Species Status Assessment

Common Name: Rusty blackbird **Date Updated:** January 11, 2024

Scientific Name: *Euphagus carolinus* **Updated By:** Jed Hayden

Class: Aves

Family: Icteridae

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

Greenberg and Droege's (1999) publication detailing the severe decline of rusty blackbirds marked the beginning of a period of heightened attention to the species. In 2005 the International Rusty Blackbird Technical Working Group was organized to focus research on this poorly known species and to address its mysterious decline.

Over the past 40 years, rusty blackbird populations have shown rangewide cumulative declines of 85% to 95% as illustrated by Breeding Bird Survey and Christmas Bird Count data (Greenberg et al. 2011). The second Breeding Bird Atlas in New York documented a 23% decline in occupancy across the state from 1980-85 to 2000-05. Acute declines continue.

Rusty blackbird reaches the southern limit of its boreal distribution in New York, occurring in the Adirondack region as an isolated population; the nearest breeding population is 130 miles to the east in northern Vermont. Breeding occurs in a variety of wetland habitats that are associated with coniferous and mixed forest, such as bogs and beaver ponds. Two subspecies of rusty blackbird are recognized: *E. carolinus* breeds in New York while *E. nigrans* breeds in the eastern Canadian provinces (Crowell 1998). New York is at the northern edge of the wintering range. Hobson et al. (2010) found isotopic evidence for use of two distinctive flyways: birds that breed in Alaska and central Canada winter in the Mississippi Alluvial Valley while birds that breed in eastern Canada winter in the Atlantic Coastal Plain. A potentially smaller, geographically isolated Atlantic Flyway population was also identified by Hobson et al. (2010), and appears to be susceptible to the local extirpations observed in New England, the Maritime Provinces, and the southern boreal zone (including NY) (Greenberg and Matsuoka 2010).

I. Status

a. Current legal protected Status

i. **Federal:** None **Candidate:** No

ii. **New York:** Special Concern

b. Natural Heritage Program

i. **Global:** G4

ii. **New York:** S2B **Tracked by NYNHP?:** Yes

Other Ranks:

-New York 2025 SGCN status: High Priority Species of Greatest Conservation Need
-Northeast Regional SGCN
-Partners in Flight: Watch List
-USFWS: Bird of Conservation Concern
-Audubon Watch List: Yellow
-COSEWIC: Special Concern

-IUCN: Red List of Threatened Species

Status Discussion:

Rusty blackbird is an uncommon breeder in New York, occurring only in the Adirondack Mountains. In western New York, it is a very common and locally very abundant migrant. During winter, rusty blackbirds are rare but local, especially near the coast. Rusty blackbirds are ranked as Imperiled in New York and Critically Imperiled in Massachusetts. Populations are considered Vulnerable in Vermont.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Declining	Declining	1966-2023	None	No
Northeastern US	Yes	Declining	Declining	2000-2010	None	Yes
New York	Yes	Declining	Declining	2000-2023	Special Concern	Yes
Connecticut	No	-	-			No
Massachusetts	No	-	-		None	Yes
New Jersey	No	-	-			No
Pennsylvania	No	-	-		None	No
Vermont	Yes	Declining	Declining		Special Concern	Yes
Ontario	Yes	Declining	Declining	2004-14	Special Concern	No
Quebec	Yes	Declining	Declining	1984-2012	None	No

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):*

The Wildlife Conservation Society has conducted surveys for boreal breeding birds at approximately 60 locations in the Adirondack Park since 2003 (Glennon 2010). Rusty blackbird is one of 12 target species.

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

Breeding Bird Survey data show a survey-wide population decline of 12.5% per year from 1966 to 2005. This trend corresponds to a 95% loss of the population since 1966 and represents one of the largest population declines documented by the BBS (Greenberg et al. 2011). An analysis of early ornithological literature by Greenberg and Droege (1999) suggests that rusty blackbird was declining well before the advent of the Breeding Bird Survey in 1966. In addition to long-term declines, more recent range retractions have been documented in central and western Canada (see Greenberg and Matsuoka 2010) and Maine (Powell 2008).

