



## Anomalously High Activity of Little Brown Bats (*Myotis lucifugus*) on Chambers Island, Door County, WI

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**Hypothesis:** *Myotis lucifugus* (MYLU) activity will be higher on Chambers Island than the other non-island Wisconsin stations due to an island effect.

### Introduction:

- Wisconsin's Little Brown Bat (MYLU) population has been decreasing
- Bat species richness can increase on isolated and densely vegetated islands
- Chambers Island is 10.04 km<sup>2</sup> and is located 10.8 km northwest of Fish Creek Harbor in Door County, WI
- Chambers Island habitat consists of wetland and dense forest

### Methods:

- Stationary high-frequency acoustic recording devices were used to remotely monitor the bat activity on Chambers Island.
- In 2019, a private landowner sponsored a bat detector which provided data for the summers of 2019 and 2020.

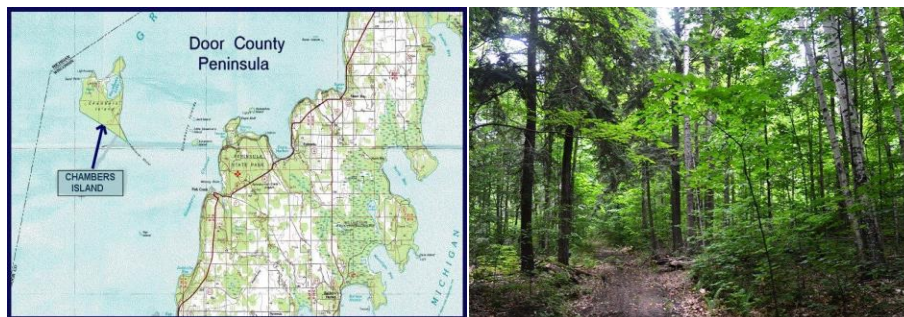
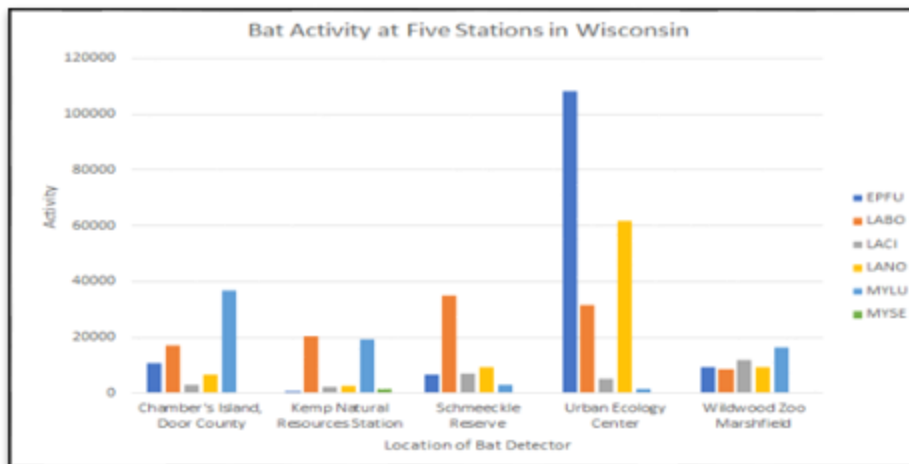


Image left: Map of Door County showing geographical location of Chambers Island

Image right: Photo taken at Chambers Island showing a trail through forest habitat



The above graph shows bat activity results at the five monitoring stations in Wisconsin for each of the Wisconsin bat species.

### Methods Continued:

- The Chambers Island acoustic data is compared to data collected from non-island acoustic recording devices located in Marshfield, WI and Kemp Natural Resource Station in Woodruff, WI.
- *Myotis lucifugus* activity is identified by Kaleidoscope Pro auto-identification software based on the bats' call frequency.

### Results:

- Graph: EPFU = *Eptesicus fuscus*, LABO = *Lasiurus borealis*, LACI = *Lasiurus cinereus*, LANO = *Lasionycteris noctivagans*, MYLU = *Myotis lucifugus*, MYSE = *Myotis septentrionalis*
- The comparison of the Chambers Island data to the other stations illustrated that there is higher *Myotis lucifugus* activity on Chambers Island than other locations.
- There is also higher activity of the federally endangered Northern Long-Eared Bat (MYSE) at Chambers Island.

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