

This permit report is for Rattling Cave in Cocke County, Tennessee. The permit was issued to Chris Ogle of Tennessee Wildlife Resources Agency (TWRA). Myself and TWRA would like to thank SCCi for your support and partnership in conducting this survey. We look forward to continued efforts with SCCi in the conservation and monitoring of Rattling Cave.

On June 8<sup>th</sup>, 2017 Chris Ogle (TWRA), Cory Holliday (TNC), and 2 TWRA interns conducted a thermal imaging camera emergence survey of Rattling Cave. This survey involved using a thermal image camera to record the emergence, and then in the office, using computer software to count the bats. Cory Holliday performed the analysis on the recording and came up with an estimate of 4,792 bats emerging from the cave.

On July 7<sup>th</sup>, 2017 Chris Ogle (TWRA), Logan Barber (TVA), and several TWRA Interns and volunteers harp trapped the cave. This survey involved using 2 tarps over the cave entrance to funnel the bats into the harp trap. Once the bats were captured, we took the following biometric measurements: weight, forearm length, age, sex, reproductive status. Also, 15 bats were swabbed for a fungal study being conducted by Tennessee Technological University. The bats were then banded with a TWRA aluminum alloy bat band and released. We captured and took biometric measurements of 116 Gray Bats (*Myotis grisescens*) both adults and juveniles, as well as 1 adult big brown bat (*Eptesicus fuscus*). We had no captures of bats that had been previously banded.

#### Conclusions:

Rattling Cave has turned out not only to be a significant winter site for gray bats, but also a significant summer site as well. We consider any summer site with around 5,000 bats as significant. This site is also important due to the presence of juveniles indicating that it is a maternity site for gray bats. The agency would like to suggest that entry into the cave be limited. We acknowledge that the cave is closed during the winter months, which is a crucial time for these bats, but with this site also being a maternity site during the summer, it would be very beneficial to the recovery of these bats if the site was closed year round. Again this is only a suggestion, and it is the agency's hope that we can continue partner with SCCi to monitor this cave. This monitoring would consist of a census via cave entry every other winter; as well as, a thermal image recording and harp trapping event every summer, which would not require an entry.

I would like to thank the SCCi again for their support and willingness to partner with us on this endeavor.

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