



GEOSCIENTISTS-IN-THE-PARKS Internship Program

PROJECT DESCRIPTION 2020 FALL/WINTER

NPS UNIT: GATES OF THE ARCTIC NATIONAL PARK AND PRESERVE YUKON-CHARLEY RIVERS NATIONAL PRESERVE	PD #: 2019428
<p>Position Title: Geology Assistant Position Type: Guest Scientist Primary natural resource discipline: Geologic resources Project keywords: Alaska, Brooks Range, chert, siliceous Location: Fairbanks, Alaska</p>	
COVID-19 NOTICE	
<p>This project description was developed prior to the onset of the COVID-19 outbreak. Therefore, project timelines and structure remain flexible and it may be necessary to postpone start dates, begin work remotely, or reformulate the project’s description. Should any development in the COVID-19 outbreak impair a project’s timeline or results, the GIP Team will work with the park and project mentors to assess the situation and determine the best course of action at that time.</p>	
PROJECT DESCRIPTION AND WORK PRODUCTS	
<p>Position Description: The Brooks Range mountains contain one of the richest sources of flakeable stone in the world. The chert quarries and outcrops that blanket this landscape were an essential resource for prehistoric hunter-gatherers for over 13,000 years. Geologists have mapped chert outcrops at only a coarse scale in this region and have not distinguished between rock that is chert in strict geological terms from tool-quality chert that was of use to prehistoric people. Tool quality chert, while abundant in this region, makes up only a miniscule proportion of all chert. This project will undertake field and lab efforts to map tool-quality chert at a sufficient level of detail to be of use to archaeologists and cultural resource managers.</p> <p>This project will conduct geological research and inventory for Gates of the Arctic National Park and Preserve to assess the qualities and sources of tool-quality lithic material. The project will provide a historic context within which to evaluate the significance of hundreds of sites, inform measures to protect vulnerable sites, and help delineate areas with high archaeological potential. Results will provide researchers, park planners, and the general public with a better understanding of archaeological resources in Gates of the Arctic National Park and Preserve.</p> <p>Thousands of known archaeological sites document the use of siliceous lithic material in the Brooks Range and compose a cultural resource of international significance. Dense clusters of archeological sites are located adjacent to good quality chert outcrops. In this massive, remote landscape where inventory has been limited, knowledge about the location of chert outcrops is an effective means to identify areas with high probability to contain archaeological resources. This knowledge therefore has management uses to aid inventory of cultural and natural (geologic) resources, which meet both statutory, enabling legislation, and agency mission obligations. It also has scientific and interpretive significance in the synthetic study of these interrelated phenomena. Opportunities abound to study prehistoric technological behaviors and regional scale issues related to hunter-gather land use, economic organization and social interaction. The GIP will</p>	

contribute directly to these studies by completing geologic mapping at a scale relevant for answering these questions.

Information and knowledge resulting from this projects will be actively transferred to park managers, staff, visitors, partners, researchers, and educators as appropriate. Initial results and activities will be shared with digital media (e.g. social media, NPS newsletters). Intermediate results (chronologies, analytical results, etc.) will be shared in scholarly publications and conferences. Final results (e.g., analytic interpretations, synthesis, and management implications, data sets) will be shared in digital media, scholarly publications and conferences, resource briefs, and incorporated into interpretive and educational programs. Reports will be distributed to NPS staff and the public through IRMA.

This position is offered through the National Park Service's Geoscientists-in-the-Parks (GIP) Internship Program in partnership with Stewards Individual Placement Program (Stewards) and The Geological Society of America (GSA).

Work Products:

- GIS files (geodatabase, feature classes, layers, etc.) of confirmed or suspected areas of tool-quality siliceous lithic material, with full metadata
- Report on the development and generation of geologic mapping data, with conclusions and recommendations for future work to be published on IRMA
- Draft of peer-reviewed scholarly article based on above report and findings
- Scientific presentation to be given at research conference (GSA, Alaska Anthropological Association, or similar)
- One page resource brief summarizing research results for public consumption

QUALIFICATIONS

Applicants must have completed a BS degree, although preferred applicants will possess MS or PhD-level coursework with emphasis on structural, physical, or sedimentary geology. Experience with GIS, remote sensing data, and geologic mapping is necessary to meet goals of project. Fieldwork opportunities possible-comfort in remote backcountry settings required. Alaska experience preferred.


