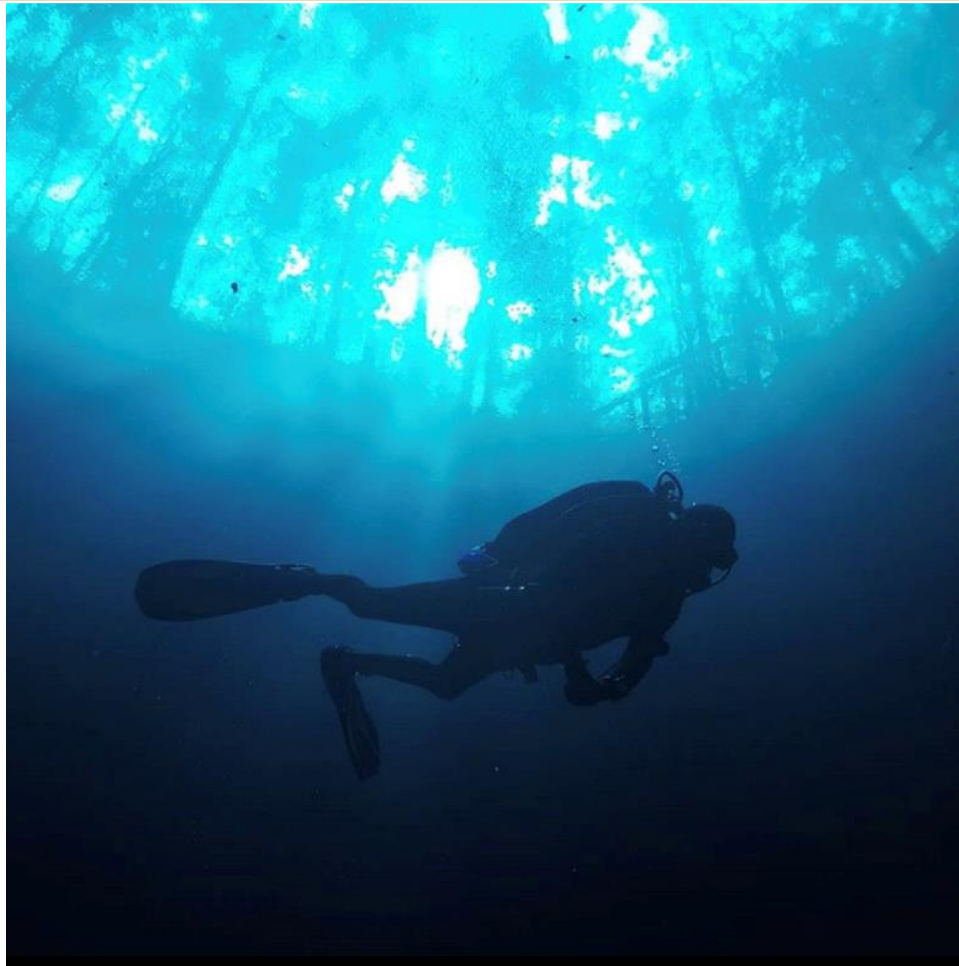




## The Florida State University Academic Diving Program

# ACTIVITY REPORT FY 2020



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## Overview

The FSU Academic Diving Program (ADP) oversees and supports underwater research conducted by FSU faculty, students, and staff, and visiting scientists. The Diving Control Board governs scientific diving operations with representative members from each invested department of the University. Day to day operations are managed by the Diving Safety Officer, with assistance provided by the staff of the Florida State University Coastal and Marine Laboratory (FSUCML). This report summarizes the activity of ADP in fiscal year (FY) 2020, between July 1<sup>st</sup> 2019 and June 30<sup>th</sup> 2020.

