



# MOSAICS IN SCIENCE DIVERSITY Internship Program

## 2020 PROJECT DESCRIPTION

<b>NPS UNIT: FIRE ISLAND NATIONAL SEASHORE</b>	<b>PD #: 2020506</b>
<p><b>Position Title:</b> Biology Assistant  <b>Position Type:</b> MIS Intern  <b>Primary natural resource discipline:</b> Biological resources  <b>Project keywords:</b> salt marsh, marshbirds, saltmarsh sparrow, birds, ecosystem  <b>Park or Program Website:</b> <a href="http://www.nps.gov/fiis">www.nps.gov/fiis</a>  <b>Location:</b> Patchogue, New York</p>	
<b>MOSAICS IN SCIENCE INTERN OVERVIEW</b>	
<p>The Mosaics in Science Diversity Internship Program is focused on persons who are under-represented in STEM fields. Students and recent graduates who 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, or veterans up to 35 years old.</p> <p>A Mosaics Intern within the Mosaics in Science Diversity Internship 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>	
<b>PROJECT DESCRIPTION AND WORK PRODUCTS</b>	
<p><b>Position Description:</b> This project supports monitoring and a collaborative research project for marshbirds. Marshbirds are one of several vital signs recommended by the NPS Inventory and Monitoring Network to be included in long-term monitoring in order to understand and protect resources of a park. In particular, the saltmarsh sparrow is used as an indicator species for monitoring the health of a saltmarsh. As sea levels rise, there are concerns that marshes will continue to shrink, and loss of habitat will negatively impact saltmarsh sparrow populations as well as other marsh species. The saltmarsh sparrow is considered globally endangered on the International Union for Conservation of Nature Red List and is being considered for listing under the Endangered Species Act.</p> <p>There are four main goals of this project:</p> <ol style="list-style-type: none"> <li>1) Continue NPS long-term monitoring of marshbirds at established survey points at FIIS</li> <li>2) Assist in initiating a new sampling design with additional survey points throughout FIIS marshes to adequately monitor marshbirds on a local park scale</li> <li>3) Assist with a collaborative restoration research project with USFWS, looking at creating microhabitats (marsh mats) for the saltmarsh sparrow</li> <li>4) Assist the NPS Biologist in engaging with local partners and improving citizen science opportunities.</li> </ol>	

To complete project goal (1), an intern will conduct distance-sample point counts and broadcast surveys for secretive marsh birds at 3 established survey points during 3 survey windows (Survey 1: May 1-May 31; Survey 2: June 1-June 25; Survey 3: June 26-July 15). The intern will follow approved SHARP monitoring protocols. It's expected to take 5 days to complete all surveys since they're close in proximity to each other. In addition, to complete project goal (2) an intern would need to re-con an additional 8 points recommended by the Network and help FIIS determine whether these points provide a good representation of salt marsh habitat to be included in the program. Project goal (2) would also take approximately a week (3-5 days) to complete and access to sites would be by foot, kayak and/or UTV.

Project goal (3) is part of a collaborative research project with the U.S. Fish and Wildlife Service (USFWS) at sites across the Northeastern U.S. This project aims to create high-quality microhabitats that experience reduced tidal inundation and may therefore minimize saltmarsh sparrow nest loss due to flooding. Their research project includes raising marsh elevation using synthetic (PET plastic) and/or natural (coir) mats, which could be carried and placed on the marsh platform. These mats would create small "islands" that are slightly elevated above the surrounding marsh habitat, and less prone to tidal inundation that exceeds typical nest height. The intern will be responsible for assisting the NPS Biologist with installing two (2 m x 3 m) mats – one synthetic and one natural – and then solely responsible for monitoring the mats every 7 days through the end of August using established health/condition, photopoint and vegetation monitoring protocols provided by the USFWS. Installation would take 1-2 days, and monitoring the mats would occur weekly and is estimated to take a full day.

Project (4) will include writing up a short report and presentation on the work conducted this summer and presenting it to the Management and Operations Team at Fire Island (FIIS). This report/presentation can also be shared with interested local organizations, such as the Seatuck Environmental Association. If appropriate, FIIS hosts a Latino Conservation Day event at Watch Hill during Latino Conservation Week in July and the intern could make "marshbirds" and their work part of the rotating educational stations for that particular event.

