

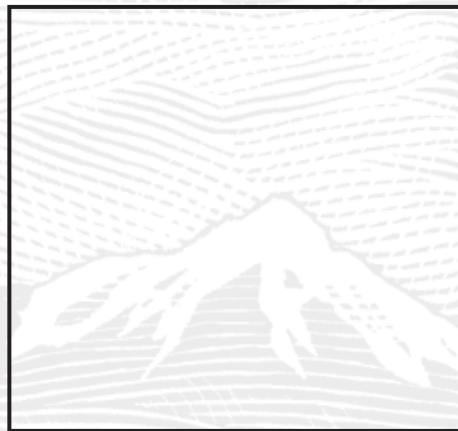
National Park Service
U.S. Department of the Interior
Jewel Cave National Monument
11149 US 16, Custer, SD 57730



How To Complete This Book

Welcome to Jewel Cave National Monument! This booklet celebrates our 125th anniversary of discovery. Once you complete the same number of activities as your age (____), you will earn your special edition 125th Junior Ranger badge and certificate! For anyone 10 years or older, complete all activities to earn your badge and certificate. If you have any questions, please ask a Park Ranger.

I am _____ years old. I need to do _____ activities.



Use this space to put the 125th Year of Discovery specialty stamp in your book!



Use the Monument's passport stamp here to record the date of your visit!

Jewel Cave National Monument is managed by the National Park Service. For more information visit: www.nps.gov/jeca

Illustrated in partnership with Volunteer Artist-in-Residence Heather Heckel (HeatherHeckel.com) and Community Volunteer Ambassador Christine Longenecker.

Please visit nps.gov/kids for more resources.




The Sacred Hills



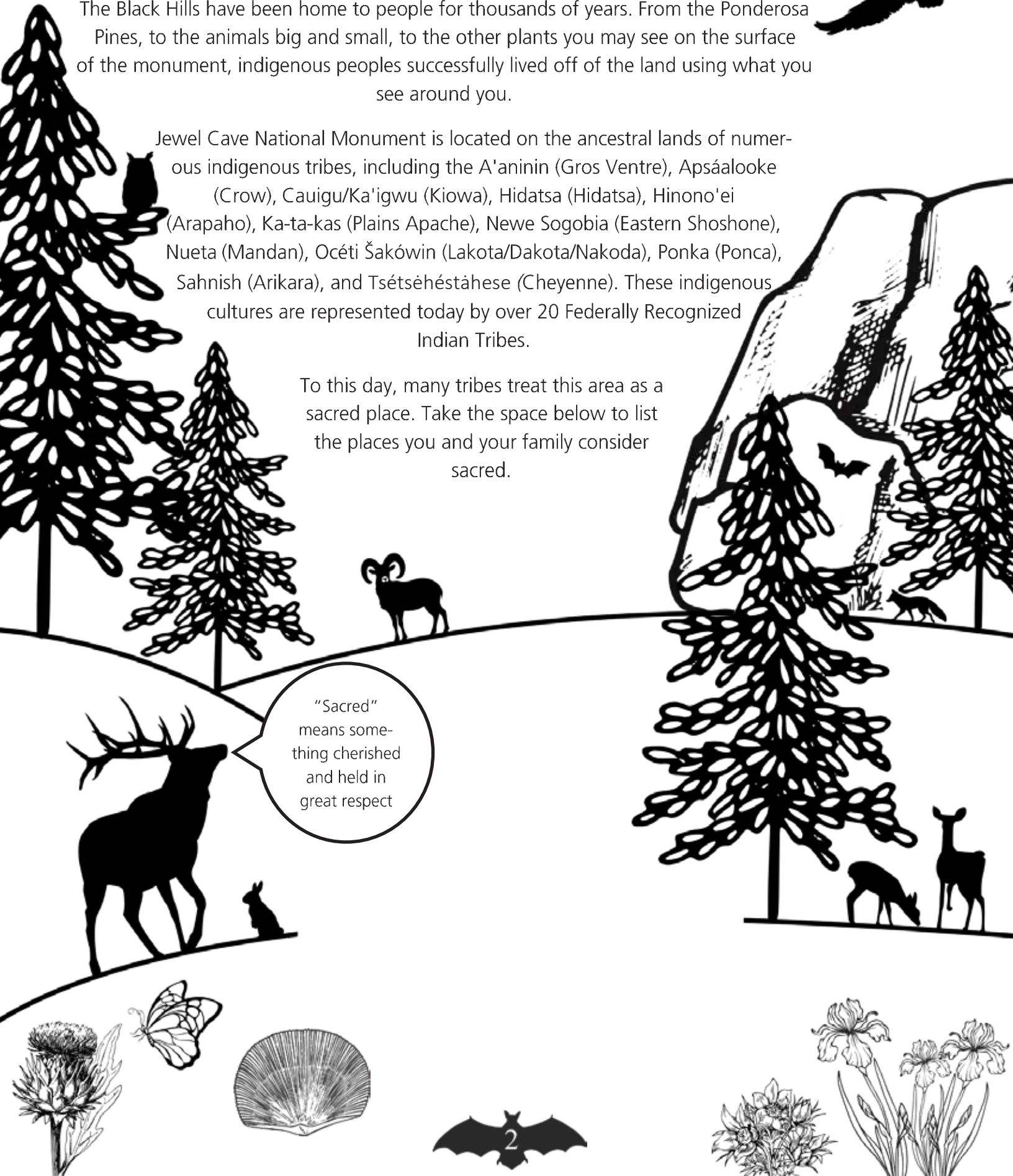
The Black Hills have been home to people for thousands of years. From the Ponderosa Pines, to the animals big and small, to the other plants you may see on the surface of the monument, indigenous peoples successfully lived off of the land using what you see around you.

