Jonathan Albert Peake

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EDUCATION

University of South Florida College of Marine Science, St. Petersburg, FL August 2016-Present
Ph.D. Candidate in Marine Science, Marine Resource Assessment Concentration
Dissertation: Spatiotemporal dynamics of marine metacommunities in the Western Atlantic
GPA: 3.96; Major advisor: Dr. Christopher Stallings

University of Miami, Coral Gables, FL Graduated Spring 2016
B.S. in Marine and Atmospheric Science with Departmental Honors in Marine Science; Cum Laude
Thesis: A meta-analysis of invasive Lionfish diet throughout the temperate and tropical Western Atlantic
Major Areas of Study: Marine Science, Biology, and Mathematics (Probability and Statistics Concentration); Minor Area of Study: Psychology
GPA: 3.80; GRE (Percentile): 167 Verbal (97%), 166 Quantitative (92%), 5.0 Writing (93%)

HONORS AND AWARDS

- St. Petersburg Downtown Partnership Fellowship in Coastal Science ($15k), 2020
- USF Office of Graduate Studies International Travel Grant ($1500), 2019
- Linton Tibbetts Endowed Graduate Student Fellowship ($10k), 2018, 2019
- Florida Forage Fish Research Program Fellowship ($15k), 2018
- American Fisheries Society Florida Chapter Student Travel Grant ($170), 2017
- Anne and Werner Von Rosenstiel Fellowship, awarded to the top incoming graduate student in each discipline at the USF College of Marine Science ($10k), 2016
- University of Miami RSMAS SURGE (Small Undergraduate Research Grant Experience) Award ($900), 2016
- NOAA Ernest F. Hollings Scholarship ($26k total awarded), 2014-2016
- Foote Fellows Honors Program, 2012-2016
- University of Miami Isaac Bashevis Singer Scholarship, full tuition for four years, 2012-2016
- Eagle Scout, 2011

PUBLICATIONS

Total Citations: 43; h-index: 3
Information obtained from Google Scholar, July 20, 2021

Faletti, M.E., Chacin, D.H., **Peake, J.A.**, MacDonald, T.C., & Stallings, C.D. (2019). Population dynamics of Pinfish in the eastern Gulf of Mexico (1998-2016). *PLoS One, 14*(8), e0221131. doi:10.1371/journal.pone.0221131

Bogdanoff, Alex K., Mostowy, J., **Peake, J.,** et al. A brief description of invasive lionfish (Pterois sp.) diet composition in the Arrecifes de Cozumel National Park. *Food Webs* 17 (2018): e00104.

Peake, J., Bogdanoff, A.K., Layman, C.A. et al. Feeding ecology of invasive lionfish (Pterois volitans and Pterois miles) in the temperate and tropical western Atlantic. *Biological Invasions* 20.9 (2018): 2567-2597.

MANUSCRIPTS UNDER REVIEW

Peake, J.A., MacDonald, T.C., Thompson, K.A., & Stallings, C.D. Estuarine forage fish community dynamics reveal association with basal resource regime across a latitudinal gradient. *Ecosphere.*

Bates, A.E., Primack, R.B., et al [PAN-Environment Working Group including **Peake, J.A.**] Global COVID-19 lockdown highlights humans as threats and custodians of the environment. *Science*.

RESEARCH AND LABORATORY EXPERIENCE

USF College of Marine Science, St. Petersburg, FL

Graduate Student/Laboratory Technician — May 2016-Present

- Leading study on spatiotemporal dynamics of western Atlantic marine metacommunities
- Performing underwater scientific diving visual fish community surveys using the Bohnsack-Bannerot method in the eastern Gulf of Mexico (eGOM)
- Analyzing video fish community surveys from the eGOM as part of ongoing monitoring effort
- Developing and maintaining Access Database for fish survey data storage, organization, and analysis
- Lead study examining estuarine forage fish community dynamics on the West Florida Shelf
- Collaborated on study comparing production in Gray Snapper (*Lutjanus griseus*) and White Grunt (*Haemulon plumerii*) on artificial and natural reefs in the eGOM
    - Collected fish using SCUBA and spear
    - Dissected and processed fish samples
    - Prepared muscle and liver tissue samples for stable isotope analysis
    - Performed eye lens delamination for tracking life history using stable isotopes
    - Analyzed ovaries for batch fecundity estimates
- Co-authored research study investigating population dynamics of Pinfish in the eGOM
    - Performed inter- and intra-annual analyses of density, biomass, and growth of Pinfish in four major estuaries of the eGOM
- Assisted with project investigating reef fish abundance via reproductive output
- Maintained and documented study on oyster predator-prey interactions with varying salinity

