

# Nocturnal Lullabies... Our Journey to Listen for Bats in the Northwest Corner of Connecticut!



## 6 out of 9 Bat Species Documented

**Big Brown Bat**  
(*Eptesicus fuscus*)

**Eastern Red Bat**  
(SC)  
(*Lasiusurus borealis*)

**Eastern Small-Footed Bat**  
(E)  
(*Myotis leibii*)

**Hoary Bat**  
(SC)  
(*Lasiusurus cinereus*)

**Indiana Bat**  
(SFE)  
(*Myotis sodalis*)

**Little Brown Bat\*\***  
(*Myotis lucifugus*)

**Northern Long-eared Bat\***  
(SFE)  
(*Myotis septentrionalis*)

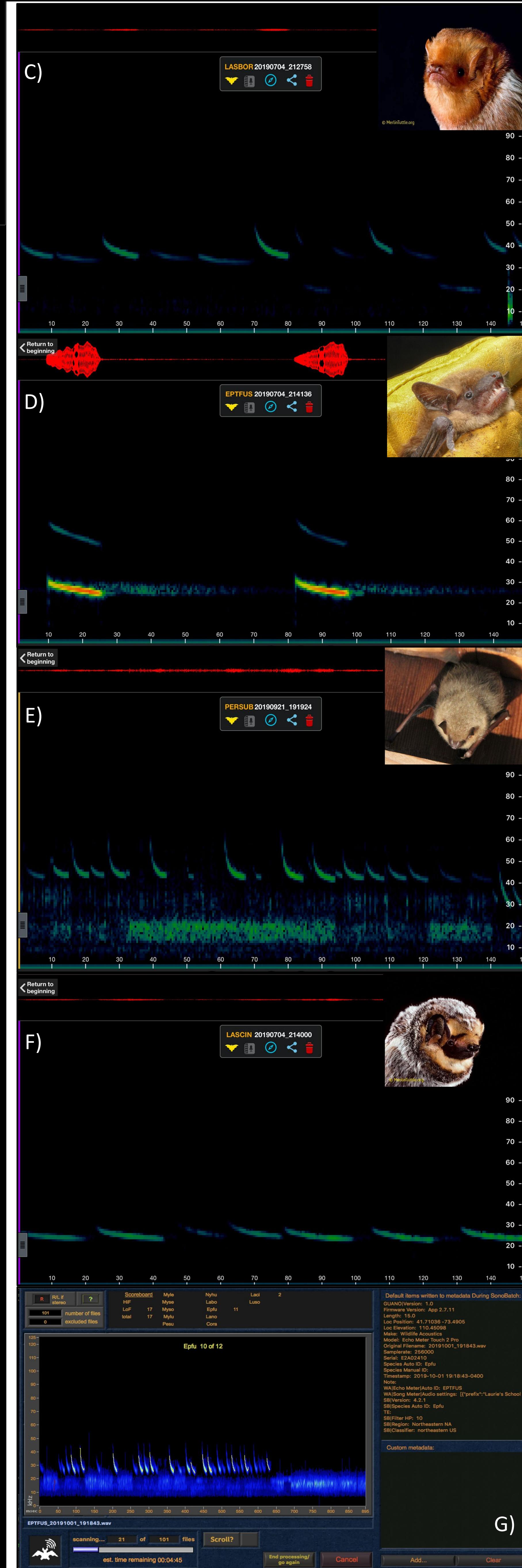
**Tricolored Bat**  
(E)  
(*Pipistrellus subflavus*)

**Silver-haired Bat**  
(SC)  
(*Lasionycteris noctivagans*)

(SFE) = State/Federally Endangered  
(E) = State Endangered

(SC) = Special Concern State

\*\* = Photographed for a wildlife



- Aside from an ongoing CT DEEP transect monitoring survey in the southeastern part of Kent, bat species within or near most of the town of Kent have not been surveyed intensively, especially on Kent Land Trust properties.
- In Connecticut and other states, populations of bats have been decimated by White-Nose Syndrome (a cold-loving fungal disease found on the nose and wings of bats that negatively affects hibernating bats). Habitat loss and wind turbines have also negatively affected bats. Ongoing acoustic surveys and monitoring of bats is critical in order to better track the impact of disease and other environmental stressors on local bat populations.
- People fear the unknown and are often misinformed when it comes to bats. Educational programming about bats, and their beneficial role in the ecosystem, is another needed component to help conserve bats locally and globally.

