

Road To Saving Bethlehem's Official City Bird

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Reason For Study/ Importance:

Chimney Swifts have been in a long-term, rangewide decline of about 2.5% per year between 1966 and 2015, resulting in a cumulative decline of 72%. Traditional brick chimneys are now deteriorating and modern chimneys tend to be unsuitable for nest sites. Chimney roosts can be used by groups of birds that can reach numbers in the hundreds or even thousands. Swifts can consume 5,000 – 6,000 insects per day, making them very effective for controlling insects. Although still relatively common, Chimney Swifts have been designated as Near Threatened since 2010.

Methods

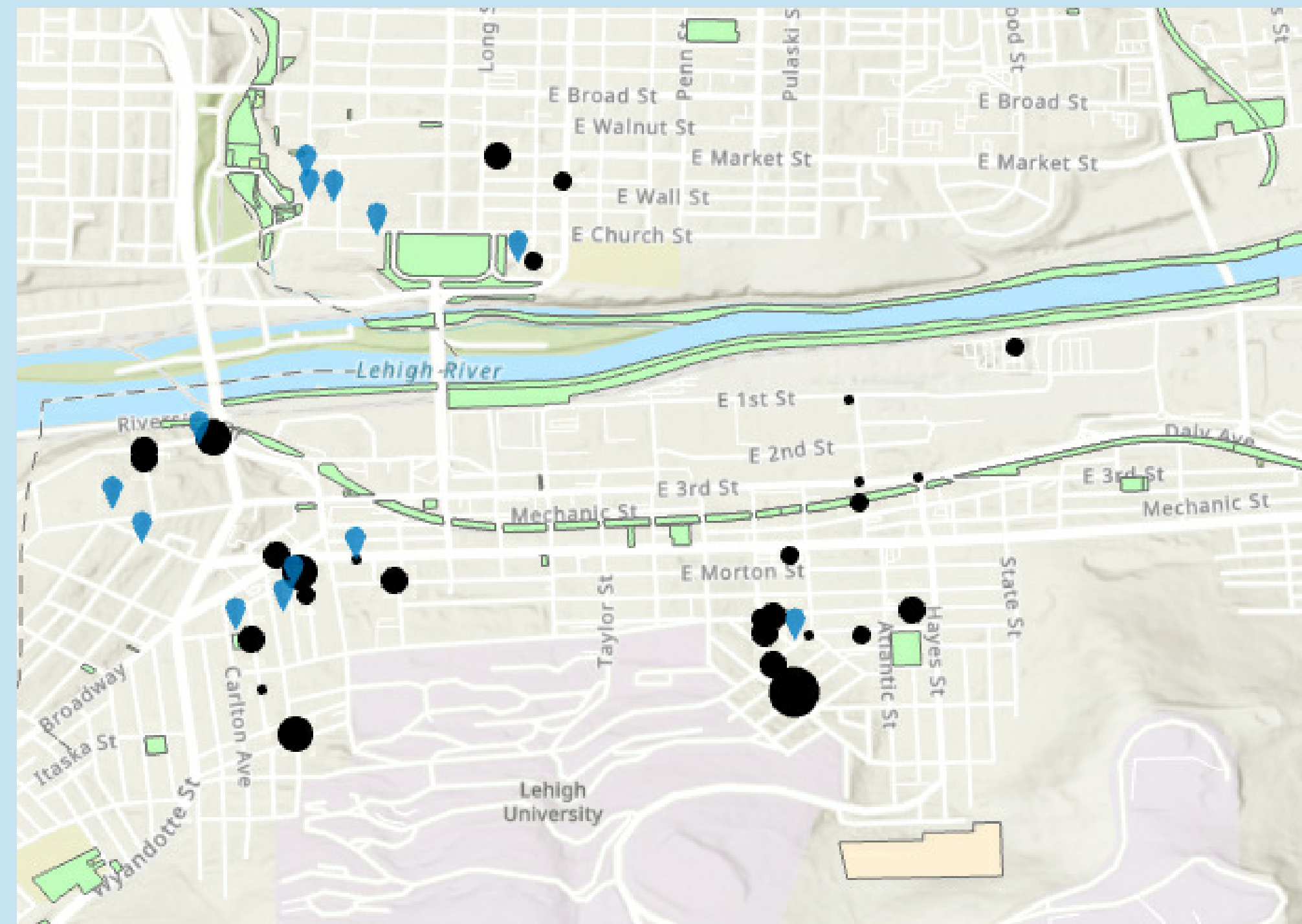
For the timespan of a month, data was collected on the number of Swift Chimney birds spotted around the South Bethlehem area as well as select parts of North Bethlehem. Data was collected at various locations, this included: date, time and duration of bird sighting, weather condition of day, amount of swift birds spotted, as well as coordinates and GPS locations of spotted nesting sights. This data, as well as other additional data provided from outside sources, was then transferred onto ARCGIS to create a visual representation of the locations of swift birds in Bethlehem.

Introduction

Just this year, Chimney Swifts were named the official Bethlehem city bird, making their conservation and eventual repopulation that much more important. Native to the Amazon basin in South America, these small and agile birds have found a home in Bethlehem. Despite federal laws like the Migratory Bird Act (1918) in place to protect them, the population of Chimney Swifts continues to decrease which inspired research this summer behind their habitats and any patterns that could be helpful to aiding conservation efforts.

Result:

From the data collected, a map was created to visualize the locations of confirmed nesting sites as well as very saturated locations with chimney swifts flocking constantly. With this map, we meet with different stakeholders who gave advice on which locations would be ideal to build new nesting towers.



Legend

Green: City of Bethlehem land and property

Pins: nesting sites

Black dots: areas with frequent swift activity



Conclusion/Further Work:

An important aspect of furthering our work would be the construction of more Chimney Towers. After several conversations with local ornithologists like Scott Burnet, several locations we've mapped that would be ideal for construction. In addition, the new tower can double as an educational space that creates awareness for Chimney Swifts in the community. Potential local ordinances were drafted for Bethlehem to pass in order to protect Chimney Swifts. These ordinances were modeled on efforts elsewhere that proved successful in protection populations in areas where the birds are similarly under threat. Another goal is to inform Bethlehem residents and raise support about the value in implementing an ordinance that keeps Chimney Swifts safe.

Citations/Credits:

- "Chimney Swift Range Map, All About Birds, Cornell Lab of Ornithology." , All About Birds, Cornell Lab of Ornithology, [www.allaboutbirds.org/guide/Chimney_Swift/maps-range#:~:text=Chimney Swifts migrate to South,Appalachians, and the Mississippi River. *](http://www.allaboutbirds.org/guide/Chimney_Swift/maps-range#:~:text=Chimney Swifts migrate to South,Appalachians, and the Mississippi River.)

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