



MOSAICS IN SCIENCE

Diversity Internship Program

2021 Project Descriptions

NPS UNIT: BISCAYNE NATIONAL PARK	PD #: 2021505
<p>Project Title: Assessing fisheries resources in Biscayne National Park in light of recent changes in fishing regulations</p> <p>Position Type: Mosaics PLC</p> <p>Primary natural resource discipline: Biological Sciences</p> <p>Project keywords: Fisheries, fishery management, field biology</p> <p>Location: Homestead, Florida</p>	
COVID-19 NOTICE	
<p>As the COVID-19 pandemic continues to change and evolve, project timelines and structure remain flexible and it may be necessary to postpone start dates, begin work remotely, or reformulate the project's description. Should any development in the COVID-19 outbreak impair a project's timeline or results, the SIP Team will work with the park and project mentors to assess the situation and determine the best course of action at that time.</p>	
PROJECT DESCRIPTION AND WORK PRODUCTS	

Position Description: We seek an intern to assist park scientists with assessing the efficacy of new fishing regulations implemented in Biscayne National Park. These new regulations were enacted in July of 2020 to improve the status of targeted species and the habitats they utilize, both of which have long been acknowledged to be in decline due to a variety of factors. The intern would be involved in completion of recreational creel surveys (surveys of recreational fishers to assess their effort, landings, and experience) to collect valuable fishery-dependent data from visitors who are fishing in the park. The data collected can be added to the park's longstanding creel database, which goes back to 1976, to help determine if the new rules have improved the status of fishery-targeted species in the park.

Creel surveys are vital to monitoring fishing effort in the park, determining if visitors are compliant with the new regulations, providing outreach to uneducated visitors, and assessing if the new regulations are improving the fishing experience. The intern will be trained in the creel survey methodologies and identification of the commonly harvested fish species. He/she will be expected to operate from the local public marinas that feed into Biscayne National Park and interact with park visitors as they return to the marina from their day of fishing. The intern will ask a series of questions about the fishing activity, then examine landings to obtain data on sizes and numbers of species. The intern would be expected to conduct creel surveys during the peak fishing days each week (Friday, Saturday and Sunday).

For the remaining two days per work week (either Monday/Tuesday or Wednesday/Thursday), the intern will work closely with other Natural Resource Management staff to gain a well-rounded exposure to various natural resource management activities within Biscayne National Park. Specific tasks will vary from week to week, but will likely include at least some of the following activities: a) monitoring and protection of threatened and endangered sea turtle nests; b) providing top-side support and data collection assistance for park SCUBA operations focused on in-water fish surveys and non-native lionfish removals; c) collection of water samples for salinity monitoring, red tide assessments, and/or ocean acidification studies; d) marine debris clean-ups from coastal (beach and mangrove) and marine (shallow reefs and seagrass) habitats, and e) survey and trapping efforts for non-native reptiles such as green iguanas, tegus, and Burmese pythons.

For all assigned tasks, the intern will be responsible for neat, complete data collection, database entry, and proper filing of hard copies of data. Should the intern demonstrate the need/desire/capabilities to conduct data analyses, the mentor will guide the intern in completion of data analyses and summary statistics. Examples of creel survey data analyses include catch per unit effort, average size of harvested species over time, and occurrence of violations.

The park's Fishery Management Plan, under which these new regulations were implemented, is considered one of the priority projects for the park. Determination of the success of the regulations implemented in support of this plan can only be done with routine monitoring of the resources, including the creel surveys. The park currently lacks the resources to complete the creel surveys, and as such, stands to lose invaluable information to help track the status of its fisheries resources. The intern would contribute by collecting creel data during the summer (typically the busiest season for fishing due to the favorable sea state during that time of year).

This position is offered through the National Park Service's Mosaics in Science Internship Program in partnership with Environment for the Americas.

Work Products: At the end of this internship, the intern will have completed creel surveys on high-traffic fishing days (Fri, Sat, Sun) with an estimated minimum of 10 interviews completed per day (but likely much higher). The creel survey database will be updated (by the intern) so that fishing activity

NATURAL & PHYSICAL WORK ENVIRONMENT

Biscayne National Park is located in southern Miami-Dade County. The park includes a narrow strip of mainland; 95% of the park is underwater. The park housing is considered fairly remote, being at least 6 to 8 miles from the nearest amenities. These amenities include a hospital, retail, grocery stores, movies etc. The weather during the summer internship period is very hot and very humid.

QUALIFICATIONS

This internship is geared towards those with coursework and/or degrees in biology, environmental science, marine science, ecology, and other similar disciplines. Much of the creel survey work will be independent, and as such, the intern must demonstrate a strong work ethic, a responsible nature, and good decision-making skills. Due to the multicultural nature of Miami-Dade County, the ability to speak another language, particularly Spanish, is considered an ideal qualification. The intern must be comfortable working outdoors in extreme temperatures, riding and working on boats and being in/on the water for extended amounts of time. Individuals prone to seasickness should not apply. Lastly, because the intern will need to drive government vehicles to access the local marinas to conduct creel surveys, a valid driver's license is needed.

The applicant must be a U.S. citizen or U.S. permanent legal resident ("green-card-holder") between the ages of 18 and 30 years old, inclusive, or veterans up to age 35. Prior to starting this position, a government security background clearance will be required.

VEHICLE AND DRIVER LICENSE REQUIREMENTS

Applicant must have a valid drivers license and a good driving record.

A personal vehicle is REQUIRED for this position.

HOUSING

Park housing is available and will be provided at no cost to the participant. The park housing is a 2-bedroom apartment. Each bedroom has 2 beds. Each bedroom will be same-gender, but the apartment overall could be co-ed, depending on other tenants. Housing capacity could be reduced to one person per bedroom, or even one person alone in the unit, depending on COVID-19 concerns and guidance, if relevant, at that time. The living room, kitchen, porch, dining area, bathroom and laundry areas are considered shared space. The kitchen is stocked with the basics and the unit is furnished. The intern will need to bring personal effects such as linens and pillows. Parking is available immediately outside and under the unit. The unit is located adjacent to park headquarters building (where the intern's office will be), making for a rapid and traffic-free commute of a 30-second walk across the parking lot.

INTERNSHIP START/END DATES

Start Date: 5/17/2021

End Date: 7/30/2021

Eleven weeks of the internship will be in the park. A mandatory Career and Leadership Workshop will be held in Washington, D.C. from August 1 – 5, 2020.

PLEASE DIRECT ANY QUESTIONS TO ENVIRONMENT FOR THE AMERICAS

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