Bass Dye

9910 Estero Oaks Dr. #206
Fort Myers, FL 33967
(641) 751-0993
bass.d.dye@gmail.com

EDUCATION

M.S. Environmental Science (2018), Florida Gulf Coast University, Fort Myers, FL

B.S. Environmental Science, minor Geoscience (2014), The University of Iowa, Iowa City, IA

Dean's List: Spring 2011, Spring 2014

SPECIALTY COURSES

Summer course (2017), Drones in Marine Science, Duke University Marine Lab, Beaufort, North Carolina

Summer course (2017), Marine Ecology, Duke University Marine Lab, Beaufort, North Carolina

Winterim course (2014), Development of Resilient and Sustainable Agricultural Watershed, The University of Iowa, Delhi, India

SKILLS/SOFTWARE

- MIKE 21, MIKE 3, Particle Tracking, and ECO Lab – modelling Suite
- R, MATLAB, JMP, Microsoft Office Suite, ImageJ
- Trained for unsupervised use of Hitachi S-3400N Variable Pressure Scanning Electron Microscope (SEM), Leica M205C stereo dissecting microscope, and Leica 4500B compound materials microscope
- Proficient in digital photomicroscopy
- ArcGIS – Basic level

PUBLICATIONS

Dye et al., 2018. Circulation Dynamics of San Carlos Bay during an El Niño year: Effect of freshwater release on water quality and mixing in a shallow estuary. Manuscript in preparation.

Dye et al., 2018. Impact of salinity variations on oyster (*Crassostrea virginica*) larvae settlement in the Caloosahatchee River Estuary in Southwest Florida using a 15-year data set. Manuscript in preparation.

Co-author, 2017. Florida Gulf Coast University Campus Ecological Monitoring Plan. Submitted to Florida Gulf Coast University President Mike V. Martin.

RESEARCH EXPERIENCE

Project Scientist, Oceans & Ice Lab at the University of Oregon – Eugene, OR

OCTOBER 2018 – PRESENT

- Support the development and interpretation of the Coos Bay hydrodynamic model (e.g., particle tracking experiments, implementing model improvements, interpreting sediment module model results)
- Manage laboratory equipment and lab
- Assist lab members in research efforts
- Communicate research efforts (e.g., stakeholder engagement, conference presentations, manuscripts)

Member, Felix Jose Lab at Florida Gulf Coast University – Fort Myers, FL

DECEMBER 2016 – PRESENT

- Development of hydrodynamic, particle tracking, and agent-based models for master's thesis
- Generated hydrodynamic model for application in a smalltooth sawfish (*Pristis pectinata*) study within a southwest Florida estuary

Master's thesis, Florida Gulf Coast University – Fort Myers, FL

AUGUST 2016 – JULY 2018

- Analyzed long-term, oyster monitoring and environmental data sets using R software
- Modeled simulations for oyster (*Crassostrea virginica*) larval dispersal under contrasted environmental conditions

Research Assistant, Sims Paleobotany Lab at the University of Iowa - Iowa City, IA

JANUARY 2014 - NOVEMBER 2014

- Researched charcoalified fossil debris with Professor Hallie Sims, a paleoecology and paleobotany researcher, during a directed study
- Prepared, photographed, and identified plant fossils using a dissecting microscope and a scanning electron microscope
- Curated fossils and databased specimen information for The University of Iowa Paleontology Repository

Hydroscience and Engineering International Student, India Winterim - Delhi, India

DECEMBER 2013 - JANUARY 2014

- Assisted course biologist with sampling protocol for pathogens in drinking water supplies
- Quantified groundwater hydraulic properties with field measurements from pumping and infiltration tests
- Collaborated with the Institute of Rural Research and Development to improve village water sustainability

Student Researcher, Field Methods in Hydrologic Science Course Project - Sutliff, IA

JANUARY 2013 - MAY 2013

- Constructed three water-level gauges for CrowdHydrology, a crowdsourcing tool used to gather water-level data
- Installed a water-level gauge in the Ciha Fen Preserve
- Wrote a site evaluation about the preserve, fens, and water gauges
- Developed geographical information system (GIS) maps of the preserve

Student Research Assistant, Iowa Geological and Water Survey - Coralville, IA

FEBRUARY 2013 - AUGUST 2013

- National Science Foundation funded research project
- Identified and extracted microfossils, such as conodonts, eurypterids, and various soft tissue assemblages from Middle Ordovician Winneshiek Lagerstätte shale unit samples
- Organized specimens by geological stratigraphy
- Maintained quality control of rock samples

PROFESSIONAL EXPERIENCE

Intern, Natural Resources Division, City of Naples - Naples, FL

MAY 2018 – SEPTEMBER 2018

- Developed an oyster reef monitoring plan to evaluate three constructed/restored oyster reefs
- Conducted field measurements to assess the performance of the restored reefs in meeting the restoration goals

Instructor, Dep. of Biological Sciences, Florida Gulf Coast University - Fort Myers, FL

FALL 2017 AND SPRING 2018 SEMESTERS

- Facilitated four sections of General Biology II Lab (BSC 1011L)
- Planned and taught laboratory materials
- Created quizzes and practical exams

Teaching Assistant, Dep. of Marine and Ecological Sciences, Florida Gulf Coast University - Fort Myers, FL

SPRING 2017 SEMESTER

- Dr. Frank Gable's Environmental Geology undergraduate course

FALL 2016 SEMESTER

- Dr. Joanne Muller's Physical Geology undergraduate course

Stormwater Intern, City of Iowa City Public Works/Engineering - Iowa City, IA

MARCH 2014 - NOVEMBER 2014

- Performed water quality tests to assess contaminants and chemical and biological composition
- Removed invasive and nuisance species from Iowa City area creeks and the Iowa River
- Organized and taught environmental education classes to students

