



## MOSAICS IN SCIENCE DIVERSITY Internship Program

### 2019 – PROJECT DESCRIPTION

NPS UNIT: LAVA BEDS NATIONAL MONUMENT		PD #: 2019511
<p><b>Position Title:</b> Science Communication Assistant</p> <p><b>Position Type:</b> DHA Resource Assistant</p> <p><b>Primary natural resource discipline:</b> Biological resources</p> <p><b>Project keywords:</b> bats, caves, wildlife, science communication, interpretation, outreach, volcanic landscape</p> <p><b>Park or Program Website:</b> <a href="https://www.nps.gov/labe/learn/nature/bats.htm">https://www.nps.gov/labe/learn/nature/bats.htm</a></p> <p><b>Location:</b> Tulelake, California</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><b>Position Description:</b> Lava Beds National Monument encompasses a unique geologic environment of volcanic upheaval, both above and below ground. The science that takes place focuses equally on the biological and physical sciences regarding volcanic and lava tube cave environments. The intern will work within the Integrated Resources Division of Lava Beds National Monument. The intern will support the following projects:</p> <ol style="list-style-type: none"><li>1. Provide scientific communication and outreach for park visitors and the local community regarding bats and caves. This will primarily involve the completion of an independent project to analyze bat occurrence data and investigate opportunities for visitors to connect with these cryptic animals in a non-harmful way. Results could be shared through public presentations and/or the development of printed outreach materials. This intern will also work with partners in the Integrated Resource Management and Interpretive Divisions to provide evening Bat Chat programs using an acoustic detector and software to display real-time bat echolocation calls and automated species identification. The intern will provide information to Interpretive staff regarding scientific monitoring and research projects taking place within the park for incorporation into public programs and outreach material. Our goal is to increase public and</li></ol>		

local awareness of bats, white-nose syndrome, and scientific methods with respect to cave resource management. Park managers will use these results to inform decisions regarding public engagement in response to an increased interest in bats.

2. Support the Integrated Resources Division through the implementation of an existing bat monitoring program. The intern will deploy acoustic detectors, complete in-cave surveys of maternal colonies, organize outflight population surveys, and collect climate data at known roost sites. This internship will continue decades of bat monitoring at Lava Beds and contribute to the North American Bat Monitoring Protocol (NABat).
3. The intern will support various management processes and decisions as they relate to natural resources; such as those relating to the monument's wildlife, plant phenology, and cave monitoring programs. This will also help the intern better understand how science shapes management decisions for use in science communications. Integrated resource management field work duties may include cave restoration, native seed collection, wildlife survey, cave and bat monitoring. This rigorous internship will provide the intern with the opportunity and need to think critically while both in the office and field in a dynamic setting. The intern will be responsible for working independently on reporting, data input/analysis, and trainings.

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 provide park visitors with at least ten public Bat Chat programs. Additionally, the intern will provide a 3-5 page written summary report of 2019 bat monitoring activities with at least three figures, one table, five citations, and future management guidelines included. This internship will provide opportunities for the public to engage with the outdoors and protected lands, fostering stewardship of the environment in current and future generations.

#### **QUALIFICATIONS**

Applicant must have or be working towards a B.S. in the physical or biological sciences. Applicant must have professional communication skills and some experience working with the public or giving interpretive programs. The participant should be able to work well independently, both in the office and in the field with little supervision, have basic map reading and GPS orientation skills, and must be comfortable hiking cross-country in a rugged environment. Basic computer skills and familiarity with MS Excel and MS Office are required. Position will require evening and night work in both developed and undeveloped areas. Applicant should be comfortable underground and able to function in the tight spaces of a cave environment. Knowledge of bat biology or previous experience with bat surveys is preferred, but not required.

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 valid driver's license is not required, but is strongly recommended so the applicant can drive NPS vehicles while on duty. A personal vehicle will not be required, but is strongly recommended as living quarters are 30-60 minutes from grocery stores, medical facilities, and other services.

#### **HOUSING**

Park housing is provided at no cost to the participant. Housing will be provided in a furnished one bedroom apartment which may be shared with another intern or seasonal employee of the same gender if high staffing levels create elevated housing needs. Pets are not allowed. Basic kitchen supplies and Wi-Fi are provided. Intern will need to bring bedding and towels. The apartments are immediately adjacent to the park offices. The park housing complex provides living quarters for both seasonal and longer-term employees and interns (approximately 35 people) during the summer season.

