



# GEOSCIENTISTS-IN-THE-PARKS Internship Program

## PROJECT DESCRIPTION 2020 SPRING/SUMMER

<b>NPS UNIT: CARLSBAD CAVERNS NATIONAL PARK</b>	<b>PD #: 2020083</b>
<p><b>Position Title:</b> Cave and Karst Assistant (1)</p> <p><b>Position Type:</b> Guest Scientist</p> <p><b>Primary natural resource discipline:</b> Multidisciplinary</p> <p><b>Project keywords:</b> caves, bats, WNS, white-nose syndrome, karst, backcountry, hibernacula</p> <p><b>Location:</b> Carlsbad, New Mexico</p>	
<b>PROJECT DESCRIPTION AND WORK PRODUCTS</b>	
<p><b>Position Description:</b> The participant will assist with monitoring Carlsbad Caverns National Park's bat populations, white-nose syndrome (WNS) detection, and development and implementation of the park's WNS response strategy. This position will be an opportunity to become intimately familiar with the park's rugged backcountry and outstanding caves. The participant will work with the Resource Stewardship and Science Division to conduct hibernacula counts and record climate data within numerous backcountry caves. The participant will assist in sampling for detection of Pd, the fungus which causes white-nose syndrome in bats. This may include mist-netting, and guano or sediment sampling. The participant will also assist with implementing procedures to prevent the spread of Pd, and develop interpretive materials to educate visitors about WNS. Other tasks may include monitoring cave resources and working with cave program volunteers on various cave-related tasks such as restoration or survey.</p> <p>With the arrival of the fungus that causes white-nose syndrome in the NPS Intermountain Region, WNS awareness and bat conservation has been elevated to a regional priority. Bat surveys and monitoring, such as those included in this project, are a key component to addressing this important wildlife disease.</p> <p>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).</p> <p><b>Work Products:</b> Project goals and materials to be produced will include reports, presentations, maps, and digital resources. Preparation of abstracts and presentations for The Geological Society of America (GSA) annual and/or regional meeting will be encouraged.</p>	
<b>QUALIFICATIONS</b>	
<p>The applicant must have experience in both horizontal caving and vertical caving techniques (SRT), and be able to safely and confidently utilize those skills in the field. The applicant must have experience reading and using cave maps, and should be comfortable hiking cross-country in a rugged mountain environment and traversing cave environments as described above. The applicant should be able to work well independently and as a team, both in the office and in the field with little supervision. The applicant should have interest and knowledge of cave biota. Applicant should have a demonstrated interest in cave conservation and the leave-no-trace policy. Experience in cave and karst management, cave cartography, sketching (underground mapping), and GIS will make the applicant more competitive. A well-qualified applicant will be working toward or already have a degree in the geosciences or cave-related studies. Computer skills in Microsoft Word, Microsoft Excel, Adobe Illustrator, Adobe Photoshop and a basic familiarity with scanning software</p>	

are required. The applicant should be able to communicate effectively in writing and orally. Online training for computer access may also be required prior to starting this position.

The applicant must be a U.S. citizen or U.S. permanent legal resident ("green-card-holder") between the ages of 18 and 35 years old. 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.** The applicant will be required to drive a government vehicle to locations throughout the park for field work.

**A personal vehicle is REQUIRED for this position.** A personal vehicle is required for personal errands and for exploring the area independently during time off. Housing is located 35 minutes from the nearest sizable town with a grocery store.

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 available and will be provided at no cost to the participant.** Housing will be in a historic multi-occupancy house. The intern will share a furnished single-family apartment, potentially with other park staff members, but will have access to their own private, lockable bedroom. Housing includes a kitchen equipped with appliances (refrigerator, freezer, oven, stove, microwave), and a bathroom with shower. The kitchen, bathroom, and living room will be shared between house occupants. Some dishes and utensils will be available, but the intern may wish to bring additional kitchen items. Participants will need to bring their own bedding and towels. There are on-site laundry facilities. TV and internet access are not provided, and there is limited cell service in the area. No guests and no pets are allowed in this housing. Groceries and other goods and services are located in the town of Carlsbad, a 35 minute drive from housing.

#### **INTERNSHIP DATES**

**Start Date:** 5/18/2020

**Number of weeks:** 52 weeks

**Flexibility of dates:** Yes

#### **LIVING ALLOWANCE**

52 weeks (\$400/week = \$20,800)

#### **RELOCATION ALLOWANCE**

\$250

## 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 \$1,638 - \$6,195 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:** Carlsbad Caverns National Park is located in the Guadalupe Mountains in southeastern New Mexico. The Guadalupe Mountains are the remnant of a Permian Age reef. Massive limestone and accompanying dolomites and siltstones comprise the outcroppings in which over 120 caves are formed. The park’s caves contain a huge abundance and diversity of speleothems including cave pearls, soda straws, draperies, popcorn, and many rare and unique formations such as subaqueous helictites, rusticles, and outstanding gypsum chandeliers. Genesis by sulfuric acid dissolution differentiates the caves of Carlsbad Caverns NP from most of the other caves in the world.

On the surface, Carlsbad Caverns NP is incised with deep rugged canyons with dramatic karst spires and cliffs. The park's desert landscape is dominated by sparse shrubs, grass, and cacti providing a home to diverse wildlife including javelina, Barbary sheep, and large colonies of cave swallows and bats. Summers in the park are hot and dry with highs in the low 100's. The park experiences frequent rain the early fall, with occasional snow and ice in the winter.

From Carlsbad Caverns NP, it is a 35 minute drive to Carlsbad, NM, the nearest town with groceries and other goods and services. Carlsbad has a permanent population of 30,000 people with an additional 30,000 people working temporarily in the area. Carlsbad is the base for two National Parks, a National Forest, two State Parks, and over three million acres of BLM land, all offering a variety of outdoor related activity opportunities.

**Physical Work Environment:** Work will be split between field and office duties. A desk and computer will be provided for office work. Field sites will be accessed by vehicle, with extensive hiking required in rugged conditions. Field work will involve both strenuous horizontal caving and the use of vertical caving techniques (SRT). Underground conditions vary with temperatures up to 68F with high humidity. Potential job-site hazards include weather, rattlesnakes, entry into caves, riding ATVs and UTVs. Participant may be required to wear a respirator (training and fit-test will be provided). Work schedule will be flexible to accommodate long days of fieldwork, with a maximum of 40 hours per week.

## MENTORING AND LEARNING GOALS

**Mentoring:** Resource Stewardship and Science Division staff will provide oversight and direction to the participant on a daily basis. The Division Chief will ensure that the participant obtains the training necessary to successfully conduct assigned tasks. RSS staff will mentor the selected individual on many aspects of cave biota monitoring and resource management, as well as providing on the job training in vertical caving and cave rescue techniques and surveying. The participant will also have opportunities to work with public cave program volunteers and to broaden their skills through interaction with the numerous researchers with projects within the park.

**Learning Goals:** The participant will gain substantial experience in cave resource management and become familiar with the caves of Carlsbad Caverns National Park. The selected individual will be able to participate in official trainings and on the job learning experiences relevant to not only cave resource management but any professional level career. Broad spectrum trainings will include first aid/CPR, computer system security and awareness, and AED operation. Job specific training will include mapping techniques, advanced vertical caving skills, cave rescue techniques, and others.

#### **SUPERVISORS/MENTORS**

**Primary Supervisor/Mentor:**

Erin Lynch  
Physical Science Technician  
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<https://www.nps.gov/cave/index.htm>

**Secondary Supervisor/Mentor:**

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