Jewel Cave National Monument is located on the ancestral lands of numerous indigenous tribes, including the A'aninin (Gros Ventre), Apsáalooke (Crow), Cauigu/Ka'igwu (Kiowa), Hidatsa (Hidatsa), Hinono'ei (Arapaho), Ka-ta-kas (Plains Apache), Newe Sogobia (Eastern Shoshone), Nueta (Mandan), Océti Šakówin (Lakota/Dakota/Nakoda), Ponka (Ponca), Sahnish (Arikara), and Tsétséhéstáhese (Cheyenne). These indigenous cultures are represented today by over 20 Federally Recognized Indian Tribes.

To this day, many tribes treat this area as a sacred place. Take the space below to list the places you and your family consider sacred.



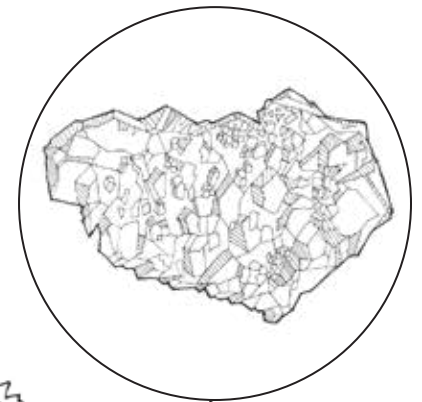
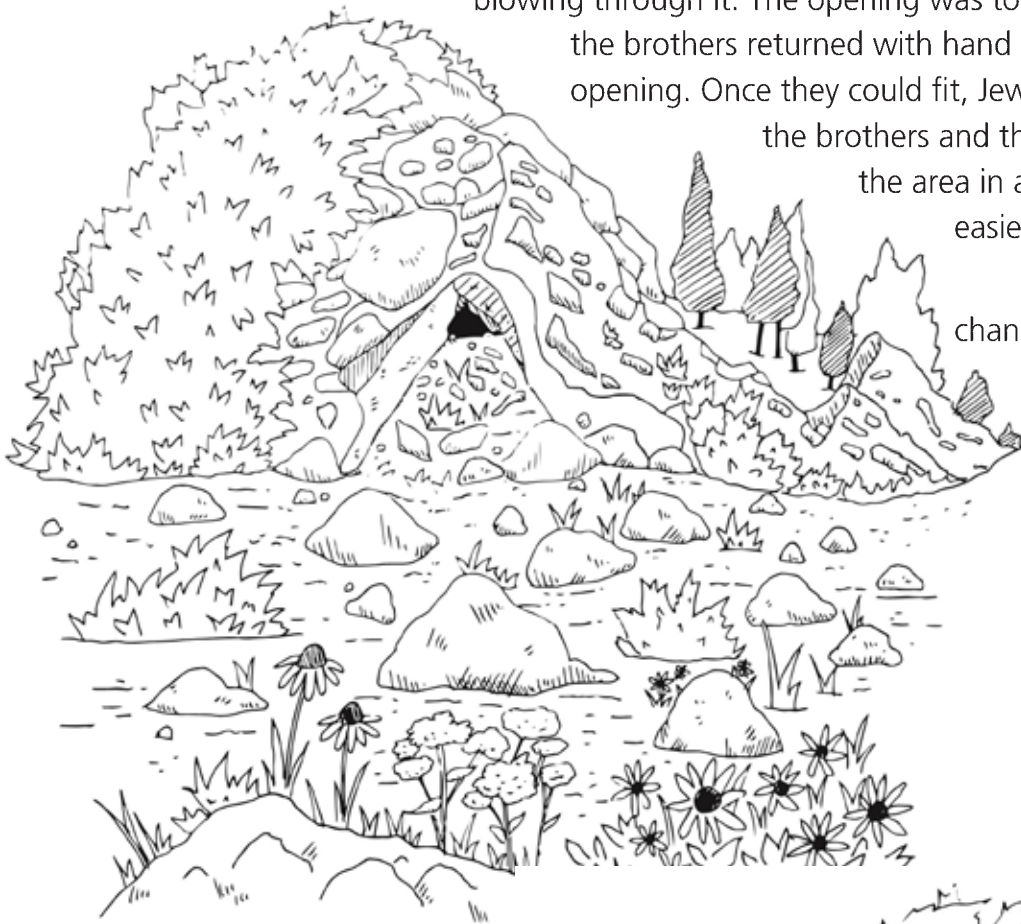
"Sacred" means something cherished and held in great respect



