Student OPS: Refining a multi-use tool to promote sustainable angling and barotrauma reduction in the recreational reef fishery

Position: OPS Student Assistant – Research: Electronics design, prototyping, and concept testing.

Location: Gainesville, Florida

Position Description: UF researchers have developed multi-use a catch-and-release fish descending device intended to control the rate of descent and safely release fish at the proper depth to prevent barotrauma and promote sustainable fishing practices. The device is being patented by UF Innovate, so all information regarding this project must remain confidential and can not be disclosed to any third party in or outside the University of Florida. The prototype has been evaluated by an advisory group of fisheries biologists, experienced anglers, and engineering specialists who provided feedback about device operation, effectiveness, and suggested improvements. Applications are sought for ONE (1) student OPS worker to develop electronic components for the device, fabricate a working prototype to incorporate into a 3D-printed device for proof-of-concept, and make additional changes based on further advisory group feedback. Field testing of the device will be performed from an offshore charter boat to collect performance data in and out of the water. Selected candidate will work closely with an OPS performing design work in SolidWorks to integrate electronic components into the assembly. Must provide in-person or online progress reports coordinated at least twice a month with the project supervisor and/or leader. Final deliverable includes all design documents with the final electronic component design and a working prototype. Prototype costs will be covered under the project budget.

This Sea Grant project is led by Victor Blanco, Extension Agent II, Sea Grant, UF/IFAS Extension Taylor County, Perry, FL. Student OPS workers will be supervised by Dr. Daniel Hofstetter in the Agricultural and Biological Engineering Department at the University of Florida main campus in Gainesville, FL.

Required Qualifications: Proficiency designing electronic circuits and assemblies, electronics prototyping and programming, good understanding about modeling design best practices, effective communication skills, and an ability to work collaboratively with other an OPS, faculty, staff, and students in the ABE Department, and with other units on campus. Preferred: Experience with electronic component modeling in SolidWorks, PCB design software, 3D-printing, and experience working on a design team. Knowledge and experience with catch-and-release reef fishing is a plus. Undergraduate and graduate students are welcome to apply.

Employment: This is a part-time, student OPS appointment. Salary will be $20/hr, for a total of 125 contracted hours, to be completed within 16 weeks of hire or as required by the project coordinator.

Applications: To apply for this position, submit a letter of application describing your relevant experience, your resume, and contact information for at least two references to Dr. Daniel Hofstetter via email at d.hofstetter@ufl.edu.

Deadline: A review of applications will begin immediately until the position is filled. Final proof-of-concept prototype to be completed by April 2024 with field testing to be performed in early May 2024.