fishery.” Final project report, Dutch Elasmobranch Society (NEV).

Nowicki, R. and Churchill, D. 2018. “Validating a new tool in food web and movement ecology for use on sharks and rays.” Final Project Report, Save our Seas Foundation.

Nowicki, R. 2016. “Effects of catastrophic seagrass loss and predation risk on the ecological structure and resilience of a model seagrass ecosystem.” PhD Dissertation.

Publications in Preparation (full drafts only, available upon request)

Burnham, K., **Nowicki, R.**, Page, H., Hall, E., Pi, J. “Reduced coral reef resilience: urchin herbivory fails to offset increases in algal biomass under ocean acidification.”

Nowicki, R., Heithaus, M. “Seagrass diversity provides landscape scale resilience to fish communities following an Extreme Climactic Event.”

Nowicki, R., Everhart, J., Gustafson, F., El-Sherbiny, M., Al-Aidarooos, A. “A rapid assessment of dominant algae-teleost relationships and fish feeding preferences in the Northeastern Gulf of Aqaba, Red Sea.”

Nowicki, R. “Context dependence, complexity, and a unified general ecology: are we predicting enough?”

Other Awards

2016 *Provost award for biology oral presentation, second place: Nowicki, R.*, Thomson, J., Fourqurean, J., Heithaus, M. “Can tiger sharks help coastal ecosystems recover from climactic disturbances?” Florida International University 6th annual Scholarly Forum.*

Most intriguing oral presentation: Nowicki, R., Heithaus, M. “Nothing in ecology makes sense”. Florida International University 18th annual Research Biosymposium.*

Formal Teaching Experience

2016 Guest lecturer and assistant, Marine Ecology, Florida International University (FIU)

Teaching Assistant, General Biology (FIU)

2015 Teaching Assistant, Human Biology (FIU)

2012 Teaching Assistant, General Biology (FIU)

2011 Teaching Assistant, General Biology (FIU)

Informal Teaching and Mentoring Experience

2012-2020 Undergraduate and Postgraduate mentor (20+ mentees, 10,000+ contact person-hours)

2014-2018 Experienced resource person, NSF Graduate Research Fellowship Program (two honorable mentions)

2016-2017 SEEDS Mentor, Ecological Society of America

2017-2018 Organizer, graduate school brown bag seminars for Mote interns (quarterly)

2016 Teaching Advancement Certification, Florida International University

2012-2014 Field biology research curriculum developer, Geraldton Grammar School, Western Australia

2012-2014 Public Research Talks in Shark Bay, Western Australia (90-100 talks total)

Public Research Presentations and Posters (21 total, first author only, underlined indicates invited)

2019 **American Elasmobranch Society Annual Meeting**
“Estimates of Amino Acid Trophic Enrichment Factors for Stable Isotope Analysis in Sharks and Rays.”

Benthic Ecology Society Annual Meeting
“Building a better mouse trap: evaluating tools to reduce rates and impact of nurse shark bycatch in Spiny Lobster fisheries.”

2018 **Long Term Ecological Research (LTER) All Scientists Meeting**
“Evaluating the influence of predator risk effects on ecological processes across multiple scales.”

Ecological Society of America Annual Meeting
“Context dependence, complexity, and prediction in ecology: Past trends and future directions.”

Gordon Research Conference and Seminar: Unifying Ecology Across Scales (Poster)

“Context dependence, complexity, and ecology as a predictive field: The case for a paradigm shift.”

2017 American Fisheries Society Annual Meeting

“Numerical Response of an Apex Predator, the Tiger Shark, to Ecosystem-Scale Seagrass Loss.”

Ecological Society of America Annual Meeting

“Effects of massive seagrass loss on abundance and habitat use patterns of a marine megafauna community.”

American Elasmobranch Society Annual Meeting

“Does widespread resource loss influence trophic characteristics of tiger sharks?”

2016 Ecological Society of America Annual Meeting

“Can tiger sharks help coastal ecosystems recover from climactic disturbances?”

American Elasmobranch Society Annual Meeting

“Response of an apex predator, the tiger shark (*Galeocerdo cuvier*), to widespread seagrass decline.”

Benthic Ecology Society Annual Meeting

“Resistance, resilience, and the response of a teleost community to catastrophic seagrass loss.”

