

JULIO CAMPERIO

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EDUCATION

University of Miami – Rosenstiel School of Marine of Atmospheric Science (Miami, Florida)

PhD student in Aquaculture, **Present**

University of Miami – Rosenstiel School of Marine of Atmospheric Science (Miami, Florida)

MS in Aquaculture, **2020**

Northeastern University (Boston, Massachusetts)

BA in Spanish, Minors in Marine Studies, Sustainable Business, and Latin American and Caribbean Studies, **2016**

University of the Virgin Islands (Christiansted, St. Croix)

Aquaponics, **2015**

Sea Education Association (Woods Hole, Massachusetts)

Oceanography and Nautical Science, **2015**

Earth University (San Jose, Costa Rica)

Sustainable Business, **2013**

Dialogue of Civilization (Cusco, Peru)

Biodiversity and Spanish, **2012**

American School of Milan (Milano, Italy)

International Baccalaureate, **2011**

PROFESSIONAL EXPERIENCE

June-October 2019

The Nature Conservancy & Future of Fish Feed
Nutrition Research Consultant, Dr. Frederick Barrows

August 2018-Present

Rosenstiel School of Marine and Atmospheric Science
Graduate Research Assistant, Dr. Daniel Benetti

May 2018

Spring Genetics & Benchmark

Farm Technician, Mr. Carlos Lopez

April-November 2018

Miller School of Medicine, University of Miami

Research Associate, Dr. Alejandro Caicedo

May-October 2017

Olakai Hawaii

Farm Supervisor, Dr. Wenhao Sun

September 2016-April 2017

Smithsonian Tropical Research Institute

Intern and Research Assistant, Dr. Roberto Ibañez

April-August 2015

Smithsonian Conservation Biology Institute

Intern and Research Assistant, Dr. Mary Hagedorn

July-December 2014

Marine Science Institute of Gran Canary

Intern and Research Assistant, Dr. Hipólito Barber

January-May 2014

New England Aquarium

Volunteer Research Assistant, Dr. Randi Rotjan

October-December 2013

New England Aquarium

Intern in Cold Marine Fish

July-December 2013

New England Aquarium

Intern in Tropical Giant Ocean Tank

May-June 2013

Rosenstiel School of Marine and Atmospheric Science

Intern, Dr. Tom Capo

RESEARCH EXPERIENCE

Palau National Aquaculture Center

Evaluate performance of novel diets on locally produced Rabbitfish. Primary Objective: Assess the overall performance of experimental diets utilizing plant-based meal instead of fishmeal. Secondary Objective: Develop a new fishmeal-free diet to replace the traditionally used milkfish feed and at the same time increase growth and reduce size variance of harvest.

Rosenstiel School of Marine and Atmospheric Science, University of Miami

Investigate alternative sources of protein to be included in feeds. Primary Objective: Assess the potential of insect meal (black soldier fly larvae) as a source of protein in aquaculture feeds for marine fish and shrimp. Secondary Objective: Understand how the nutritional value of insect meal can be affected by the feed source provided to the larvae.

Miller School of Medicine, University of Miami

Investigate the anatomy and physiology of the pancreatic islet to determine the effects of local vascular dysfunction on islet hormone secretion, glucose metabolism, and pathogenesis of diabetes. Primary Objective: Determine the Role of Pericyte in Pancreatic Islet Fibrosis.

Smithsonian Tropical Research Institute

Impacts of varying diets on development of spindly leg syndrome in captive bred harlequin tadpoles. Primary Objective: Determine effects of diet quantity. Secondary Objective: Determine effects of diet quality. Tertiary Objective: Determine effects of water composition.

Smithsonian Conservation Biology Institute

Impacts of bleaching on rice, mushroom, cauliflower and lobe coral reproduction. Primary Objective: Determine basic physiological parameters of sperm from bleached coral using computer assisted sperm analysis (CASA). Secondary Objective: Learn effects of varying cryoprotective agents on cryopreserved coral sperm and fresh eggs in regard to post thaw motility and fertilization rates.

