

RYAN J. ECKERT

Coral reef ecology, mesophotic coral ecosystems, molecular ecology

EDUCATION

- 2019
|
expected
2024 • **Ph.D. Student in Integrative Biology**
Florida Atlantic University
Advisor: Dr. Joshua Voss
Boca Raton, FL
- 2017
|
2019 • **M.Sc. in Biological Sciences**
Florida Atlantic University
Thesis: Population genetics and algal symbiont communities of the coral species *Montastraea cavernosa* on the Belize Barrier Reef
Advisor: Dr. Joshua Voss
Boca Raton, FL
- 2005
|
2009 • **B.Sc. in Biological Sciences**
Florida State University
Thesis: Associational resistance and susceptibility in *Solanum carolinense*
Tallahassee, FL

RESEARCH EXPERIENCE

- 2017
|
present • **Graduate Research Assistant**
FAU, Harbor Branch Oceanographic Institute
Voss Laboratory
Ft. Pierce, FL
- 2009
|
2017 • **Research Specialist**
NOAA's Flower Garden Banks NMS
Science Division
Galveston, TX
- 2007
|
2009 • **Research Assistant**
Florida State University
Underwood Laboratory
Tallahassee, FL

TEACHING EXPERIENCE

- 2017 • **Graduate Teaching Assistant**
FAU Harbor Branch Oceanographic Institute
Marine Biodiversity
Ft. Pierce, FL
- 2013
|
2014 • **Guest Lecturer**
Texas A&M University at Galveston
Scientific Diving Field Survey Methods
Galveston, TX
- 2010 • **Instructor**
Galveston Independent School District
21st Century ACE
Galveston, TX



Ph.D. student specializing in coral reef ecology, mesophotic coral ecosystems, molecular ecology, and multivariate data analysis.

CONTACT INFO

5600 US1 N, Ft. Pierce, FL 34946

+1 (772) 224-2396

ryan.j.eckert@gmail.com

[Ryan J Eckert](#)

[RyanEckert](#)

[CnidaRyan](#)

SKILLS

Coral reef ecology
Technical SCUBA diving
750+ Scientific Dives
350+ Days at Sea
90+ research expeditions
Multivariate data analysis
NGS Library prep
Bioinformatic analysis
Github, Bash, R, Python



STUDENTS MENTORED

- 2018 ● **Emily Chei**
Link fellowship intern
 Assessing population connectivity of the coral *Montastraea cavernosa* along the northern Florida Reef Tract
 Currently a student at Cornell University
- 2017 ● **Ashley Reaume**
Link fellowship intern
 Optimized extraction and amplification of algal symbiont DNA from TRIzol preserved corals
 Currently a graduate student at University of Central Florida



