

MOSAICS IN SCIENCE INTERNSHIPS - 2014



Park		Title	Project Description
1	Biscayne National Park (Jeneva Wright)	Archeological Impacts of Climate Change	<ul style="list-style-type: none"> • Assist in monitoring and documentation of ongoing impacts to approximately 100 submerged and shoreline archeological sites; • identify sites in imminent peril of destruction in the event of sea level rise predicted for South Florida in the coming decades; and • assist with large scale, ongoing archeological site stabilization projects (historic shipwreck and prehistoric terrestrial site).
2	Congaree National Park (Binal Rana)	Field Research Technician	<ul style="list-style-type: none"> • Assist with a big tree survey (tree identification and measurement); • characterize benthic habitats for freshwater mussel conservation by assisting with surveys and monitoring of the diversity, abundance, and location of freshwater mussels in the Congaree River; and • assist with inventorying historical sites and invasive plants on new park lands, ongoing floodplain hydrology monitoring, floodplain stream condition assessments, or citizen science butterfly monitoring.
3	Coronado NM* (Rachel Lopez)	Speleologist	<ul style="list-style-type: none"> • Update documentation related to caves, developing and facilitating cave restoration, and assisting with finalizing a cave management plan for the park; • assist with update of cave documentation by synthesizing existing data sets, shapefiles, photographs, paper and digital maps, and archival records in to GIS; drafting new cave maps as needed; and • coordinate restoration work with volunteers at Coronado Cave.
4	Cuyahoga Valley National Park (Yeyzy Vargas)	Water Quality Research Assistant	<ul style="list-style-type: none"> • Complete a water quality research project and develop a method to provide timely results to park visitors regarding recreational water quality of the Cuyahoga River. Project will include collecting river water samples and processing the samples in the lab; and • participate in other river use planning project activities such as assisting in developing urban community support for a 100-mile long water trail connecting the national park to other existing trail systems in northeastern Ohio.

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5	Denali National Park and Preserve (Chelsea Lewis)	Digital Research Communicator	<ul style="list-style-type: none"> • Create digital education exhibits that bring current park science to life for students and visitors showing the park's biological, cultural and geological stories; and • complete his/her own project and collaborate extensively the Murie Science and Learning Center Education team, park scientists, and the park media team.
6	El Malpais National Monument (Roxanne Pourshoushtari)	Bat and Cave Biology Intern	<ul style="list-style-type: none"> • Conduct field surveys and population counts of bats and cave mapping; and • organize and digitize existing bat data from a variety of sources.
7	Florissant Fossil Beds National Monument (Gabiella Rossetto)	Paleontology / Museum Intern	<ul style="list-style-type: none"> • Work on projects relating to the geologic and paleontologic resources including: monitoring the monument's fossil sites, preparing and/or cataloging new collections of fossil leaves and insects from delicate shale deposits, photographing the monument's fossil collections to create digital images, and reorganizing fossil collections into the monument's new paleontology research facility; • other duties may include: inventorying collections, database entries, fossil excavations, preparing maps, and assisting visiting researchers; and • specialized projects may be available for those having self-sufficient experience in GIS, or those with experience in identification of fossil leaves or insects.
8	Fort Union NM/Pecos NHP* (Madeleine Pluss)	Natural Resources Intern	<ul style="list-style-type: none"> • Work with park resources management staff to inventory natural plant communities, survey and conduct erosion control on 200 year old Santa Fe Trail traces, carry out a vigorous exotic plant species control program, maintain the park GIS database; • assist with mapping existing exotic plants in the park, work with resources management staff to manually or chemically treat areas, use GPS and GIS to map treatments and results; and • work with the Interpretation Division to develop handouts and web-based materials to document the park's efforts and make them available on line for partners and the public.
9	Grand Teton National Park (Anton Yelk)	Interdisciplinary Science and Education Technician	<ul style="list-style-type: none"> • Assist with glacial monitoring for climate change, monitoring water quality, and GIS mapping of geological hazards in the park; and • assist the educational outreach program staff with planning and developing a field science based program for 9-12 grades and incorporate information in to lesson plans that include field data that supplement the park's data used for natural resource management.

