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

**Position:** OPS Student Assistant – Research: CAD design, prototyping, and proof of concept.

**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 make revisions to the existing design in SolidWorks, fabricate a 3D-printed proof-of-concept prototype, and make additional changes based on further advisory group feedback. Field testing will be performed from an offshore charter boat to collect performance data in and out of the water. The selected candidate will work closely with an OPS developing electronics that will need to be incorporated into the revised design. 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 SolidWorks files with the final version of the design and a physical 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 creating complex parts and assemblies in SolidWorks, good understanding about solid modeling design best practices, effective communication skills, and an ability to work collaboratively with an OPS, faculty, staff, and students in the ABE Department, and with other units on campus. **Preferred:** Certified SolidWorks Associate (CSWA) certification, experience with 3D-printing of plastic parts, 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.