The combination of monitoring and research in this project are in line with the NPS mission, of preserving unimpaired natural resources and values. Salt marshes are among the most productive ecosystems in the world and are considered the "ecological guardians of the coast". The loss of this habitat means the loss of a great number of species dependent on it. Marshbirds are one of several vital signs recommended by the NPS Inventory and Monitoring Network to be included in long-term monitoring in order to understand and protect resources of a park. As sea levels rise, there are concerns that marshes will continue to shrink, and loss of habitat will negatively impact saltmarsh sparrow populations as well as other marsh species. The saltmarsh sparrow is considered globally endangered on the International Union for Conservation of Nature Red List and is being considered for listing under the Endangered Species Act. The species' population is declining rapidly – as well as other tidal marshbirds - throughout its range from habitat loss, degradation and current sea-level rise.

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:** The final products and materials from this project will be a short report and presentation on the intern's work, which will be presented at a monthly Management and Operations Team at FIIS. This report/presentation can also be shared with interested local organizations, such as the Seatuck Environmental Association.

In addition, all data forms and spreadsheets will be reviewed for QA/QC before submission and summarizing data. Images – as well as all electronic data – will be saved on the park's network drive to eventually be uploaded to the NPS IRMA site by the NPS Biologist. Lastly, if appropriate, FIIS hosts a Latino Conservation Day event at

<p>Watch Hill during Latino Conservation Week in July and the intern could make “marshbirds” and their work part of the rotating educational stations for that particular event.</p>
<p><b>QUALIFICATIONS</b></p> <p>A Bachelor’s Degree in a science-related field – or working towards a Bachelor’s Degree – is a requirement for this internship position. Field experience and bird identification skills (or a strong desire to learn these skills) is preferred in an applicant.</p> <p>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 35 years old. Prior to starting this position a government security background clearance will be required.</p>
<p><b>VEHICLE AND DRIVER LICENSE REQUIREMENTS</b></p> <p><b>Applicant must have a valid driver license and a good driving record.</b> The intern will drive a park vehicle (truck or UTV) to access sites throughout the internship.</p> <p><b>A personal vehicle is RECOMMENDED but not required for this position.</b> The main reason one is recommended is to more easily get around Long Island during off days. A vehicle will be provided for the intern to access grocery stores near their official duty station, if needed.</p>
<p><b>HOUSING</b></p> <p><b>Park housing is available and will be provided at no cost to the participant.</b> Housing is located on Fire Island, in a section called Watch Hill. Watch Hill is only accessible by boat or ferry, and an intern is provided a ferry pass to get to/from Fire Island to Patchogue. It is a shared housing unit with a private bedroom. It includes a bathroom and kitchen facility, with essentials and certain appliances. There is also a separate building in walking distance for self-service laundry. The intern would need to bring bedding (full-size bed), towels and toiletries.</p>
<p><b>INTERNSHIP START/END DATES</b></p> <p><b>Start Date:</b> 5/18/2020  <b>End Date:</b> 7/31/2020</p> <p>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.</p> <p><b>Are these dates flexible?</b> Yes</p>
<p><b>STIPEND PAYMENT</b></p> <p>\$4,800, all travel and housing costs will be covered</p>
<p><b>NATURAL &amp; PHYSICAL WORK ENVIRONMENT</b></p> <p><b>Natural Environment:</b> Fire Island National Seashore is primarily located on Fire Island, a barrier island off the south shore of Long Island, NY. Watch Hill (where housing is located) is only available by boat and ferry; however, there is a marina with a restaurant and local shop at Watch Hill, but no grocery store. The intern would have to travel off Fire Island to access grocery stores in Patchogue. There is little to no elevation since the park is at sea-level and the weather can be hot and humid in mid-summer but temperatures can get down to the 60's-70's in the early morning and evenings because of the ocean breeze.</p> <p><b>Physical Work Environment:</b> The work environment for this position is approximately 70% field work and 30% office work. Field work will be in the salt marsh adjacent to Watch Hill on Fire Island. Personal protective equipment (bug jackets, headnets, bug spray, etc.) will be provided to the intern to protect against mosquitoes and ticks. To access particular sites the intern will have to walk through the salt marsh and/or may need to kayak to other sites. Safety and logistics are key components of all internships at FIIS. The intern must be comfortable on small and large boats (ferries) since it’s required for transportation to and from Fire Island and Long Island. Office work includes data entry and completing a report and presentation. This will be completed at the Watch Hill office or in Patchogue. The offices in Patchogue are located right next door to the ferry terminal, so it’s less than a 5 minute walk.</p>