

**Conserve Wildlife Foundation of NJ
Mist Netting & Radio Telemetry Survey
2015-2017 Report**

Purpose: The purpose of this study was to determine continue studying summer distribution and habitat selection of Northern Long-eared Bats (MYSE) through presence/absence surveys at the study sites in New Jersey.

This project is a continuation of a project, which began in 2015 to understand the summer distribution and habitat selection of Northern Long-eared Bats (*Myotis septentrionalis*). Over the 3 years our team has used this project to fill in data gaps throughout the state and has expanded the project to other species of interest including any of the 4 myotis species in New Jersey. This year the project focused on seven locations in New Jersey. These locations included: Hutchenson Memorial Forest, Clinton Wildlife Management Area, Thundergut Pond Wildlife Management Area, Colliers Mills Wildlife Management Area, Manchester Wildlife Management Area, Tuckahoe Wildlife Management Area, and the Allamunchy Wildlife Management Area, Sussex Branch.

For each location, we deployed seven mist nets of various heights and lengths along small trails, stream corridors or narrow roads (see attached excel document). Each night we set the nets before sundown (around 5pm) and kept the nets raised until 2am. We had a team of at least 4-6 people, with at least 1 handler out each night.

Photo 1:



Photo 1: CWF’s Stephanie Feigin and team put up mist nets

The nets were checked every 10 minutes for bats. Any bat caught in our nets was carefully removed from the net, we IDed the species, sex, age and reproduction status, and (based on species) the bat was either released immediately (away from the net) or brought (in a cloth or brown paper bag) to “base camp” area for further data collection. All myotis bats were to be brought back for further data collection: banded, weighed, the forearm measured, WNS wing score index checked, photos taken, and were to receive a transmitter.

Any MYSE caught would be tracked to their diurnal roosts until the signal was lost. Radio transmitters are placed in between the shoulders of the bat with surgical cement. Tracking would occur immediately after release and the signal is continually checked throughout the night to get general direction of the bats movement. The next day after the transmitter was attached, the team would return to the site for more in-depth telemetry and to locate the roost tree. Telemetry would continue each consecutive day until the transmitter fell off. After, all pertinent data about roost site and surrounding area was to be recorded. Evening emergence counts were conducted at each identified roost tree.

2017 Results:

This project allowed the team of 15+ trained volunteers (consultants and students) to conduct 10 netting nights and 5 tracking days catching a total of 91 bats, including 21 eastern red bats (*Lasiurus borealis*), and 70 big brown bats (*Eptesicus fuscus*). The team completed 8 netting nights at 7 locations throughout New Jersey. This year, however, our team did not catch any MYSE or other myotis species so no bats were tracked.

Photo 2:



Photo 2: Eastern red bat caught in 2017

Our team had planned to conduct as many netting nights as possible to cover the maximum number of sites throughout the summer. Our team also assisted another team contracted to net and do radio telemetry at a few sites throughout the summer as well. Their team caught one MYSE but did not locate a roost tree.

Previous Years:

For the last 3 years, CWF has led a team of 20+ student volunteers, collecting data on Northern long-eared bats and the forest habitats they rely on. Throughout the course of the project our team has conducted 60+ netting nights covering 30+ sites throughout the state catching a total of 201 bats, including 10 Northern long-eared bats, 2 little brown bats (*Myotis lucifugus*), 41 eastern red bats (*Lasiurus borealis*), and 152 big brown bats (*Eptesicus fuscus*).

Photo 3:



Photo 3: Mist netting locations from 2015-2017

Our team tracked all 10 Northern long-eared bats, documenting 9 new roost sites in different forested areas throughout New Jersey. These data allow for more protection of these specific known roost sites through timing restrictions for tree cutting to protect the bats and their pups, as well as protected buffer zones around the known roost site.

Photo 4:



Photo 4: MYSE caught in 2016