Species Status Assessment

Common Name: American bittern **Date Updated:** March 12, 2025

Scientific Name: *Botaurus lentiginosus* **Updated By:** Heidi Kennedy

Class: Birds.

Family: Ardeidae

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

The American bittern breeds across the northern half of the United States and in most of Canada within freshwater wetlands and rarely in tidal marshes (Gibbs et al. 1992). Although nests are usually built within stands of tall emergent wetland vegetation (Gibbs et al. 1992), they can sometimes be found on drier ground within adjacent grasslands. The species is monotypic. It occurs sparsely throughout the state, occurring in 9% of Breeding Bird Atlas survey blocks statewide with concentrations in St. Lawrence and Jefferson counties (McGowan 2008). Since the early 1980s, a 10% decline in occurrence was documented during the second Breeding Bird Atlas survey. Historic declines were documented in the 1950s through 1970s due to loss of wetland habitat, but populations now appear to be fairly stable. Detection of American bittern is best attained through species-specific surveys because of its secretive nature, and Atlas methods may not have adequately detected this species. This species is also not captured well by the Breeding Bird Survey.

I. Status

a. Current legal protected Status

i. **Federal:** Not Listed **Candidate:** No

ii. **New York:** Special Concern

b. Natural Heritage Program

i. **Global:** G5

ii. **New York:** S4 **Tracked by NYNHP?:** No

Other Ranks:

-NYS 2025 SGCN Status: Species of Greatest Conservation Need
-IUCN Red List Category: LC - Least concern

Status Discussion:

American bittern is a fairly uncommon breeder in New York and is currently listed as a species of Special Concern. It is uncommon but regular along New York's coastline in winter and rare inland. It is listed as Endangered in CT, MA, NJ, and PA. It is not listed in NH or VT.

II. Abundance and Distribution Trends

Note - Due to the secretive nature of this species, the North American Breeding Bird Survey (BBS) does not provide credible results for this species at smaller scales and shorter time frames due to low/very low route abundance (birds per route). Most of the trends listed below are not statistically significant.

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Declining	Unknown	1966-22 BBS showed significant decline of –0.88% annually	None	-
Northeastern US	Yes	Unknown	Unknown	2000-2022 BBS showed non-significant decline of -0.22% annually	None	-
New York	Yes	Unknown	Declining	Between the 1980-1985 and 2000-2005 BBAs it was found in 10% fewer blocks	SC	Yes
Connecticut	Yes	Unknown	Unknown	only one confirmed breeding location reported in the last decade (from 2015 SSA).	E	Yes
Massachusetts	Yes	Unknown	Declining	The MA BBA showed a –4.5% decline in % blocks between (1974-1979 and 2007 – 2011)	E	Yes
New Jersey	Yes	Declining	Declining	Since 1970s	E	Yes
Pennsylvania	Yes	Unknown	Declining	The 2nd BBA (2004 – 2009) showed a 42% decline from the first BBA (1983-1989) 10-year abundance trend unknown from (From PA 2015 – 2025 SWAP)	E	Yes
Vermont	Yes	Increasing	Increasing	The 2nd BBA showed a 71% increase from 1976-1981 to 2003-2007	Not listed	Yes

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
Ontario	Yes	Stable	Stable	2000-2022 BBS showed a non-significant increase of 0.14% annually. BBA between 1980-1988 and 2000-2005 was relatively stable	Not listed	-
Quebec	Yes	Stable	Increasing	2000-2022 BBS showed a non-significant change of 0% annually. BBAs between 1984- 1989 and 2010 – 2014: total squares with records went from 559 -890	Not listed	-
Southern Great Lakes Basin	Yes	Stable	Stable	Birds Canada Marsh Monitoring Program showed that populations were stable overall between 1995-2023		-

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):*

NYSDEC conducted a three-year pilot study of the National Marsh Bird Monitoring Program from 2009-2011 at selected wetlands across the state. These standardized surveys (using broadcast calls) continued from 2012 through 2019 using both random and non-random points on public and private land in managed and non-managed marshes. Surveys were done at a significantly reduced level in 2020 -2022.
In addition, the Marsh Monitoring Program through Birds Canada has long term marsh bird monitoring routes in the Great Lakes Basin part of New York. The American bittern is a target species in both of these survey protocols.

