

Species Status Assessment

Common Name: Chimney Swift **Date Updated:** 2024-12-20
Scientific Name: *Chaetura pelagica* **Updated By:** tgh
Class: Aves
Family: Apodidae

Species Synopsis

(a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):

The Chimney Swift, *Chaetura pelagica*, is a migratory insectivore that breeds across southern Canada, east of Saskatchewan, and across the United States, east of Texas (Steeves et al. 2020). Chimney swifts nest in hollow trees, and it is believed that the expansion of European settlers led to an increase in its population and range, as human-made structures provided more habitat for the species (Steeves et al. 2020).

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**
ii. New York: Unlisted: protected native

b. Natural Heritage Program

i. Global: G4G5
ii. New York: S5B **Tracked by NYNHP?**

Other Ranks:

New York 2025 SGCN status: Species of Greatest Conservation Need
COSEWIC: Threatened
IUCN Red List: Vulnerable
Northeast Regional SGCN: Watchlist [Assessment Priority]

Status Discussion:

Chimney swifts are widespread in New York during the breeding season, and are ranked as secure (S5B) by the New York Natural Heritage Program (NYNHP).

In Canada, chimney swift is listed as a threatened species due to the reduction in aerial insects, as well as reduced chimney-like structures for nesting. This status was re-confirmed in 2018 (NatureServe 2025).

II. Abundance and Distribution Trends

Region	Present ?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Declining	Unknown	BBS 1966-2022 trend for US		
Northeastern US	Yes	Declining	Unknown	BBS 1966-2022 trend		Watchlist [Assessment Priority]
New York	Yes	Declining	Unknown	BBS 1966-2022 trend		
Connecticut	Yes	Declining	Unknown	BBS 1966-2022 trend	S4B	
Massachusetts	Yes	Declining	Unknown	BBS 1966-2022 trend	S5	
New Jersey	Yes	Declining	Unknown	BBS 1966-2022 trend	S3B,S4N	
Pennsylvania	Yes	Declining	Unknown	BBS 1966-2022 trend	S3B,S5M	
Vermont	Yes	Declining	Unknown	BBS 1966-2022 trend	S4B	

Region	Present ?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
Ontario	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S3B	
Quebec	Yes	Declining	Unknown	BBS 1966-2022 trend	S2B	

Column options

Present?: Yes; No; Unknown; No data; (blank) or Choose an Item

Abundance and Distribution: Declining; Increasing; Stable; Unknown; Extirpated; N/A; (blank) or Choose an item

SGCN?: Yes; No; Unknown; (blank) or Choose an item

Monitoring in New York

(specify any monitoring activities or regular surveys that are conducted in New York):

Trends Discussion

(insert map of North American/regional distribution and status):

While specific population data is hard to determine for the species, Breeding Bird Survey data has shown a decline in population over recent generations. Additionally, the New York Breeding Bird Atlas (BBA) documented less occupancy between the first and second atlas period. The third BBA is underway but utilizes a different block system that makes comparison difficult.