Sample Preparation Technician, Iowa Geological and Water Survey - Coralville, IA

SEPTMBER 2013 - APRIL 2014

- Cleaned, sorted, labeled, and boxed rock samples for future microscopic examination
- Managed and classified rock samples into the Iowa Geological Survey Rock Library

Water Treatment Intern, Wastewater Treatment Plant - Eldora, IA

JULY 2011 - AUGUST 2011

- Collected wastewater samples from pretreatment, primary, and secondary treatment stages
- Analyzed wastewater samples for dissolved oxygen levels and liquid sludge settlement

Municipal Water Intern, Eldora Public Works - Eldora, IA

MAY 2011 - JUNE 2011

- Measured pH, hardness, fluoride, and chlorine levels of municipal water
- Recorded water data from wells and pump stations daily for eight weeks
- Installed water hydrants and tested performance

PRESENTATIONS (*academic poster)

*Dye, Bass D., Richard, J., Jose, F., Mortensen, J.B., Milbrant, E., 2018. Impact of salinity variations on oyster (*Crassostrea virginica*) larvae settlement in the Caloosahatchee River Estuary in southwest Florida. Florida Lake Management Society 29th Annual Technical Symposium, Fort Lauderdale, Florida

Dye, Bass D., Richard, J., Jose, F., Mortensen, J.B., Milbrant, E., 2018. Impact of salinity variations on oyster (*Crassostrea virginica*) larvae settlement in the Caloosahatchee River Estuary in southwest Florida. Gulf of Mexico Graduate Student Symposium, Dauphine Island, Alabama

*Dye, Bass D., Richard, J., Jose, F., Mortensen, J.B., Milbrant, E., 2018. Impact of salinity variations on oyster (*Crassostrea virginica*) larvae settlement in the Caloosahatchee River Estuary in southwest Florida. 27th Annual Southwest Florida Water Resources Conference, Fort Myers, Florida

Dye, Bass D., Richard, J., Jose, F., 2017. Identifying optimal sites to implement oyster reef restoration in the Charlotte Harbor Estuary using a biological-physical model. Florida Gulf Coast University Undergraduate Marine Science Orientation, Fort Myers, Florida

Dye, Bass D., Richard, J., Jose, F., Milbrant, E., Urakawa, H., Bartleson, R., Haynes, L., Tolley, S.G., 2017. Development of biological-physical model to simulate oyster (*Crassostrea virginica*) larval transport in the Charlotte Harbor Estuary. Université de Bretagne Occidentale (University of Western Brittany) Research Group Meeting, Brest, France

Richard, J., Dye, B., Jose, F., 2017. Oyster (*Crassostrea virginica*) Larval Transport Modeling for the Caloosahatchee River/Estuary. Charlotte Harbor National Estuary Program Watershed Summit, Punta Gorda, Florida

*Dye, Bass D. and Sims, Hallie J., 2014. Implications of a new water fern from the Cretaceous Dakota Formation of Woodbury County, Iowa, U.S.A. Geological Society of America Annual Meeting, Vancouver, British Columbia

PROFESSIONAL SERVICE

Graduate Student Advisory Committee, FGCU faculty appointed position, Academic Year 2017 - 2018

Reviewer, FGCU 7-Year Program Review for the M.S. Environmental Science, November 2017

Panel member, FGCU Undergraduate Senior Seminar: Graduate School Inquiries, Nov. 2017, April 2018

Session co-host, Climate Change: FGCU Biodiversity Conference, March 2017

Discussion host, Plenary of FGCU Biodiversity Conference, March 2017

AWARDS

Florida Gulf Coast University Whitaker Center Travel Grant

Gulf of Mexico Graduate Student Symposium Travel Grant

Duke Marine Lab Summer Tuition Scholarship - Lawrence I'Anson Scholarship

Florida Gulf Coast University Biodiversity Conference Student Scholarship

Florida Gulf Coast University Blair Foundation Environmental Sciences Scholarship for Summer Research

Florida Gulf Coast University Graduate Studies Fellowship

University of Iowa Ann Morse Study Abroad Scholarship

CERTIFICATIONS AND ASSOCIATIONS

Certified, PADI Open Water Scuba Diver

Member, The Geological Society of America

Member, The Oceanography Society

ACTIVITIES

Volunteer, City of Naples, Florida Coastal Cleanup – SEPTEMBER 15, 2018

Volunteer, Sanibel Captiva Conservation Foundation, Monthly survey of oyster reefs - SEP., OCT., NOV., 2017

Volunteer, 2014 Great Iowa River Canoe and Kayak Race - JUNE 14, 2014

Volunteer, Iowa River Mussel Blitz, Annual survey of Iowa River mussel populations - AUGUST 26, 2014

REFERENCES

Felix Jose
Associate Professor and Program Leader for Marine Science
Department of Marine and Ecological Sciences
Florida Gulf Coast University, Fort Myers, FL
Phone: (239) 590-1879
Email: fjose@fgcu.edu

Gregory Tolley
Professor, Chair, and Program Coordinator M.S.
Department of Marine and Ecological Sciences
Florida Gulf Coast University, Fort Myers, FL
Phone: (239) 590-7206
Email: gtolley@fgcu.edu

Michael B. Kingston
Professor
Biology Department and Environmental Studies Department
Elon University, Elon, NC
Phone: (336) 278-6182
Email: kingston@elon.edu