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An Epic Gate

Steel and Concrete Protect a Crucial Bat Cave

Carved deep into the Cumberland Mountains of central Tennessee is one of the most important bat hibernation sites in the world. Each fall, Hubbards Cave attracts endangered gray bats (*Myotis grisescens*) and seven other species from 100,000 square miles (260,000 square kilometers) around.

But Hubbards' thousands of feet of underground passages and chambers proved almost as attractive to local spelunkers as to bats. These underground explorers were, usually inadvertently, killing bats by the thousands. Being awakened too often in winter can prove fatal for hibernating bats, for each burst of activity burns away fat reserves needed to survive till spring.

When Merlin Tuttle first visited the cave in 1962, he found only a few thousand bats. But eight years later, he discovered a hidden sanctuary, a winter refuge for 250,000 gray bats. These survivors were crammed into too small a space, with many roosting near the floor. Thousands fell victim to floods and raccoons. The last of the great Hubbards Cave population was failing fast: By 1984, barely 88,000 gray bats remained.

By then, however, Tuttle's educational efforts had borne fruit, as The Nature Conservancy's Tennessee Chapter purchased Hubbards Cave.

Now the cave was protected, but what about the bats? With help from Tuttle and Bob Currie of the U.S. Fish and Wildlife Service, a daring plan was developed: They would build the largest gate ever erected at a bat cave. The Richmond Area Speleological Society funded the project. The Nature Conservancy organized local logistics, and Mid-State Steel Corporation donated materials. The Tennessee National Guard built a mile-long road over rugged terrain and hauled tons of equipment up the mountain.

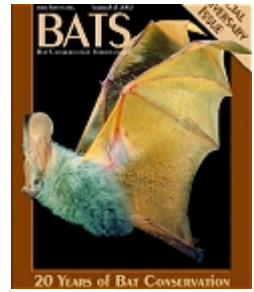
Currie and Roy Powers of the American Cave Conservation Association organized National Speleological Society volunteers from five states. They designed and built the gate under the watchful eye of The Nature Conservancy's Linda Pearsall.


The gate, some 30 feet (9.1 meters) tall and 35 feet (10.6 meters) wide, contains more than 110 tons of steel and concrete to ensure protection of this key hibernation site.

Even that wasn't enough. Many bats refused to pass through the gate and began hibernating in an unprotected area that was especially exposed to vandals. So the partners built a second huge gate in 1999 to protect the new area. This time they relied on a unique design developed by Powers that stopped vandals while giving bats ample room to fly over the top. In 2001, a "bat window" was added to the first gate. Now bat numbers are growing rapidly at Hubbards Cave.

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