Population trends in Quebec show an important annual fluctuation in the number of rusty blackbirds recorded, which suggests that this species could be cyclic (Savard et al. 2011) but a severe long-term decline has also been documented by both the Breeding Bird Survey and Christmas Bird Counts.

Christmas Bird Count data for North America from 1966 to 2005 show a decline of 4.5% per year, a rate that would result in a population decline of 85% over that period (Greenberg et al. 2011). COSEWIC (2006) notes that despite the limitations of the CBC data (counts may be underestimated because rusty blackbirds mix with groups of similar species), it is the best indication of population trends for rusty blackbird because most of the wintering area is surveyed.

In New York Crowell (1998) noted rusty blackbird as an uncommon breeder that was however "evidently increasing." The second Breeding Bird Atlas documented a 23% decline in occupancy from 1980-85 to 2000-05. Breeding Bird Survey data for New York show a nonsignificant decline of 1.5% per year from 1966 to 2010 and a nonsignificant decline of 1.4% per year from 2000 to 2010. The nearest breeding population—in northern Vermont—declined by 23% from 1976-81 to 2003-07.

Glennon (2023) reported precipitous declines in Rusty blackbirds in the Adirondack Park from 2007-2022, with the species occurring at only 18% of surveyed sites.

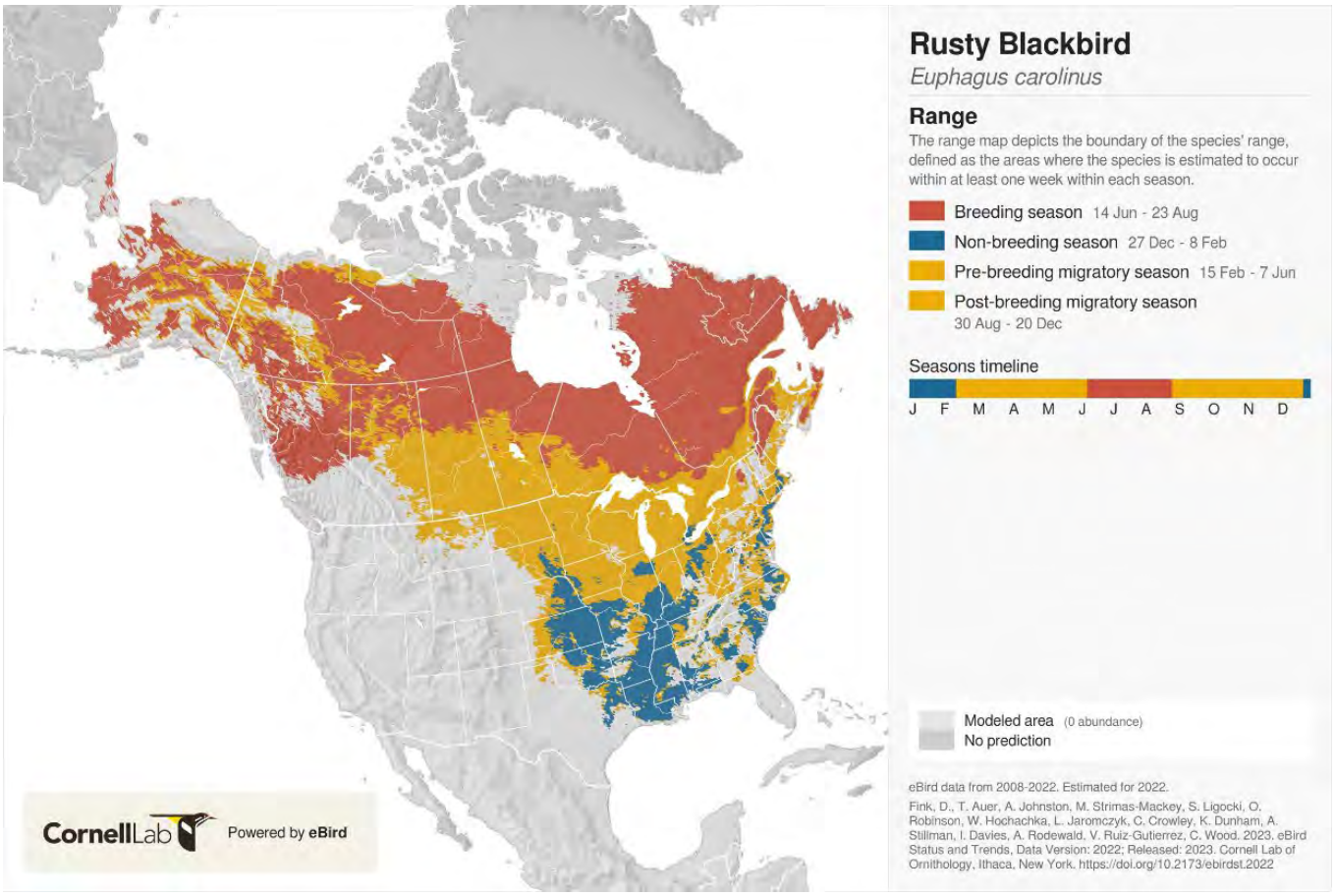

Figure 1. Rusty blackbird distribution in North America (eBird)

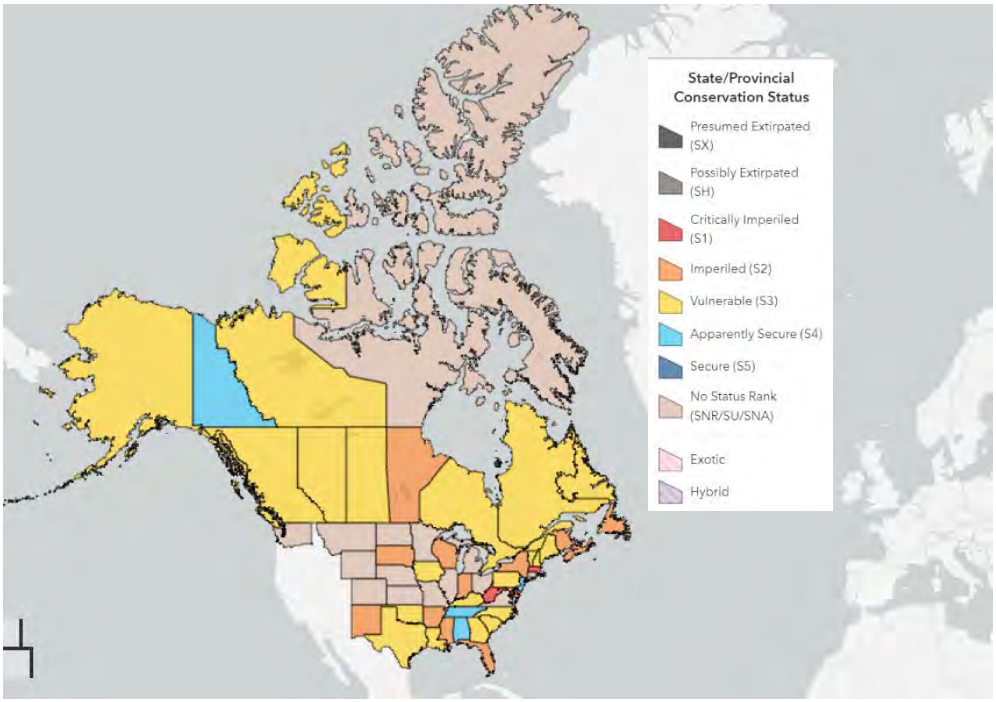

Figure 2. Conservation status of the rusty blackbird in North America (NatureServe 2023).

