

National Park Service  
U.S. Department of the Interior

Murie Science and Learning Center  
Denali National Park and Preserve



# Murie Science and Learning Center Research Fellowship Program

## *2013 Application Instructions and Guidelines*



To determine the age of glacial features and the timing of past glacial activity in the Arrigetch Peaks (Gates of the Arctic National Park and Preserve), 2012 MSLC Fellow Simon Pendleton collects rock samples for isotopic analysis. Photo credit: Kathryn Ladig.

**A program offered with funding from Alaska Geographic  
in partnership with the National Park Service at**

**Bering Land Bridge**

**Cape Krusenstern**

**Denali**

**Gates of the Arctic**

**Kobuk Valley**

**Noatak**

**Wrangell - St. Elias**

**Yukon - Charley Rivers**



The goal of the Murie Science and Learning Center Research Fellowship Program is to support scientific research that assists park managers in making informed decisions about the protection of natural and cultural resources and visitor experiences in arctic and subarctic parks.

## Background

Research is an important tool used by the National Park Service (NPS) to meet its responsibilities for the stewardship of the park's natural, cultural, and subsistence resources, and for providing quality visitor experiences.

To encourage scientific and scholarly research that (1) fills gaps in the ecological or cultural understanding of park resources or (2) addresses management issues, the National Park Service (NPS) and Alaska Geographic established the Murie Science and Learning Center Fellowship Program through the Murie Science and Learning Center (MSLC), located in Denali National Park and Preserve.

**In 2013, fellowship applications will be considered for funding requests up to \$8000. Funds may be used over one or two years.** More than one fellow may be selected. The fellowship program supports field research in the biological, physical, social, and cultural sciences. Project requests are more likely to be successful if they address topics that address issues of importance to park managers. Collaborative projects are encouraged. Selected fellows conduct research or scholarship projects in arctic and subarctic parks and share their research with others through some form of educational outreach.

This fellowship program is made possible through proceeds from MSLC programs developed jointly by Alaska Geographic and the NPS.

## Eligibility

The Murie Science and Learning Center Research Fellowship supports field research in any of the national park service units coordinating with the MSLC. Two broad ecological areas (arctic and interior Alaska) are encompassed by two Inventory and Monitoring Networks: the Arctic Network (Bering Land Bridge National Preserve, Cape Krusenstern National Preserve, Gates of the Arctic National Park and Preserve, Kobuk Valley National Park, and Noatak National Preserve); and the Central Alaska Network (Denali National Park and Preserve, Wrangell–St. Elias National Park and Preserve, and Yukon–Charley Rivers National Preserve).

The fellowship program is designed primarily to provide funding for graduate students, but may also be appropriate for college and university faculty, undergraduate students, state and federal agency scientists, and private-sector researchers. Research fellows must be self-directed individuals whose work will contribute to the scientific knowledge of the natural and cultural resources of arctic and subarctic parks. The fellow must be able to complete the proposed project within one or two years (depending on the funding and timing requested) and provide a final report, even if the project is part of a larger thesis project. Recipients may apply for a Fellowship in subsequent years, but project proposals will be evaluated independently of the previous year's work.

Funds may be used for a variety of purposes including salary support; room, board, and travel directly associated with fieldwork; supplies; and analytical costs. Requests for permanent equipment are not encouraged, but will be considered. Any permanent equipment purchased with fellowship funds remains the property of the National Park Service and will need to be returned to the park at the end of the project. Fellowship funds cannot be used for tuition, fringe benefits, institutional overhead, thesis preparation, publication of results, or costs associated with attendance at professional meetings.

## Opportunities for Research

Ecosystems in the Arctic (ARCN) and Central Alaska (CAKN) Networks range from low elevation coastal marine ecosystems, boreal forests, rivers, and sand dunes to sub-alpine scrub vegetation and alpine tundra, snowfields, and glaciers. These parks offer vast, relatively unmodified landscapes in which to study such topics as glaciers, rivers, air quality, fire effects, visitor experiences, subsistence harvests, cultural history, traditional and ecological knowledge, and the effects of climate change on physical and biological resources and on landscapes.

