

## Toughbook Aids in Tracking Endangered Bat

When Copperhead Environmental Consulting set out to study the spring migratory movement of the endangered Indiana Bat, they decided to take the Panasonic Toughbook CF-19 along for the ride.

"The state of Tennessee hired us to go into the area included in their Habitat Conservation Plan of the Cumberland Plateau to find out if they have Indiana Bats summering in that area," Mark Gumbert, Copperhead Environmental Consulting President and Founder said.

A colony of Indiana Bats hibernate in the caves of the Cumberland Plateau during the cold winter months and when spring arrives they are ready to head to their summer roosting habitat.

"It is believed that when they exit the cave they pretty much head to where they are going to spend the rest of the

summer. Sometimes traveling over 100 miles within two or three nights," Mr. Gumbert said.

So the group went into a dedicated research area within the Habitat Conservation Plan boundary in the early spring, caught the bats and outfitted them with radio transmitters.

To be able to monitor the transmissions effectively Copperhead Consulting needed a reliable laptop and for that they turned to Rugged Depot and the Panasonic Toughbook CF-19.

Once the transmitters were attached they were able to use the Toughbook loaded with mapping software to track the movements of the bats.

"As we had the plane flying around and the bat flying I also had five vehicles on the road tracking the bat, the Toughbook was definitely an asset to make the project complete," Mr. Gumbert said.

Aside from the Toughbook the tracking system involved requires a lot of electronic equipment.

Mr. Gumbert went on to say "we've got two-way radios going on, we've got the receiver for the tracking equipment and then we've got cell phones when our two-way radios aren't enough to keep us in communication with one another. And then in the air there are all the plane electronics, which are a lot in themselves."

When using Dell laptops the group has experienced a tremendous amount



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A blend of in-the-field flexibility and proven durability, Toughbook CF-19 transforms easily from a laptop to a handwriting-friendly tablet PC. The Toughbook CF-19 features sealed all-weather IP54 design and extensive MIL-STD testing help ensure that Toughbook CF-19 will stand up to the most rigorous environments.

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of interference with the additional equipment forcing them to shut down those laptops completely to be able to track the bat.

“The Toughbook is shielded so there was very little interference with the tracking, telemetry and radio equipment,” Jeff Hawkins, Copperhead Environmental Consulting Project Manager said.

There were some long hours in the air and on the ground involved with getting the data that was needed. For that the battery life of the Toughbook came in very handy.

“The battery life was long. I think it lasted for eight hours so there were no issues with that, which was great.” Mr. Hawkins said.

The size and ease of the Toughbook also benefited the team.

“There were a couple of situations when it was useful to be able to flip the screen around and make it a tablet so when you were in the plane you could just sit it on your lap and it would not interfere with the yolk of the plane,” Mr. Hawkins said.

Copperhead Environmental Consulting, with the help of the Panasonic Toughbook CF-19, did succeed in finding the Indiana Bat and when asked if they would be using the Toughbook on the next project the answer was a resounding “yes.” In fact, the crew will be using the computers on a project on Ft. Knox where they will be tracking Indiana bats as they forage throughout the night. Again, the shielded laptop will reduce interference with tracking equipment and will be able to withstand the rigors of field work. The ability to mount the computers loaded with mapping software in the trucks has been extremely useful and will be an asset on any future projects, whether they involve other electronics or not.

“If the Toughbook can withstand me it can withstand anything,” Mr. Gumbert said.

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A banner for Rugged Depot with a repeating diamond pattern background. On the left is the Rugged Depot logo, a blue and black cube. To its right is the text "Rugged DEPOT" in large, bold, black letters. Further right is the slogan "WE DON'T DO FRAGILE" in a bold, black, sans-serif font. Below the slogan is the address "24915 Silver Leaf Street Magonila, Texas 77355" and the phone number "(800) 995-5007". On the far right is the Panasonic Toughbook logo, a black cube with "P3" on it, and the text "PANASONIC TOUGHBOOK PREMIER PARTNER" below it.