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 veteran up to age 35. Prior to starting this position, a government security background clearance will be required.

VEHICLE/DRIVER LICENSE REQUIREMENTS

Applicant must have a valid driver license and a good driving record. Intern will be required to drive a park vehicle.

A personal vehicle is RECOMMENDED but not required for this position. Public transportation available in Fairbanks, but will limit housing options.

If the GIP is required to drive a park vehicle for their position, Stewards will perform a driving records search, and the GIP’s ability to drive a park vehicle during work hours will be contingent upon the results. GIPs will have to have had their license for 3 years or be over the age of 21 to be insured as drivers under Stewards insurance policy. Examples of things that will preclude a GIP from driving a park vehicle include: GIP under the age of 21 years old that has been licensed less than three years, DUIs, multiple moving vehicle violations, suspended or revoked license, or three or more accidents (regardless of fault) in the last 3 years. If the driver’s search is favorable, Stewards will provide driver’s liability insurance while the intern is driving a NPS vehicle for their GIP position. If the GIP is denied coverage by Stewards, they will not be permitted to drive during work hours.

HOUSING	
Park housing is NOT available and the intern will be responsible for finding housing in the nearby area. Rental options available for \$500 (dry cabin or shared room) to \$1200 (apartment or small home) per month	
INTERNSHIP START/END DATES	
Start Date: 12/07/2020	
Number of weeks: 20 weeks	
Flexibility of dates: Yes	
LIVING ALLOWANCE	
20 weeks (\$525/week = \$10,500)	
RELOCATION ALLOWANCE	
\$1,000 (AK and HI)	
AMERICORPS PROGRAM	
	AmeriCorps is a program that engages individuals in intensive community service work with the goal of “helping others and meeting critical needs in the community”. The GIP Program is supported through AmeriCorps by providing a Segal Education Award in addition to the GIP’s living stipend and relocation allowance.
Upon successful completion of the GIP position, the GIPs (AmeriCorps members) are eligible for a \$1,612 - \$6,095 pre-tax education award that can be used for paying back student loans or for continuing their education. The amount of the education award is based on the length of the position.	
AmeriCorps limits the number of terms an individual can serve to 4 terms. If an applicant has previously completed 4 GIP or other AmeriCorps positions, they will not be eligible to apply for an additional GIP position.	
NATURAL & PHYSICAL WORK ENVIRONMENT	
Natural Environment: Fairbanks is located in the Alaska interior and has a continental climate, with large variation of temperature from winter to summer. The sun is above the horizon from 18 to 21 hours during June and July. The range of temperatures in summer is comparatively low, from the lower 30s to the mid 90s (degrees Fahrenheit). In winter, this range is larger, from about 65 below zero to 45 degrees above. (Adapted from climate.gi.alaska.edu).	
Fairbanks is the second most populous metropolitan area in Alaska, with around 100,000 residents in the greater area. The city and larger borough contain a university and several military bases, and support services such as grocery and retail stores, restaurants and bars, movie and performance theaters, libraries, public transportation, and more.	
Physical Work Environment: Fieldwork is possible dependent on the timing of the internship. This work will require the use of small aircraft in remote, backcountry settings while being able to lift more than 50 pounds and hike up to 10 miles a day. Office setting will require work at a desk for 8 hours a day in an administrative center located in Fairbanks.	
MENTORING AND LEARNING GOALS	
Mentoring: Park staff will directly supervise intern and provide project oversight. Relationships within agency (e.g., with Regional Geologist) and outside entities (e.g., University researchers, State of Alaska geology office staff) will be facilitated and encouraged. The intern will work closely with park archaeologists and resources team in meeting goals and developing products. The intern will be encouraged to participate in non-duty office events such as wellness activities, brownbag research presentations, etc.	
Learning Goals: The intern is expected to make new contributions to the knowledge of geologic resource distribution within the Brooks Range. This will be an opportunity for interdisciplinary work between the	

natural and social sciences. Any fieldwork will require aviation and bear safety training. Additional relevant trainings, such as in cultural resource law or wilderness first aid will be offered if available. Professional and personal development will be encouraged, such as web-mapping, ESRI story map publication, enterprise GIS distribution, or hard copy cartographic product development.

SUPERVISORS

Primary Supervisor:

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Secondary Supervisor:

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