There are many layers or themes in the extensive regional Geographic Information System (GIS) database (e.g., hydrology, elevation, soils, and landcover) that can be used to build composite information about potential study sites or to model habitat suitability. To see what is available in GIS, visit the website [www.nps.gov/akso/gis](http://www.nps.gov/akso/gis), select the link to the "NPS Data Store" and click on the park of interest. For assistance with GIS information, contact [Jon\\_Paynter@nps.gov](mailto:Jon_Paynter@nps.gov) (for Denali), [Joshua\\_Scott@nps.gov](mailto:Joshua_Scott@nps.gov) (for Wrangell–St. Elias) or [Joni\\_Piercy@nps.gov](mailto:Joni_Piercy@nps.gov) (for other parks).

Consult each park's website or search by park at <http://science.nature.nps.gov/research>. Discussions with park staff about your project are encouraged to maximize its value to managers. Contact [Lucy\\_Tyrrell@nps.gov](mailto:Lucy_Tyrrell@nps.gov) (at Denali) to get the name of appropriate staff to contact at Denali or other parks.

## Special Research Considerations

Arctic and subarctic parks are primarily pristine wilderness parks with millions of acres of outstanding research opportunities in landscape settings. Researchers have responsibilities to adhere to laws protecting wilderness, follow Leave-No-Trace guidelines, and consider wilderness values, and local subsistence customs in making minimal impacts in all aspects of research.

Travel must be planned in advance with respective park staff. Backcountry travel may be arduous and time-consuming. Each park may have its own travel challenges and ways of handling travel requests.

Limited housing may be available in or near some parks. Requests for backcountry camping permits, potential housing (cabins, dorm, apartment, or campgrounds—as available by park), as well as any other special requests, should be incorporated into the research proposal.

To ensure that research proposals match the high-priority research needs of arctic and subarctic parks, applications for fellowship funding **must be accompanied by a letter of support from the Park Superintendent** where the research is planned. This requirement is waived for Denali, because park staff who coordinate the review of proposals are familiar with Denali's research priorities. To facilitate project administration and coordination, a park staff member may be assigned as a research liaison to each research fellow.

## Provisional Acceptance Pending Research Permit

For fellows proposing to conduct fieldwork inside a park (rather than nearby), acceptance into the Fellowship Program is provisional until a Research and Collecting Permit is issued. Initial acceptance as a Fellow is NOT A GUARANTEE that a Research and Collecting Permit will be issued for work in the park as written in the proposal. Modification of methods or sites may be necessary. Information on applying to conduct research in Denali or any national park may be found at the NPS website <http://science.nature.nps.gov/research>. Fellows are encouraged to submit the application for a research and collecting permit as soon as possible, but at least 2 to 3 months prior to the anticipated start of the project in the park. *Fellows intending to work in Denali must submit an application for a research and collecting permit no later than April 1, 2013 for the summer field season.* Prior to issuing a permit, park staff review the project for compliance with wilderness and park policies and administrative concerns—is the research study appropriate for a national park? Please consult with [Lucy\\_Tyrrell@nps.gov](mailto:Lucy_Tyrrell@nps.gov) (907)683-6352 if there are questions.

## Requirements of Award Winners

Each fellow is required to provide these items to the MSLC Fellowship administrator (Lucy Tyrrell) within 6 months of completion of field work (except where noted or arranged):

- At least one educational outreach (such as a public involvement in research, a talk at the Murie Science and Learning Center (at the time research is conducted at the park, or as otherwise arranged); poster, fact sheet, hi-tech or classroom activity to share the research process and the results (see flier with ideas at [www.nps.gov/dena](http://www.nps.gov/dena)). If a talk is given, a fellow can share plans for study, observations so far, and similar projects already completed, as it is understood that results may not yet be collected or analyzed. More than one outreach product is encouraged. Tentative choice for educational component will be discussed with fellowship administrator Lucy Tyrrell prior to distribution of 60% funding.
- Provide electronic final report (intro, methods, results, discussion, literature cited, acknowledgments)
- Provide a one-page summary (abstract) of research results for a general audience (ask for format)
- Send several digital photos (jpg or tif files) of researcher/field work in progress, with captions for photos in a separate word document

Fellowship recipients must also fulfill all conditions of the Research and Collecting Permit (e.g., must submit an Investigator's Annual Report and publications/thesis, and comply with guidelines for collections).

