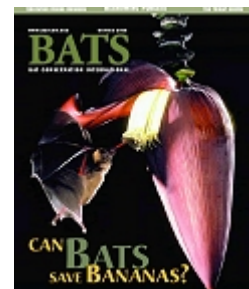


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Moving a Mountain for Big-eared Bats
BCI and cavers clear trash for critical cave
Jim Kennedy



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In 2005, Saltpeter Pit was just another name on a long list of obscure Kentucky caves we hoped to explore in our recovery efforts for the endangered Indiana myotis (*Myotis sodalis*). But an old cave map revealed a likely cold-air trap that could be an ideal spot for hibernating bats. Besides, we knew the cave's location and we had the landowner's permission to enter it. Many promising bat caves have never been evaluated due to a lack of access. What we discovered at Saltpeter Pit was an extraordinary opportunity that quickly turned into an almost-overwhelming challenge.

On a sunny November day, my field crew and I drove across a hayfield and up a hill to the sinkhole called Saltpeter Pit. But, as we peered over the edge, the pit looked nowhere near as deep as the 53 feet (16 meters) described on the map. A colossal mound of household trash almost filled the pit to within 20 feet (6 meters) of the entrance. Rusting refrigerators and gobs of rotting carpet clung precariously to the walls, snagged there before they could reach the bottom.

Nonetheless, we carefully rigged our ropes to a pair of convenient trees and dropped warily into the hole, landing atop the trash pile. Surrounding us was one of the biggest mounds of nastiness that I have ever sunk a foot in.

Clearly, Pulaski County families had been using Saltpeter Pit as a dump for decades. The pile we dubbed "Mount Trashmore" included battered appliances, lawnmowers, fence wire, feed sacks bulging with who-knows-what, old roofing material, children's toys, broken bottles, pipe, car parts, a wading pool, animal bones and much more. And that's just what we could see on the surface. The whole mess was cemented together with mud that washed into the cave from the surrounding fields.

We began picking our way down the slope to the actual cave floor, pausing occasionally to kick footholds into the garbage and roll loose tires out of the way. I climbed, slid and hopped down the slope and moved into a passageway that extends out from the pit. As I rounded a bend, I was surprised to see several clusters of bats.

"Bingo," I thought, assuming we had discovered a new Indiana myotis roost. But looking closer, I was delighted to recognize them as Rafinesque's big-eared bats (*Corynorhinus rafinesquii*), which are rarely found in sizeable clusters. I estimated about 600 bats were clinging to the ceiling — a remarkably large and important population of these rare bats. I was amazed that they were using the cave despite the 30-foot-high (9-meter) trash pile clogging the entrance.

Farther along the passage, we came to a junction room, where distinctive roost stains on the ceiling revealed the previous presence of other hibernators. This almost certainly was the Indiana myotis roost we originally sought. It was indeed a cold-air trap. Caves where most passages are lower than the entrances tend to pool cold air throughout the year, getting colder only in the winter. These are ideal conditions for maintaining the low temperatures

required by hibernating bats, especially Indiana myotis.

So why were they no longer using Saltpeter Pit? We may never know, but it was doubtful that they abandoned it because of disturbance by human visitors. It seems likely that the great mound of garbage restricted flight space, altered airflow and perhaps changed the cave's microclimate. At any rate, the trash was an unnatural component of the cave and introduced pollutants into the local aquifer. To protect the aquifer and the big-eared bats' hibernation site "and perhaps to entice the Indiana myotis to return " Mount Trashmore had to go.

I knew just the group that could help. I explained our problem to Chris Clark and Dave Foster at the Kentucky-based American Cave Conservation Association (ACCA). Together, we launched an ambitious plan to remove the trash.

However, we severely underestimated the task that faced us. We planned to clear the mountain over a few weeks during the summer of 2006 with some eager volunteers, a few paid contractors and a lot of ingenuity.

Volunteer cavers descended on Mount Trashmore in August 2006. They rappelled into the muck and began shoveling it into huge bags, each holding 1,000 pounds of rotting debris. An ingenious system of scaffolding spanned the sinkhole and a system of pulleys allowed Jeeps to haul the bulging bags up to the surface, then into the bucket of a front-end loader. The trash was taken to a dumpster, where recyclable materials were sorted out.

An impressive 20 tons or so of debris was removed during that 10 days of backbreaking work, but the malodorous mountain was barely dented.

As the extent of the challenge became clear, we invested much more time in planning and received additional funding from a Kentucky state PRIDE grant. We also hired a larger paid crew to reinforce our resolute volunteers. In four grueling weeks of 2007, the team removed about 130 tons of trash, reducing the mountain to a modest " but still disgusting " hill. Biologists, meanwhile, installed dataloggers that monitor temperature and humidity at strategic locations to gauge the effects of trash removal and evaluate the cave's suitability for bats.

The project piqued the imagination of newspapers and television stations throughout the area. Their very positive reports raised local awareness of bats and bat conservation issues.

Last summer, cavers and paid workers finally finished the cleanup. They hauled away the final 50 tons of trash, dismantled the scaffolding and restored the site. In all, roughly 200 tons of trash and muck was dug up, bagged and hauled out of Saltpeter Pit, including more than 520 automobile tires, a boat, eight refrigerators, a riding lawnmower and countless parts and chunks of cars and trucks.

In this exceptional collaboration, more than 70 people worked on the cleanup, supported by a variety of grants (including one from Beneficia Foundation) and in-kind contributions. The project is valued at more than \$170,000, including about \$50,000 in donated labor, equipment and landfill fees. But the mammoth project is finally complete: Mount Trashmore is gone. Cavers will be monitoring the cave to prevent future dumping.

In January 2008, I returned to Saltpeter Pit and documented the continued presence of the Rafinesque's big-eared bats, but still no Indiana myotis. Only time will tell if the

endangered species returns to the cave; repopulation often takes years. But if they come back, Saltpeter Pit will be far more welcoming than it has been for many years.

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