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10	Great Basin National Park (Kaytan Kelkar)	Paleontology Inventory in the Great Basin	<ul style="list-style-type: none"> • Conduct an inventory of the paleontological resources of the park, including field reconnaissance to locate fossils and documentation of fossil specimens by collecting GPS coordinates and quality digital photographs; • enter information in databases, paleontological locality forms, and digital photograph metadata; and • assist in the preparation and cataloging of fossils collected during previous inventory years and learn how to perform paleontological locality condition assessments.
11	Guadalupe Mountains NP* (Salvador Armador)	Phenology Monitoring & Climate Change Interpretation	<ul style="list-style-type: none"> • Develop and implement a phenology monitoring citizen science program for the park including researching appropriate species and phenomena for phenology monitoring, selecting species (or phenomena, such as first / last frost) for monitoring, creating a monitoring form, selecting monitoring sites, and implementing a pilot monitoring program; and • develop themes and messages relating to phenology and climate change with suggestions for how to incorporate them into wayside displays, electronic and social media, curriculum-based education programs, park publications, Junior Ranger programs, and other materials, as appropriate.
12	Hopewell Culture NHP* (Stephen Roethle)	Natural Resources Intern	<ul style="list-style-type: none"> • Work on a wide variety of wildlife and vegetation projects including wildlife inventory and monitoring projects, nighttime amphibian surveys and frog and toad call surveys, annual breeding bird survey, and the cutting-edge treatment of ash trees against the non-native Emerald Ash Borer beetle.
13	Lava Beds National Monument (Sarina Patel)	Science Communications Intern	<ul style="list-style-type: none"> • Work with the Interpretive Division to train staff on science projects and methods taking place within the park and ways it can be incorporated in to regularly scheduled interpretive programs; • present several science communication programs to park visitors; and • assist park staff in evaluating and implementing standard operating procedures being developed for the draft cave entrance community and cave environment inventory & monitoring protocol which include: cave climate, ice level monitoring, human visitation, vegetation monitoring, bat monitoring, visible organics monitoring and invertebrate monitoring.
14	Manassas National Battlefield Park (Nyambura Njagi)	GIS/Viewshed Technician	<ul style="list-style-type: none"> • Develop and complete GIS model that can be used for viewshed analyses at the park and throughout the NPS; and • Model will be used to evaluate threats to the scenic viewshed and to help inform management direction to address those threats.

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15	North Cascades National Park (Justin Tran)	Science Engagement Specialist	<ul style="list-style-type: none"> • Create an educational or outreach program combining intern's research and science communication skills and present the program to park visitors through hands-on citizen science, evening programs, and educational activities. • Work will focus on the Cascades Butterfly Program, a volunteer-based program that monitors the distribution and abundance of subalpine butterflies, time will be split between monitoring butterflies and working on science engagement; and • assist in training new citizen scientists in butterfly monitoring.
16	Ozark National Scenic Riverways (Alianora Walker)	Cave and Karst Interpreter	<ul style="list-style-type: none"> • Research and develop interpretive programs and conduct tours, talks and Power Point programs on the geological features of Ozark National Scenic Riverway. Interpretive programs will describe the geologic features and processes: karst topography, springs, sinking streams, caves, collapsed caves, shut-ins, endangered species, and water quality.
17	Petrified Forest NP* (Shelby Matsuoka)	Paleontologist	<ul style="list-style-type: none"> • Assist park with ongoing excavations of Late Triassic vertebrate fossils; • Other projects include paleontological inventory and monitoring of newly purchased lands, fossil preparation/conservation, museum curation, and vertebrate paleontology/geology research; and • working with professional paleontologists to gain experience and understanding of these basics of the science of paleontology.
18	Prince William Forest Park (Darius Naraine)	GIS Tech/ Stream Morphology Intern	<ul style="list-style-type: none"> • Assist the park with collecting GIS data along the Quantico Creek, create GIS maps and models, conduct research on potential management opportunities to improve the park streambanks, create maps and map templates for environmental compliance documents, assist natural resource field personnel in plant and animal surveys, and field surveys of park recreational facilities; and • participate in other natural resource management activities including invasive species management, water quality and water chemistry testing, and disturbed lands restoration.
19	Saguaro NP and Southern Arizona parks (Kristan Culbert)	Desert Hydrology Research Assistant	<ul style="list-style-type: none"> • Monitor the park's water quality and quantity, macroinvertebrates and amphibians, and channel morphology in streams, springs, seeps, and spring-fed rock pools called tinajas.

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20	San Juan Island NHP* (Graham Crawbuck)	Prairie Restoration Intern	<ul style="list-style-type: none"> • Coordinate and oversee the propagation and maintenance of native plants for prairie restoration activities in the native plant nursery; • projects include collecting and sowing seeds, cultivating native prairie plants, and expanding nursery operations located at the American Camp unit of the park; and • participate in other restoration actions including exotic plant control, mapping plant distribution, and other tasks.
21	Valley Forge National Historical Park (Sidney Mathis)	Natural Resource Conservation Internship	<ul style="list-style-type: none"> • Inventory and map priority invasive forest species and native forest species susceptible to encroaching pests to assist park managers in controlling and managing new pest species and developing a proactive management strategy, work with staff to develop a standardized survey method and protocol, gather and record data, use GPS technology to map species, assist with invasive species management and control, and other data collection efforts; • Help develop park informational brochures on natural resources and prepare and present information about park natural resources or independent project results.

*Positions marked with an asterisk are funded by the National Park Foundation. All of the other positions are funded by the NPS Youth Programs Division. Program participants are shown in parentheses after the park name. For more information on the Mosaics in Science Program, see: <http://nature.nps.gov/geology/mosaics/index.cfm> (NPS internet website), and http://rock.geosociety.org/g_corps/mosaic/mosaic.htm (partner website, use this website to apply for positions).