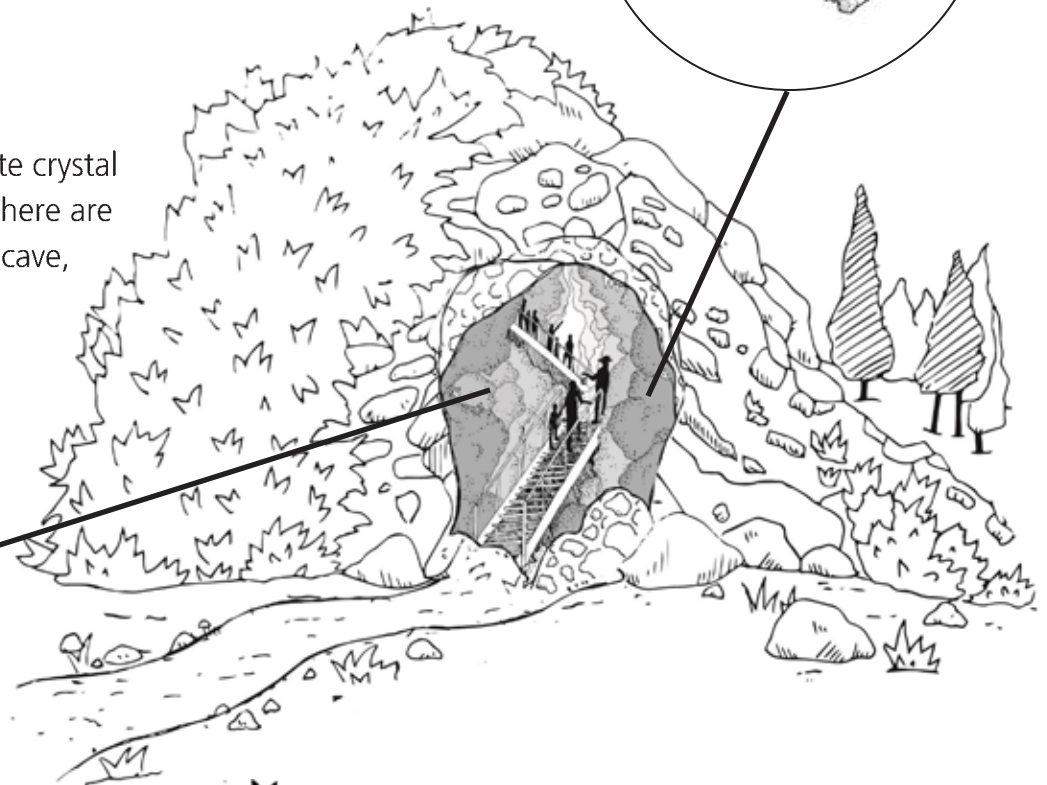
A Cave in Hell Canyon

On September 18, 1900, two brothers made a discovery that would have lasting impacts even 125 years later! The brothers, Frank and Albert Michaud, rode upon an opening in Hell Canyon with wind blowing through it. The opening was too small for humans to enter, but the brothers returned with hand tools and dynamite to enlarge the opening. Once they could fit, Jewel Cave was revealed. Over