

2010 Trout Rock Bat Count - WNS Takes Its Toll

By Bob Hoke

There's a series on cable TV titled "Life After People" and its tagline is "Welcome to Earth, population zero". That line seemed appropriate at the recent bat count in Hamilton Cave. Executive summary: Counts during the last ten years averaged 450 bats. This year there were only 30. Read on for the details.

Hamilton Cave is one of three caves in the NSS-owned John Guilday Caves Nature Preserve in Pendleton County, West Virginia. Bat counts have been done in Hamilton and New Trout caves each winter since the NSS bought the property in the early 1980s. Trout Cave is counted in odd numbered years to reduce the disturbance of its small colony of endangered *Myotis sodalis* bats.

Last year White Nose Syndrome was found on three bats in Trout Cave and on many more bats in Hamilton. Also, the number of bats roosting near the Hamilton entrance was much higher than normal, and the number in the rooms at the far end of the count were down significantly. This is typical of WNS-infected caves.

The plan was to do the regular counts in Hamilton and New Trout, and a partial count in Trout, on Friday, February 26. The cavers doing the Hamilton and New Trout counts came in from the DC/Baltimore area on dry roads and almost sunny weather. However, the government crew from the Elkins area, who were going to count in Trout, couldn't make it because a blizzard had closed Route 33 heading east out of Elkins.

The bat counts in all three caves follow well documented routes each year and there is no attempt to search the caves for hidden bat colonies. This counting method provides a consistent long-term database of each cave's population.

Here are the results of the 2010 counts, and graphs summarizing the counts over the years.

HAMILTON CAVE: I helped Keely Owens and Tabitha Viner with this year's count. As we hiked to the cave we looked along the trail for dead or flying bats, or for ones roosting in cliff cracks. We saw nothing unusual. (Last year several dead bats were found and a few were seen in cracks in the cliffs).

Based on reports from New England WNS caves, we expected some dead bats inside the cave near the entrance. We also thought we might see a lot of bats in the entrance area, similar to last years crowd.

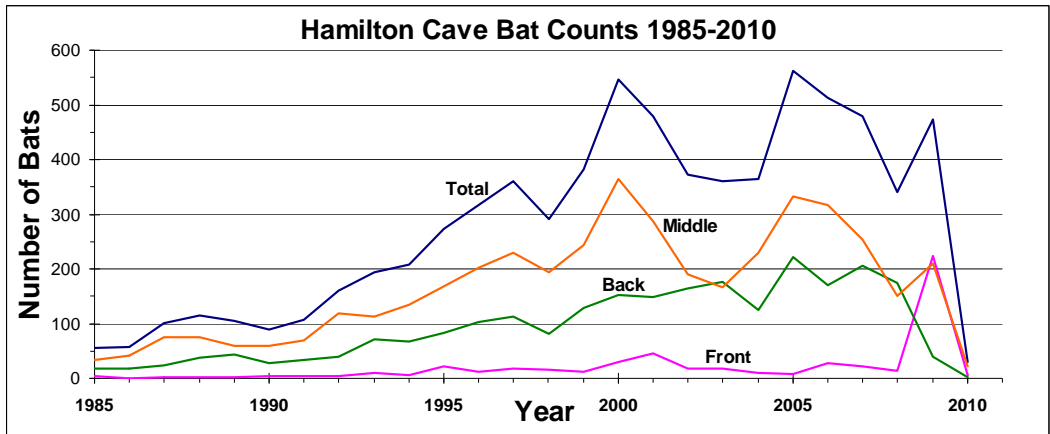
What greeted us was nothing. No dead bats. No flying bats. No sleeping bats. Nothing. It was creepy. As we proceeded toward the back section of the cave we saw an occasional bat, but nothing like the normal number. We only saw a total of 30 bats in the entire cave, way below the 10-year average of 450 and the lowest number since the counts began in 1985.

We don't know what happened to the bats. Did they all die in the cave and were eaten by something? Did they survive last winter and die after leaving the cave (perhaps due to wing damage caused by WNS)? Did they survive and somehow decide that Hamilton Cave was no longer a suitable habitat? We don't have a clue.

We carefully checked as many bats as we could observe closely and six of the 30 bats had obvious WNS symptoms. There may have been more that we couldn't see.

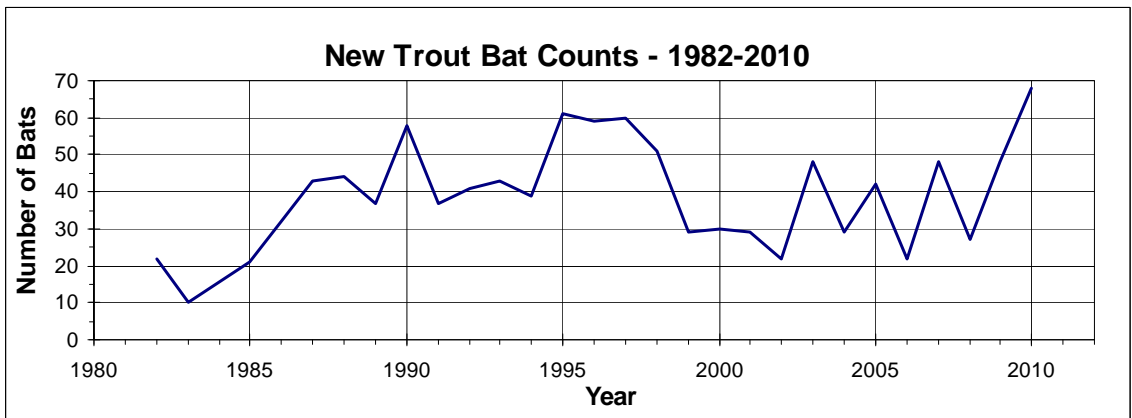
I expected to see some dead bats as we progressed into the cave (away from where outside critters could feast on them), but there was no sign of any mortality. No bodies, no wings, no bones, nothing. (Actually there was one partial body near the back of the cave, but Tabitha said it had been dead for at least several months).