Aquarium Manager — August 2017-August 2018

- Managed and coordinated use of space for the College of Marine Science's aquarium facilities
- Tended to mechanical issues, water chemistry maintenance, and tank upkeep between projects
- Documented IACUC protocols and addressed issues resulting from routine inspections

NOAA Southeast Fisheries Science Center, Beaufort, NC

Student Researcher — August 2015-May 2016

- Conducted meta-analysis of lionfish diet across invasive region as Senior Honors Thesis Project
- Enhanced Lionfish Stomach Content Analysis Tool
- Co-authored Cozumel Lionfish Diet Study

NOAA Hollings Scholarship Program Student Researcher — Summer 2015

- Built Microsoft Access-based Lionfish Stomach Content Analysis Tool
- Dissected lionfish stomachs, identified and analyzed stomach contents from Cozumel, Mexico

Rosenstiel School of Marine and Atmospheric Science, Coral Gables, FL
Volunteer Research Assistant September 2013-May 2016

- Dissected lionfish stomachs, identified and analyzed stomach contents
- Assisted in sorting zooplankton samples and identifying late-stage larval fish
- Dissected, sexed, and extracted otoliths from lionfish

Institute of Marine and Environmental Technology, Baltimore, MD
Student Researcher Summer 2013, Summer 2014

- Helped build recirculating aquaculture system for hatching and rearing of larval Atlantic Bluefin Tuna (*Thunnus thynnus*)
- Cultured live feeds for aquaculture and analyzed effects of parameters on success and nutrition
- Analyzed taurine levels in food sources for wild and aquacultured fish
- Searched for integral gene in taurine biosynthesis pathway of cobia (*Rachycentron canadum*)

TEACHING EXPERIENCE

USF College of Marine Science, St. Petersburg, FL
Teaching Assistant Spring 2017-Present

- Formal teaching assistant for Biometry (Fall 2018, Fall 2019, Fall 2020) and Applied Multivariate Statistics (AMS; Spring 2019, Spring 2020, Spring 2021) courses for College of Marine Science graduate students
- Informal teaching aid to an Introduction to R Statistical Programming course (Spring 2017) for CMS graduate students and faculty/staff
- Provided input and guidance in lecture development and course content
- Helped troubleshoot issues with code and brainstormed solutions to specific coding questions
- Graded weekly code-based lab assignments (Biometry and AMS)
- Oversaw and implemented transition of Biometry and AMS from MATLAB to R Statistical Computing Environment

POSTERS AND PRESENTATIONS

USF College of Marine Science Graduate Student Symposium
St. Petersburg, FL Spring 2020
"Community structure and dynamics of forage fishes in the eastern Gulf of Mexico (1998-2017)", Oral

Western Society of Naturalists, Ensenada, Mexico
Fall 2019 "Community structure and dynamics of forage fishes in the eastern Gulf of Mexico (1998-2017)", Oral

USF College of Marine Science Graduate Student Symposium
St. Petersburg, FL Spring 2019
"Metacommunities in 4D: Spatiotemporal dynamics of coastal marine metacommunities in the Western Atlantic", Oral

USF College of Marine Science Graduate Student Symposium,
St. Petersburg, FL Spring 2017
"A Meta-analysis of Invasive Lionfish Diet Throughout the Temperate and Tropical Western Atlantic," Poster

RSMAS Undergraduate Research, Creativity, and Innovation Forum Spring 2016
Coral Gables, FL
"A Meta-Analysis of Invasive Lionfish Diet throughout the Temperate and Tropical Western Atlantic", Poster

68th Annual Meeting of the Gulf and Caribbean Fisheries Institute
Panama City, Panama Fall 2015
"A Meta-Analysis of Invasive Lionfish Diet Throughout the Temperate and Tropical Western Atlantic", Poster

