



MOSAICS IN SCIENCE DIVERSITY Internship Program

2019 – PROJECT DESCRIPTION

NPS UNIT: GREATER YELLOWSTONE NETWORK AND YELLOWSTONE NATIONAL PARK	PD #: 2019508
<p>Position Title: Biology Assistant Position Type: MIS Intern Primary natural resource discipline: Biological resources Project keywords: fieldwork, vegetation, climate, data collection, monitoring Park or Program Website: https://www.nps.gov/im/gryn/index.htm Location: Bozeman, Montana and Mammoth, Wyoming</p>	
MOSAICS IN SCIENCE INTERN OVERVIEW	
<p>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.</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 Land 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>	
PROJECT DESCRIPTION AND WORK PRODUCTS	
<p>Position Description: This internship provides opportunities to work with science professionals from the Greater Yellowstone Network (GRYN) and Yellowstone National Park (YELL) on projects related to natural resources monitoring and management. Interns will work in the Greater Yellowstone Ecosystem (GYE) which includes 3 park units (Bighorn Canyon National Recreation Area, Yellowstone and Grand Teton national parks) and Forest Service lands.</p> <p>GRYN's long-term monitoring programs focus on vegetation (sagebrush, grassland, wetland, and whitebark pine), rivers and springs, climate, and amphibians. GRYN scientists gather data on natural resource indicators or ‘vital signs’ to inform managers of the vital signs status and trends. Further, the program examines how climate, fire, invasive species, and other factors may play a role in observed changes. In YELL, park scientists gather data on biological resources and climate at sites along a transect from lower to higher elevations (approximately 4,000 to 10,000 feet). These data will be used to inform managers about how species are adapting at different elevations and climates overtime.</p> <p>GRYN is one of 32 inventory and monitoring (I&M) networks established by the National Park Service to enhance scientific knowledge about select park natural resources. The I&M Program's goal is to provide natural resource information to managers and the public by collecting, analyzing, and reporting on long-term monitoring data. Yellowstone is over two million acres and the core of the Greater Yellowstone Ecosystem, one of the largest intact ecosystems in the lower 48 states of the USA. It is well known for its geysers and often referred to the</p>	

Serengeti of North America. The Yellowstone Center for Resources (YCR) supports science and resource management for wildlife, aquatic resources, vegetation, physical resources, and cultural resources. Both GRYN and the YCR are critical for integrating science into decision making.

This intern will learn about both science programs by joining both GRYN and YELL field crews that are responsible for data collection activities. Work schedules are typically 10 to 12 hour days in multi-day “hitches”. Hitches can range from 2-8 days and require long drives, front- and backcountry camping, hiking 8 to 20 miles per day carrying a heavy pack across rough, mountainous terrain, and working in grizzly bear country. The intern will be required to attend GRYN/YELL training and safety programs prior to entering the field. We will provide opportunities to take American Red Cross (or equivalent) CPR and First Aid courses. Following training, the intern, as a member of a field crew, will be expected to hike and navigate using a handheld GPS, map, and compass to field sites. On site the intern will be expected to collect data following established protocols.

The intern should anticipate working all summer in mountain weather conditions and the presence of insects and wildlife. Temperatures can range from below freezing and snowing to close to 100 degrees. Days can be long with biting insects (e.g. mosquitoes). Supervisors work closely with field crew members to safely and efficiently implement fieldwork. The intern’s tasks may be adjusted to meet these requirements. The intern is expected to be inquisitive and engaged through hands-on and active participation in fieldwork, planning and logistics, being proactive in learning new skills, self-sufficient in backcountry and front country environments, supportive of other crew members, and to conduct themselves professionally as a representative of the National Park Service.

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: Data collected on all monitoring programs are used in reports to inform managers on the status and trends of natural resources. In addition, the intern will be expected to report on a project that is of interest to them but relates to the work that they participate in throughout the summer. This project will be designed and written up following the scientific method and available to present during the final MIS closeout gathering.

QUALIFICATIONS

This position is a field-based position requiring individuals to spend much of their time in the outdoors and camping for several days at a time. In addition to having an interest in learning biological sciences, the incumbent should have demonstrated experience and a willingness to work in remote, rugged, and mountainous backcountry terrain typically above 7,000 feet in elevation for extended periods. The incumbent should possess the physical ability required to hike long distances, off-trail (up 20 miles/day) while carrying backpacks, tools, and supplies of at least 30-50 lbs. The incumbent should be willing to backcountry camp with co-workers for several days at a time and willingness to learn and practice good backcountry skills that enable the candidate to work safely and efficiently in extreme weather conditions and in grizzly bear country. If not already trained in basic first aid and CPR, the network will support this training.

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

Applicant must have a valid driver’s license and a good driving record. While a personal vehicle is not required, it may allow the intern more opportunities to explore on days off. There is a free bus system that operates throughout the town of Bozeman. In addition, we can provide a bicycle for short commutes. Government vehicles will be used to commute for business trips but not for personal needs.