INTERNSHIP START/END DATES
<p><b>Start Date:</b> 5/20/2019</p> <p><b>End Date:</b> 8/8/2019</p> <p>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.</p> <p><b>Are these dates flexible?</b> Yes</p>
STIPEND PAYMENT
<p>\$5,760, all travel and housing costs will be covered</p>
PHYSICAL/NATURAL & WORK ENVIRONMENT
<p><b>Physical/Natural Environment:</b> Located in the high desert, Lava Beds ranges in elevation from about 4,000 to about 5,500 feet. The open landscape of grasses, sagebrush and junipers is interrupted often by lava flows and other volcanic features. Lava Beds protects a wide variety of well-preserved lava features resulting from many eruptions of the Medicine Lake shield volcano over the past 500,000 years- including cinder and spatter cones, lava flows, and over 700 lava tube caves. These features result from a tectonic plate beneath the Pacific Ocean slowly sliding under the continental plate. As it dives deep into the earth, this oceanic plate melts into magma, which then rises to the surface as lava several hundred miles inland from the coast. The Medicine Lake volcano is one of many places where these eruptions occurred throughout the Cascade Range of volcanoes, which stretches from northern California into British Columbia.</p> <p><b>Work Environment:</b> Office work will comprise approximately 30% of the internship, fieldwork 70%. Park elevations vary from 4,000 to 5,500 ft. The job may involve strenuous physical activity (hiking for several hours over rough terrain), exposure to tight underground environments and weather extremes. Typical summer weather is very low humidity with high temperatures in the 80s in direct sunlight. Klamath Falls is the nearest community over 1,000 people (population 40,000) and is a one hour drive from the housing area. There are several large grocery stores, restaurants and a hospital, etc. located in Klamath Falls. Small airports are available in Klamath Falls (1 hour drive) and in Medford, OR (2.5 hour drive).</p>
MENTORING AND LEARNING GOALS
<p><b>Mentoring:</b> Mentorship will be provided primarily by the Natural Resource Program Manager, though the intern will also work with other permanent and seasonal employees. Career mentoring (job shadowing, development of federal resume, assistance with USAjobs and identification of science-based NPS careers) will be provided by the Natural Resource Program Manager, GIS Specialist, and Physical Scientist. Opportunities for job shadowing will include projects related to the development of a bat monitoring program, coordination of a Youth Conservation Corps, implementation of vegetation crew restoration projects, and completion of cave monitoring activities. Office work may be completed independently, but field work is conducted by teams of two or more staff. The park is encouraged by this internship opportunity specifically because of the experience it will give the intern and the opportunities it will give the park staff to help foster the intern's future in natural resource management. The Natural Resource Program Manager will give the intern the opportunity to work with a variety of people in different fields and to perform duties hands-on.</p> <p>The supervisor/mentor will develop a detailed workplan and Leadership Development and Mentoring Plan in collaboration with the selected intern.</p> <p><b>Learning Goals:</b> There will be an extremely wide variety of opportunities for the intern to develop leadership skills. These range from participation in the various types of monitoring that occurs in the park to participating in science communication and working with other divisions to understand the link between science and management. The intern will work with and participate in daily natural resource management efforts in a unique volcanic landscape, including work in lava tube caves. Safe caving practices, leave-no-trace wilderness ethic, and an adherence to the scientific method will be guiding work principles.</p>

**LEADERSHIP DEVELOPMENT**

The Natural Resource Program Manager will provide mentorship and guidance via weekly meetings focused on leadership skill development, critical thinking, real-world problem solving, project management, and stakeholder engagement. Topics will focus on communicating the value of scientific monitoring and exploration of the outdoors in order to engage public constituents and stakeholders. Specifically, the intern will develop leadership skills first through the improvement and implementation of public outreach programs, and second through a written summary report detailing results of 2019 bat monitoring activities. Individual development of the finer points of the data summary and analysis will be the responsibility of the intern, while the mentor and other park staff will provide general guidance on management issues of concern and completion of related projects.

**PRESENTING PROJECT RESULTS**

At the end of the season, the intern will provide a concise 30 minute presentation to park managers and staff regarding the implications of the reviewed opportunities for visitors to view and connect with bats in a way that is positive for both bats and people. The presentation will focus on the successes and failures of the Bat Chat public programs and any outreach materials created by the intern. The presentation will provide guidance for ensuring connection with current and future generations.