Breeding range map for Chimney Swift

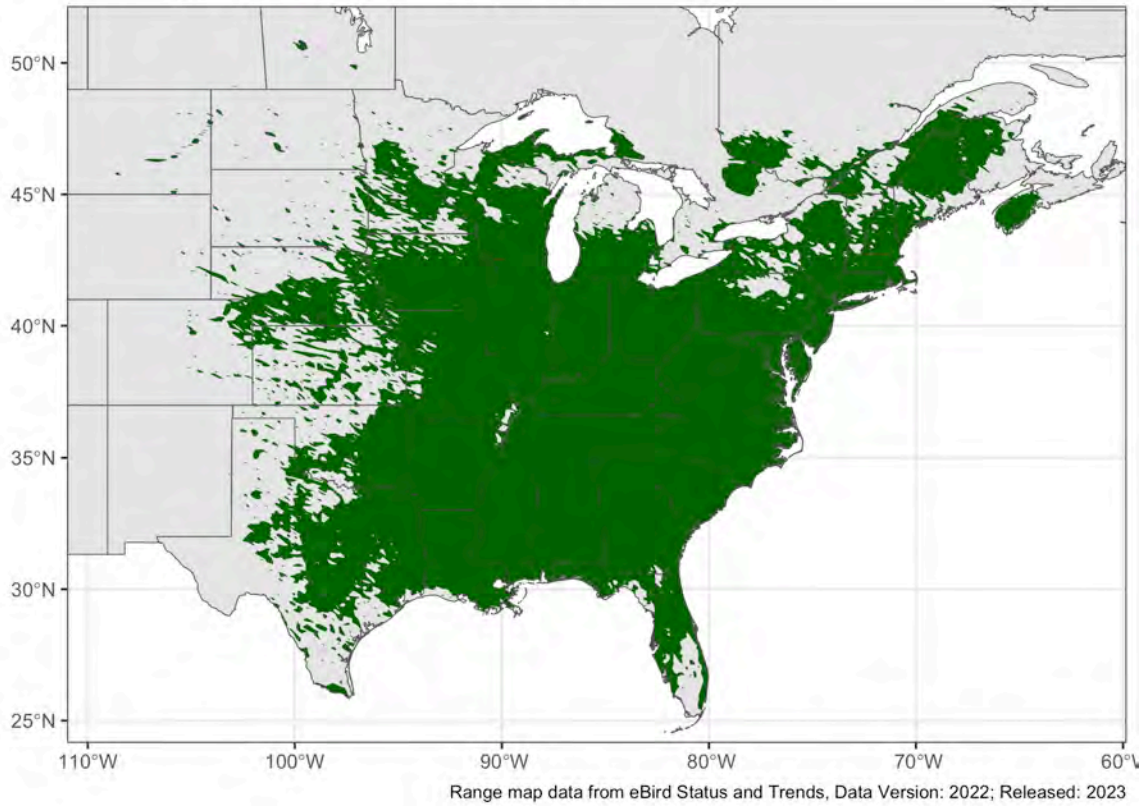


Figure 1. Breeding range for chimney swift (eBird).