time, the brothers and their business partners developed the area in and around Jewel Cave to allow easier access for cave tours.

There have been a lot of changes since the first recorded discovery of Jewel Cave. Can you circle the differences?



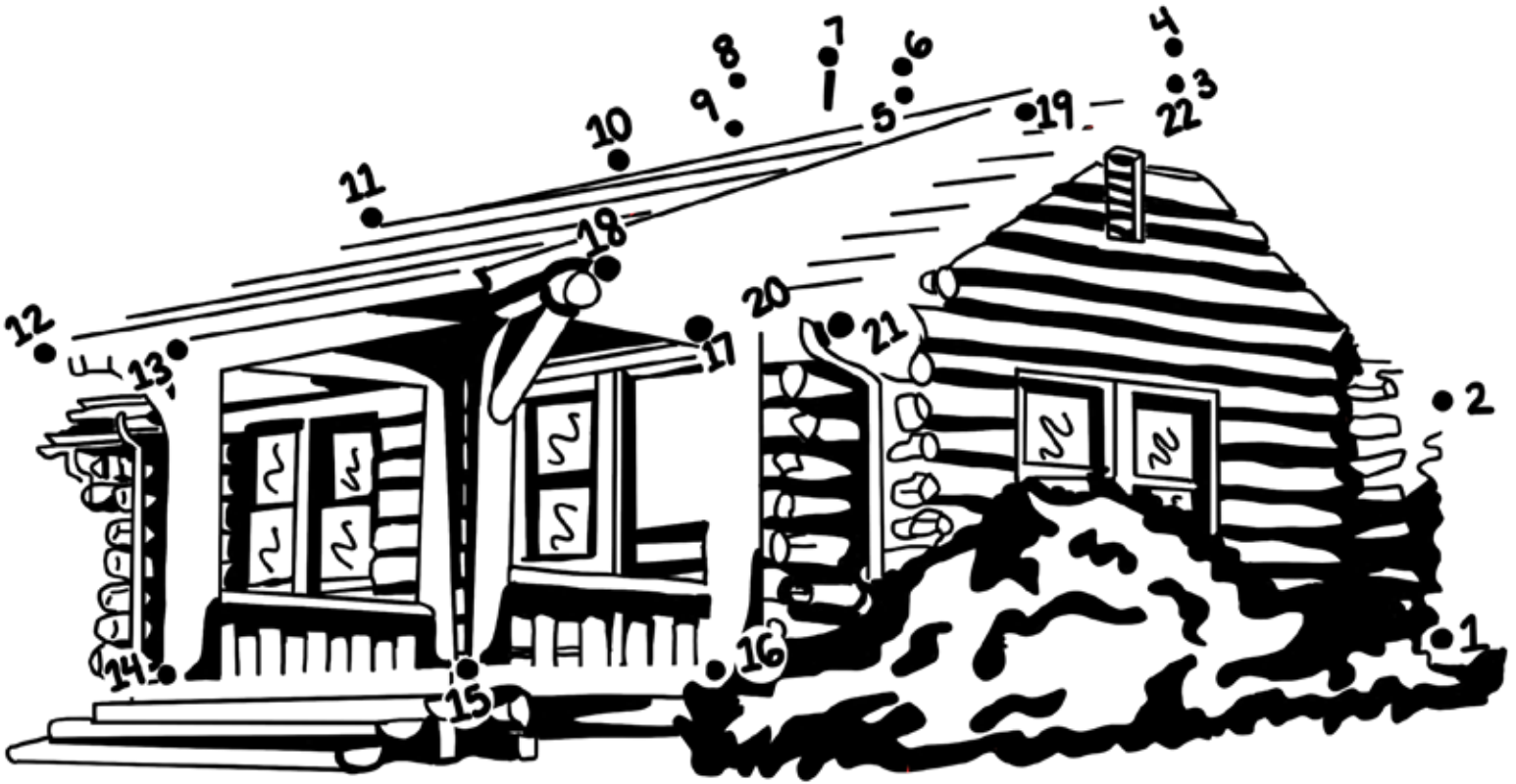
Jewel Cave is named for the calcite crystal (spar) that 'sparkles like jewels'. There are two types of calcite crystal in the cave, nailhead spar and dogtooth spar.