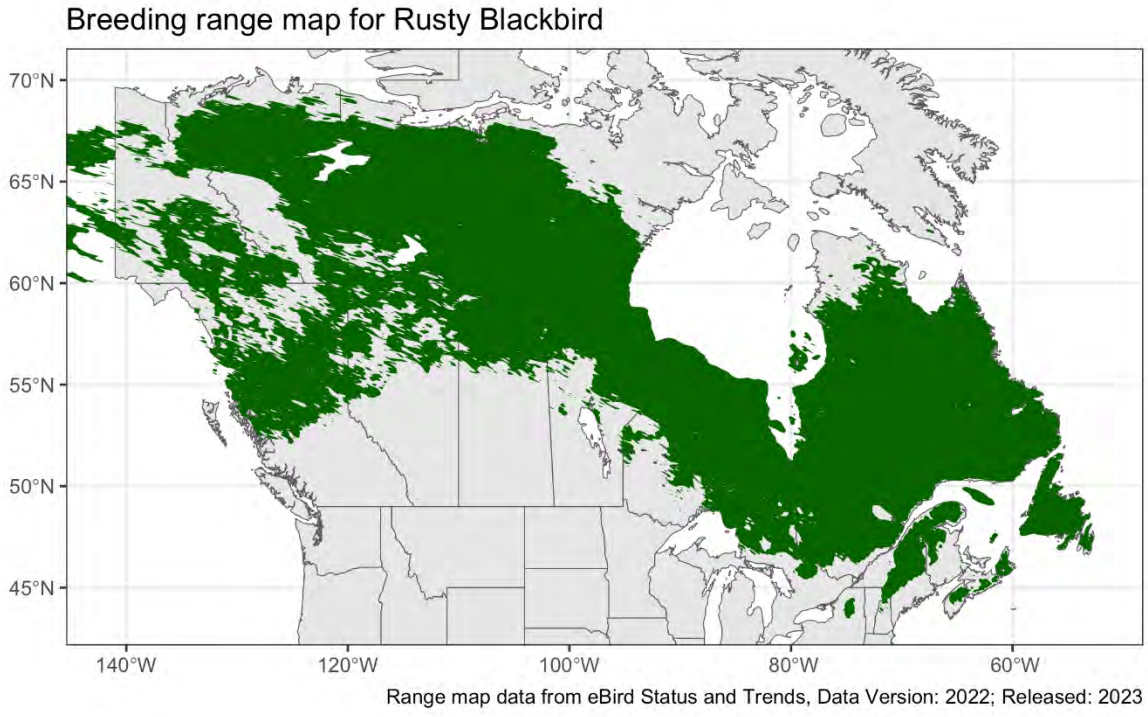

Figure 3. Breeding range of rusty blackbird in North America (eBird)