Year-round range map for Chimney Swift

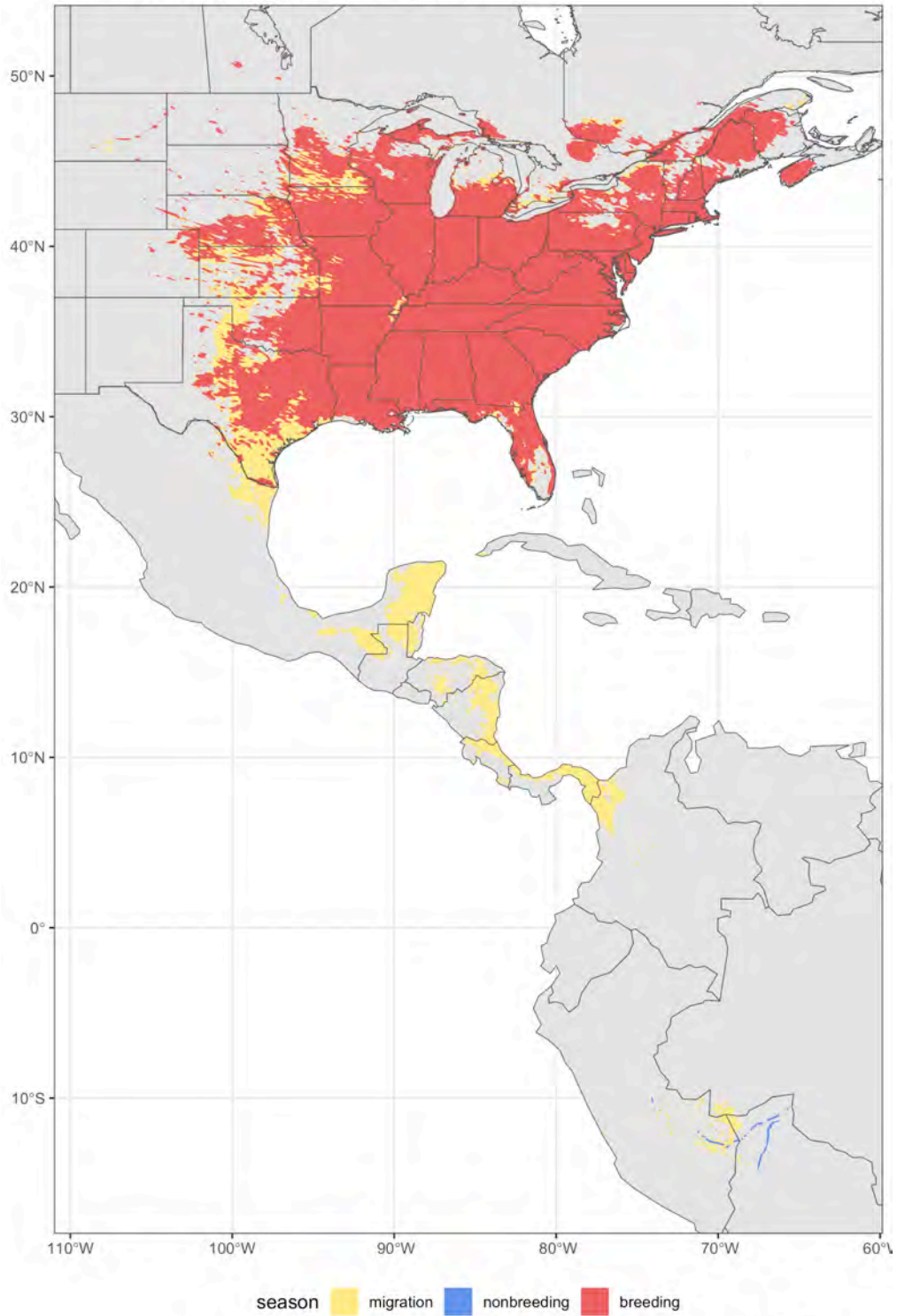


Figure 2. Full (year-round) range for chimney swift (eBird).

III. New York Rarity

(provide map, numbers, and percent of state occupied)

