



MOSAICS IN SCIENCE DIVERSITY Internship Program

2019 – PROJECT DESCRIPTION

NPS UNIT: BISCAYNE NATIONAL PARK	PD #: 2019501
<p>Position Title: Natural Resource Management Assistant Position Type: DHA Resource Assistant Primary natural resource discipline: Biological resources Project keywords: Fisheries, Reef Fish, Data Analyses, Statistics, Spatial Analyses Park or Program Website: https://www.nps.gov/bisc/index.htm Location: Homestead, Florida</p>	
DIRECT HIRE AUTHORITY RESOURCE ASSISTANT OVERVIEW	
<p>The Mosaics in Science Diversity 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 DHA-RA Internship, participants must be a U.S. citizen or U.S. permanent legal resident (“green-card-holder”) and currently enrolled in an undergraduate, graduate, or PhD degree program at an accredited institution of higher education during the summer internship. Persons enrolled in a certificate program do not qualify for DHA positions.</p> <p>The DHA Resource Assistant internship (DHA-RA) is a unique internship opportunity within the Department of the Interior (DOI). The objective is to build a pathway to employment in the DOI for exemplary students in higher education. DHA-RA interns will apply natural resource science expertise to NPS management and build a network with federal employees throughout the internship. The internships are designed to develop the participant’s technical and creative thinking abilities, leadership skills, and problem-solving capabilities. DHA-RA interns will receive a weekly stipend of \$480, park-provided housing or a housing allowance, and paid travel expenses. DHA-RA interns who successfully complete the internship requirements receive a 2-year eligibility period starting from the date of their degree during which they can be non-competitively hired by the DOI. Successful completion of the internship does not guarantee that the participant will be hired in to a federal position.</p>	
PROJECT DESCRIPTION AND WORK PRODUCTS	
<p>Position Description: The DHA Resource Assistant will complete in-depth analyses of Biscayne’s reef-fish data (from 1999 to the present) to support the park’s Fishery Management Plan and impending park-specific fishing regulatory changes to be implemented by the Florida Fish and Wildlife Conservation Commission (FWC). The analyses will examine spatial and temporal trends in fish populations within the park. The goal is to better understand and document spatial and/or temporal trends in numbers, distributions, and sizes of reef fish, specifically those targeted by recreational and commercial fisheries; findings will help guide the development of park-specific fishing regulations to be co-developed by the NPS and the FWC. The DHA Resource Assistant will work methodically within a pre-established database and the R software program to analyze data individually for a series of targeted species as well as at a multi-species community level. In the process of doing so, the DHA Resource Assistant will develop the basic scripts and protocol needed to ensure future years’ analyses can continue uninterrupted and in the same manner as previous years.</p>	

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

Work Products:

A report summarizing: i) trends in the numbers (densities), sizes, and occurrences of targeted species (including various snappers, groupers, hogfish, and triggerfish) over space (distributions across different reef habitat classes and depths) and time (years), and ii) trends in community-level reef fish metrics (e.g. species richness, diversity indices, etc.) over space and time.

1. Documentation of the script and associated protocols for each type of analysis run, such that the script can be applied to future years' data in order to continue analyses beyond the tenure of the DHA Resource Assistant.
2. A presentation of findings to park staff and partners.

QUALIFICATIONS

This project is very technical in terms of database management and statistical analyses. The selected individual must be an upper-level undergraduate student or a graduate student who has: i) successfully completed at least 2 statistics courses and ii) experience using the R software program. Experience in other software programs, such as ArcGIS, Excel, and PowerPoint are not required, but would certainly enhance the products produced by the intern. The individual must be comfortable with spending long hours in front of a computer doing a repetitive sequence of steps to complete analyses.

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

VEHICLE/DRIVER'S LICENSE REQUIREMENTS

A driver's license and vehicle are not required to access the worksite at the park headquarters. Park housing is located adjacent to the headquarters building. However, it should be noted that park housing is approximately 7 miles away from the closest amenities (grocery stores, retail shops, etc.) so the selected individual would need a valid driver's license and a personal vehicle in order to access these areas. The intern may be asked to participate in occasional trainings/meetings with partner agencies, which would require local travel using a provided government vehicle.

HOUSING

Biscayne's park housing calendar is currently not scheduled out past April of 2019, however it can be anticipated that housing is available (based on occupancy patterns for the preceding few months). If housing is not available (or the park cannot finance the intern's stay at the house), recruitment will be limited to individuals within the local commuting distance (e.g., students from Florida International University and University of Miami).

The housing unit is a 2-bedroom apartment with each bedroom being a two-person room. Depending on occupancy, the intern might have to share the bedroom with a person of the same gender. The unit itself could be a co-ed living situation in that while each bedroom would only be assigned to individuals of the same gender, the two bedrooms could have different gender assignments. The kitchen, closets, bathroom, dining room, and living room are all considered shared common space. The kitchen is equipped with the basic items needed for preparing and eating meals. Tenants must bring their own towels and bedding. Pets are not allowed. The unit is equipped with Wi-Fi.

INTERNSHIP START/END DATES

Start Date: 5/20/2019

End Date: 8/8/2019

Eleven weeks of the internship will be in the park. A mandatory Career Workshop will be held in Washington DC from August 4 – 8, 2019.

