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Montana cavers wary of closures due to bat disease

By Rob Cheny
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Mike McEachern would like to talk about the wonders of caves, but a fast-moving crisis in the subterranean world is keeping his attention above ground.

"I suspect I'm going to be spending much less time in the wilderness," the leader of the Northern Rocky Mountain Grotto caving club said this week. "I'm going out and talking to people instead of doing the thing that I love."

The problem is a disease devastating cave bat communities in the eastern United States called White Nose Syndrome. The influential environmental group Center for Biological Diversity is petitioning for a nationwide closure of caves on public lands, Endangered Species Act prosecution of anyone traveling between bat caves and efforts to buy private-land caves to protect the bats.

The effort has already triggered cave closures on U.S. Forest Service lands in the East, South and Midwest, along with a U.S. Fish and Wildlife Service advisory to other federal land managers

to close their caves and institute decontamination rules for those who do enter caves.

But the closures - and the disease - have yet to take hold in the Pacific Northwest and much of the Southwest. McEachern believes the closures are an overreaction unjustified by the available science. But he doesn't doubt the fate of bats demands attention.

"What's happening is people want to help bats, they feel hopeless, there's a million bats dead, that's horrible, they're grasping around maybe cavers can spread it," he said. "But with closures, they're not getting much bang for the buck. They're losing their first line of defense by closing caves to cavers."

Like bats themselves, White Nose Syndrome is a little-understood issue with enormous consequences. Science magazine researchers in April found that the loss of bats in North America would lead to about $22.9 billion in losses to the agricultural industry. That's because bats eat massive numbers of crop pests that otherwise would require chemical control.

A single little brown bat eats 4 to 8 grams of insects a night. The Science authors estimated the 1 million bats killed so far by White Nose Syndrome are no longer eating between 660 and 1,320 metric tons of bugs a year.

"Some of these species are clearly headed for extinction if things don't change," Center for Biological Diversity conservation advocate Mollie Matteson said. "It is a sacrifice, but I have met many cavers who've hung up their gear. They don't want to be responsible for moving this deadly fungus around. They may need to give this sport up."

Scientists do know that White Nose Syndrome is spread by a fungus, Geomyces destructans, that appeared suddenly in bat

colonies around Albany, N.Y., in 2006. The fungus causes a white residue to build up around the noses of hibernating bats, killing them. In some caves that support colonies with thousands of bats, it can kill the entire community in two to three years.

Bats spread the fungus among themselves, and can contract the disease by entering an infected cave where another colony has died out. What's not clear is whether humans can carry the fungus from cave to cave in a way that will transfer to bats.

"We're not saying human beings are a major vector or will cause some pattern that wouldn't occur naturally," said Ann Froschauer of the Fish and Wildlife Service. "But we've seen really big jumps in western Oklahoma and Missouri that aren't easily explained by bat movement. And we're trying to prevent that process being speeded up by big jumps."

On Wednesday, FWS officials in Kentucky confirmed the first case of White Nose Syndrome in that state. That brings the total infected states to 16, along with three Canadian provinces.

A caver and self-professed "bat dork," Froschauer said she understands the upset felt by the caving community. It's similar to the challenge anglers face trying to control invasive pests that cling to their boats and felt-soled wading boots. That's why the agency has also recommended vigorous decontamination of all gear when cavers travel between caves.

"We know humans can move things around - this has happened with lots of other endangered species," Froschauer said. "And if we take a step back from WNS and look at cave ecosystems, I think we can agree decontaminating between sites is a good idea. Even caves half a mile apart have specific, endemic critters that live there. This is something cavers should be keeping up after WNS has moved through."

McEachern agrees with the decontamination regime, noting the National Speleological Society has embraced it and rallied its members to support more bat research. But he also noted that caves in the Rocky Mountains appear to have very different bat habitat than the mostly eastern U.S. areas that have White Nose Syndrome outbreaks.

"We don't have huge hibernaculums like they have in the East," he said. "A cave in Montana that had 2,000 bats would be a huge hibernaculum for an alpine cave. In one major cave system in the wilderness, we've been going there for years and we've never seen a single bat. With all the years I've spent doing archaeology, I've carefully looked at floors for bones, and never seen a bat bone."

Montana has one major public cave - Lewis and Clark Caverns State Park between Whitehall and Three Forks. Park manager Lynette Kemp said a year ago, the park started asking visitors if they'd been to other caves. If so, those folks would be required to disinfect any belongings that had been in the other caves, or leave them outside.

Researchers and other more involved cavern explorers need written permits from the Montana Department of Fish, Wildlife and Parks that they were following decontamination procedures.

"We've been talking with other cave operators and that's what they're doing, too," Kemp said. "We won't be closing caves on FWP land at this time, but we're following the Forest Service policy on caves."

Only a few kinds of people tend to care about caves, McEachern said, and they don't often share notes.

Archaeologists and climatologists study them for signs of prehistoric life, while biologists examine bats and other current inhabitants. The recreational explorers spread across all categories, often dedicating weeks of vacation time to reach isolated caves.

"I just worry about some of the plans being put forth for caves," he said. "A blanket closure isn't going to work. They can't keep people from growing pot in the national forests, so they aren't going to be protecting the caves."