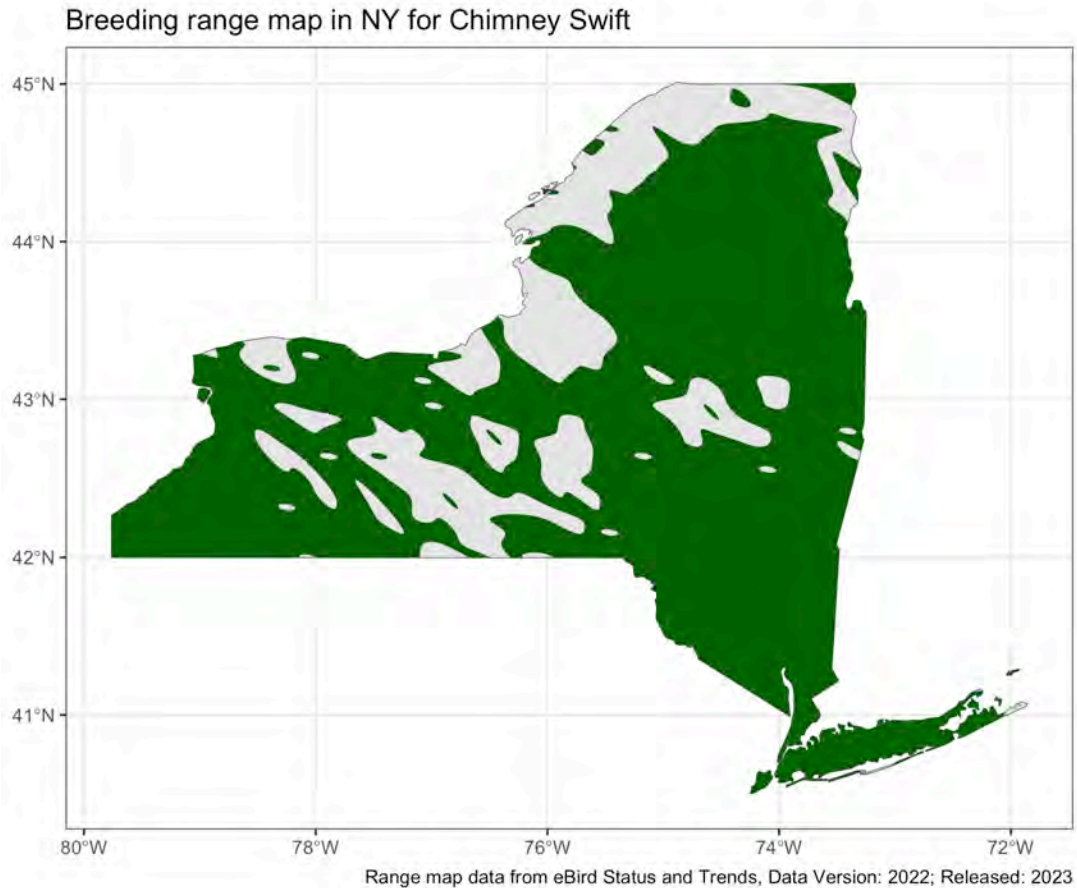


Figure 4. NYS breeding range for chimney swift (eBird).

Details of historic and current occurrence:

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 3124 blocks, 58.6% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 2652 blocks, 49.7% of the survey blocks statewide (McGowan and Corwin 2008).

The third BBA (2020-25) is currently underway and utilizes a different number and layout of survey blocks across New York, making direct comparison with the first two Atlases difficult. There were 5,333 blocks in the first and second BBAs, and there are 5,710 blocks in the current BBA, of which 1,815 are considered priority blocks. To date, chimney swift has been documented in 1431 priority blocks, 40.1% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2024).

New York's Contribution to Species North American Range:

Based on eBird data, 1.75 percent of the population breeds in New York, while 0 percent of the non-breeding population occurs in New York. Among all states with breeding populations, New York ranks 20 of 41.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%		

Column options

Percent of North American Range in NY: 100% (endemic); 76-99%; 51-75%; 26-50% 1-25%; 0%; Choose an item

Classification of NY Range: Core; Peripheral; Disjunct; (blank) or Choose an item

IV. Primary Habitat or Community Type

(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):

NatureServe broad habitat types: Aerial, Suburban/orchard, Urban/edificarian, Aerial, Aerial, Aerial

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/ Increase
Unknown	Unknown	Unknown	Unknown

Column options

Habitat Specialist and Indicator Species: Yes; No; Unknown; (blank) or Choose an item.

Habitat/Community Trend: Declining; Stable; Increasing; Unknown; (blank) or Choose an item.

Habitat Discussion:

Usually associated with cities & towns.

Cosmopolitan; inhabits rural and urban environments having both an abundance of flying arthropods and suitable roosting/nesting sites. Nests principally in chimneys, but also on the interior walls of a variety of other anthropogenic structures including silos, barns, outhouses, uninhabited houses, boathouses, wells, and cisterns (Bent 1940). Natural nest sites include the interior of hollow tree trunks and branches, Pileated Woodpecker cavities and rock shelters (Bent 1940, Fisher 1958, Hofslund 1958). Trees in which nests have been found include American Beech (*FAGUS GRANDIFOLIA*), Yellow Birch (*BETULA LUTEA*), Silver Maple (*ACER SACCHARINUM*), Sycamore (*PLATANUS OCCIDENTALIS*), Bald Cypress (*TAXODIUM DISTICHUM*), and Water Tupelo (*NYSSA AQUATICA*; Blodgett and Zammuto 1979, Fischer 1958, Hofslund 1958, Mumford and Keller 1984, Stevenson and Anderson 1994). Due to the prevalence of nesting structures in areas populated by humans, often occurs at higher densities in anthropogenic environments than natural ones (i.e., forests; Beissinger and Osborne 1982). Migrating flocks roost overnight principally in chimneys, but also in hollow trees or, rarely, even exposed on tree trunks (Bent 1940, Spindelov 1985).

IUCN habitat description: This migratory species is extremely gregarious, and typically nests in chimneys, though other structures such as hollow tree trunks can be used (del Hoyo et al. 1999,

COSEWIC 2007, Zanchetta et al. 2014). Eggs have been recorded from May to July, though the precise timing varies slightly throughout its range. A clutch of two to seven eggs is laid, and extra-parental co-operation is well established. It is present in North America until September (del Hoyo et al. 1999). When breeding, this species is readily associated with urban environments, although it will forage over a range of habitat types. Main habitats include river-edge forest, the edge of tropical lowland evergreen forest and second-growth scrub. It can also be found along the coast in Peru, up to 3,000 m over irrigated farmland in western Andean valleys, and even in central city zones (del Hoyo et al. 1999). Spiders, along with Hymenoptera spp., Diptera spp. and other insects have been recorded in its diet (del Hoyo et al. 1999).