## Important Dates

For 2013 fellowships, the deadline for applications is February 15, 2013. Awards will be announced as soon as possible (hopefully by March 1). Field work must begin within a reasonable time after receipt of the fellowship (usually prior to September 1, 2013). However, exceptions may be appropriate and should be discussed with the research fellowship administrator (see contact information below). Final report, educational outreach, one-page summary, photos, and captions are due *within six months after the completion of field work* unless arranged otherwise in advance. Awards will be disbursed in two payments: (1) 60 percent on issuing a Research and Collecting Permit, if working inside a park, and on setting tentative educational outreach products, and (2) the remaining 40 percent when all specified project deliverables have been received by the fellowship administrator.

## Application Process

Individuals wishing to apply for a MSLC Research Fellowship should consider consulting with park staff. Submit the following documents electronically (preferably in MS Word) to the fellowship research administrator (listed at the bottom of this page):

- Applicants need only submit one cover sheet/application to apply to both MSLC and Discover Denali fellowships. An applicant would not receive more than one fellowship. A completed application cover sheet can be found at <http://www.nps.gov/dena/naturescience/discodena.htm>
- A research proposal that contains the following sections, with headings:
  - (1) Project title } In sections 1-4, include no more than 1500 words total
  - (2) Research objectives or questions }
  - (3) Statement about the significance of this project to park management issues or resources (see evaluation criterion #2 below) }
  - (4) Methods including data analysis }
  - (5) List of requests for logistical help in the park  
(e.g., camping in the backcountry, housing, temporary work or storage space, access by private vehicle)
  - (6) Project budget for funds received (including any matching funds received or anticipated)
  - (7) Project timeline (1 or 2 years?), as specific as possible, including tentative dates for fieldwork
  - (8) Annotated list of project deliverables (see Requirements and Important Dates above)
- A curriculum vitae or resume that lists research experience, published papers, presentations, etc.
- For current students, a letter of support from an academic advisor or principal investigator
- **A letter of support from the Superintendent of the national park of interest** (all parks except Denali)

Proposals will be evaluated by a panel in conjunction with the park of interest.

The following criteria may be very important in determining which projects are funded or unfunded.

- (1) Completeness of proposal (Are all the items listed above included?)
- (2) Significance of the project to park management issues or resources
  - (most preferred) Does it help managers make decisions about critical resource issues?
  - (preferred) Does it provide missing resource information or help set targets for indicators of desired resource condition?
  - (least preferred) Does it provide other information about park resources?
- (3) Science and scholarship (Does the project have scientific or scholarly merit? Are the study questions and methods clear? Is this a novel approach or idea, or at least an approach with a new twist?)
- (4) Feasibility and ability of investigator to complete the work (Is it realistic for the timeframe suggested? Does the researcher have some experience or credentials to be able to competently do this research?)
- (5) Educational outreach component (Does the applicant clearly suggest outreach component(s)? Is the outreach creative and useful to the park? Does it have the potential for long-term leveraging of other educational opportunities?)

## Contact information

Ask questions and submit proposals; discuss housing and logistics at Denali; discuss fact sheets or other outreach: [Lucy Tyrrell@nps.gov](mailto:Lucy_Tyrrell@nps.gov) Research Administrator at Denali National Park and Preserve, (907)-683-6352.

Discuss temporary office space or storage space at MSLC; discuss educational outreach: [Sierra McLane@nps.gov](mailto:Sierra_McLane@nps.gov) Education Coordinator, Murie Science and Learning Center, (907) 683-6436.