HOUSING

Park housing is provided at no cost to the participant. While based with the network in Bozeman, housing is provided at Montana State University—this is a single room in a dorm with a communal kitchen (e.g. refrigerator, stove, microwave). Kitchen cookware and utensils are limited and while we would encourage the participant to bring these, GRYN may be able to assist basic cooking supplies. There are also university dining halls open during the summer months, and Bozeman contains numerous grocery stores, delis, and restaurants. See the City of Bozeman and Montana State University websites for more information about resources available to students and residents. While in Yellowstone the intern will be in a dormitory or shared apartment. The intern will be responsible for all their own cooking, towels, bedding, and house cleaning. There is WIFI available in the dorms but unlikely when housed in the park, although there are locations the individual can access WIFI. No pets are allowed.

INTERNSHIP START/END DATES

Start Date: 5/20/2019

End Date: 8/8/2019

Mandatory Career Workshop will be held in Washington, DC from August 4 – 8, 2019

Are these dates flexible? Yes

STIPEND PAYMENT

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

PHYSICAL/NATURAL & WORK ENVIRONMENT

Physical/Natural Environment: Grand Teton and Yellowstone national parks and the John D. Rockefeller Jr. Memorial Parkway create the core of the 23 million acre Greater Yellowstone Ecosystem, one of the largest, relatively intact ecosystems in the contiguous United States which includes over 18 million acres of largely contiguous federal land. Bighorn Canyon National Recreation Area is situated at the northern end of the Great Basin Desert and provides a unique natural environment with the convergence of the desert, the Rocky Mountains, and the northern Great Plains. Portions of the Pryor Mountain Wild Horse Range fall within the boundaries of the recreation area.

As described in the position description, work is performed outdoors in the high desert of Bighorn Canyon and mountainous terrain throughout the Greater Yellowstone Ecosystem but predominantly in Yellowstone National Park. Work will be take place at elevations ranging from 3,500 to 10,000 feet. Weather extremes are common with rain, lightening, cold, and extreme heat happening often all in one day. Mountainous weather conditions should be expected, wildlife is plentiful including grizzly and black bears and other animals found in the western U.S.

While living in Bozeman most everything is walking or biking distance from the office and dormitory which are only 1/2 mile apart. There is a grocery store located between the office and dorm. Mammoth Hot Spring, Yellowstone, is 80 miles from Bozeman. The town of Gardiner, Montana is 5 miles north of Mammoth and contains restaurants, a grocery store, and pharmacy.

Work Environment: The Greater Yellowstone Network consists of 6 full-time employees and 2-4 summer seasonal employees/interns. The Yellowstone Center for Resources is quite a bit larger with upwards of 100 employees including interns that workgroups focused on targeted areas such as vegetation or wildlife. All teams work closely together to complete projects safely and efficiently. The network hosts a mandatory, week-long orientation at the start of the field season which includes safety scenario exercises. The intern would need to be available to participate in this team building week. The intern should expect to preform over 75% of the work outdoors. Office work includes paperwork and the end of the season project. This is a very physical position and the intern must enjoy camping, hiking, and being out of doors for extended stretches of time. While in the field, local conveniences are often not available including cell service.

Crews take with them all the necessities to last through an 8-day work schedule. This includes all pertinent clothing, gear, and food. The network will provide field equipment such as backpacks, tents, sleeping bag, pepper spray (i.e., bear deterrent), cookware, and other safety equipment.

MENTORING AND LEARNING GOALS

Mentoring: The intern works directly with the professionals of the Greater Yellowstone Network and Yellowstone National Park. This gives them the opportunity to experience a diversity of habitats and learn a wide array of field techniques used to collect scientific data on a variety of natural resources (climate, plants, insects, and amphibians). The intern will be provided opportunities to be shadow park-based natural resource operations and activities being conducted by other partners such as the USFS, USGS, and MSU, so that they can gain a better understanding of natural resource science and monitoring, and more generally, how land management agencies work to study and conserve natural resources. Collectively, the NPS scientists and managers have a depth of experience and diverse education and professional backgrounds ranging from developing and implementing physical, natural, and cultural resource projects; developing and utilizing relational and Geospatial databases and providing scientific data to be used in management decision making. With this wide range of experience we are able to offer the intern opportunities to gain knowledge and skills in many active areas of science and land management. In addition, the internship will be provided a unique opportunity to learn and practice outdoor and leadership skills and experience some of the most spectacular backcountry in the conterminous U.S. We can provide recommendations to interested individuals about how to prepare for the activities associate with a typical field season. In addition the the intern will be provided guidance on searching for jobs on USAJobs, developing a resume, along with discussing with many individuals about future science careers with the NPS and other federal agencies. The supervisor/mentor will develop a detailed workplan and Leadership Development and Mentoring Plan in collaboration with the selected intern.

Learning Goals: Our goal of this internship is to offer hands on experience in gathering scientific information that informs land managers and the public about the condition and trends of select natural resources. The intern will learn how to navigate and work safely in the backcountry of one of the most iconic areas of the United States, the Greater Yellowstone Ecosystem. They will become adept at identifying native and non-native vegetation. The intern will learn how to use a wide range of field equipment such as maps, compasses, GPS, hand held electronic data loggers, and paper data forms. All of these skills will contribute to a deeper understanding of a career in the biological sciences and land management.