## Operation Highlights

Diving activity in FY 2020 was significantly impacted by the COVID-19 pandemic. With growing concerns over community spread and increased risk of infection, the Diving Control Board suspended diving operations on Monday, March 30. State and University action followed shortly thereafter, and only essential diving operations were authorized through the end of the fiscal year. Prior to the suspension, diving activity was projected to approach record highs. Instead, the most active period of the year was eliminated (Figure 1), including several international research trips. As a result, year over year diving activity declined by 57%.

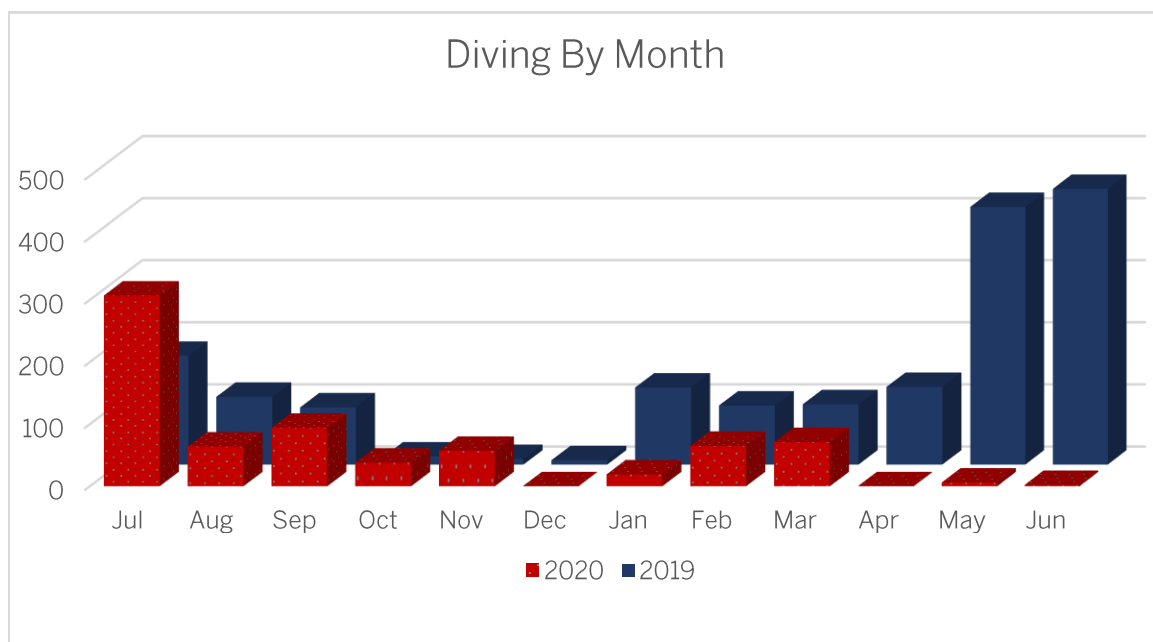


Figure 1. Multi-year comparison of diving activity by month. The COVID-19 Pandemic was responsible for the suspension of diving operations in April, May and June of 2020.

Prior to the onset of the pandemic, ADP facilitated underwater research for 54 active FSU Scientific Divers (Figure 2). Active divers are individuals using SCUBA diving as a tool to train for, or contribute to, research at FSU.

Divers include undergraduate students, graduate students, research staff, postdoctoral researchers, and faculty from across campus, including the Coastal and Marine Laboratory and the departments of Anthropology, Biological Science, Earth, Ocean, and Atmospheric Science, and Geography. Biological Science consistently accounts for the largest portion of activity, with 29 divers logging 366 dives in FY 2020. Collectively, divers across FSU logged 735 dives, spending nearly 570 hours in the field working underwater (Figure 3).

There were zero Incident Reports filed with the Diving Control Board in FY 2020, compared to four in the previous year. 115 equipment rental requests were made to ADP, with rentals ranging from one day to several months.