Making a Monument

Jewel Cave became a national monument on February 7, 1908 under the administration of the US Forest Service. The National Park Service was put in charge of protecting the monument in the early 1930s and with the help of the Civilian Conservation Corps, began to develop the site for its visitors and the rangers who would work here.

The Civilian Conservation Corps (CCC) worked on projects throughout the National Park Service from 1933 to 1942, including those at Jewel Cave National Monument. Many of these projects are still seen and used today! One of the most iconic that they completed at the monument was the log cabin now seen in the Historic Area. This cabin served as housing for the rangers stationed at Jewel Cave, the Ranger Headquarters, and the Visitor Center! Help our Civilian Conservation Corps members complete the cabin in time for our rangers to move in by connecting the dots in order.




Caves and the National Park Service





Jewel Cave became a National Monument in 1908 after President Theodore Roosevelt signed The Antiquities Act. The Antiquities Act allows a president to designate land under the jurisdiction of the federal government. All federal lands go through this process somehow. For example, Wind Cave became a National Park in 1903 after an act of Congress. There are over 60 "National Parks", but over 400 units which the National Park Service protects. See the text in the upper left corner which lists some of the different NPS units that include caves. Even more caves are publicly and privately owned! Have you been to any other caves? Put a star near other caves you have been to!


Let's Get Batty!

Bats are a very important animal in our environment. They manage insect populations and even pollinate many plant species. Jewel Cave is home to at least ten species of bats. Learn more about our bat friends and match their picture with their description.

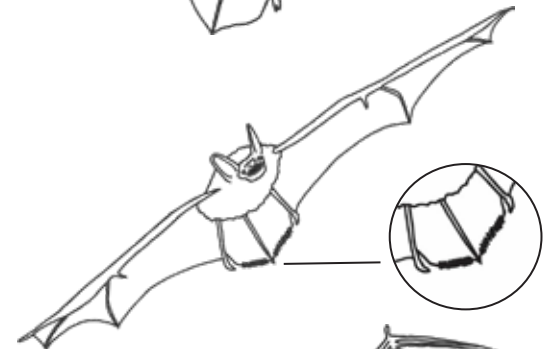
 *Townsend's Big Eared Bat- Echolocation is when an animal makes a sound, the sound bounces off whatever is in front of them, and once they hear it, they can tell how far away something is. My big ears make me a great echolocator!*

 *Western Small-footed Myotis- I may have some small feet, but my black ears and black wings help me stand out even more!*