V. Species Demographics and Life History

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/Catadromous?
Yes	Yes	No	Yes	Yes	No

Column options

First 5 fields: Yes; No; Unknown; (blank) or Choose an item.

Anadromous/Catadromous: Anadromous; Catadromous; (blank) or Choose an item.

Species Demographics and Life History Discussion

(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):

MATE/SITE FIDELITY: Exhibits mate and site fidelity, and normally mates for life (Dexter 1951b, Dexter 1992). In Ohio, 84.5% of nesting swifts under observation retained the same mate when both returned for nesting, and 96% of the pairs that returned and nested together occupied the same air shaft used in the previous year (Dexter 1992). In New York, two pairs mated for three successive summers and five pairs mated for two successive summers (Fischer 1958). Sixty-two percent of banded adults returned to the New York study area and of these 70.5% returned to their previous nest site (Fischer 1958). In Kingston, Ontario, 9.7% of banded bird returned to the study area (Bowman 1952). One bird, banded at Rome, Georgia was subsequently captured at Kent, Ohio, then captured again at Rome (Dexter 1979). In New York, 11% of birds banded as nestlings returned to the study area, and 70% of these returned to their natal site to breed (Fischer 1958). **WEATHER:** The time interval between visits to feed young increases at temperatures above or below 21-24 C, and on windy or rainy days (Zammuto et al. 1981). Most individuals leave the roost during light levels of 0-0.65 lux, and return to roost at light levels of 0-0.19 lux (Zammuto and Franks 1981). On cold, rainy mornings, emergence from the roost is either delayed or birds soon return after leaving. On windy days, birds leave the roost earlier and return later than on calm days (Zammuto and Franks 1981). Relatively cold or warm temperatures, wind, and rain all reduce flying insect abundance and apparently decrease swift foraging efficiency (Zammuto and Franks 1981, Zammuto et al. 1981). **POPULATION PARAMETERS:** At Kingston, 177 banded swifts were still alive six years after banding (Bowman 1952). Annual mortality is estimated to be 50% (Fischer 1958). Lives to be 14 years old (Terres 1991).

VI. Threats

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	Choose an item. (chimney capping, shift from chimney structures removing nesting habitat)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
5. Biological Resource Use	5.3 Logging & Wood Harvesting	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.3 Agricultural & Forestry Effluents	9.3.3 Herbicides & pesticides	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 1. Threats to chimney swift.

It is believed that the capping of chimneys, shift from traditional chimney structures, or demolition of buildings has negative impacts on chimney swift populations by removing important nesting structures. The severity of this change is not well known (BirdLife International 2018, Steeves et al (2020).

Like many aerial insectivores, increased use of pesticides in agriculture, and historical use of DDT, has caused a decline in available insect prey (Steeves et al., 2020).

Are there regulatory mechanisms that protect the species or its habitat in New York?

Yes:  **No:** **Unknown:**

If yes, describe mechanism and whether adequate to protect species/habitat:

This species is included in the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) and is protected as a native species under the NYS Environmental Conservation Law.

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

Action Category	Action	Description
A.1 Direct Habitat Management	A.2.1.1.2 Nest boxes, roosts, and other artificial maternities	
B.3 Outreach	B.3.1.4 Public outreach and information	Educate homeowners on chimney swifts
C.8 Research and Monitoring		

Table 2. Recommended conservation actions for *chimney swift*.

To counter the reduction in available chimneys for chimney swifts, artificial chimney-like nesting structures could provide similar habitat for the species. Additionally, educating homeowners about chimney swifts’ presence in their chimneys, as well as their lack of threat to the homeowners, could help prevent capping chimneys or disturbances to chimney swifts (Steeves et al., 2020).

VII. References

This SSA drew heavily from these resources:

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