Overall the count was pretty disconcerting. I'm not quite sure what I expected, but it certainly wasn't the dramatic population drop we saw. The graph shows how the cave's bat population steadily increased for about 15 years then stabilized for almost a decade before WNS caused it to crash.



This graph shows the number of bats in the front, middle, and back sections of Hamilton cave for each year since bat counts started, as well as the total number of bats. White-Nose Syndrome was first seen in the cave in 2009. That year the number of bats in the entrance area spiked and the back section count dropped significantly. The overall bat population crashed in 2010.

NEW TROUT CAVE: Fred Grady, Dave West, and Karen Willmes did the New Trout count. They carefully looked for signs of WNS, but none were found. They also looked for dead or flying bats and saw nothing unusual except that a dead Pip was found in the passage between the First Room and the Second Room. It showed no sign of WNS damage. Surprisingly, the total number of bats counted was a record 68 (the 10-year average is 35 bats). Much of the increase was Little Brown bats and the reason for the increase is unknown. (The vast majority of Hamilton's bats are Pips, so it doesn't appear that the New Trout bats are coming from Hamilton).



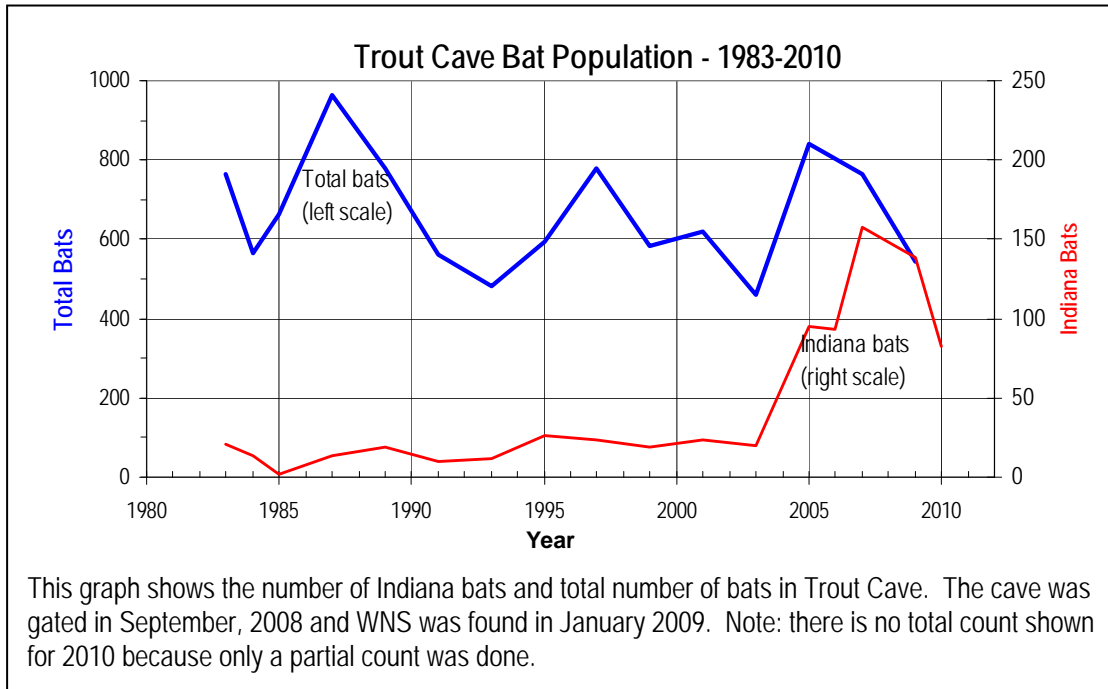
This graph shows the total number of bats in New Trout Cave each year since counting was started in 1982.

TROUT CAVE: Trout is normally counted only in odd-numbered years to reduce the impact on the cave's Indiana bat population, but a partial count was done this year to assess the impact of WNS on the cave's Indiana bat population. The count was done on March 3 by Craig Stihler, Rick Doyle, Barb Douglas, and Kieran O'Malley.

The counters reported seeing many fewer bats than in previous years and there were about 20 dead pups hanging on the walls in the front section of the cave. They said that if they hadn't been expecting problems those bats would have been counted as being alive and not investigated further.

Most bats in the cave showed no signs of fungus, but many bats in the front portion appeared to be dehydrated and emaciated. Fungus was evident only in the moist section of the cave (the back part of the maze and beyond the Register Room).

The number of Indiana bats observed dropped significantly from recent counts, but is still much larger than the pre-2003 counts. Trout Cave is gated and there has been no human access since the count on January 30, 2009.



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