

Survey reveals Indiana bat summer roost at Beanblossom Bottoms Nature Preserve: www.heraldtimesonline.com

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Good news is quickly turning sour for bat researchers in southern Indiana.

The good is that the federally endangered Indiana bat has been found at Sycamore Land Trust's Beanblossom Bottoms Nature Preserve over the summer. The bad is that a fungal infection known as white-nose syndrome could continue wiping out bat populations, including the newly discovered summer colony at the nature preserve.

There will be a count this winter of bats in hibernation across Indiana and, due to white-nose syndrome, "we anticipate they'll be down significantly," said Andrew King, fish and wildlife biologist at the Bloomington field office of the U.S. Fish and Wildlife Service.

King led the summer survey that found the bats in Monroe County.

Sycamore Land Trust approached King last fall and asked if his office would be interested in conducting a survey for Indiana bats. After gathering internal support, King teamed with the Bloomington office of WEST (Western EcoSystems Technology) Inc., which conducted the acoustic survey in June to analyze the bats' echoes.

Indiana bats winter locally but the data isn't as telling for where the bats spend their summers because they disperse, King explained.

In addition to the acoustic survey, Bloomington field office biologists also glued small, temporary radio transmitters — each weighing about two-tenths of a gram — to the backs of the Indiana bats. They then tracked the creatures for several days to their daytime roost trees.

John Lawrence, assistant director for Sycamore Land Trust, along with Bloomington biologists and WEST Inc. biologists, conducted evening "emergence surveys" as well, in order to count the number of bats that left the roost trees. On July 12, the highest nightly count from one tree was recorded at 24.

That night, the highest cumulative number of Indiana bats was also recorded, totaling 33. According to the survey summary, all were presumed to be Indiana bats.

The Indiana bat was detected at 10 of the 15 sites where bat detectors were distributed, but it wasn't confirmed until July when mist netting was set and three Indiana bats were captured, among dozens of other bats.

"You don't really know until you go out and catch a few," said Lawrence.

Of the Indiana bats found, two were juveniles and one a "reproductively active" adult female.

"The presence of these bats indicated that an Indiana bat maternity colony was present and using habitat in the area," the bat survey summary read.

The survey results validated all the hard work, including the labor intensive survey, King said.

"It made all the effort worthwhile," he said.

Not only did he want to help the Sycamore Land Trust, but King wanted to test the new survey protocols, from acoustic analysis to the mist netting.

He also wanted to determine if the Indiana bat was nearby because of the threat of white-nose syndrome, which has killed millions of bats across Eastern America in the last six years, and has been spreading outward from there.

The fungus is neither native to North America nor specific to the bat, but is very bad news for bats. Lawrence said it can live on the bat, interrupting its body processes, leading to starvation during hibernation and, eventually, death.

Local bat populations are affected by this disease now and King expects experts will see deaths as early as this winter.

Indiana bat population numbers have been recovering in recent years, making biologists optimistic for the endangered species. Then the disease hit and is reversing the "positive trend," he said.

Logistically, the colony at the nature preserve provides easy access for potential monitoring for the next several years, he added. By having a local colony, experts can see how these populations are surviving as the disease runs its course.

Other Indiana bat colonies have been found in the area but most are located on private property, he explained.

Saving bat populations is worth the effort, King said, referring to an April 2011 Science Magazine story that showed bats contribute billions of dollars to the economy as they consume "agricultural pests."

Without bats, he said, there would be more insects in the summer — including mosquitoes that carry West Nile virus — so bats can help in preventing the spread of the disease, which can be deadly for humans.

Identifying the bat confirms the 500-plus acres of wetland are indeed serving as a habitat for endangered species, Lawrence, with the land trust, said.

"It's one more really important reason to preserve a place like (Sycamore)," he added.

The endangered Indiana bat keeps a summer home in northwest Monroe County.
Courtesy photo



A researcher examines the carcass of an Indiana bat that succumbed to white nose syndrome, an affliction that is decimating the bat population. This 2009 picture was taken in New York but the disease has spread from the East and now threatens Indiana's population of the endangered species.
Associated Press File

