



ALABAMA SWIFTWATCH

from ALABAMA AUDUBON

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Introduction

Alabama SwiftWatch is a statewide community-science project initiated by Alabama Audubon in 2019. SwiftWatch volunteers collect data on roosting and nesting chimney swifts (*Chaetura pelagica*) with the ultimate goal of creating the first long-term data set covering Alabama's swift population, the sites swifts use for nesting and roosting, and the persistence of those sites over time. Given that rapid urban redevelopment presents an ever-present threat to these birds' breeding success—in one community in Kansas, the swift population declined by 45% over twenty years due to a 42% loss of nesting chimneys (Cink)—data like ours may aid in understanding how swift populations change in response to habitat loss in dynamic urban environments. We may also be able to share our data with city officials, urban planners, and wildlife agencies in order to promote chimney preservation and the conservation of this important migratory species.

This project specifically seeks to document chimney use across the state of Alabama and to collect more general data on chimney swifts during their breeding season and fall migration. Our volunteers help us to meet these objectives by following standardized protocols for a) roost-site monitoring, b) roost-site presence/absence surveys, and c) nest-site monitoring.

Background

Chimney Swifts

Chimney swifts are aerial insectivores that spend all day on the wing; incapable of perching on branches, they instead use their specialized feet, wings, and tails to cling to vertical surfaces, like the insides of chimneys or hollow trees.

Prior to European settlement and the associated decline of old-growth eastern forests, chimney swifts nested and roosted in cavities inside large, hollow trees. But with urbanization and further natural habitat loss, the swifts adapted and began nesting and roosting in manmade structures such as wood- and coal-burning chimneys. Long-distance migrants that breed in eastern North America and winter in South America, swifts arrive in Alabama in mid-March and remain in the state through October (Imhof 1976). Just before and during fall migration, the birds congregate in large roosting flocks, with hundreds to thousands of birds occupying a single chimney each night.

The global chimney swift population has declined at a rate of ~2.5% per year over the past several decades (Sauer et al. 2017). While an increase in pesticide use and subsequent decline in insect

populations may have contributed to this decline (Nocera 2012), habitat loss in the form of fewer and fewer suitable chimneys is also a concern in some areas of the range.

SwiftWatch

The first national SwiftWatch program began in Canada in 2010 (birdscanada.org). Through that program, volunteers have identified 750 active chimneys in Ontario and the Maritime Provinces, over a hundred of which are regularly monitored. Many organizations throughout the United States have also started SwiftWatch programs, largely in the form of a “Swift Night Out,” a one-night roosting-swift count that takes place each year during fall migration. (Alabama Audubon has hosted Swift Night Out events for several years in the Birmingham metropolitan area and is expanding these events to other cities in Alabama.)

Roost-site Monitoring

Prior to and during migration, chimney swifts gather in large flocks to roost each night. These migratory groups, sometimes numbering in the thousands of birds, are often referred to as “swiftnados,” as the birds will often fly in dramatically swirling circles around the chimney just before diving inside for the night. Swifts need safe roost sites in which to rest each night during their migratory journey, but at least a handful of documented roosting chimneys are torn down in Alabama each year. *The goals of our roost-site monitoring program are to a) identify potential and actual roost chimneys, and b) collect data on the numbers of swifts using each site throughout fall migration.*

Required equipment: A timekeeping device (for instance, a watch or smartphone); pen/pencil and data sheet or smartphone for recording data.

Helpful equipment: Binoculars, clipboard, video camera

Each volunteer will be assigned one or two active roost chimneys each season, depending on availability. Ideally, two people will monitor a single site together, especially where large numbers of swifts are present. At very large roost-sites, more than two people may be needed to help count and/or record data.

Methods

Roost-site monitoring begins during the last week of July and ends in the final days of October. Ideally, sites will be visited a minimum of once a week. We will attempt to coordinate one night

per month during August-October when all volunteers will monitor their sites on that same night. This will likely coincide with the continent-wide Swift Night Out effort that occurs the second weekend of August and/or September. You will receive details about this effort in July each year. You should arrive at your site ~15-30 minutes before sunset and record data on temperature, wind, and cloud cover. Monitoring ends when all of the swifts are inside the chimney or are no longer visible. If there is a small number of birds (< 100) it's generally easier to count birds as they enter chimney, rather than trying to count them as they fly around in the "swiftnado." At chimneys where there are smaller numbers of swifts, every attempt should be made to count all individuals. At sites with large numbers of swifts, group sizes will probably need to be estimated. One great method is to get a mental image of what a group of 50-100 individuals looks like and then count by that increment. This method can be used while the swifts are flying in the "swiftnado" or as they are entering the chimney. Ultimately it comes down to whatever you find easiest. If two people are counting at one site, each should count separately before averaging the two counts and recording the average on the Roost-site Monitoring Data Sheet. Lastly, you can take photos or videos of the swifts entering the chimney and count individuals that way.

Temperature, wind speed, wind direction, and cloud cover should also be recorded during each visit. The first three of these can be determined by consulting a weather app on your phone. Cloud cover and precipitation can be estimated, then recorded using one of the codes at the bottom of the data sheet.

