

Successful Cave Gating Workshop at Cliff Cave, Missouri

We had a successful 6th National Cave Gating Workshop at Cliff Cave, south of St. Louis, from October 5-14, 2009. Thanks to the 40 people who participated as instructors, hosts, students, volunteers, and agency support (please see the list at the bottom).

The two main entrances to Cliff Cave were gated for multiple reasons. The impetus for funding the conservation project was the joint discovery (by St. Louis County Department of Parks and Missouri Department of Conservation) of Indiana bats in the cave in May 2008. We later learned that they had been seen before, but their identification was uncertain without clear photos. We have very good photographic equipment, so we have been able to determine that Indiana bats use Cliff Cave during spring and fall migration, but seem to be absent in summer and winter. We are continuing our bat surveys for awhile to clarify bat usage. Four species of bats use the cave in different seasons.

We had to keep the discovery of the I bats in Cliff Cave quiet until we could obtain substantial funding and gate the cave, because publicity probably would have led to vandals going there to gawk at the bats and possibly harm them. That's why we did not announce the project in the news media, or provide much information. During the project we found bottle rockets in the bat roost area and a spray painted "Sorry bats" on the ceiling. I also found drug paraphernalia in the entrance room.

It is important for people to understand how severely endangered Indiana bats are. In Missouri we have lost more than 97% of our state's Indiana bats over 30 years. And we have lost 15% of what we had two years ago, according to surveys of hibernacula (hibernation caves and mines) conducted by Tony Elliott and Bill Elliott (who are not close relatives, by the way). It is important to protect their dwindling winter colonies and transient (migration) sites from human disturbance. They use forests in northern Missouri during summer. We have seen up to 78 Indiana bats in Cliff Cave, sometimes in a single cluster, sometimes in several clusters. See the article, "Cliff Cave History", on this *Biospeleology* website, which provides geology, history, biology, and such.

The Cliff Cave gates may be more important than just preventing disturbance if the WNS fungus, *Geomyces destructans*, is significantly spread on people's clothing and shoes, a real possibility. Access to Cliff Cave has been a free-for-all, despite the chain-link fence and signs, so the risk of infecting the cave was high. WNS also is spread from bat to bat.

Cliff Cave also is a monitoring site for WNS, White Nose Syndrome, which has not arrived yet in Missouri. But we are pretty much expecting it to arrive here this winter or next according to trends in the eastern USA. Cliff Cave is the easternmost site we have in Missouri for detecting this dreaded disease, which has killed, some say, over 2 million bats of several species, including Indianas, little browns, pips, big browns, and northern bats. It has not hit gray bats yet, but we are concerned that could happen too. Some of our so-called common bats could decline significantly if trends continue.

A full gate, Gate 1, was built on the main entrance October 5-12, using 7.4 tons of steel, despite two days of thunderstorms in which we stayed indoors and held class. But at least we no longer had to hold class at night after a tiring day. Gate 2 was built on the second entrance, a sinkhole, on October 13. Gate 2 is a quasi-bay window/full gate at the entrance ledge, with 1.4 tons of steel. We finished two days early despite the rain.

There are hundreds of aspects to planning, funding and carrying out a large cave conservation project. A few people asked why we charged a student fee. That has always been done at the national cave gating workshop, and the students essentially get it back in several ways. Working lunches were catered out to the work site so we would not lose time having to go off site, and workers could eat in relays to keep the work going. Also the fees were used to help support the trip expenses of one instructor, as his nonprofit organization has had a loss of revenue because of the bad economy. The students participated in 11 hours of indoor classes, with lectures by several instructors on cave ecology, cave meteorology, bat ecology, cave gate design, and related subjects, plus they got a binder full of literature on cave gating and bats. Included in that was information on the decision-making required before even gating a cave. There are good reasons for and against gating a cave, and also bad reasons for and against. See “Cave Gating Criteria” and the other documents provided at the workshop on this website.

The gating project was financially supported by partners from the Missouri Department of Conservation, St. Louis County Parks Department, American Cave Conservation Association, Bat Conservation International, Missouri Caves & Karst Conservancy, Meramec Valley Grotto and caver volunteers. A new management plan will be co-written for the cave by SLCPD, MDC and MCKC. It will include cave restoration and occasional access by permit by cavers and others during times when Indiana bats and other wildlife are not in a sensitive period. WNS decontamination procedures will have to be used, we think. We do hope and expect some of the bats in Cliff Cave to increase over the next few years. Meanwhile, MDC is working on a WNS Response Plan for Missouri.

MDC has made some video clips of the cave gating project, bat counts and other cave and bat subjects. You can see them on YouTube at:

<http://www.youtube.com/user/moconservation#g/c/D7C7F0C7995ECF68>

Again, many thanks to all the hard-working folks who came out for Cliff Cave!

Bill

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40 Participants in the Cliff Cave Gating Project

Instructors:

Jim Kennedy BCI, Austin, TX
Roy Powers, ACCA, Duffield, VA
Bill Elliott, MDC, Jefferson City, MO (also host)
Jerry Fant, ACCA, Wimberley, TX
Chris Clark, ACCA, Horse Cave, KY

Hosts:

Keith Goldacker, SLCPD, St. Louis
Dennis Hogan, SLCPD, St. Louis
Erin Shank, MDC, St. Louis

Students:

Derek Shiels, MDC, Jefferson City, MO
Klaus Leidenfrost, MTNF, MCKC, Rolla, MO
Bree McMurray, MODOT, Jefferson City, MO
Jon Beard, SPG, Springfield, MO
Jim Cooley, KCAG, Kansas City, MO
Chuck Bitting, NPS, Arkansas
Tony Elliott, MDC, Kirksville, MO (also instructor)
Jeremy Micaleff, Coarsegold, CA
Joe Williams, Jadwin, MO
Alicia Lewis, MCKC, St. Louis
Jeff Souza, Red Bluff, CA

Volunteers:

Steve Samoray, Hermitage, TN
Sara Samoray, Hermitage, TN
Aaron Rowe, St. Peters, MO
Jessica Rowe, St. Peters, MO
Dustin Davis, VA
Shawn Williams, St. Louis
Pic Walenta, Gladstone, MO

Support:

Dean Ponticello, SLCPD, St. Louis
Andy Miller, SLCPD, St. Louis
Craig Adams, SLCPD, St. Louis
Larry Inabnit, SLCPD, St. Louis
Pam Campbell, SLCPD, St. Louis
Dave Martin, SLCPD, St. Louis
Ted Iwasyszyn, SLCPD, St. Louis
Tim Emmons, SLCPD, St. Louis
Don Hutson, SLCPD, St. Louis

Bryan Faser, SLCPD, St. Louis
Raenhard Wesselschmidt, MDC, Busch Wildlife Area
John Vogel, MDC, St. Louis