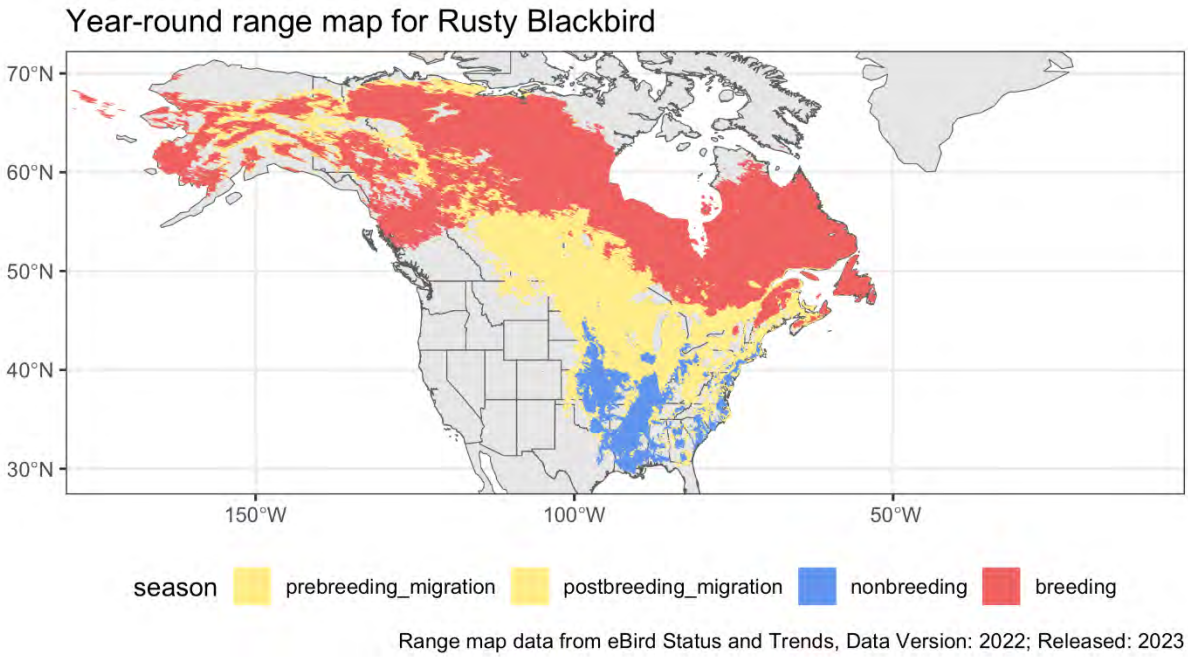

Figure 4. Year-round range of rusty blackbird (eBird).

III. New York Rarity *(provide map, numbers, and percent of state occupied)*

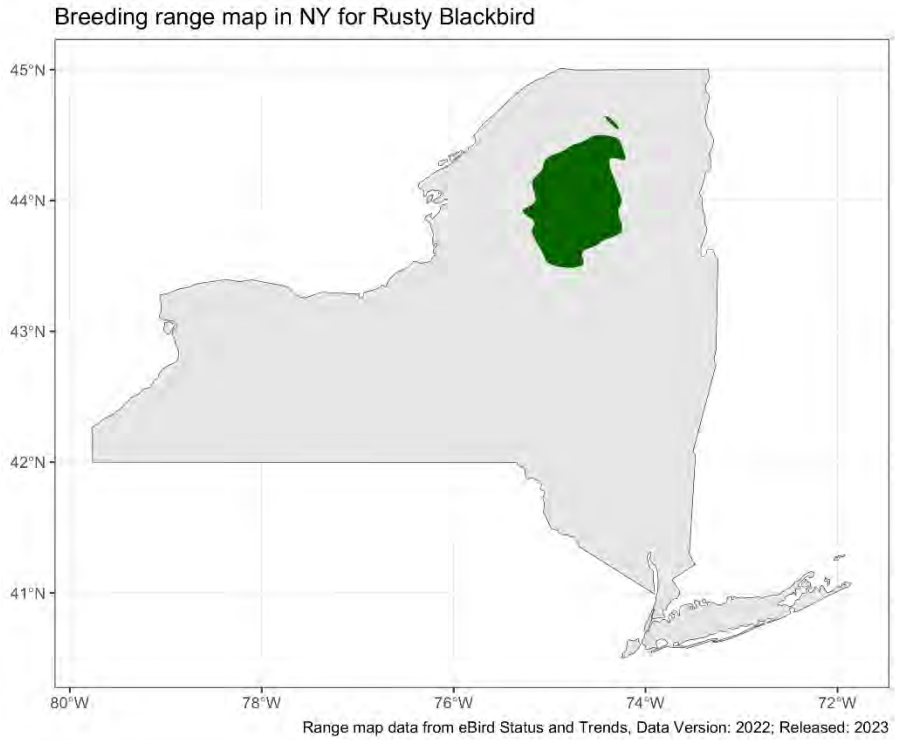

Figure 5. New York breeding range of rusty blackbird (eBird).