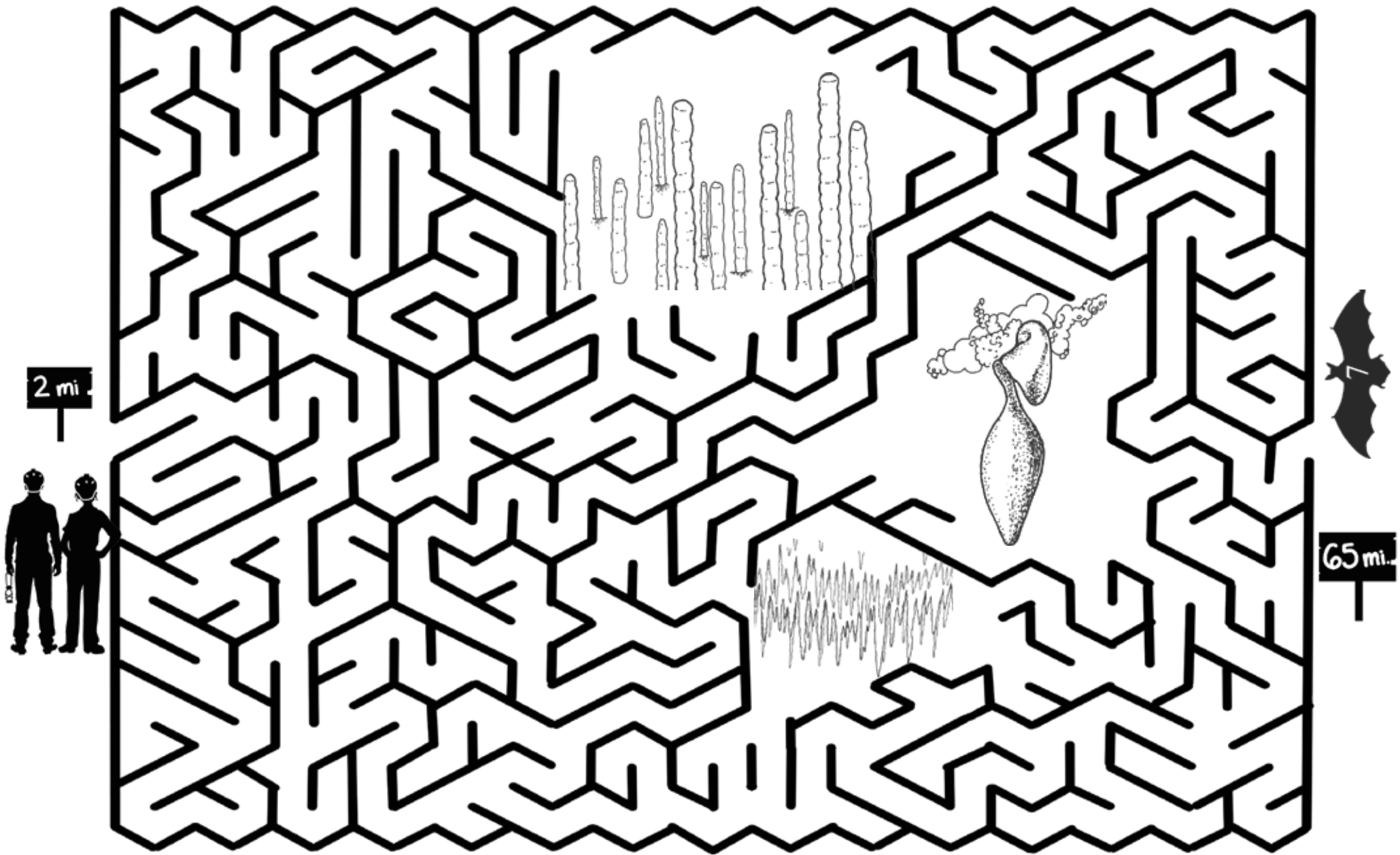
 *Hoary Bat- 'Hoary' means that something is a gray/white color. Some people think I look old, but I promise I am just as fast as any other bat!*

 *Long legged bat- I live all the way from Alaska to Mexico, I guess you could say that my long legs help me travel!*

 *Black Hills Fringe Tailed myotis- I am a sub species of the fringe tailed bat family! Our 'fringe' grows between our back legs on the bottom of our tails.*



From the first recorded discovery of Jewel Cave in 1900 until 1959, Jewel Cave was only thought to be 2 miles long. All of that changed when Herb and Jan Conn, our pioneer explorers, began volunteering at Jewel Cave. By the time the Conns retired from caving in 1981, they had mapped over 65 miles of cave. Help Herb and Jan get from 2 miles to 65 miles of long, long crawlways or passages. Notice the stalactites, stalagmites, and hydromagnesite balloons along the way!



