

FURTHER EXPLANATION AND JUSTIFICATION FOR KENTUCKY SALTPETER CAVES PROJECT

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Basically, we are interested in identifying, locating, visiting, and evaluating previously unrecognized hibernacula in the hope that we can document further population declines and possibly work with landowners and management agencies to restore conditions and allow the populations to rebuild. We are most interested in the federally endangered Indiana bat, but these actions will also benefit other cave-using bat species as well as the cave ecosystems dependent on the energy input provided by bats.

We are searching the literature and collective knowledge of Kentucky cavers to develop a list of potential caves to be field checked. These caves would have either (1) had large colonies of bats previously reported, even if in a trip report; (2) still have visible evidence of past bat roosts, such as large guano piles or wall or ceiling roost stains; or (3) fit the model for a good hibernaculum, with good cold air trapping abilities, multiple entrances, multiple levels, or other complexities.

We are initially targeting saltpeter caves since a primary source of the nitrates mined for saltpeter was often from bat guano. For caves on the generated list selected for visitation, we require maps and location data, as well as landowner contact information. We have hired a field crew of cavers to visit and evaluate these caves, leaning heavily to local Kentucky cavers to fill these positions if any are available.

Now to allay some fears regarding “management” of the caves. Right now, we have NO plans at all to do anything management-related to any of the caves we visit. This could change somewhat, of course, depending on what is found. Our primary focus is on the recovery of the Indiana bat. Since it was first listed over 30 years ago, “species recovery” has been somewhat of an oxymoron. The numbers of bats continue to decline. Populations would be declining even more rapidly if a few suitable mines had not been colonized, giving the species a few new roosts that are not thermodynamically stressful or susceptible to disturbance.

What we are trying to do with this project is to identify caves that HAD been used before human changes (such as through saltpeter mining) or just plain old disturbance caused them to abandon those sites. Very few caves have the narrow range of cold temperatures preferred by this species, and the bats congregate from multi-state areas to overwinter in them. Indiana bats once were one of the more common species in the eastern United States, but now are barely holding on in a relative handful of sites. We are discovering that many caves across the range of the species once were used by the bat, but today these are not even recognized as “bat caves” since they have been abandoned long before recorded history. If we can visit even a few dozen caves in a year and find one good cave that used to hold many, many bats and make it suitable once again (either through restoration of the cave's original [pre-mined] configuration or by reducing disturbance during the critical season), then we provide another little island of safety for the species. Right now there are only 480,000± Indiana bats left in the world, and some of the caves we have found lately on our own housed over 100,000. Just think, one new site, properly managed, could allow the population to grow 1/5 again as large as it currently is. Sure, that may be optimistic, but is worth

a chance. We are not just focusing on Kentucky — there are parallel efforts in several other states (such as Indiana) at this time. The more of these safe harbors we provide, the better the chance that the populations will finally begin to rebound and that we can look back in pride at all of the collaborative efforts involved in that success. And if the species is downlisted and eventually delisted, then that means that caves currently closed for the bat will likely be reopened again, at least on a limited basis.

I hate gates on caves, but have realized years ago that not all cave visitors, cavers and spelunkers alike, are as knowledgeable or conscientious about some of the ecological issues as I am. And as long as a few bad apples go into the critical bat caves at the wrong time of year, build fires in caves, or just plain shoot or club bats to death, we are stuck with gates as a means of protection. People can go elsewhere, but the bats cannot. And for the couple of percent of all the caves in Kentucky, that's not much of a sacrifice for us cavers.

Still, keep in mind that all we are doing right now is documentation of past bat use. Future management needs, if any, will be discussed on a case-by-case basis, and will certainly involve members of the Kentucky caving community if they are interested.

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