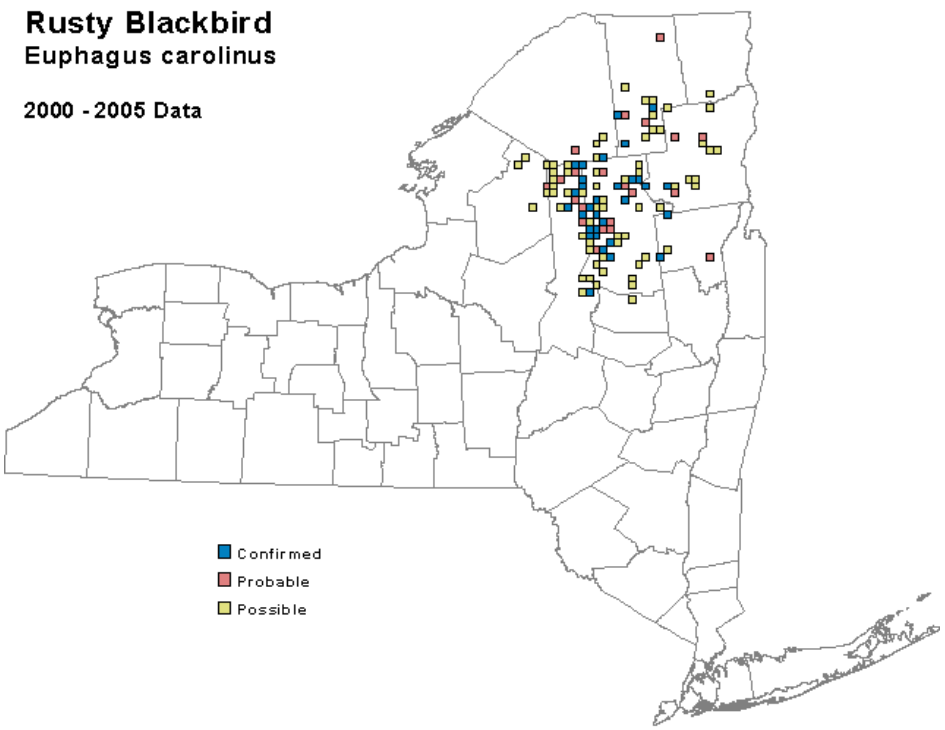

Figure 6. Rusty blackbird occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008)

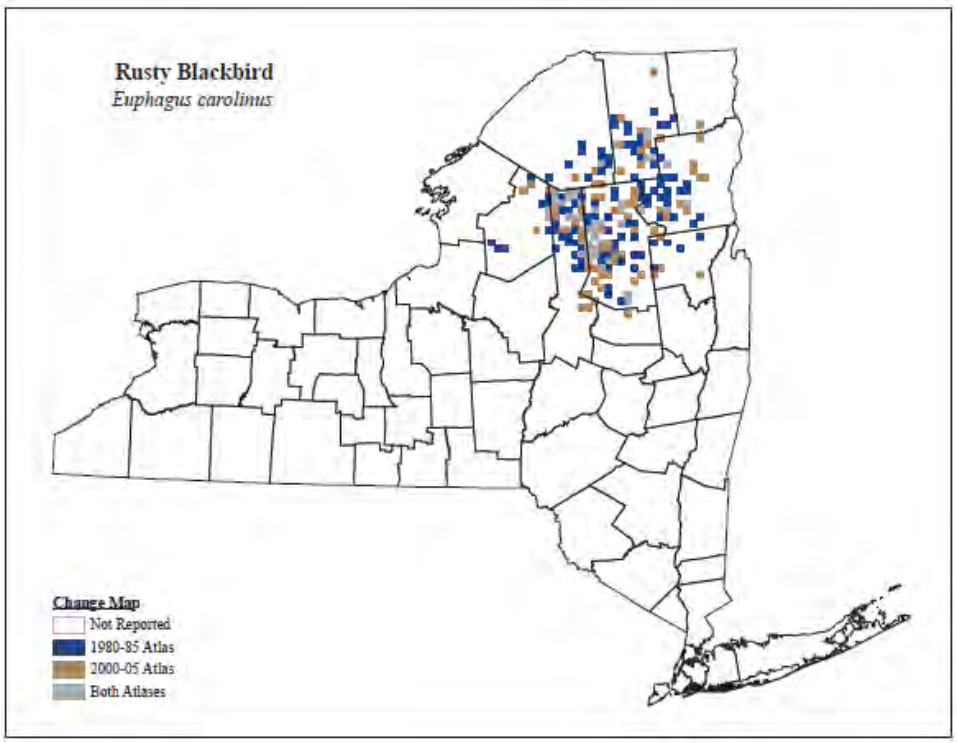

Figure 7. Change in rusty blackbird occurrence in New York State between the first Breeding Bird Atlas (McGowan and Corwin).