NOAA Office of Education Science and Education Symposium
Silver Spring, MD Summer 2015
"Feeding Ecology of the Invasive Lionfish *Pterois volitans*: A New Tool for the Analysis of Lionfish Stomach Contents", Oral

PROFESSIONAL DEVELOPMENT

Advanced PRIMER version 7/PERMANOVA+ Workshop, St. Petersburg, FL Spring 2019
Presentation Bootcamp, St Petersburg, FL Fall 2016
Marine Resources Population Dynamics Workshop, Layton, FL Spring 2016
Communicating Science Effectively Workshop, Annapolis, MD Summer 2013

OUTREACH AND COMMUNITY SERVICE

- Acted as Treasurer of the USF Marine Science Advisory Committee Fall 2017-Spring 2018
- Volunteered in National Ocean Sciences Bowl Spoonbill Regional Bowl Spring 2017 and 2018
- Organized exhibit for St. Petersburg Science Festival Fall 2016 and 2017
- Volunteered during Spa Beach Seine Netting field trip with Shorecrest Elementary Junior Kindergartners Spring 2017
- Participated in Keg and Klean Beach Cleanup Spring 2016
- Identified and updated restaurants serving lionfish for the NOAA Invasive Lionfish Story Map: Eating for a Cause Summer 2016
- Helped build educational endemic garden in Galapagos Spring 2015
- Volunteered for Towson University SciTech Lab Day for Grades 3-5 Summer 2013
- Volunteered in National Ocean Sciences Bowl Manatee Regional Bowl Spring 2013
- Volunteered in hurricane preparation of Miami area community garden Fall 2012

PROFESSIONAL ASSOCIATIONS

American Association for the Advancement of Science (AAAS)
American Fisheries Society
Ecological Society of America
Western Society of Naturalists

SIGNIFICANT COURSEWORK

Graduate Courses:
Biological Oceanography, Physical Oceanography, Chemical Oceanography, Geological Oceanography, Fish Biology, Biometry, Applied Multivariate Statistics, Data Analysis Methods

Undergraduate Courses:

Marine Science: Marine Animal Neurophysiology and Behavior, Marine Ecology, Marine Conservation Biology, Spatial Applications in Marine Science (GIS), Marine Genomics and Conservation Genetics

Biology: Genetics, Cellular and Molecular Biology, Organic Chemistry I and Lab, Comparative Physiology

Mathematics: Introduction to Probability Theory, Statistical Analysis, Abstract Mathematics, Linear Algebra, Multivariable Calculus, Advanced Calculus, Mathematical Statistics

Field Experience: Semester-Long Study Abroad Field Experience in the Galapagos Islands, Spring 2015

RESEARCH CRUISES

Participating Scientist, *R/V Weatherbird,* September 24-26, 2019

Fish egg sampling on the West Florida Shelf for fecundity-based population estimates

FIELD SKILLS

Operation and trailering of a 26' twin-hull motorboat
Scientific Diving Using Enriched Air (Nitrox)
Bohnsack-Bannerot Visual Fish Surveying
Spearfish Sampling
Hook-and-Line Sampling

LABORATORY SKILLS

Polymerase Chain Reaction (PCR)
Liquid Chromatography-Mass Spectrometry (LC-MS)
Gel electrophoresis
Flow cytometry
Ethanol extraction
Microscopy
Otolith extraction and analysis
Settlement-stage reef fish identification
Stomach content identification
Stable isotope analysis
Fish dissection
Fish eye lens delamination
Batch fecundity estimation

COMPUTER AND PROGRAMMING SKILLS

R Statistical Language and Coding
MATLAB Mathematical and Statistical Software
Scilab Numerical Computational Software
PRIMER Statistical Software
Microsoft Access Database Management
Visual Basic for Applications (VBA) Language and Coding
Geographic Information Systems (GIS)
Windows OS, Linux OS, ChromeOS
Microsoft Office (Word, PowerPoint, Excel, Publisher, OneNote)

CERTIFICATIONS

PDIC Open Water SCUBA Certification
USGS Motorboat Operator Certification
AAUS Scientific Diver: 60 Foot Depth Certification
PADI Nitrox Diver Certification
NAUI First Aid/CPR/Oxygen Provider