REFEREED PUBLICATIONS

- 2019 ● **8. Populations of the coral species *Montastraea cavernosa* on the Belize Barrier Reef lack vertical connectivity**
Sci Rep (2019). doi:[10.1038/s41598-019-43479-x](https://doi.org/10.1038/s41598-019-43479-x)
Eckert RJ, Studivan MS, Voss JD
- 2019 ● **7. The Mesoamerican Reef**
 In: Loya Y., Puglise K.A., Bridge T.C.L. (eds) *Mesophotic Coral Ecosystems of the World*. Springer International Publishing, Cham, pp 71–84.
[doi:10.1007/978-3-319-92735-0_5](https://doi.org/10.1007/978-3-319-92735-0_5)
 Gress E, Voss JD, **Eckert RJ**, Rowlands G, Andradi-Brown DA
- 2019 ● **6. Coral bleaching and recovery from 2016 to 2017 at East and West Flower Garden Banks, Gulf of Mexico**
Coral Reefs (2019). doi:[10.1007/s00338-019-01788-7](https://doi.org/10.1007/s00338-019-01788-7)
 Johnston MA, Hickerson EL, Nuttall MF, Blakeway RD, Sterne TK, **Eckert RJ**, Schmahl GP
- 2019 ● **5. Localized coral reef mortality event at East Flower Garden Bank, Gulf of Mexico**
Bull Mar Sci (2019). doi:[10.5343/bms.2018.0057](https://doi.org/10.5343/bms.2018.0057)
 Johnston MA, Nuttall MF, **Eckert RJ**, Blakeway RD, Sterne TK, Hickerson EL, Schmahl GP, Lee MT, MacMillan J, Embesi JA
- 2018 ● **4. Seasonal variability of carbonate chemistry and decadal changes in waters of a marine sanctuary in the Northwestern Gulf of Mexico**
Mar Chem (2018). doi:[10.1016/j.marchem.2018.07.006](https://doi.org/10.1016/j.marchem.2018.07.006)
 Hu X, Nuttall MF, Wang H, Yao H, Staryk CJ, McCutcheon MR, **Eckert RJ**, Embesi JA, Johnston MA, Hickerson EL, Schmahl GP, Manzello D, Enochs IC, DiMarco S, Barbero L
- 2016 ● **3. Persistence of coral assemblages at East and West Flower Garden Banks, Gulf of Mexico**
Coral Reefs (2016). doi:[10.1007/s00338-016-1452-x](https://doi.org/10.1007/s00338-016-1452-x)
 Johnston MA, Embesi JA, **Eckert RJ**, Nuttall MF, Hickerson EL, Schmahl GP

Citations: 88

h-index: 5

i10-index: 2

- 2016 ● **2. Rapid invasion of Indo-Pacific lionfishes *Pterois volitans* (Linnaeus, 1758) and *P. miles* (Bennett, 1828) in Flower Garden Banks National Marine Sanctuary, Gulf of Mexico, documented in multiple data sets**
BioInvasions Rec (2016). doi:10.3391/bir.2016.5.2.09
 Johnston MA, Nuttall MF, **Eckert RJ**, Embesi JA, Sterne TK, Hickerson EL, Schmahl GP
- 2014 ● **1. Lionfish (*Pterois volitans* [Linnaeus, 1758] and *P. miles* [Bennett, 1828]) records within mesophotic depth ranges on natural banks in the Northwestern Gulf of Mexico**
BioInvasions Rec (2014). doi:10.3391/bir.2014.3.2.09
 Nuttall MF, Johnston MA, **Eckert RJ**, Embesi JA, Hickerson EL, Schmahl GP





MANUSCRIPTS IN PREPARATION

- **Population structure of the scleractinian coral, *Montastraea cavernosa*, in the Northern Florida Reef Tract**
Bull Mar Sci (in revision).
 Dodge DL, Chei E, Beal J, **Eckert RJ**, Voss JD
- **Symbiodiniaceae community variation among *Montastraea cavernosa* populations along a depth gradient on the Belize Barrier Reef**
Front Microbiol (in prep).
Eckert RJ, Reaume A, Sturm AB, Studivan MS, Voss JD



PRESENTATIONS

- 2019 ● **Genetically distinct depth-stratified *Montastraea cavernosa* coral populations on the Belize Barrier Reef harbor relatively homogeneous Symbiodiniaceae communities**
 48th Annual Benthic Ecology Meeting  St. John's, NL, Canada
Eckert RJ, Reaume A, Voss JD
 Oral presentation
- 2019 ● **Populations of the coral species *Montastraea cavernosa* lack vertical connectivity on the Belize Barrier Reef**
 ASLO Aquatic Sciences Meeting  San Juan, PR.
Eckert RJ, Studivan MS, Voss JD
 Poster presentation
- 2018 ● **Affordable and ecologically relevant graduate research on the world's second largest barrier reef? You better Belize it!**
 HBOI Science Seminar  Ft. Pierce, FL.
Eckert RJ and Studivan MS
 Oral presentation
- 2018 ● **Connected corals: population genetics of *Montastraea cavernosa* on the Belize Barrier Reef**
 HBOI Ocean Discovery Visitors Center Marine Science Fridays

📍 Ft. Pierce, FL.