## Objectives

- Objective 1:** To document bat species found within the town of Kent, CT, particularly near Kent Land Trust Properties, via mobile and stationary acoustic surveys.
- Objective 2:** To contribute valuable data to the state's National Diversity Database (NDDB).
- Objective 3:** To raise awareness about bat species and their importance within the northwest corner of Connecticut via a Story Map and community-based programming.

## Study Area & Methodology

**Study Area** - We chose to acoustically survey bats in several different places on or near Kent Land Trust properties in Kent, CT. Different habitats (i.e. riparian, forest interior, forest edge, grasslands, inland wetlands, and man-made structures) were represented in our study. These locations included:

- Kent Falls State Park
- Audrey and Robert Tobin Preserve
- Winter Farm
- Marvelwood School Tennis Courts
- Skiff Mountain Wildlife Management Area - Pecks Pond
- Skiff Mountain South Preserve - Marvelwood School
- Schaghticoke Road Transect
- Southeastern Kent Transect

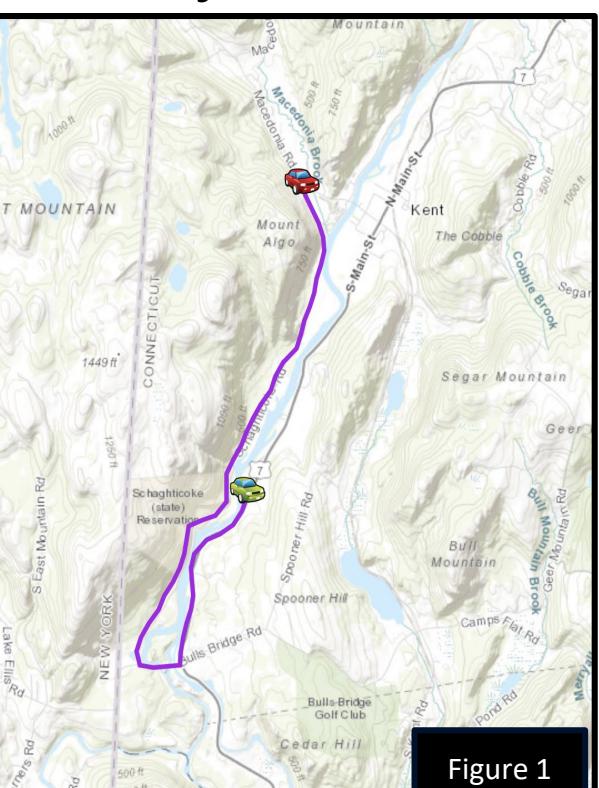
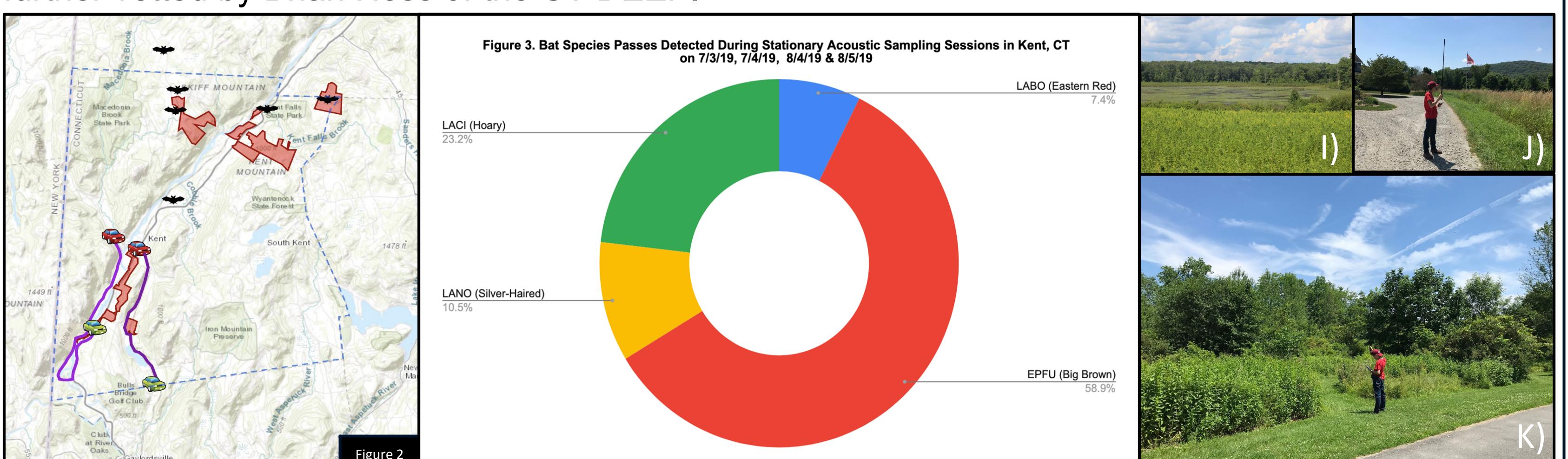


