



MOSAICS IN SCIENCE DIVERSITY Internship Program

2020 PROJECT DESCRIPTION

NPS UNIT: BISCAYNE NATIONAL PARK	PD #: 2020502
<p>Position Title: Natural Resource Management Assistant Position Type: MIS Intern Primary natural resource discipline: Biological resources Project keywords: Fishing, fisheries, creel surveys, interviews Park or Program Website: www.nps.gov/bisc Location: Homestead, Florida</p>	
<p>MOSAICS IN SCIENCE INTERN OVERVIEW</p>	
<p>The Mosaics in Science Diversity Internship Program is focused on persons that are under-represented in STEM fields. Students and recent graduates that are African American, Latino/Hispanic, Asian, Pacific Islander, and Native American are encouraged to apply for these internships. In order to be eligible for a MIS intern position, applicants 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, and veterans up to 35 years old.</p> <p>A Mosaics Intern within the Mosaics in Science Diversity Program is an entry level natural resource science internship that focuses on career exploration and building fundamental natural resource science skills. Each Mosaics Intern will receive a weekly stipend of \$400, park-provided housing or a housing allowance and paid travel expenses. Interns who successfully complete 640 hours of work in one or more eligible internships and are under the age of 30 will be eligible for the Public Lands Corps Non-Competitive Hiring Authority for two years following the completion of the internship. Successful completion of a Mosaics in Science internship does not guarantee that the participant will be hired in to a federal position.</p>	
<p>PROJECT DESCRIPTION AND WORK PRODUCTS</p>	
<p>Position Description: Creel surveys are a way to collect valuable fishery-dependent data from visitors who are fishing in the park. These surveys allow for the collection of demographic and general information about the fishing trips, as well as biological data to help estimate and track metrics such as fishing effort, which species are most targeted, size at capture, and frequency and nature of fishing violations.</p> <p>The Biscayne National Park creel survey began in 1976 and, as such, is one of the longest-running creel survey programs of which we are aware. Sadly, the future of this program is in peril due to recent budget cuts which make it impossible to support park staff to work on the weekends (when creel surveys are done). It is imperative that creel surveys continue due to: 1) the declining state of fisheries resources in the park (as well as at a larger spatial scale) and 2) the need to monitor fishing effort and harvest as new park-specific state regulations designed to improve the status of the park’s fisheries resources are set to be implemented in early 2020. The park’s fisheries resources have long been acknowledged to be in decline, with fewer large targeted species being observed both in underwater visual surveys as well as in landings. Very few individuals above the minimum legal size are observed, and the illegal harvest of undersized fish is an all-too-common occurrence which only exacerbates the problem. In recognition of the deteriorating resources, park staff have collaborated with the Florida Fish and Wildlife Conservation Commission (the agency responsible for setting fishing regulations in the park) to develop park-specific regulations with the goal to improve the abundances and sizes of targeted fish</p>	

species by 20% over existing conditions. Proper monitoring, including routine creel surveys, are needed to determine if this 20% improvement goal is being met.

Furthermore, the park is now in the second year of a 2-year PMIS project supporting Dr. Jerald Ault (University of Miami's Rosenstiel School of Marine and Atmospheric Science) to analyze past fishery-dependent creel survey data and fishery-independent underwater visual survey data to develop an optimal creel survey sampling scheme. The results of Dr. Ault's work would be applied to future creel survey collection efforts, including where, when, and how to conduct creel surveys.

The intern's primary duty is to gather crucial fishery-dependent data through the creel survey. The intern will conduct creel surveys during peak fishing days (Thursday through Sunday), with one remaining day of the 5-day work week being left open so that the intern can participate in other natural resource activities, running the gamut from sea turtle nest monitoring to reef fish surveys to coral restoration to water quality field work. The intern will be trained in the creel survey methodologies and identification of locally harvested fish species. They will be expected to operate from the local public marinas that feed into Biscayne National Park, interacting with park visitors as they return to the marina from their day fishing. The intern will also have the opportunity to provide invaluable outreach and education to park visitors who may have a question about fishing rules or even just on the park in general. Much of this 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 multi-cultural nature of Miami-Dade County, the ability to speak another language, particularly Spanish, is considered an ideal qualification.

Should the intern demonstrate the desire and capabilities to conduct data analyses, the fishery and wildlife biologist will mentor the intern on how to utilize the Microsoft Access creel survey database to complete a variety of data analyses and summary statistics, such as catch per unit effort for various species, average size of harvested species over time, and occurrence of violations.

The park's Fishery Management Plan 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. As stated above, the park currently lacks the resources to complete these creel surveys, and as such, stands to lose invaluable information to help track progress on its fisheries resources. The intern would contribute by collecting data during the summer which is, historically, the busiest season for fishing due to the favorable conditions at sea during that time of year.

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

Work Products: Completion of creel surveys four days per week (weather permitting), entry of collected survey data into the park's database, and, if the student so desires and is capable, a report summarizing data analyses and summary statistics that were computed from the collected data.

QUALIFICATIONS

Priority will be given to female applicants or males from the local community, as park provided housing is limited and available to females only.

The individual should be friendly and outgoing; able to interact with the public. Spanish-speaking is highly desirable since ~50% of the park's user base is Spanish-speaking. Ability to identify common fish of South Florida is good, but not essential (and can be taught on the job). The individual should be neat and organized, and someone who pays attention to detail. Someone majoring in some aspect of biology or environmental sciences would be ideal, although given the public-interaction nature of this work and the likelihood of conducting outreach during the course of the surveys, an education major would also be suitable. The intern must be able to

stand on their feet for extended periods of time and must be able to tolerate working outdoors under extreme heat and humidity.

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 a veteran 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 driver license and a good driving record. The intern will be conducting creel surveys at various public marinas that feed into the park. Thus, they will have to utilize a government vehicle to access these various marinas.

A personal vehicle is REQUIRED for this position. The park is located at least 6 or 8 miles from local amenities (grocery stores, retail, movie theater etc). The intern would need a car in order to leave the park.

HOUSING

Park housing is available and will be provided at no cost to the participant. Priority will be given to female applicants or males from the local community, as park provided housing is limited and available to females only. The park housing is a 2-bedroom apartment. Each bedroom has 2 beds. Each bedroom will be same-sex, but the apartment over all could be co-ed, depending on other tenants. The living room, kitchen, porch, dining area, bathroom and laundry area are considered shared space. The kitchen is stocked with the basics, 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: 5/20/2020

End Date: 7/31/2020

Eleven weeks of the internship will be in the park.

A mandatory Career Workshop will be held in Washington, D.C. from August 2 – 6, 2020.

Are these dates flexible? Yes

STIPEND PAYMENT

\$4,800, all travel and housing costs will be covered

NATURAL & PHYSICAL WORK ENVIRONMENT

Natural 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 or 8 miles from the nearest amenities. These amenities include hospital, retail, grocery, movies etc. The weather during the internship period is very hot and very humid.

Physical Work Environment: The field work will consist of daily visits to local public marinas. The intern can expect to encounter slippery boat ramps and to conduct surveys in the hot summer sun with extreme humidity. Mosquitoes and other biting insects may be problematic at certain times of day. The intern will be standing for long periods of time. Job hazards include prolonged sun/heat exposure, handling fish with sharp spines and slipping on wet boat decks and boat ramps. The intern will work weekends and a typical schedule will be Wednesday – Sunday, 8 hours per day.