

## Purpose:

Are the species of bats in decline at the Cathance Preserve?

Does habitat influence the number of bat species?

## Hypothesis:

The number of species of bats has declined at the Cathance Preserve since 2012, the last time data was collected.

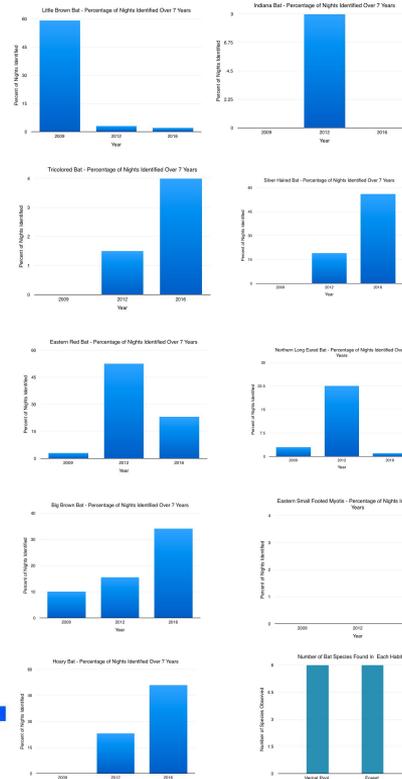
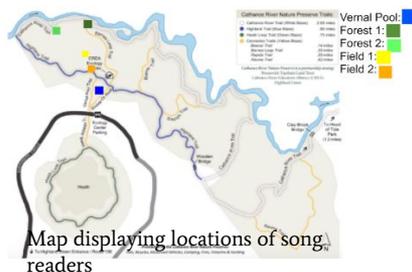
Habitat does influence the number of bat species.

# Listening to Bats at Cathance River Preserve

Katie Callahan and Rose Davis

## Procedure:

1. Set up song readers in Vernal Pool 1, Forest 1, and Field 1.
2. Determine the openness of each area, the distance from water, and take photos of each location.
3. Weekly, change the location of the Field 1 and Forest 1 song readers to Field 2 and Forest 2, respectively. (see map)
4. Repeat step 2 for Forest 2 and Field 2.
5. After 6-8 weeks, remove the song readers from the location and download data for analysis.



## Conclusion:

- The first hypothesis was incorrect, since some bat populations increased, and others decreased.
- The species that decreased in order from greatest to least: Little brown bat, northern long-eared bat, and the eastern red bat.
- The species that increased in order from greatest to least: Silver haired bat, hoary bat, big brown bat, and tri-colored bat.
- The Indiana bat was not found in 2009, 2012 or 2016.
- The second hypothesis was mostly incorrect, since 6 bat species were found at the forest and vernal pool habitats and 5 were found at the field habitat. Habitat did not have much influence on the number of bat species in this study.



Big brown bat



Eastern red bat



Katie (L) Rose (R)

Bats make up one quarter of the world's mammals with 1,100 species found worldwide. The two factors limiting bat populations today are loss of habitat due to deforestation and habitat fragmentation, as well as White-Nose Syndrome, a fungus that infects the nose, wings, and eyes of hibernating bats.

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