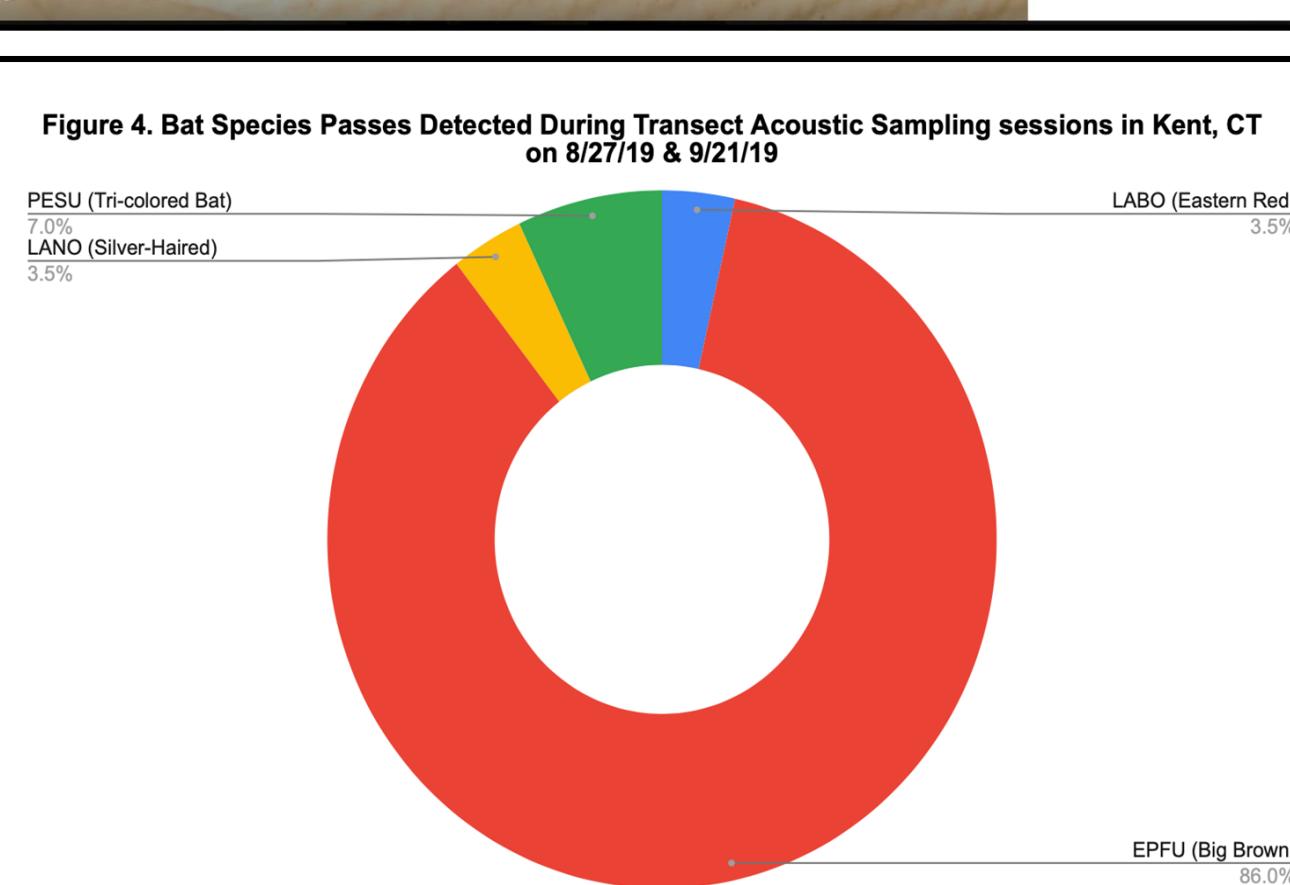
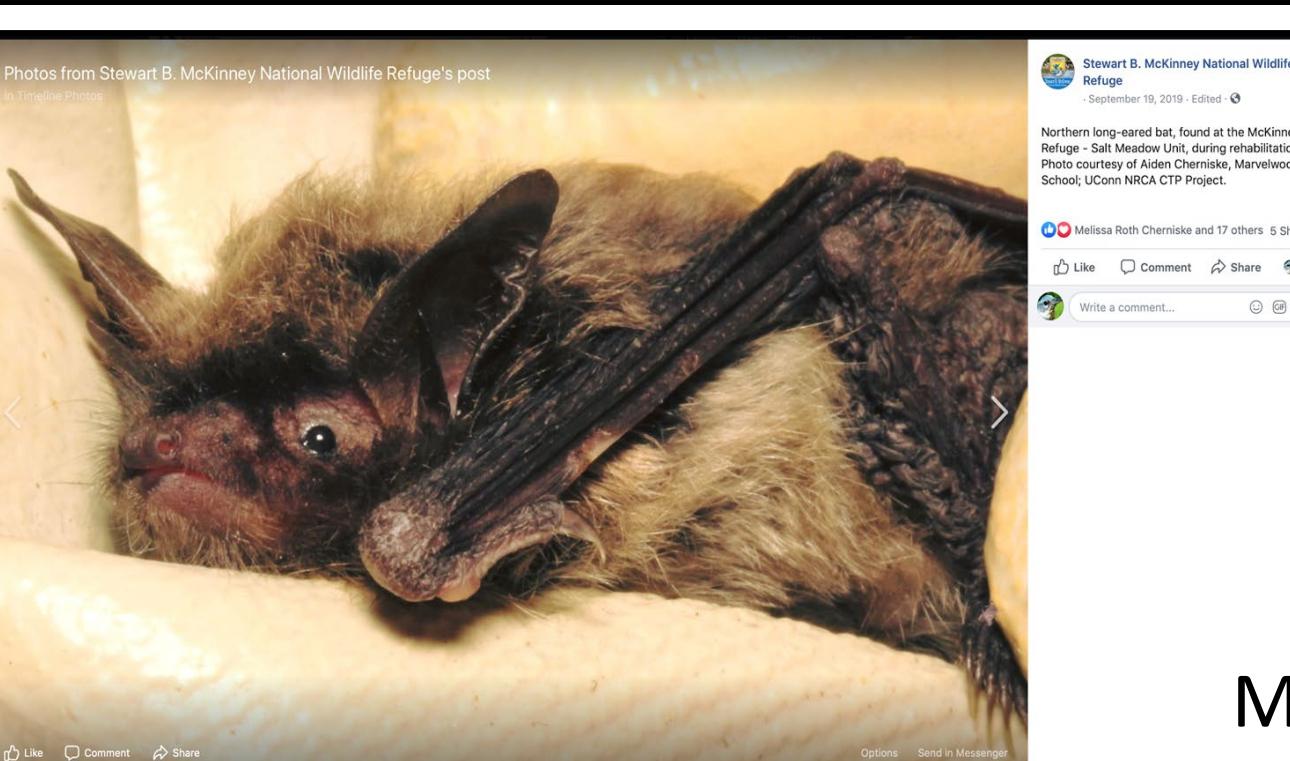
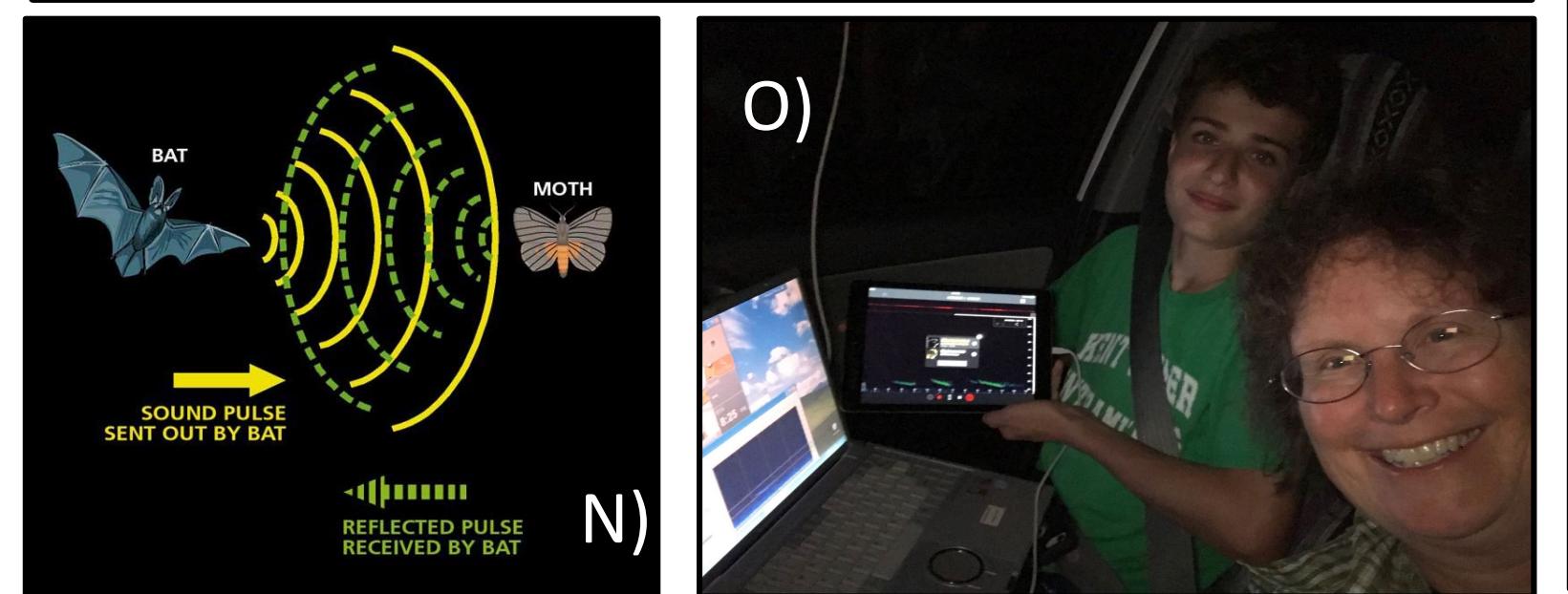
Figure 1: Schaghticoke Road Transect  
Figure 2: Map of Survey Sites Near KLT property  
Figure 3: Bat Species Passes Detected at Stationary Acoustic Sampling Sites.  
Figure 4: Bat Species Passes Detected at Transect Acoustic Sampling Sites.

