MOSAICS IN SCIENCE DIVERSITY INTERNSHIP

PROJECT DESCRIPTION

Position Title: Pollinator Steward
Position Type: MIS Intern
Primary natural resource discipline: Biological resources
Park or Program Website: https://www.nps.gov/indu/index.htm
Location: 1100 N. Mineral Springs Road
          Porter, Indiana 46304

MOSAICS IN SCIENCE INTERN OVERVIEW

A Mosaics Intern 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 26 will be eligible for the Public Land Corps Non-competitive Hiring Authority for 120 days 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.

The Mosaics in Science 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 35 years old.

PROJECT DESCRIPTION AND WORK PRODUCTS

Position Description: Studies suggest that native pollinators are declining on a global scale. In the U.S., the once commonly found rusty-patched bumblebee, *Bombus affinis*, was recently listed as a candidate for federal protection under the Endangered Species Act. Recent surveys at the Indiana Dunes National Lakeshore (INDU), revealed a relatively high diversity of native bees occurring in the park. This has sparked interest from resource managers at INDU on how to improve management for native bees and contribute to conservation efforts. Park interpreters from INDU and our not-for-profit environmental education partner, Dunes Learning Center, have also expressed a need for incorporating information on native pollinators into educational programs and outreach activities.

The goals of this project are twofold: initiate a pilot native pollinator stewardship program and collect updated data on native bee diversity and abundance at INDU. The Pollinator Steward intern will participate in both initiatives. The intern will work with Great Lakes Research and Education (GLREC) staff and park interpreters to develop programs and materials to educate the public about the ecosystem benefits provided by native bees, and how they can support native pollinators. Additionally, the intern will work with the GLREC research coordinator to collect data for a native bee survey in the park. Specifically, the intern will: 1) Develop a citizen...
science survey activity and provide training to interpretive staff, teachers, and the public using the “Streamlined Bee Monitoring Protocol for Assessing Pollinator Habitat”; 2) Develop educational materials, interpretive programs, and social media content on native pollinators; 3) Facilitate a teacher training workshop on insects; 4) Collect data for a native bee survey using standardized protocol; 5) Process samples and prepare specimens for identification by taxonomic experts. This position is ideal for a motivated student interested in biodiversity conservation issues, environmental monitoring, and science outreach.

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:** The intern will gain hands on experience in research and science outreach. The intern will produce educational materials, interpretive programs, and social media content on native pollinators. Park staff and citizen scientists will receive training in the “Streamlined Bee Monitoring Protocol for Assessing Pollinator Habitat”. Educators will learn about native pollinators and be provided with educational materials that can be used in the classroom. The intern will collect and process survey data as part of a native bee monitoring project which will provide a baseline against which to measure the effects of land use, pesticide, and climate change on native pollinators. Furthermore, information on the diversity, distribution, and abundances of native bees will help the park assess habitat quality and inform active management strategies to promote native bee habitat. The intern will have the opportunity to contribute valuable data on the distribution of native bees throughout the park through established citizen science projects such as BeeSpotter, BumbleBeeWatch, and iNaturalist.

**QUALIFICATIONS**

The intern is required to be currently working toward a degree (or a recent graduate) in general biology, natural resources, environmental science, agriculture, entomology, or a related field and have at least a 3.0 GPA. The ideal candidate will have an interest in environmental education and be enthusiastic about working outdoors and collecting data. A willingness to work with insects is essential. Desired qualifications include a course or background in entomology, strong oral and written communication skills.

Prior to starting this position a government security background clearance will be required.

**VEHICLE/DRIVER’S LICENSE REQUIREMENTS**

Applicant must have a valid driver’s license and a good driving record. The participant will need a personal vehicle to travel between lodging and park sites, although carpool options with other interns may be a possibility.

**HOUSING**

Park housing is provided for researchers and students conducting research with two months advance notice. Houses are furnished and include single or shared bedrooms, kitchen facilities, and bathrooms. Only linens are required.

**INTERNSHIP START/END DATES**

Start Date: 5/22/2017  
End Date: 8/4/2017  
Mandatory Career Workshop will be held from August 6 – 10, 2017  
Are these dates flexible? Yes

**STIPEND PAYMENT**

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

**PHYSICAL/NATURAL & WORK ENVIRONMENT**

Physical/Natural Environment: Indiana Dunes National Lakeshore is located along the south shore of Lake Michigan. It consists of about 15,000 acres of dunes, wetlands, prairies, and forests. It is about 60 driving miles from Chicago, and close to train service. There are small towns within 5 miles near the park where supplies can be obtained.
**Work Environment:** There is opportunity to interact with GLREC, interpretive, and resource management staff at the park, as well as USGS scientists housed in a nearby facility. The park has about 2 million visitors annually so the public has significant interaction with the interpretive staff. Work will consist of approximately 25% time in the office, 50% field, and 25% laboratory. Field work includes potential exposure to extreme weather conditions, poisonous plants, biting insects, and wild animals. Sampling may be performed in potentially hazardous areas including steep slopes. The park will provide safety training in use of facilities and equipment. The intern will be provided with tick prevention guidelines and equipment. NPS will provide DOI computer security training. The intern will have access to NPS computers after security training is obtained.

**MENTORING AND LEARNING GOALS**

**Mentoring:** The intern will work closely with the GLREC staff, and collaborate with park interpreters and natural resource managers. There will be opportunities to interact with researchers from USGS, Field Museum of Natural History, and several universities. Additionally, there will be networking opportunities with local environmental organizations, the Dunes Learning Center, educators, and the regional conservation consortium, Chicago Wilderness. The intern will be encouraged to contribute to a variety of public outreach programs such as the Indiana Master Naturalist program, and other citizen scientist projects. There are numerous informal park activities the intern may participate in including brown bag lunches, employee picnics, and guided hikes. The intern will be able to participate in training opportunities for park staff. Orientation and safety training will be provided with other summer interns and seasonal staff at the park. The GLREC research coordinator will provide oversight for the project.

**Learning Goals:** By participating in both research and educational activities, the intern will be able to explore a variety of career options and develop skills important to both fields. The intern will gain valuable communication skills by preparing and presenting programs on native pollinators to park staff, educators, citizen scientists, and the general public in both professional and informal settings. The intern will receive training in research methods including standard sampling protocols established by USGS researchers for conducting bee surveys, specimen processing, basic insect identification and taxonomy, and data management. Through interactions with seasonal and permanent park staff, the intern will learn about NPS culture.