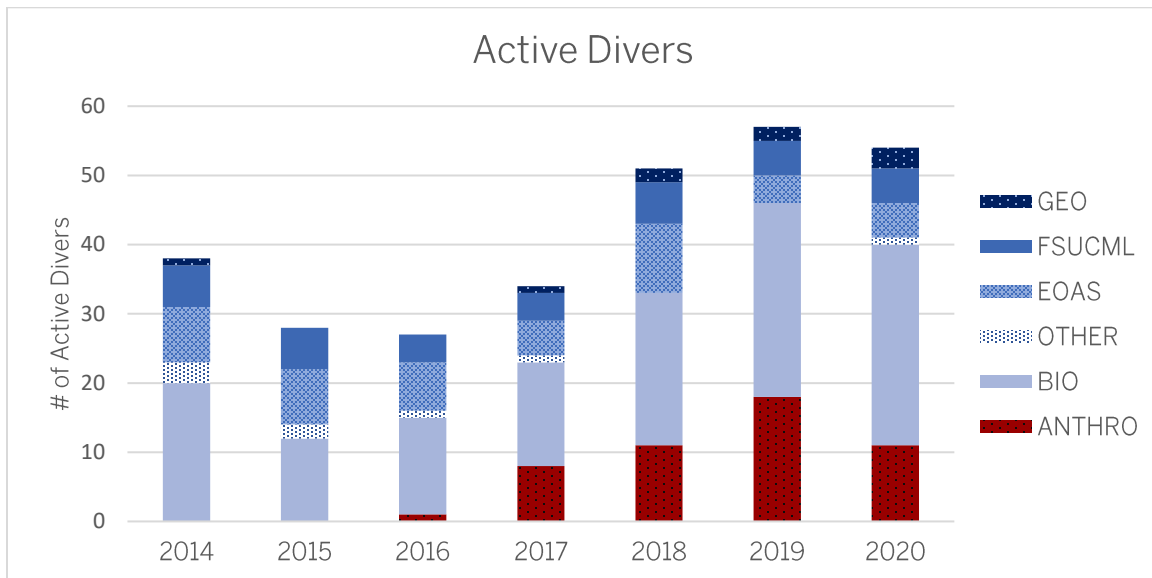


Figure 2. Annual changes in the number of active divers over time by department. ANTHRO = Anthropology; BIO = Biological Science, EOAS = Earth, Ocean, & Atmospheric Science, FSUCML = Coastal & Marine Laboratory, GEO = Geography, OTHER = All Other Departments