**Methodology** - Six stationary sampling sites were established. These areas were sampled twice during the summer of 2019 (July and August). Acoustic surveys started 30 minutes after sunset and continued for a 15-minute period. The presence or absence of bat species at the site was recorded using EpiCollect 5. Two transect surveys were conducted within the town, one in late August and the other in mid-September. Again, the presence or absence of bat species was recorded. Acoustic surveys were accomplished using Wildlife Acoustic's Echo Meter® Touch 2 Pro Ultrasonic Module and a car roof mount. SonoBat® analysis software was used to verify our recordings. Our data was further vetted by Brian Hess of the CT DEEP.



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## Results

- While conducting just a few acoustic survey sessions in or near Kent during the summer of 2019, we were able to formally identify the presence of **five** out of the **nine bat species found in Connecticut**. This data was contributed to the state's NDDB.
- In our quest to learn more about bats, we were also able to photograph bats in rehabilitation and roosting in the wild (Tricolored Bat). We helped a local wildlife rehabilitator verify that one of the bats being rehabilitated was actually the state-and federally-endangered Northern Long-Eared Bat. This marked the documentation of our **sixth bat species found in Connecticut**.

## Implications

This project revealed how understudied Kent Land Trust properties and habitat adjacent to land trust properties are in Kent with respect to bats. Moving forward, Kent Land Trust and other land trusts should consider incorporating acoustic surveys and bat monitoring into their management plans to better understand their valuable role in local bat conservation. Programs promoting educational awareness about bats should also be considered. Please refer to our Story Map to learn more about bats.



## Photo References

- |   |   |
|---|---|
| A) Using a 360-degree camera to take habitat photos           | H) Habitat photos of Schaghticoke Road Transect   |
| B) Attaching bat monitor to the roof of car before our survey | I - K) Habitat photos of some of our survey sites   |
| C) Eastern Red Bat call (recorded by us)                      | L) Using SonoBat software   |
| D) Big Brown Bat call and photo (recorded by us)              | M) One of our pictures featured on Facebook about the Northern Long Eared Bat   |
| E) Tricolored Bat call and photo (recorded by us)             | N) Diagram of how bats echolocate ( <a href="https://news.softpedia.com/news/">https://news.softpedia.com/news/</a> ) |
| F) Hoary Bat Call (recorded by us)                            | O) Us in the car ready to survey  |
| G) Processing a call in Sonobat                               | P) Taking pictures of bats with a local rehabilitator Linda Bowen   |
|   | Q) Cross referencing calls between our two monitoring devices during a survey   |

