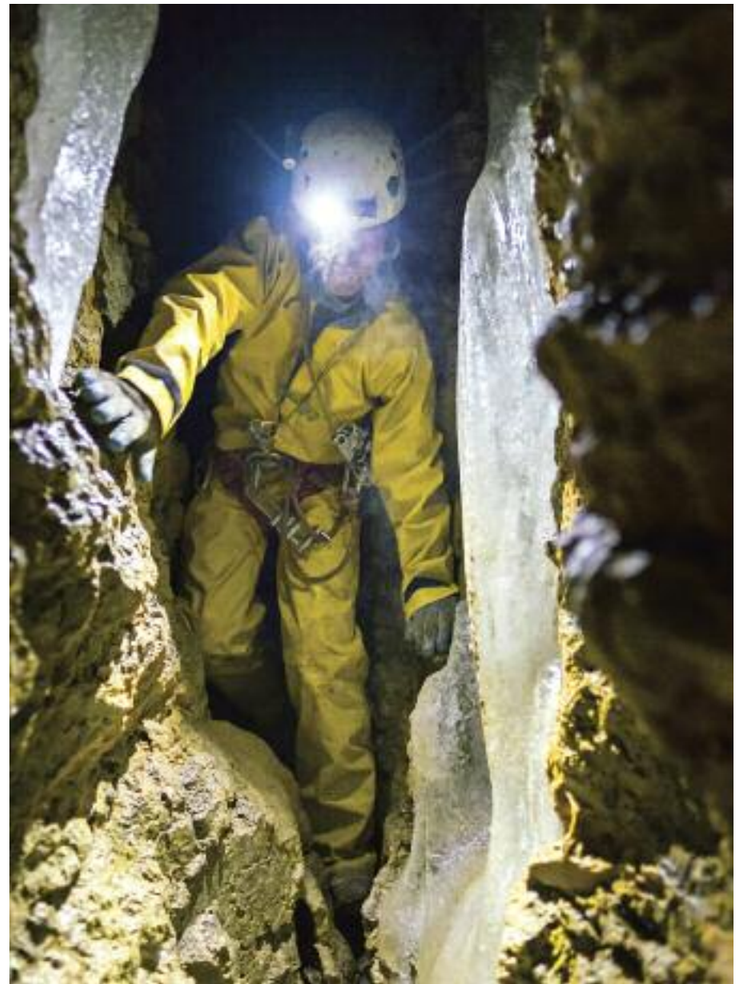
HOW LOW CAN THEY GO?

A team of cavers descends into the nation's deepest limestone cave, in Montana's Bob Marshall Wilderness, farther down than anyone has ever been.

Story and photos by Braden Gunem

READY TO DROP Expedition team member Steven Rehbein adjusts his harness at the top of a roped pitch in Tears of the Turtle, the deepest limestone cave in the continental United States.



TRUDGE UP, THEN DOWN Clockwise from left: Approaching the entrance of Virgil, a cave near Tears of the Turtle, in the Bob Marshall Wilderness; packing for the descent into Tears; Brian Gindling works his way past ice formations in Tears; warming a snack; sketching the map of a new passage in Tears.

This past July, a team of 12 expert cavers from across the United States spent ten days exploring and mapping three remote alpine caves in the Bob Marshall Wilderness of Montana. I was invited to accompany the team and photograph their descents.

One goal of the expedition was to set a new record by venturing farther down one of the caves, the deepest limestone cave in the United States. Jason Ballensky, expedition leader, says he and a partner first discovered that cave in 2005. "Cavers have known for decades that the Bob has deep caves," says Ballensky, who grew up in Miles City and now works in California as a telecommunications engineer. The cave enters Turtlehead Mountain in the center of the wilderness area several miles west of the Chinese Wall. Ballensky and his partner named it Tears of the Turtle. "We knew it would be a brutal descent, so we'd cry if we couldn't make it but would also cry if we did," explains Ballensky. He returned in 2014 and led a team that reached a depth of 1,659 feet, laboriously recorded with various devices that measure distance and slope, making it the deepest limestone cave in the country.

Tears of the Turtle isn't the kind of cave most people imagine, with giant chambers filled with beautiful formations. It's a long, narrow crack descending into a dark abyss. Parts of many passages are so tight the cavers must move sideways with their back and chest rubbing rock. Sometimes they have to crawl or scooch along on their side. Many passages have no floor and require what's known as stemming—bracing feet, knees, and hands against the walls to keep from dropping. This is no place for novices.