Details of historic and current occurrence:

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 151 blocks, 2.8% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 117 blocks, 2.2% of the survey blocks statewide, not a significant change since the first atlas (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, Rusty blackbirds have been documented in 159 priority blocks, 8.8% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2024).

New York's Contribution to Species North American Range:

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Disjunct	~130 miles

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):*

- **a.** Riparian
- **b.** Conifer Forest Swamp
- **c.** Mixed Hardwood Swamp
- **d.** Open Acidic Peatlands
- **e.** Wet Meadow / Shrub Swamp

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/Increase
No	No	Stable	

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:

The rusty blackbird's breeding distribution corresponds to the boreal forest. The species is closely associated with water and can thus be found in a variety of habitats where these characteristics converge, including fens, alder-willow bogs, muskeg, beaver ponds, as well as forest opening such as the swampy edges of lakes and streams.

Rusty blackbirds have been referred to as "loosely colonial" (Orians 1985) though few colonies have been located. Powell (2008) found one such colony in Maine and speculated that colonial nesting was more common historically.

Peterson (1988) noted that rusty blackbirds in New York breed in boreal bogs, ponds, and swamps—often with standing dead snags—surrounded by forest. Powell (2008) documented the use of small, stunted conifers (primarily spruce) at the edges of wetlands for nesting, areas that result in low predation rates.
During the winter, rusty blackbirds are rare and local, but occur regularly along the coast in wooded swamps and other wetlands, and occasionally visiting bird feeders (Crowell 1998).

V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/ Catadromous?
Yes	-	-	Yes	-	-

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):*

From Avery (1995):

The age at first breeding is probably 1 year. There are not many studies that measure hatching success, but it appears to be high. One brood per year is probable, but re-nesting following nest failure is likely. A bird banded in Arkansas on 6 Apr 1931 was shot on 30 Jan 1939, for a life span of at least 8 yr, 9 mo (Cooke 1942). The nest failure rate appears to be low, but transition to independence could be a critical period. Predation by owls, accipiters, and other raptors occurs, but impact on populations is not known. Substantial mortality to local populations may occur when rusty blackbirds are in mixed-species winter roosts subjected to blackbird control in the southern United States (Stickley et al. 1986). In New England populations, Powell (2008) estimated the average rate of nest success to be 62%. Recent research suggests that rusty blackbirds have low site fidelity. Also, as early breeders, rusty blackbirds may be missed in bird surveys conducted in May or June when rusty blackbirds are quietly on nests.

VI. Threats *(from NY 2015 SWAP or newly described):*

The effects of exurban development on wildlife in the Adirondack Park have been studied by the Wildlife Conservation Society. A pattern has been observed in which the introduction of houses and roads into the landscape via residential development brings in a different set of predators and competitors that previously occurred in lower numbers (e.g., common grackle, red-winged blackbird). The combined effect of these changes tend to favor certain kinds of species over others—omnivores over insectivores, residents over migrants, generalists over habitat specialists (especially interior forest specialists), and tree nesters over ground nesters (Reed et al. 2012, Glennon and Kretser 2013). Rusty blackbird is a more specialized species that may compete with, or suffer higher predation from, the more common ones for which exurban development creates habitat.
Rusty blackbirds in the Adirondack Park are noted to colonize wetlands farther away from human infrastructure and are more likely to abandon wetlands closer to human infrastructure (M. Glennon, pers. comm.).

Within its breeding range in the boreal forest, this species could be affected by habitat alterations linked to global climate change (such as drying of wetlands) and to intensive forestry (Greenberg and Matsuoka 2010), as well as acidification of wetlands, and mercury contamination. Rusty blackbird was classified as “presumably stable” in regard to predicted climate change in an assessment of vulnerability conducted by the New York Natural Heritage Program (Schlesinger et al. 2011). However, McClure et al. (2012) found that the rusty blackbird’s southern range has shifted northward by an average of 143km since 1966. Their work showed a disproportionate decline in low-latitude areas, which is indicative of a climate-induced retraction.