Are these dates flexible? Yes
STIPEND PAYMENT
\$5,760, all travel and housing costs will be covered
PHYSICAL/NATURAL & WORK ENVIRONMENT
<p>Physical/Natural Environment: Biscayne National Park headquarters, where the internship will be based, is located in Homestead, Florida. Most of the park is underwater, with the few terrestrial areas being the mainland shoreline and the chain of islands in the park. The park headquarters area includes a Visitor Center, an administration building, a maintenance building, and park housing. Headquarters is approximately 7 miles from local amenities, including gas stations, supermarkets, retail stores, hospitals and a movie theater. Homestead has a sub-tropical climate, with a hot and humid rainy season (May through November) and a (relatively) cooler dry season (December through April).</p> <p>Work Environment: Being a project focused on data analyses, this project will be heavily office-based. It is anticipated that approximately 90% of the position time will be spent at the office working on a computer to complete the various analyses and reporting. The intern will be given the occasional opportunity to join coworkers in the field so that he/she may get the chance to observe the park's reef resources. The internship will occur during the summer months, which can be very hot and humid in South Florida. While working indoors, the intern can expect to remain comfortable in a fully air-conditioned building. Outdoor work will likely involve sun exposure, humidity, heat, biting and stinging organisms, and occasional storms. Visiting park reefs will involve traveling on boats and snorkeling.</p>
MENTORING AND LEARNING GOALS
<p>Mentoring: Park staff will mentor the intern by helping the DHA Resource Assistant develop a thorough understanding of the goals of the project and helping him/her develop the strategy for moving forward. The primary project supervisor will facilitate training sessions (via phone, online, and in person) with appropriate personnel from the National Oceanic and Atmospheric Administration (NOAA) and/or The Florida Fish and Wildlife Conservation Commission (FWC) to ensure that the DHA Resource Assistant has a full understanding of the existing reef fish database and the R software program that will be used to complete analyses. Weekly discussions between the supervisor and the DHA Resource Assistant will provide for status updates on the project, including any issues that have arisen and how problems can be resolved. Additionally, other park biologists and resource management personnel can assist the DHA Resource Assistant by providing insights on fish species life histories, unique events (e.g. hurricanes, bleaching episodes), and other information that might help in the interpretation of findings. The project supervisor will also provide the DHA Resource Assistant opportunities to shadow park biologists in the field so he/she can observe firsthand the park's coral reefs and fish inhabitants, as well as the data collection process. Beyond the specific project mentoring, the project supervisor will also provide career-focused mentoring to the intern, including notifying him/her of potential job opportunities, providing assistance in resume preparation and editing, engaging in mock interviews, and familiarizing the intern with applying for federal jobs through USAJOBS,</p> <p>The supervisor/mentor will develop a detailed workplan and Leadership Development and Mentoring Plan in collaboration with the selected intern.</p> <p>Learning Goals: The DHA Resource Assistant will develop increased analytical skills, particularly related to data management, statistical analyses, software programming, and synthesis of findings into a final report. The work will likely involve training and/or collaboration with individuals from both NOAA (which maintains the entire reef fish survey dataset) and FWC, thus providing opportunities for inter-agency collaboration, networking, and professional growth. The DHA Resource Assistant will have the opportunity to gain leadership experience in two ways. First, the intern will be given "ownership" of the project, and will be tasked with developing goals and timelines for completion. Secondly, the intern will be given the opportunity, if he/she is interested, to provide</p>

providing training and explanations of his/her work products to other park staff, including entry-level biotechnicians and interns, who may be interested in learning data analysis skills and/or the statistical software being used.

LEADERSHIP DEVELOPMENT

To develop leadership and project management skills in the intern, the supervisor will, at the onset of the internship, have a detailed meeting with the intern in which the general goals and existing data are discussed. The supervisor will task the intern with coming up with a plan for tackling the goals and a schedule for completion of different tasks. Once the intern develops these items, the supervisor and intern will meet again to discuss, and the supervisor can assist in fine-tuning the plan and schedule, as well as helping to make arrangements for any trainings and/or acquisitions needed to make the project run smoothly.

Once the project is underway, the supervisor will conduct weekly status update meetings with the intern, which will provide the intern opportunities to provide progress updates, discuss plans for future work (including modifications to original plans), and detail any challenges that have arisen. The supervisor will work with the intern to develop ideas to help overcome challenges, but will strongly encourage the intern to think critically to generate suggestions on his/her own. Throughout the process, the supervisor will encourage the intern to communicate with park partners (from NOAA and FWC, for example) to discuss the project and receive any additional training or insight that would enhance the success of the project.

Lastly, the intern will, if he/she is interested, be able to lead less-experienced co-workers (such as entry-level biotechnicians, interns, and volunteers) in trainings related to the project. These would be informal sessions in which the intern could provide instruction on data analyses and/or the software program(s) used,

PRESENTING PROJECT RESULTS

Prior to the conclusion of the internship, the DHA Resource Assistant will be asked to present a seminar of his/her work and findings to park staff and partners. It is anticipated that attendees will include members of various divisions (Resource Management, Interpretation, Superintendent's Office, etc), with many having roles as decision-makers within the park. As with past internship presentations, the seminar will be held in the auditorium of the Visitor Center, allowing interested park visitors to also attend and participate. The seminar will include a question-and-answer session after the presentation to enhance the intern's experience in communication as well as to further stimulate critical thinking by exposing the intern to new/different viewpoints.