Tears is located in one of the most inaccessible places in the Lower 48, requiring team members to make a 22-mile approach from the base of the Swan Range carrying heavy packs of food and gear. Once inside, they used a total of 49 climbing ropes to pass through tight passages coated in icy sludge, slowly descending for hours at a time, before bringing their weary, mud-covered selves back up to an underground resting area. A rescue from the bottom would have taken days, and a broken leg or torn knee cartilage likely would have

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meant death from hypothermia in the constant 37 degree temperature.

During the 2014 expedition, the team was unable to get past a 100-foot-long passage of deep mud they named the Slough of Despond. "It's the kind of cold, sloppy mud you worry about getting stuck in and never getting out of," says Ballensky. On this most recent trip, crew members knew they had to bypass the mud pit to reach deeper depths.

The team set up an advance camp in a large room 40 feet by 200 feet, deep in a passage above the previously impassable mud pit. The camp provided a place where the explorers could sleep and eat before continuing deeper. Two teams of three cavers each spent three days underground, using the middle day to explore deeper and the other two to get in and out. Other members of the team hauled gear to and from the advance camp.

To get through the Slough of Despond, the cavers brought mud shoes, a type of snowshoe made for glacial mudflats. The footwear didn't work, so the first descending team spent an entire day climbing along a wall over the mud. Once past that hazard, team members found more tight passages that continued mostly horizontally and not in the downward direction as they had hoped. Altogether, the two teams surveyed 600 feet of new passage beyond the mud pit, while descending a total of only 30 additional feet. "We would have tried to go farther, but we'd reached the limits of our endurance," Ballensky says.

Still, the expedition surpassed the old depth and achieved a new record.

What is the appeal of squeezing through tight rock passageways in the dark, enduring days of cold and fatigue, and risking life and limb? "Seriously, we often ask that ourselves," says Ballensky. "I guess we do it because we go into places where no one has ever been before." Expedition caving is a lot like mountaineering, only in the opposite direction.

The cavers are going back. "I could tell by the air movement that the cave is a lot deeper than we reached this summer," says Ballensky. "But we won't return until at least 2018. We need time to figure out how we can spend more time down there to go even deeper."

NOT FOR BEGINNERS
Above: Jason Ballensky rappels down the Death is All Around You Drop in Virgil cave. Above right: Covered in icy mud, exhausted team members take a break in Tears of the Turtle.

Cavers work with FWP on bat conservation

Since 2006, when white-nose syndrome (WNS) was first discovered in bats in a New York cave, wildlife conservation agencies have been taking steps to prevent the fatal disease from spreading. White-nose syndrome or the pathogen that causes it, *Pseudogymnoascus destructans*, has since been found in 28 states and three Canadian provinces. In some caves where WNS is prevalent, bat numbers have declined by 90 percent.

Though neither the disease nor the pathogen has appeared in Montana, wildlife officials are taking steps to reduce the chances that bats become infected. To keep watch on the state's caves and bat populations, FWP has worked closely with members of Northern Rocky Mountain Grotto (NRMG). "Cavers are out exploring caves all the time, so they're a huge help in monitoring remote sites and gathering information on bat habitat and bats in general," says Lauri Hanauska-Brown, chief of the FWP Nongame Wildlife Management Bureau.

HEALTHY FOR NOW A Townsend's big-eared bat clings to the wall of a Montana cave. So far, bats here have remained free of a fatal disease infecting those in many other states.

JESSE LEE WARNOCK

As part of the partnership, cavers follow decontamination protocols and report on the group's website whether caves do or don't have bats. The information is then automatically forwarded to the Montana Natural Heritage Program to add to a central database, says Bryce Maxell, the heritage program's director. Cavers have provided technical expertise to help biologists enter narrow caves to capture and test bats for WNS. They have also installed temperature and humidity data loggers, cave use registers, bat roost loggers, and signs warning people about the bat disease and the need to decontaminate clothing before moving from one cave to another.

Ian Chechet, chairman of the NRMG and a member of the Tears of the Turtle expedition, says that cavers and conservation agencies in Montana have established working relationships not found in other states. "For various reasons, cavers and public agencies are at odds in some parts of the country," he says. "But here in Montana we're working together, and that's been good for us in the caving community, and the agencies tell us it's helped them too."

—Tom Dickson