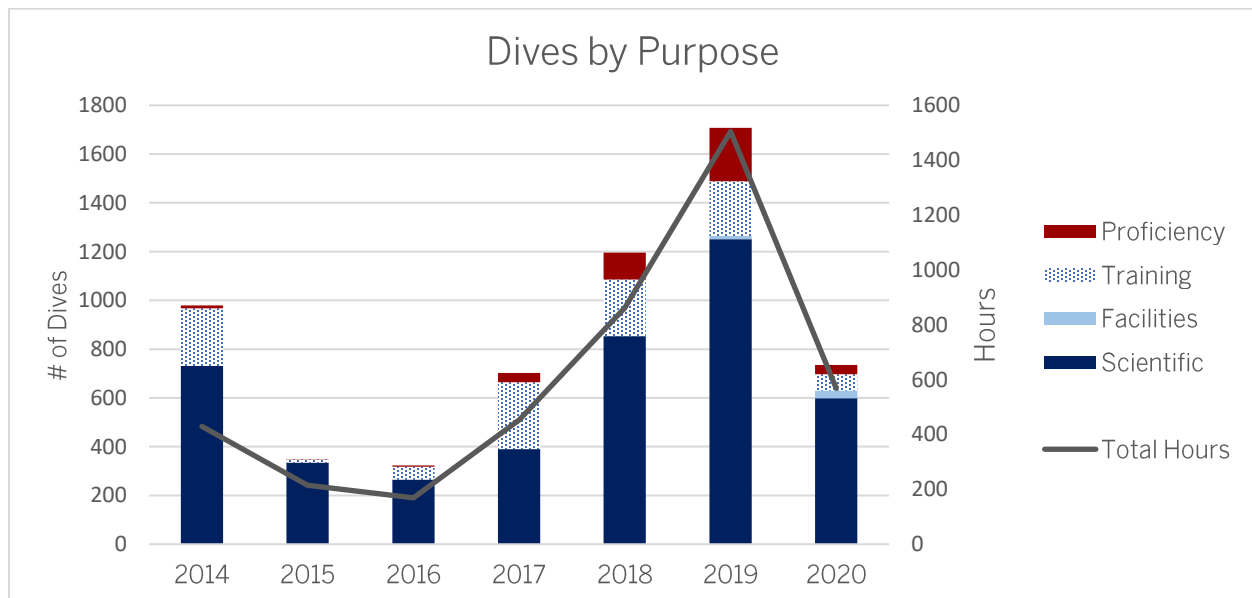


Figure 3. Annual changes in the total number of dives in four categories: proficiency, training to become Scientific Divers, scientific dives and facilities dives. The line represents total bottom time (surface to surface) in hours.

## Research Location and Subject Matter

The majority of diving operations continue to be concentrated in Florida. Morcom Aquatics Center in Tallahassee serves as an outstanding site for training dives, and various north Florida karst features also serve as important training sites. Boat diving and marine training operations are centered at FSUCML.

Most domestic scientific work is launched from FSUCML, including projects that partner with local agencies to monitor regional artificial reefs and maintain marine instrumentation. Routine underwater maintenance of the FSUCML seawater system and the research vessel (R/V) Apalachee was undertaken by ADP beginning in FY 2019 and increased in FY 2020.

Additional ADP supported diving activities include underwater archaeological digs and a field school overseen by the Department of Anthropology. The archaeological work has proved productive, not only in revealing elements of prehistory, but in producing a pipeline of young professionals with an uncommon and valuable skillset.

Diving intensive international research trips account for a growing portion of dives logged. In Bonaire, Dutch Caribbean, research focuses on the ecological processes that impact coral reefs; in British Columbia, Canada, biologists study trophic dynamics in temperate kelp forests; and in Moorea, French Polynesia, multiple lab groups work to identify the processes that influence coral reef resilience - this year that included the NSF-funded discovery of cryptic coral species and previously undocumented genetic diversity.

