

Iowa Acoustic Bat Surveys

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Introduction

To better understand and assess the bat population of Iowa, a survey is needed. One approach to surveying bats is to use acoustic detection equipment.

Materials and Methods

The Iowa Acoustic Bat Surveys covered 10 counties with a total of 19 driving transects, as well as six walking transects conducted in central Iowa parks and farms. The surveys were designed to use Anabat SD2 acoustic monitors to detect and record bat activity. We were able to complete all transects at least two times over the course of our two-month data collection period.

Results and Discussion

Across the state, seven different bats species were recorded at least once (Figure 1). Bat activity levels for individual transects ranged from a minimum of 1.9 percent to a maximum

of 19.7 percent of 15s intervals containing bat activity with a statewide mean of 7.3 percent. Bat activity was consistently higher in eastern Iowa compared with central and southern Iowa.

Central Iowa Farms. Identifying the species that produced a bat call is difficult and most calls could not be narrowed down to a single species. For those calls that could be identified, big brown, hoary, and silver-haired bats were the most frequently identified species at the farms. This is consistent with the results of our driving transects indicating these are the most common species in central Iowa. Other bat species including the tri-colored, evening, and *Myotis* spp. bats were detected. These tend to be more common in eastern Iowa (Figure 1).

For the farms surveyed in central Iowa, the ISU Curtiss Farm had the highest amount of bat activity with 16 percent of 15s intervals containing bat activity, followed closely by the ISU Horticulture Station with 13 percent. The ISU Ag Engineering/Agronomy Farm had the least bat activity with only 3 percent of 15s intervals containing bat calls (Figure 2).

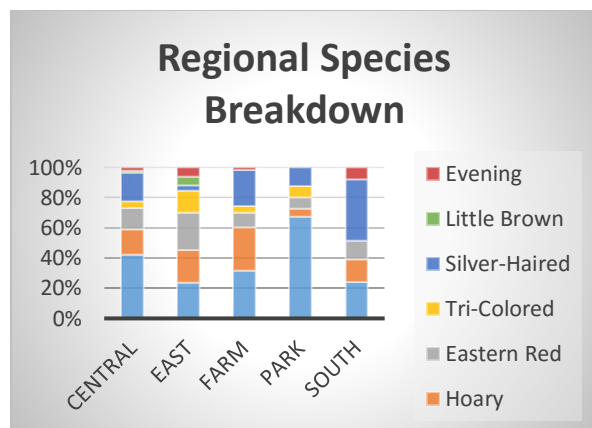


Figure 1. Regional breakdown of bat species by location.

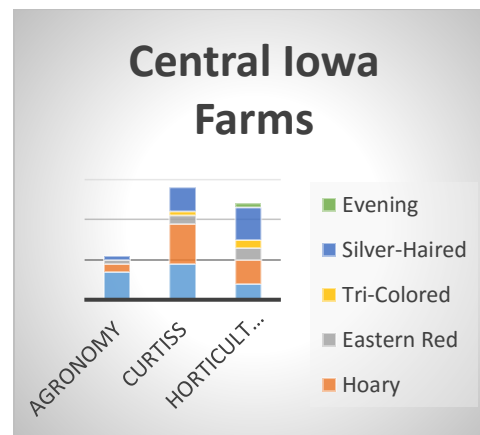


Figure 2. Breakdown of bat species detected in central Iowa by farm location.