

National Park Service  
U.S. Department of the Interior

Murie Science and Learning Center  
Denali National Park and Preserve



# Discover Denali Research Fellowship Program

## *2012 Application Instructions and Guidelines*



2011 Discover Denali Fellow Colby Wright studies geology in the upper Riley Creek area. Photo courtesy: Colby Wright

**A program of the Murie Science and Learning Center  
offered in partnership between the  
Denali Education Center and the National Park Service**



*The goal of the Discover Denali Research Fellowship Program  
is to support scientific research that assists park managers in making informed decisions  
about the natural and cultural resources at Denali National Park and Preserve.*

## 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 NPS and the Denali Education Center established the Discover Denali Research Fellowship Program through the Murie Science and Learning Center (MSLC), located in Denali National Park and Preserve. Selected fellows conduct research or scholarship projects to address issues of importance to park managers, and share their research with others through some form of educational outreach.

**In 2012, 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 will help park managers tackle management issues. Collaborative projects are encouraged.

This fellowship program is made possible through proceeds from Discover Denali, an MSLC program developed jointly by the Denali Education Center and the NPS. Discover Denali, the program that gives both its name and funding to the research fellowship program, educates Royal Celebrity Tours participants about Denali's natural and human history.

The Denali Education Center is an NPS park partner that fosters understanding and appreciation of Denali through informative and inspiring programs. The Murie Science and Learning Center was established in the spirit of the Natural Resource Challenge, an NPS initiative aimed at increasing research and education efforts in our national parks.

## Eligibility

The Discover Denali Research Fellowship Program supports field research in the Denali National Park and Preserve area. The fellowship program is designed 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 Denali. The fellow must be able to complete the proposed project within one or two years (depending on the funding and timeframe requested) and provide a final report, even if the project is part of a larger thesis project. Recipients may apply for a Research 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 Denali National Park and Preserve range from lowland boreal forests and riverine systems to sub-alpine scrub vegetation, alpine tundra, and high alpine snowfields and glaciers. Denali has more than 750 species of vascular plants, 39 species of mammals, including grizzly and black bear, caribou, moose, wolf, Dall's sheep, wolverine, lynx, and red fox, 165 species of birds, 15 species of fish, and one species of amphibian.

Denali offers 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.

Denali has several hundred layers or themes in its extensive 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. For assistance with GIS needs, please contact [Jon\\_Paynter@nps.gov](mailto:Jon_Paynter@nps.gov).

A list of research desired or needed by Denali managers, including topics with existing data to utilize, is posted at <http://www.nps.gov/dena/naturescience/research.htm> Also posted on the website is information about Denali's Resource Stewardship Strategy (RSS), including a list of the 19 strategies and 99 projects that provide the focus for the research, resource, and science education programs at Denali for the next two decades (2008-2027). 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) for the appropriate staff person to contact.

## Special Research Considerations

Denali is primarily a pristine wilderness park. Its six million acres provide outstanding research opportunities in landscape settings. Researchers have responsibilities to adhere to laws protecting wilderness, follow Leave-No-Trace guidelines, and consider wilderness values in making minimal impacts in all aspects of research.

Travel in Denali must be planned in advance. Backcountry travel may be arduous and time-consuming. Projects that do not require helicopter access or special private-vehicle travel permits on the Denali Park Road are favored. Shuttle buses travel along the 90-mile Park Road from mid-May to mid-September, providing researcher access to sites along the road corridor. Researchers could apply fellowship funds toward the shuttle bus fees. Park entrance fees are waived for research fellowship recipients. Limited housing is available outside the park, at park headquarters, and along the park road. **Requests for park housing, campgrounds, or backcountry camping permits, as well as any other special requests, should be incorporated into the proposal.** To facilitate project coordination with park projects of the same discipline, a park resources staff member may be assigned as a research liaison to each research fellow. More information for prospective researchers is found at <http://science.nature.nps.gov/research> By request and as available, research fellows will be able to use Murie Science and Learning Center facilities for guest researchers (e.g., wireless service, computer access, work space, and storage). Please include these requests in the proposal/study plan for the project.

## Provisional Acceptance Pending Research Permit

For those Discover Denali Research Fellows proposing to conduct fieldwork within Denali (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 Denali 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>. **Discover Denali fellows intending to work in Denali must submit an application for a research and collecting permit no later than April 1, 2012 or at least 3 months prior to the anticipated start of the project in the park whichever is earlier.** Prior to issuing a permit, park staff reviews the project for compliance with wilderness and park policies and administrative concerns—is the research study appropriate for Denali? 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 Discover Denali research 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 Discover Denali researcher 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

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

## Important Dates

For 2012 fellowships, the deadline for applications is February 15, 2012. 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, 2012. However, exceptions may be appropriate and should be discussed with the Discover Denali research administrator (see contact information below). Final report, educational outreach, summary, photos, and captions are due *within six months after the completion of field work*. Awards will be disbursed in two payments: (1) 60 percent at the outset of the field work (on approval of Research and Collecting Permit, if working inside Denali; and on setting tentative educational outreach products), and (2) the remaining 40 percent when all specified project deliverables have been received at Denali.

## Application Process

Individuals wishing to apply for a Discover Denali Research Fellowship should first refer to helpful documents at <http://www.nps.gov/dena/naturescience/research.htm> Submit the following documents electronically (preferably in MS Word) to the fellowship program research administrator (listed at the bottom of this page):

- A completed application cover sheet that can be downloaded from the following website <http://www.nps.gov/dena> (Applicants to Denali need only submit one cover sheet/application to apply to both Discover Denali and MSLC fellowships. A researcher would not receive more than one fellowship.)
- A research proposal that contains the following sections, with headings:
  - (1) Project title } no more than 1500 words in total for these sections
  - (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 requests for logistical help in the park (e.g., camping in the backcountry, housing, temporary work or storage space, access by private vehicle) For options of logistical help, contact [Lucy Tyrrell@nps.gov](mailto:Lucy_Tyrrell@nps.gov) and refer to documents at <http://www.nps.gov/dena/naturescience/research.htm>
  - (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

### Proposals will be evaluated by a panel:

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.