

ASHTON BALLARD

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1260 Connecticut Street
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EDUCATION

San Diego State University
Master's in Cell and Molecular Biology

Start August 2021

Auburn University
Bachelor of Science: Conservation of Organismal Biology December 2019

Relevant Courses: Biology of Marine Systems, Caribbean Fish & Hard Coral Identification (Operation Wallacea Study Abroad), Cell Biology, Conservation Biology, Ecology, Evolution and Systematics, Genetics, Invertebrate Biodiversity, Vertebrate Biodiversity, Microbiology, Organic Chemistry, Vertebrate Biodiversity, Wildlife Ecology and Management, Plant Biology, Botany, Genetics, Animal Physiology, Entomology, Physics I, Calculus I, Physics II

PUBLICATIONS

Journal Papers in Review

Parr, N.P., Hughes, A.Q., and Leinbach, S.E., Moss, A.G., Chadwick, N.E. "Sexual and asexual reproduction of Florida false corals *Ricordea florida*: Recovery following removal of aggregations in the Lower Florida Keys."

INTERNSHIPS

Coral Restoration Foundation
Key Largo, FL
Mentor: Derek Hagen

January-September 2020

- Aided in the restoration of over 8,000 square meters of coral reef across 8 sites in the Florida Keys.
- Helped maintain the world's largest coral nursery by cleaning structures frequently.
- Harvested, transported, and outplanted nursery raised *Acroporid* and *Orbicella* corals on the Florida Reef Tract.
- Supervised recreational dive programs involving scuba diving field work.
- Lead community outreach events (lectures, booths, festivals, etc.)
- Designed an American Association for the Advancement of Science (AAAS) hackathon for middle school girls focused on coral restoration (GenerationCoral).
- Taught educational workshops focused on coral biology and physiology (K-12).

- Worked in conjunction with South-East Zoo Alliance for Reproduction & Conservation (SEZARC) and collected gamete bundles of *Acropora cervicornis* corals during spawning.
- Published monthly “Bringing it Back” articles to Coral Restoration Foundation’s website which focused on updates regarding restoration work.
- Created training material on outplanting site selection for *Acroporid* corals in the Florida Keys.

RESEARCH EXPERIENCE

Lab Research

Mentor: Dr. Nanette Chadwick

May-December 2019

Auburn University

- Research project aimed at determining the major modes and rates of clonal replication and factors that induced detachment of inverse buds of the Caribbean corallimorpharian, *Ricordea florida*.
- Determined and described different stages of longitudinal fission, inverse budding, and pedal laceration of *R. florida*.
- Recorded measurements of 30+ corallimorpharians weekly for 5 months.
- Concluded the optimal feeding regime of *R. florida* using experiments and observations.
- Responsible for maintaining constant temperatures and photosynthetically active irradiance (PAR) for 5 tanks containing corallimorpharians

Field Research

Mentors: Dr. Nanette Chadwick and Jenny Mallon

May-December 2018

Auburn University/Operation Wallacea

- Research project aimed at determining the most efficient monitoring method for coral reefs.
- Collected data manually and using video via benthic fish transects, as well as, herbivory surveys during a two-week period and then compared the two methods for accuracy and efficiency.
- Acted as a research assistant as well and collected data via coral mapping using GPS, sea grass quality/abundance using quadrats, and juvenile sea turtle behavior.

Mentor: Jacob Botello

Auburn University- Ecology Lab

May-August 2019

- Research project aimed at quantifying the difference in leaf decomposition between two leaf species that differ in “toughness” (as a crude index of cellulose and lignin) and determine if the presence of macroinvertebrates affects leaf decomposition.

Mentor: Jacob Botello

May-August 2019

Auburn University- Ecology Lab

- Research project aimed at determining the morphological adaptations of fish to stream flow speed.

PRESENTATIONS

Paper Presentation, “Factors influencing the detachment of inverse buds in Caribbean corallimorpharians *Ricordea florida*,” Dr. Nanette Chadwick Marine Lab, 2019.

Paper Presentation, “A Comparison of Monitoring Methods on the Mesoamerican Barrier Reef at Akumal, Mexico”, Dr. Nanette Chadwick Marine Lab, 2018.

PROFESSIONAL/ LEADERSHIP DEVELOPMENT

- Created educational material for outplant site selection for *Acroporid* corals in the Florida Keys used by Coral Restoration Foundation.
- Acted as a lead intern at Coral Restoration Foundation. I was responsible for transferring the knowledge and skills of coral fragmentation, coral harvesting and outplanting, maintaining a coral nursery, leading dive programs, and educational workshops/presentations.
- Transferred data collection methodology knowledge of *R. florida* to incoming graduate student in Dr. Nanette Chadwick’s lab.

WORK EXPERIENCE

- Deckhand/Crew on sailing vessel for Red Hospitality in Key Largo, FL (June-August 2020)
- Lifeguard at Wynlakes Golf & Country Club in Montgomery, AL (May 2013-August 2015)

SKILLS AND CERTIFICATIONS

- Scuba Schools International Rescue Diver
- Scientific Diver- Coral Restoration Foundation/ NOAA
- CPR/AED/ First Aid- American Red Cross
- Oxygen Administration- Divers Alert Network
- Vessel Livery and Boater’s Safety

VOLUNTEER EXPERIENCE/ INVOLVEMENT

Clean Water Project in the Tijuana River

Volunteer

January 2021-Currently

San Diego, California

Goals include improving water quality of the Tijuana River in order to benefit public and environmental health of the San Diego-Tijuana megaregion

Feeding San Diego

Volunteer

December 2020-Currently

San Diego, California

Adopt A Highway

Volunteer

January 2020-Currently

San Diego, California

Dr. Nanette Chadwick Lab

Volunteer

May 2018-December 2019

Auburn University

Included duties such as recording water temperatures and salinity of tanks, as well as, completing water changes and chemical and pH testing.

Marine Biology Club

Member

August 2017-December 2019

Auburn University

Society of Conservation Biology

Member

August 2017-December 2019

Auburn University

Operation Wallacea

Research Assistant

June 18- July 2, 2018

Akumal, Mexico

HONORS AND AWARDS

- Explorer's Club Member
- The Society of Collegiate Leadership & Achievement
- Gamma Beta Phi Honors Society
- Auburn University Dean's List
- Auburn University Cum Laude

REFERENCES

Dr. Nick Parr- Florida Keys Marine Sanctuary Liaison and Program Consultant
Email: ndp0011@auburn.edu

Jenny Mallon- PhD candidate
School of Geographical and Earth Sciences
University of Glasgow
Expedition Akumal Coral Reef Restoration
Email: jmallon967@gmail.com

Rebecca Creighton- Restoration Staff Member
Coral Restoration Foundation
Email: rebecca@coralrestoration.org

Andrew Jaroszewski- Restoration Staff Member
Coral Restoration Foundation
Email: andrew@coralrestoration.org

Derek Hagen- Education Program Manager
Coral Restoration Foundation
Email: derek@coralrestoration.org