Fossils and Formations

Jewel Cave is home to some amazing crystals and cave formations, but fossils can be found as well! Ancient brachiopods and other sea critters like mollusks and corals can be found within the Pahasapa limestone. The formations in the cave are formed through the deposition of minerals into many different shapes. Some of these formations were deposited during the formation of the cave itself, or even earlier! These are known as 'primary' cave formations or speleogens. Other features were formed more recently or are still actively forming now! These are 'secondary' cave formations known as speleothems. The features in the cave are very fragile, though, so always make sure to not touch cave formations. Take only pictures and leave only memories! Draw what you think our fossils and formations look like based on their description.

Brachiopod – This fossil is embedded in the limestone layer in which Jewel Cave Formed. It is distinguished by its clamshell shape.

Dogtooth Spar – This version of calcite crystal is typically found in cavities and veins in Jewel Cave rather than covering the walls. The name comes from its sharpness similar to canine teeth.

Nailhead Spar – Formed underwater, nailhead spar is made of calcite and covers the majority of the cave walls. The tops of the crystals are flat similar to the flat head of a nail.

Stalactite- These drip down from the ceiling and look very similar to icicles.

Hydromagnesite Balloon - These are one of our rarest cave formations. Imagine a balloon the size of your small finger, and then paint it silver. Hydromagnesite balloons are found only in 13 caves in the world.

These two formations can grow close together and form columns!

Stalagmite- These grow up from the floor after minerals build up to look like a small mountain.

Speleo-Scavenger Hunt! Search through this booklet to discover and identify the fossils and formations mentioned on this page.



Cave Exploration

Our volunteer cave explorers spend up to 4 days in the cave on a single trip. While there is a lot of exciting things to see in the cave, the explorers are on a mission to survey the cave and record what is seen and found along the way. Every trip that goes into the cave needs at least 3 people for safety. The trip leader will write a detailed trip report. This report tells us about everything that have happened on the trip! It can include if they found a special cave formation, a unique cave room, or anything that the cave explorers found interesting. This is all a part of the data that is collected about Jewel Cave.

Imagine you are a trip leader who just finished a trip through Jewel Cave, finish the report below to share with our cave scientists!

TRIP REPORT

Date: ___/___/___

Recently, our group of _____ cave explorers entered Jewel Cave for a 4-day exploration trip. We
Number
spent three nights at _____ Camp. It was quite an adventure! After a day of caving, we made
Adjective
it to camp and stopped to eat our favorite cave snack, _____. Over the next two days, we
Favorite Food
mapped _____ miles of newly discovered cave! We decided to name our survey "_____"
Number Cave Survey Name
because we saw lots of _____. On the last day, we packed up our camp, making
Favorite Cave Formation
sure to leave no trace of our stay and started back. We couldn't resist one last look and we discovered a
brand new cave formation called "_____".
Name a New Cave Formation

It was a _____ trip and we can't wait to go back!
Adjective

My favorite part of the trip was ... _____



How can you help a park?

Every year, the National Park Service relies on the work of volunteers to preserve and make America's public lands accessible to you!

Jewel Cave hosts volunteers who serve as our cave explorers, as well as cave tour guides, invasive plant or trail litter crews, and artists who help educate the public about the cave and volunteering.

There are a variety of different roles volunteers can fill at National Parks. See the volunteer opportunity list below for some ideas about how you could help a National Park, then use the space to draw yourself volunteering at a National Park!

- Preventative Search and Rescue
- Kayak River Roving
- Diving Research and Marine Debris Clean-Up
- Historic Uniform Sewing
- Native Seed Collecting
- Campground host
- Maintenance
- And many more!

To see the NPS current volunteer roles, please visit Volunteer.gov.

This page was created with the help of the Community Volunteer Ambassador program.





Jewel Cave National Monument certifies that

Junior Park Ranger's Signature

has completed all of the requirements
for becoming an official
JUNIOR RANGER

and pledges to continue learning about the science and history
of all National Park Sites.

Park Ranger's Signature

Date