Rusty blackbird populations in the Northeast have blood mercury concentrations averaging 0.9ppm, high enough to generate concern with respect to negative reproductive effects (Osborne et al. 2011). Intense efforts made beginning in the 1960s to control grackle and blackbird numbers—these species were considered important agricultural pests—also affected rusty blackbirds. Between 1974 and 1992, red-winged blackbird and European starling control programs were responsible for the extermination of 100,000 rusty blackbirds, which was 1% of the total number of birds killed in roosts (Dolbeer et al. 1997). Luscier et al. (2010) documented winter use of wetland forests as well as agricultural areas in which rusty blackbirds supplement their invertebrate diet with weed seeds and waste grains. Greenberg and Matsuoka (2010) also note the potential negative effects of disease (West Nile virus) and increasing raptor populations in the post-DDT era to struggling rusty blackbird populations. Wetland forests in the Mississippi Valley Flood Plain and the Atlantic Coastal Plain are important wintering areas for rusty blackbird (Greenberg and Droege 1999, Hamel et al. 2009). The conversion of the wetland forests in these areas for agriculture and urban development is considered one of the most significant factors in the decline of the rusty blackbird (Greenberg and Droege 1999). Between 1950 and 1980, more than 25% of flood plain forests along the Mississippi were converted (Hefner and Brown 1984). Qualitative analysis by Hamel et al. (2009) suggests that recent loss of forested wetlands in the Southeast has not been as steep as the decline in rusty blackbird populations over the same period. They state that it is therefore premature to conclude that loss of nonbreeding habitat is the primary cause of population decline, though it likely has contributed.

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.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
5. Biological Resource Use	5.1 Hunting & Collecting Terrestrial Animals	-	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.
8. Invasive & Other Problematic Species	8.2 Problematic Native Plants & Animals	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.2 Industrial & Military Effluents	9.2.5 Mercury	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.1 Habitat Shifting & Alteration	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to rusty blackbirds in New York State.

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

Yes: _ü_ **No: _____** **Unknown: _____**

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

Effective in 2011, the USFWS changed regulations on blackbird nuisance control programs to remove rusty blackbird from the list of birds for which no permit is required "because of long-term evidence of population declines throughout much of their range." The new regulations state that a permit must be obtained to control rusty blackbirds, nontoxic shot or bullet must be used, and control actions must be reported.

The provision in the Migratory Bird Treaty Act had a special provision about blackbirds: "A federal permit shall not be required to control yellow-headed, red-winged, rusty, and Brewer's blackbirds, cowbirds, all grackles, crows, and magpies when found committing or about to commit depredations upon ornamental or shade trees, agricultural crops, livestock, or wildlife, or when concentrated in such numbers and manner as to constitute a health hazard or other nuisance..."

In New York, the Environmental Conservation Law does not specifically address rusty blackbirds: "Red-winged blackbirds, common grackles and cowbirds destroying any crop may be killed during the months of June, July, August, September and October by the owner of the crop or property on which it is growing or by any person in his employ."

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

The Rusty Blackbird Technical Working Group was organized in 2005. In 2009, this group started a “Rusty Blackbird Blitz,” an annual 17-day survey period to document population size and trends. Powell et al. (2010) investigated the implications of rusty blackbirds nesting in the regenerating edges of logged wetlands and concluded that in these regenerating areas, rusty blackbirds may be subject to "equal preference" ecological traps and thus experience a nearly 70% reduction in nest survival due to increased predation rates. Powell et al. (2010) suggest that buffers 75 m wide around the perimeter of suitable wetlands should increase the daily nest survival rate.
The NY Comprehensive Wildlife Conservation Strategy (CWCS; NYSDEC 2005) states the need for a management plan for high-altitude conifer forest birds that incorporates the results of the 2004 State Wildlife Grant study on boreal forest birds (Glennon 2010). Conservation actions following IUCN taxonomy are categorized in the table below.

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct Habitat management	Site/Area management

Action Category	Action	Description
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation Planning	Site/Area protection Resource/Habitat Protection
C.10 Institutional Development	C.10.2.0.0 External support and organizational development	Alliance and Partnership Development

Table 3. Recommended conservation actions for rusty blackbirds.

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