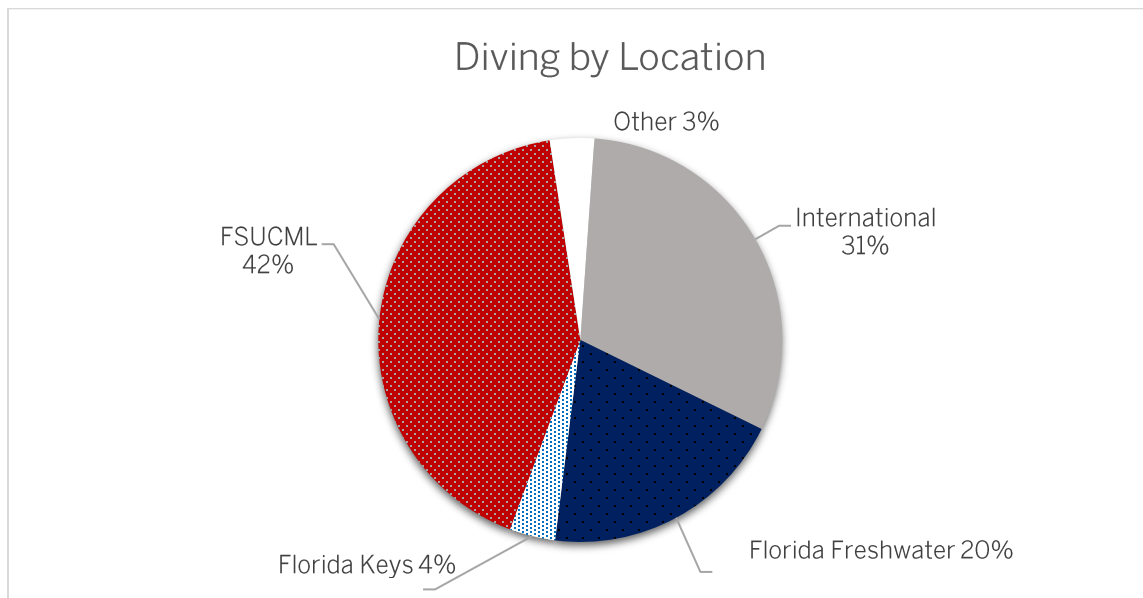


Figure 4. Percent of total FY 2020 dives by location. A total of 773 dives were logged.

## Financial Highlights

The Academic Diving Program has three sources of funding for general operations (Figure 5):

- 1) A general operations allotment provided by the Coastal and Marine Laboratory through the Office of Research (OVPR) is retained in the Education and General (E&G) Funds budget #224001. This account provides \$7k annually for essential supplies, and training and travel expenses for the DSO to attend AAUS meetings every other year.
- 2) Revenue generated through workshop fees and equipment rentals are processed through the auxiliary budget #224003. Workshops and equipment rentals fees totaled \$9.2k in revenue in FY 2020, including \$2.3k in revenue generated through use of ADP resources by outside organizations (e.g. Florida Fish and Wildlife Conservation Commission).

- 3) Variable subsidies are provided on request directly from OVPR. Past examples include funding for equipment replacement and subsidized training expenses for the annual Introduction to Scientific Diving workshop. This year, subsidies included \$7.5k for the hire of temporary instructional personnel. A proposal for equipment replacement was submitted in March 2020 for \$24.8k.

Expenses for FY 2020 totaled \$16.7k (Figure 6), not including salary for full-time employees. A spending freeze enacted in March contributed to a remaining balance of \$7.2k in Aux #224003 and \$1.9k in E&G #224001. Remaining funds will be used for delayed training and services in FY 2021.

All funds are accounted for by the FSUCML Office Manager.

