

The Rarest and Largest Bat in Florida Discovered on the Florida Panther National Wildlife Refuge

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Next to the beautiful and powerful Florida panther, many other species of animals also find their home in the Florida Panther National Wildlife Refuge, including the Florida Bonneted Bat (FBB). Cliff Maehr, along with two other Refuge interns and staff, discovered in a recent field study that this species is more abundant in the refuge than previously thought.



Captured Florida Bonneted Bat

Photo Credit: Florida Fish and Wildlife Conservation Commission

The largest bat in the state, the bonneted bat is insectivorous and is believed to be one of the rarest bats in North America. In the US, it is only known from South Florida. This fieldwork was conducted on the refuge because three of 12 locations where the FBB has been documented border the Refuge (these include the Picayune Strand State Forest, Fakahatchee Strand Preserve, and Big Cypress National Preserve). Thus, it was

suspected that the FBB could be on the Refuge as well. Further, determining the presence of the FBB on the refuge would help the US Fish and Wildlife Service with its ongoing assessment of whether the bat should be listed as endangered.

Interns deployed nine acoustical detectors on rotating shifts to monitor for the presence or absence of this bat. Their targeted deployment sites were open freshwater or wetland areas. The bat is thought to forage near these areas, drinking water during flight. Detection devices ran for three-four consecutive nights at thirteen different locations and recorded all ultra-sonic frequencies or bat echolocations. A program called the Bat Call Identification East was used to decipher the recordings. This program can distinguish the FBB echolocation by its unique low-frequency echolocation which is unlike other bat species in Florida.

Overall, the acoustical detectors found conclusive evidence that the Florida Bonneted Bat was present and was most common on the east side of the Refuge. There were several occurrences where at least two bats were found at separate sites simultaneously. Over the three to four night deployments, the sites with two highest recordings of abundance were discovered at two large ponds. Early responses by consulting biologists have revealed that the unique method of employing multiple detection recorders was productive for further gauging the bat's relative abundance.



Clif Maehr (right) with Refuge Staff and Interns

Photo Credit: United States Fish and Wildlife Service

The growing awareness of this bat may correlate to a wider abundance than previously known. There is still much to learn about this species as to their numbers and distribution. Mr. Maehr indicated in his study report that bats are excellent biological indicators of many things and their sensitivity to habitat disturbance might signify the health of an ecosystem. This brings excitement to refuge staff as its' presence on the Refuge may indicate a healthy refuge ecosystem. I wonder what specifically draws them to the refuge landscape- are staff maintaining roosts here? Or are these bats simply using the water sources during travel and hunting? Perhaps with further studies, we may one day know.