Please enter your data online at <https://tinyurl.com/swifts2020>. You may also submit a photo or a scanned image of your data sheet to Lianne Koczur, Alabama Audubon's Science & Conservation Director, at lianne@alaudubon.org.



Photo of chimney swifts coming to roost at a large chimney in Birmingham.



The same photo with color-coded groups of 100 chimney swifts. Getting a mental image of what a group of 100 swifts looks like can help you estimate how many are at your site. Photos courtesy of Greg Harber.

Roost-site Presence/Absence Surveys

Although Alabama Audubon volunteers and staff have identified several large roosts in Birmingham over the last decade, many more remain undocumented, both within that city and across the state. *The goals of our presence/absence surveys are to a) identify active roost chimneys, and b) document chimneys that appear to be suitable for roosting but may not currently be used by swifts.*

Required equipment: A timekeeping device (for instance, a watch or smartphone); pen/pencil and data sheet or smartphone for recording data.

Helpful equipment: Binoculars, clipboard

Methods

The first step in a presence/absence survey is to find a chimney that could be suitable as a roost site. These tend to be relatively tall, uncapped brick chimneys, although we've also seen swifts use metal pipe chimneys, low unused barbecue chimneys, and even a wishing well. Generally speaking, the more built-up, industrial areas of a city are good places to start. Older buildings such as schools (especially those with old and unused incinerators) and churches tend to be the most promising. In addition to walking or driving through a city looking for suitable candidate chimneys, Internet-savvy volunteers can use satellite imagery on Google Maps or Google Earth to do a primary scan of a neighborhood.

Once you have identified chimneys to survey, you can visit the site at dusk to document any swift activity. Use the *Presence/Absence Survey Data Sheet* at the end of this manual, and under *building type*, provide a general description (e.g., school, church, factory).

Please enter your data online at <https://tinyurl.com/swifts2020>. You may also submit a photo or a scanned image of your data sheet to Lianne Koczur, Alabama Audubon's Science & Conservation Director, at lianne@alaudubon.org.

Nest-site Monitoring

Large roost chimneys are relatively easy to identify and monitor; nesting chimneys, on the other hand, can be more challenging. Not only do the latter tend to be smaller, but the fact that only a single pair of breeding swifts will occupy a single chimney means that we can't rely on "swiftnados" to find them.

The loss of nesting habitat due to chimney capping has been a major concern in some portions of the breeding range. *The goals of nest-site monitoring are to a) locate the chimneys that swifts are actively nesting in, and b) attempt to determine the fate of the individual nests.*

Required equipment: A timekeeping device (for instance, a watch or smartphone); pen/pencil and data sheet or smartphone for recording data.

Helpful equipment: Binoculars, clipboard

Methods

Similar to the presence/absence surveys for roost-sites, the first step in nest-site monitoring is to find a chimney that looks like it has the potential to host nesting swifts. If a suitable-looking chimney is found, you should visit it a minimum of three times during the breeding season (March–June), and then watch it for a minimum of fifteen minutes to see if adult swifts enter. You can keep track of your initial survey data on the *Nest-site Presence/Absence Data Sheet* at the end of this manual.

Once a nesting pair is found, the nest-site should be monitored at least once every two weeks. When monitoring a known nest, watch the chimney for a minimum of thirty minutes and record the time(s) that an adult enters and/or leaves the chimney. If binoculars or a camera are being used, you may also be able to determine if the bird was carrying twigs (nest-building) or insects in its bill when entering. Record any such observations in the *notes* column of the data sheet.

Please enter your data online at <https://tinyurl.com/swifts2020>. You may also submit a photo or a scanned image of your data sheet to Lianne Koczur, Alabama Audubon's Science & Conservation Director, at lianne@alaudubon.org.

Other Observations

If you have other notable observations of chimney swifts—sightings of large groups, say, or nesting or roosting chimneys that you happen to observe outside standard data-collection times—please record them for us! While there may not be a standard data sheet for these types of observations, the following are some suggestions for how and what to record: date, time, location (address or coordinates), number of swifts, activity/behavior (flying, for instance, or a single bird flying into chimney, a roosting flock).

Please enter your data online at <https://tinyurl.com/swifts2020>. You may also email all such observations to lianne@alaudubon.org.

Safety

Safety is our number-one priority. If, for any reason, you do not feel safe at a particular monitoring site, **do not** go to or stay at that site. Having two people for data collection at evening roosts is always a best practice. Always have your cell phone on you in case an emergency situation arises, and be sure to tell someone where you're planning to survey. If heavy rain or storms are forecast for the evening you plan to monitor, do not go out—simply wait until another evening when you are available and the weather is better.

Helpful Resources

Chimney Swift Identification and General Information:

- www.allaboutbirds.org/guide/Chimney_Swift/id
- www.audubon.org/field-guide/bird/chimney-swift
- birdsna.org/Species-Account/bna/species/chiswi/introduction

Information on Nesting Chimney Swifts:

- www.birdscanada.org/volunteer/ai/resources/How_to_Be_a_Good_Swift_Landlord.pdf
- alaudubon.org/swifts/

Books:

- [Amzn.com/1585443727](https://www.amazon.com/dp/B000000000)

- Amzn.com/1585443719

Acknowledgements

Thanks to Greg Harber for reviewing this manual and providing photos. Methods are adapted from Rioux et al. (2010).

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