

Bats are an integral part of many ecosystems and provide numerous valuable services such as pollination, seed dispersal and, in our region, insect control. Sampling the bat community to assess ecosystem health and document bat species of conservation interest is typically accomplished by capturing individuals in combination with collecting acoustic data. Acoustic sampling has the advantages of being effective in many varied habitat types, potentially less biased than capture data, and non-invasive to the bats. Many surveys are now entirely acoustic as the technology and ability to assign species identification to each has advanced substantially during the last few decades. In fact, regulatory agencies currently allow acoustic only surveys to assess the presence/probably absence of endangered bat species when automated acoustic identification software is used to assign calls. Unfortunately, identifying species based on calls is extremely challenging and often plagued by high inaccuracies. Our objective for this project was to assess the reliability of software programs that are approved for bat surveys by the U.S. Fish and Wildlife Service. To accomplish this objective, we used Anabat Swift detectors to record calls for 129 detector nights during July-August, 2018. We used two different automated acoustic identification software programs to assign species identity to all recorded files. Our preliminary analyses indicate substantial differences between results produced by these two software programs. We recommend caution when relying solely on acoustic data and automated software programs to determine presence/probably absence of bat species of conservation concern within a landscape.