Smithsonian Marine Station Scientific Seminar Series

“Climate change, predator loss, and the resilience of an iconic seagrass ecosystem.”

Dissertation Defense, Florida International University

“Effects of catastrophic seagrass loss and predation risk on the ecological structure and resilience of a model seagrass ecosystem.”

Florida International University Annual Scholarly Forum

“Can tiger sharks help coastal ecosystems recover from climactic disturbances?”

Florida International University Science and Suds forum

“Resistance, resilience, and the response of a teleost community to catastrophic seagrass loss.”

Florida International University Annual Research Biosymposium

“Nothing in ecology makes sense.”

Staff presentation, Mystic Aquarium, Mystic, Connecticut

“Using captive-held elasmobranchs to understand the diets of wild sharks and rays.”

2015 American Elasmobranch Society Annual Meeting

“Effects of predation risk from tiger sharks (*Galeocerdo cuvier*) on resilience of an iconic seagrass ecosystem following a widespread climate driven disturbance.”

Florida International University Annual Research Biosymposium

“Effects of predation risk from tiger sharks (*Galeocerdo cuvier*) on resilience of an iconic seagrass ecosystem following a widespread climate driven disturbance.”

2014 Shark Bay Marine Park Department of Environment and Conservation Annual Meeting

“Impacts of a catastrophic seagrass decline on the marine fauna of Shark Bay.”

2013 Shark Bay Marine Park Department of Environment and Conservation Annual Meeting

“Decline, impact, and recovery of Shark Bay’s seagrass community.”

Professional Memberships

2015-Present American Elasmobranch Society

2015-Present Ecological Society of America

2016 Benthic Ecology Society

2017 American Fisheries Society
2013 American Society of Naturalists

Journals Reviewed For

Estuaries and Coasts, Marine Ecology Progress Series, Diversity, Science Matters, Water

Other Research Experience

2019 **Research Scientist**
Save Our Sharks Research expedition to tag tiger sharks, Saba, Dutch Antilles

2018 **Research Scientist**
Mote Marine Lab- King Abdulaziz University joint research cruise to Gulf of Aqaba, Saudi Arabia

2015-Present **Research Scientist**
OCEARCH foundation (4 research cruises, OCEARCH.org)

2013-2015 **Field leader**
Shark Bay Ecosystem Research Project (SBERP.org)

2011-2014 **Research Assistant**
FIU (PIs: J. Trexler, D. Burkepile, K. Boswell, M. Heithaus, FIU)

2011 **Ecological consultant**
Pew Charitable Trusts (PI: C.H. Peterson, UNC)

2010-2011 **Research Assistant**
University of North Carolina IMS (PI: C.H. Peterson, UNC)

Outreach, Volunteer and Service Experience

2012-present **100+ talks, presentation, and interviews to the public in person, online, and over radio**

2017-2020 **Member, Technical Advisory Committee, Florida Keys National Marine Sanctuary Water Quality Protection Program**

2017-2019 **Poster/Presentation Judge, Annual FIU Biosymposium**

2018 **Ecological Society of America (ESA) Presentation Judge**
Skype a Scientist! Science host
Consulting Scientist, Lower Keys Fishing Guide Association

2016 **Interim Treasurer, FIU Science and Suds Forum**

2013-2015 **Graduate student practical problem working group** (resulted in Stroud et al. 2015)

2010-2011 **Regular dive site cleanup, Radio Island Jetty, Beaufort, NC**

2008 **Education volunteer, Ft Fisher Aquarium, NC**

2007 **Member, "Long Leaf Pines" organization** (protected ~2 acres of long-leaf pine habitat on UNCW campus from development)

Field Proficiencies

US. Coast Guard OUPV captain's license (400+ vessel days)

Australian licensed Restricted coxswain (~900 operator hours)
AAUS: Research diver (~400 dives)
PADI/SSI: Open water diver, advanced open water diver, rescue diver, Enriched Air Nitrox (EAN) diver
Australian and American Red Cross: CPR, first aid, AED
DAN: Oxygen administrator

Software Proficiencies

Statistical programs (R, Sigmaplot, PRIMER+ Permanova)
Media manipulation software (Adobe *Photoshop*, GIMP, Inkscape, Lightworks)
3D scanning software
3D Photogrammetry software (Agisoft Metashape)
MS Office Suite

References available upon request
