

Geologic Research Opportunities in the Parks



The National Park Service encourages partnerships with researchers to assist with the inventory, monitoring, protection, and restoration of our Nation's geologic resources. National Parks offer opportunities in all disciplines of geologic research including, but not limited to: Paleontology, Coastal/Marine Geology, Geomorphology, Cave and Karst, Petrology/Mineralogy, Stratigraphy/Sedimentology, Aeolian processes, Volcanology, Glaciology, and Geo-hazard studies.

Opportunities for Geologic Research in the National Parks

Partnerships between the geological community and the NPS allow both researchers and park managers to gain a better understanding of dynamic geologic processes and features within coastal park units. These cooperative efforts enable park managers to make informed decisions concerning our nation's priceless natural resources.

The National Park Service strives to preserve and protect the natural resources and habitats within park boundaries and the processes that maintain them. By maintaining ecosystems in their "natural state," the NPS provides unique research settings for scientific investigations. Examples of past and

current studies conducted within our National Parks include: the discovery of Alamosaurus, a rare dinosaur excavated at Big Bend National Park; the use of LIDAR, a laser form of radar, to monitor coastal change at Assateague Island National Seashore; the compilation of a geology training manual for Grand Canyon National Park; the analysis of avalanches as transport mechanisms in Glacier National Park; and paleoclimate reconstruction from Carlsbad Cavern speleothems.

NPS Research Permit and Reporting System

The NPS Research Permit and Reporting System enables potential investigators to apply for permits to conduct fieldwork within units of the National Park Service, review permit requirements and restrictions, examine the results of previous studies, submit annual accomplishment reports, and to search and review research activities that will further the preservation of park resources. Applications for permits must include a research proposal and should be submitted at least 90 days in advance of

planned field activities. Each proposal will be reviewed for compliance with National Environmental Policy Act (NEPA) requirements and other laws, regulations, and policies. Individuals may obtain materials via the Internet (<https://irma.nps.gov/rprs/Home/>) or by contacting the park in which the work will be conducted.

Funding Sources

Scientific research that addresses park specific resource management issues may qualify for internal funding. These sources may include the Natural Resources Preservation Program, Fee Demonstration Program, and/or Challenge Cost Share Program. This funding MUST be secured through a park or regional office. Based on information provided by the researcher, the park will submit a proposal in a Project Management Information System (PMIS) format.

For information concerning supported student research positions, see

Geoscientists in the Parks
<http://www.nature.nps.gov/geology/gip/>

General Research Guidelines and Considerations

- Applied research that meets NPS needs is preferred. For a list of park specific needs please visit <https://irma.nps.gov/rprs/Home/>, or individual park webpages.
- Benefits to park interpretation programs should be a clearly stated component of every proposal.
- Linkages between geological and biological sciences are encouraged. NPS reviewers have a wide range of backgrounds, not necessarily in geology.

- Please be patient in research permit processes. Revision and resubmission of proposals should be anticipated.
- Once each year, for the duration of the study, researchers are required to submit a written Investigator's Annual Report (IARs) in the Research Permit and Reporting System.

National Park Service Research Programs

Cave and Karst Program

<http://www.nature.nps.gov/geology/caves/>
The NPS Cave and Karst Program provides scientific research, cartographic mapping and inventory programs, and increased public awareness and educational opportunities as related to cave and karst resources. There are more than 4,900 known caves within the NPS.

Paleontology Program

<http://www.nature.nps.gov/geology/paleontology/>
With more than 240 parks with identified fossil resources, there are numerous opportunities for paleontological research within the NPS. Please contact the individual park in which you would like to conduct research.

Coastal Geology Research

<http://www.nature.nps.gov/geology/coastal/>
The NPS encompasses 97 coastal park units and include more than 11,000 miles of Great Lake and ocean shoreline. The NPS is actively seeking research partnerships to protect and preserve the vital geologic, biological, and physical resources found within our coastal National Parks.

Geoscientists in the Parks

<http://www.nature.nps.gov/geology/gip/>
Positions are available to experienced students, professionals, and retired geologists through the Geoscientists in the Parks program. These positions include research, resource management, interpretation, and education. These jobs usually range from 2-6 weeks, seasonal or temporary positions. Researchers work with park staff to investigate park specific needs. This research is then used to assist park managers in making decisions concerning resource management issues.

National Cave and Karst Research Institute

<http://www.nckri.org/>
The National Cave and Karst Research Institute facilitates speleological research, enhances public education, and promotes environmentally sound cave and Karst management.

Cooperative Ecosystem Studies Units (CESUs)

<http://www.cesu.org/>
CESUs are multidisciplinary partnerships between federal agencies and universities. At present, there are more than 70 universities acting as host institutions for CESU agreements with the NPS. CESU activities are funded via cooperative agreements that enable federal, state, and university researchers to share facilities, equipment, and expertise to better understand our natural resources.

Research Learning Centers

<http://www.nature.nps.gov/rlc/>
Research Learning centers provide logistical support to researchers, including lodging facilities and laboratory equipment. By providing a connection to the general public, especially educators, learning centers enable scientists to share their discoveries with the outside world.

Research Publications

Opportunities exist for the publication of scientific research within National Park Service journals and reports. The quarterly journal, Park Science (<http://nature.nps.gov/parkscience/>), integrates research and resource management. NPS Technical Reports present scientific data

that has been collected within Parks, and NPS Natural Resource Reports describe how scientific research can be applied to resource management issues.