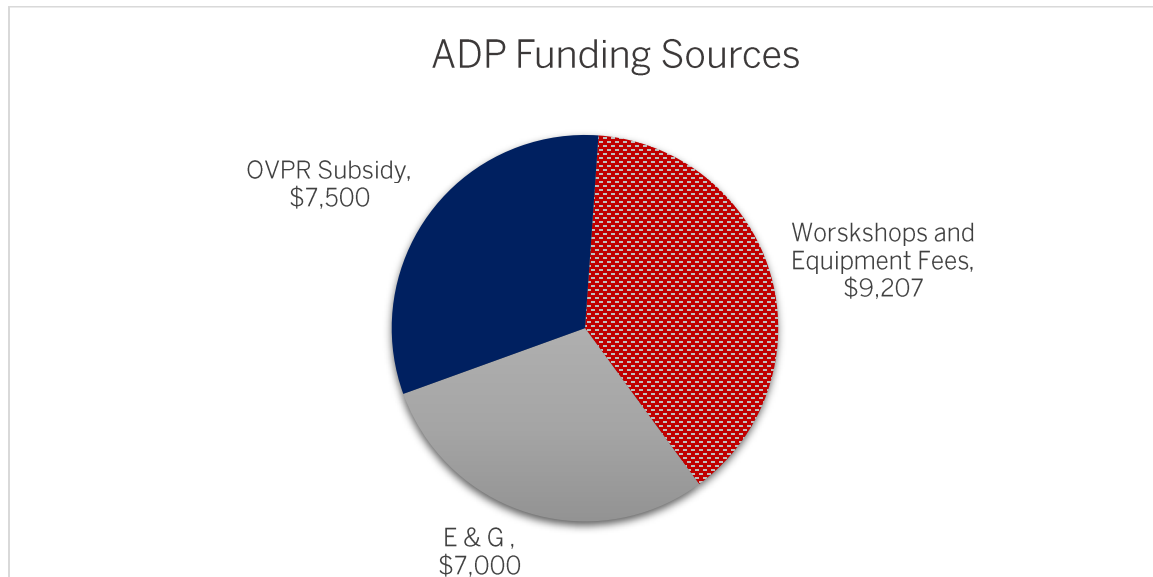


Figure 5. ADP funding sources for general operation FY 2020. Funding totaled \$23.7k. Additional funding is needed for equipment replacement in FY 2021.

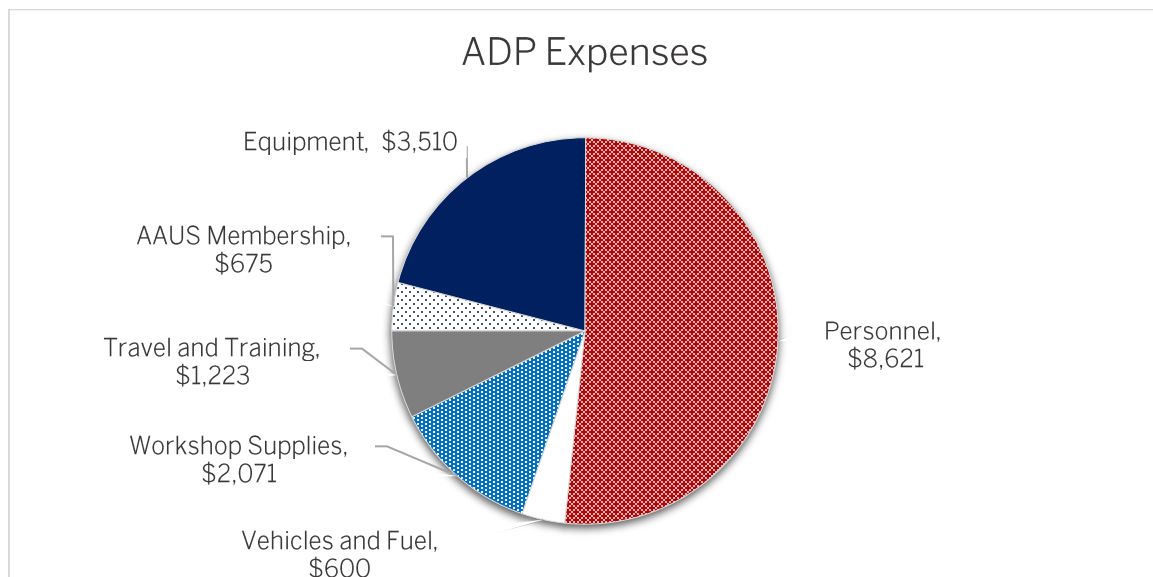


Figure 6. FY 2020 expenses for Aux #224003 and E&G #224001. Expenses were classified into six categories. The single largest expense was \$7.5k for the hire of temporary instructional personnel.

## Looking Ahead

In spite of the interruption caused by the COVID-19 pandemic, ADP anticipates increased diving activity over the next several years. This projected increase would follow suit with the years 2017-2019 and is reflective of burgeoning underwater research at FSUCML and research labs in the Tallahassee area. However, with growth comes the need to increase the capacity of the program. To ensure ADP can continue to support all ongoing research diving requests and maintain safety standards, supplemental funding is needed in FY 2021. The 2020 5 Year Equipment Plan was finalized in January and details top financial priorities and identifies the need to secure funding to replace aging diving equipment, and increase and improve ADP's inventory of SCUBA equipment.



Figure 7. Partially bleached *Pocillopora* sp. photographed during research trip in Moorea, French Polynesia. The NSF-funded project revealed cryptic coral species and previously undocumented genetic diversity.