Marine Science Institute of Gran Canary

Determine impacts of varying diets on lipid and protein quantity of tilapia.

New England Aquarium

Determine temperature and symbiosis recovery potential in wounded northern star corals.

Rosenstiel School of Marine and Atmospheric Science

Determine impact of salinity on growth of red algae.

FIELD EXPERIENCE

Koror, Palau, 2019

Stock growth assessment on farms and communication with farmers on new feed rates

Miami, Florida, 2019

Collection of reef and pelagic fish through fishing

Gamboa, Panama, 2016

Identification, handling, collection, and transportation of frogs

Kaneohe Bay, Hawaii, 2015

Collection and re-introduction of corals, hermit crab and small reef fish, data collection, coral sperm-egg collection, and small motorboat operator

Caribbean Sea, Puerto Rico to Grenada, 2015

Data collection and reef health assessment

New England, 2014

Coral and mucus collection

TEACHING EXPERIENCE

Spring 2020

Aquaculture II Teacher Assistant

Instructed and mentored students on larval rearing of marine finfish

May-June 2014

Northeastern University Compost Initiative

Basics and introduction of worm composting to a wide range of audience

PRESENTATIONS

- April 2021 The Nature Conservancy and Reef Resilience Network, Webinar
Presented section on potential environmental impacts and mitigation strategies for marine coastal aquaculture geared towards marine ecosystem managers who want to learn more about aquaculture in their respective regions.
- November 2020 German Association of Amphibian and Reptile Veterinarians, Webinar
Presented results of award-winning research conducted on the development of a muscular and skeletal disorder which manifests in captive bred frogs.
- February 2020 Aquaculture America 2020, Honolulu, HI
Gave two presentations at the 2020 World Aquaculture Society conference. First one on the potential of utilizing black soldier fly larvae meal as fishmeal replacement in aquafeeds, and an overview of research done on the topic on a variety of species. Second one on the use of plant-based feeds to improve growth and performance in locally farmed rabbitfish in Palau.
- May 2019 Florida Aquaculture Review Council, Bartlow, FL
Grant proposal to seek state funding for research on utilizing black soldier fly larvae to recycle Florida's waste and produce a meal that can be included in aquaculture feeds for fish and shrimp produced in the state.
- August 2015 Smithsonian Conservation Biology Institute, Oahu, HI
Comparison of the effectiveness of cryostraws and cryovials for the conservation of coral embryos, and the bleaching of corals due to rising sea temperature of the Kaneohe Bay.
- Summer 2014 Northeastern University and Dudley Community, Boston, MA
Introduction, processes, functionality, DIY, benefits and limitations of vermicomposting to high school and college students and adults.

AWARDS AND SCHOLARSHIPS

- Spring 2020 Dr. Frank-Mutschmann, Award, €1000
1st place award given by the German Association of Reptilian and Amphibian Veterinarians for research conducted on the development of a muscular and skeletal disorder which manifests in captive bred frogs
- Spring 2014 D'Amore McKim Business School, Grant, \$200
Build large worm composter for sustainable organic waste management and community engagement
- Spring 2014 Presidential Global Scholarship, Scholarship, \$600
Offset travel and living expenses for international internship

SKILLS

Languages- fluent in English, Spanish and Italian

Project management skills- strong leadership and managerial skills, prioritizes and manages projects of various sizes and value, team builder, understands task prioritization and deadlines

Interpersonal skills- performs well as a team member or leader, contributes knowledge and motivation to the team, can manage change within an organization project

Management style - manages with respect and positive attitude, recalls objectives and deadlines to team members to keep projects on track, can grow and sustain a high-performance team

Presentation skills- effectively develops verbal presentations to all audiences

Computer skills- proficient in software tools for projects, such as Microsoft Office, custom MAT software, Adobe Photoshop, GIS, ImageJ, Prism, SketchUp, R, drone pilot