Eckert RJ
Oral presentation

- 2018 ● **Breaking point: population genetics reveal a lack of vertical connectivity of *Montastraea cavernosa* on the Belize Barrier Reef**
47th Annual Benthic Ecology Meeting 📍 Corpus Christi, TX.
Eckert RJ, Studivan MS, Voss JD
Oral presentation
- 2013 ● **Ciguatera fish poisoning in the northwestern Gulf of Mexico.**
66th Gulf and Caribbean Fisheries Institute Conference 📍 Corpus Christi, TX
Eckert RJ, Loeffler C, Robertson A, Johnston MA, Hickerson EL, Schmahl GP
Poster presentation
- 2009 ● **Associational resistance and susceptibility in *Solanum carolinense***
Southeastern Ecology and Evolution Conference 📍 Gainesville, FL.
Eckert RJ, Kim T, Underwood N
Poster presentation

🏠 FUNDING

- 2019 | 2021 ● **FAU Presidential Fellowship**
\$10,000
- 2018 | 2019 ● **FAU GPSA Travel Awards**
\$1,600
- 2018 ● **FAU Thesis Award**
\$500
- 2018 ● **PADI Foundation Grant**
\$4,973
- 2009 ● **Bess H. Ward Honors Thesis Award**
\$1,000
- 2005 | 2009 ● **Florida Bright Futures Academic Scholarship**
\$14,850
- 2005 | 2009 ● **Florida State University Freshman Academic Scholarship**
\$8,000
- 2005 ● **Florida State University Freshman Advanced Placement Scholarship**
\$500

🏆 AWARDS

- 2019 | 2021 ● **Florida Atlantic University Presidential Fellow**

2006

|
2009

2005

- **Florida State University Dean's List**
- **Florida State University President's List**



CERTIFICATIONS

- **AAUS Scientific Diver**
190', Trimix
- **TDI Technical SCUBA Diver**
Advanced Nitrox, Decompression Procedures, Trimix 200'
- **PADI Trimix Gas Blender**
- **DAN Oxygen delivery, First Aid, and CPR for scuba diving injuries**
- **USCG Licensed Merchant Mariner**
100 GRT
- **USFWS Motorboat Operator Certification Course**
- **Sea-Bird Electronics technician**
- **NOAA Working SCUBA Diver**
- **NOAA EEHS Hyperbaric Chamber Operator training**



MEMBERSHIP AND SERVICE

2019

- **International Coral Reef Society**

2019

- **HBOI Graduate Student Association**
Secretary

📍 Ft. Pierce, FL

2018

- **Association for the Studies of Limnology and Oceanography**



SKILLS

- Offshore field research cruise planning, logistics, and execution
- Coral sampling, benthic surveys, fish surveys, photography, navigation and mapping
- DNA and RNA extraction, PCR, qPCR, Gel electrophoresis, NGS library preparation
- Data visualization, CPe, Primer7, Python, Bash, and R statistical software
- Bioinformatic and multivariate statistical analyses
- Technical SCUBA diving
- Operation, navigation, and handling of small boats
- Marlinspike, and mooring buoy construction/installation/maintenance
- Setup, operation, and maintenance of oceanographic equipment (Sea-Bird Electronics)
- Operation of Nitrox compressor systems and Trimix blending
- Adobe InDesign, Adobe Illustrator, and Adobe Photoshop
- Experience with National Resource Damage Assessment operations



REFERENCES

- **Dr. Joshua Voss**
Ph.D. Advisor
• +1 (772) 242-2538
• jvoss2@fau.edu
📍 Florida Atlantic University
- **Dr. Adrienne Simoes-Correa**
Assistant Professor
• +1 (713) 348-3054
• ac53@rice.edu
📍 Rice University
- **G.P. Schmahl**
Superintendent
• +1 (409) 621-5151
• george.schmahl@noaa.gov
📍 Flower Garden Banks National Marine Sanctuary

*This curriculum vitae was made with the R package **pagedown**.*

Last updated on 2019-11-12.