

IAN R. COMBS

Coral reef ecology, coral health and disease



EDUCATION

2019
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2017

M.Sc. in Biological Sciences

Florida Atlantic University

📍 Boca Raton, FL

Thesis: Characterizing the impacts of stony coral tissue loss disease on coral in southeast Florida using 3D photogrammetry
Advisor: Dr. Joshua Voss

2014
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2010

B.Sc. in Marine Science

University of Delaware

📍 Newark, DE



RESEARCH EXPERIENCE

Present
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2019

Research Technician

FAU, Harbor Branch Oceanographic Institute
Voss Laboratory

📍 Ft. Pierce, FL

Dr. Joshua Voss

Lead field research operations for local southeast Florida stony coral tissue loss disease related projects including disease monitoring, fate-tracking, disease intervention, and tissue sampling. Responsible for sample processing, data entry, data analysis, and database management of southeast Florida projects. Maintain lab and field supplies, chemical inventory, and lab equipment. Mentor interns and assist students in the lab. Assist with report and publication writing.

2019
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2017

Graduate Research Assistant

FAU, Harbor Branch Oceanographic Institute
Voss Laboratory

📍 Ft. Pierce, FL

Dr. Joshua Voss

Executed fieldwork for southeast Florida stony coral tissue loss disease projects, collected and analyzed roving diver disease survey data, adapted and optimized 3D photogrammetry technique to assess surface area of fate-tracked coral colonies, processed and analyzed 3D photogrammetry data, intervened on diseased, fate-tracked coral colonies. Participated in 2 research cruises totalling 20+ days at sea.

2017

Coral Restoration Intern

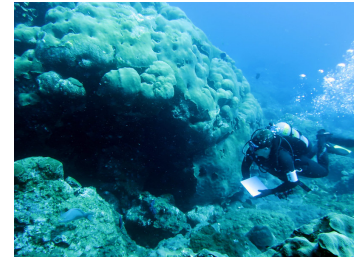
Mote Marine Laboratory

📍 Summerland Key, FL

Elizabeth Moore International Center for Coral Reef Research & Restoration

Chris Page

Maintained land-based coral nursery including water quality, raceway maintenance, and microfragmentation



Research technician specializing in coral health and disease, coral reef ecology, and 3D photogrammetry.

CONTACT INFO

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✉ combsi9892@gmail.com

🌐 [Ian Combs](#)

🌐 [icombs2017](#)

🐦 [Scleractinian_](#)

SKILLS

Coral reef ecology

Coral health and disease

160+ Scientific Dives

Multivariate data analysis

3D Photogrammetry

2017

Coral Health and Disease Research Intern

Mote Marine Laboratory

📍 Sarasota, FL

Coral Health and Disease Laboratory

Dr. Erinn Muller

Collected, processed, and analyzed data to better understand genotypic responses to ocean acidification and temperature in *Acropora cervicornis*

2014

Research Assistant

University of Delaware

📍 Lewes, DE

Team Benthic Habitat Mapping

Dr. Douglas Miller

Processed over 1,000 benthic AUV photographs assessing incidental mortality of sea scallops from commercial fishing dredges



TEACHING EXPERIENCE

2018

Graduate Teaching Assistant

FAU Harbor Branch Oceanographic Institute

📍 Ft. Pierce, FL

Marine Biodiversity

Gathered specimens, set up and tore down experiments, assisted students in the field and in the laboratory, proctored exams, graded and provided feedback on end of semester project

2017

Research-based After-school Program for Students

Mote Marine Laboratory

📍 Summerland Key, FL

Assisted high school students with designing, implementing, and analyzing their own research projects

2015

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2014

Alumni Service Corps

Gonzaga College High School

📍 Washington, D.C.

Substitute taught a wide variety of classes, coached rugby and water polo, coordinated volunteering, meal preparation, and meal delivery at Gonzaga's chapter of Campus Kitchen



STUDENTS AND INTERNS MENTORED AND CO-SUPERVISED

present

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2020

Ashley Carreiro

Coral Reef Health and Ecology Lab

Determining stony coral tissue loss disease intervention success on *Montastraea cavernosa* using 3D photogrammetry

2019

Mckenna Rayburn

Link fellowship intern

Intervention methods and rate of tissue loss on stony coral tissue loss disease-affected *Montastraea cavernosa* in the Florida Reef Tract

2018

Diana Perez






Link fellowship intern

Zooxanthellae characterization and connectivity in *Montastraea cavernosa*

TECHNICAL REPORTS

- 2019
Intervention and fate tracking for corals affected by stony coral tissue loss disease in the northern Florida Reef Tract
Florida Department of Environmental Protection
Voss JD, Shilling E, **Combs I**

PRESENTATIONS

- 2019
Characterizing impacts of scleractinian tissue loss disease on corals in southeast Florida with photogrammetry and 3D modeling
48th Annual Benthic Ecology Meeting  St. John's, NL, Canada
Combs IR, Beal J, Voss JD
Oral presentation
- 2019
Characterizing the impacts of scleractinian tissue loss disease on corals in southeast Florida
ASLO Aquatic Sciences Meeting  San Juan, PR.
Combs IR, Beal J, Voss JD
Poster presentation
- 2019
Impacts of scleractinian tissue loss disease on corals in southeast Florida
Indian River Lagoon Symposium  Ft. Pierce, FL.
Combs IR, Beal J, Voss JD
Poster presentation
- 2019
Understanding coral disease through 3D Modeling
HBOI Ocean Discovery Visitors Center Marine Science Fridays  Ft. Pierce, FL.
Combs IR
Oral presentation
- 2018
White blotch disease impacts on corals in southeast Florida
47th Annual Benthic Ecology Meeting  Corpus Christi, TX
Combs IR, Beal J, Voss JD
Poster presentation

FUNDING

- 2019
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2018
Indian River Lagoon Graduate Research Fellowship
\$7,947
- 2019
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2018
FAU GPSA Travel Awards
\$1,600



CERTIFICATIONS

AAUS Scientific Diver

100'

DAN Oxygen delivery, First Aid, and CPR for scuba diving injuries

USFWS Motorboat Operator Certification Course



MEMBERSHIP AND SERVICE

2018

Association for the Studies of Limnology and Oceanography



SKILLS

Field research planning, logistics, and execution

Coral sampling, benthic surveys, photography, navigation and mapping

3D photogrammetry, 3D model generation using Agisoft Metashape, 3D model analysis using Rhinoceros 3D

Data visualization using R statistical software

Multivariate statistical analyses

Scientific SCUBA diving

REFERENCES

Dr. Joshua Voss

Associate Research Professor
CIOERT Executive Director
M.Sc. Advisor

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📍 Florida Atlantic University

Jeff Beal

Marine/Estuarine Habitat Restoration Coordinator

📍 Florida Fish and Wildlife
Conservation Commission

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Dr. M. Dennis Hanisak

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Director of Education

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📍 Florida Atlantic University