Advanced instrumentation skills- hemocytometer, 600 °C digester, homogenizer, cryopreservation, centrifugation, zooxanthellae extraction, titration, liquid nitrogen, PAM, PAR, HACH and YSI

Basic instrumentation skills: map reading, GPS, diamond-head chisel, staining, solution preparation, pH meter, ammonia-nitrite-nitrate meter, weighing, media preparation, data collection, scintillation vials, HOBO Loggers, thermometer, dissolved oxygen meter, calipers, power tools, refractometer, use of bleach and Virkon, pumps and filter systems

Husbandry skills- maintains research collections for modern reproductive and research studies in fish, coral, and algae, feed preparation, health assessment and observation, quarantine, cleaning, handling, measurements, separation and transportation

Seamanship- small motorboat operator, helmsman, sail and line handling, variety of knots, navigation, map reading, dead reckoning, sextant, boat checks, emergency plans

CERTIFICATIONS

IACUC, 2018

Small Boat Operator, 2015

PADI Rescue Diver, 2012, (+200 dives)

PUBLICATIONS

Benetti, D. D., Suarez, J., Camperio, J., Hoenig, R. H., Tudela, C. E., Daugherty, Z., McGuigan C.J., Mathur, S., Anchieta, L., Buchalla, Y., Alarcon, J., Marchetti, D., Fiorentino, J., Buchanan, J., Artilles, A., Stieglitz, J.D. (2021). A review on cobia, *Rachycentron canadum*, aquaculture. 1–19.
<https://doi.org/10.1111/jwas.12810>

Camperio Ciani, J.F., R. Jones & F.T. Barrows. 2020. Performance of fishmeal-free rabbitfish (*Siganus lineatus*) feed in Palau, Micronesica 2020-03, 11 pp. Published online 03 June 2021.
<http://micronesica.org/sites/default/files/camperioetal2020.pdf>

Benetti, D.D., J. Stieglitz, J. Suarez, R. Hoenig, C. Tudela, Z. Daugherty, C. J. McGuigan, J. Geng, S. Mathur, Y. Buchalla, J. Camperio and L. Anchieta. (2020). Marine Finfish Aquaculture Research and Development at the University of Miami. *World Aquaculture*, Dec. 2020: 43-56.

Benetti, D., Stieglitz, J. D., Hoenig, R. H., Tudela, C. E., Daugherty, Z., McGuigan, C.J., Geng, J., Mathur, S., Suarez, J., Buchalla, Y., Camperio, J. (2020). Overview of the research activities, academic track and technological achievements of the University of Miami Aquaculture program. *World Aquaculture Society, 2020, Honolulu -USA*.

Camperio Ciani, J.F., Guerrel, J., Baitchman, E., Diaz, R., Evans, M., Ibanez, R., Ross, H., Klaphake, E., Nissen, B., Pessier, A.P., Power, M.L., Arlotta, C., Snellgrove, D. Wilson, B., Gratwicke, B. (2018). The relationship between spindly leg syndrome incidence and water composition, overfeeding, and diet in newly metamorphosed harlequin frogs (*Atelopus* spp.). *PLoS ONE* 13(10): e0204314.
<https://doi.org/10.1371/journal.pone.0204314>

Carter, V.L., Hagedorn, M., Lager, C.V., Camperio Ciani, J.F., Dygert, A.N., Schleiger, R.D., Henley, E.M. (2016). Effects of Bleaching on Coral Reproduction. *International Coral Reef Symposium*.

Hagedorn, M., Carter, V.L., Lager, C., Camperio Ciani, J.F., Dygert, A.N., Schleiger, R.D., Henley, E.M. (2016). Potential bleaching effects on coral reproduction. *Reproduction, Fertility and Development* 28, 1061–1071. <http://dx.doi.org/10.1071/RD15526>