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

The second breeding bird atlas (BBA) in New York showed a decline in occupancy of 10% from 1980-85 to 2000-05.

Long-term data is not available range-wide; however, habitat trends suggest that substantial declines of 30-70 percent of habitat have probably occurred.

Between 1966-2022 the North American Breeding Bird Survey (BBS) showed significant declines of –0.88% annually in North America and –1.02% annually in the United States. Breeding Bird Survey (BBS) data (1966-1989) indicated a decline in the north-central U.S. (Hands et al. 1989, Brewer et al. 1991) and possibly in New England (USFWS 1987), due mainly to loss and degradation of wetlands. However, due to the secretive nature of this species, the BBS does not typically provide credible results for this species at smaller scales and shorter time frames due to low/very low route abundance (birds per route). Other sources suggest that declines have occurred in portions of New York and in southern New England, Pennsylvania, New Jersey, and Delaware (Gibbs and Melvin 1992). Eaton (1988) stated that the species had declined in New York since the 1950s.

Targeted standardized marsh bird surveys using broadcast calls would be more effective to determine secretive marsh bird species trends. The Birds Canada Marsh Monitoring Program uses standardized marsh bird surveys within the Great Lakes basin, and their data from 1995 to 2023 showed that American Bittern appeared to be stable overall within the Southern Great Lakes Basin (Tozer, 2020).

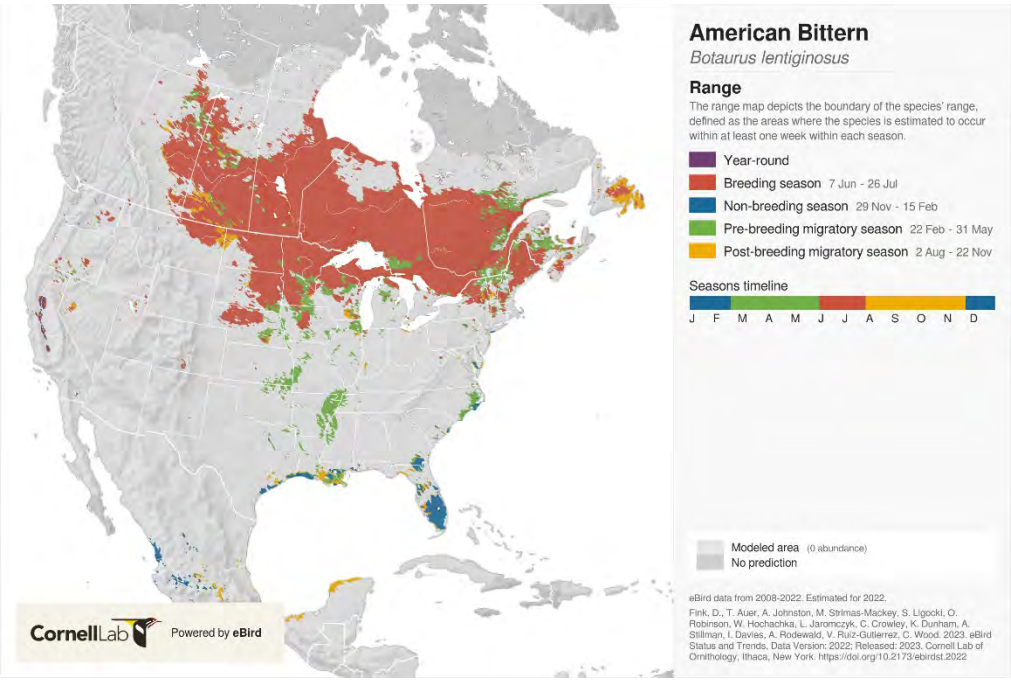

Figure 1. American bittern distribution in North America (eBird 2022)

Figure 2. Distribution of American bittern in North America (Birds of North America Online).

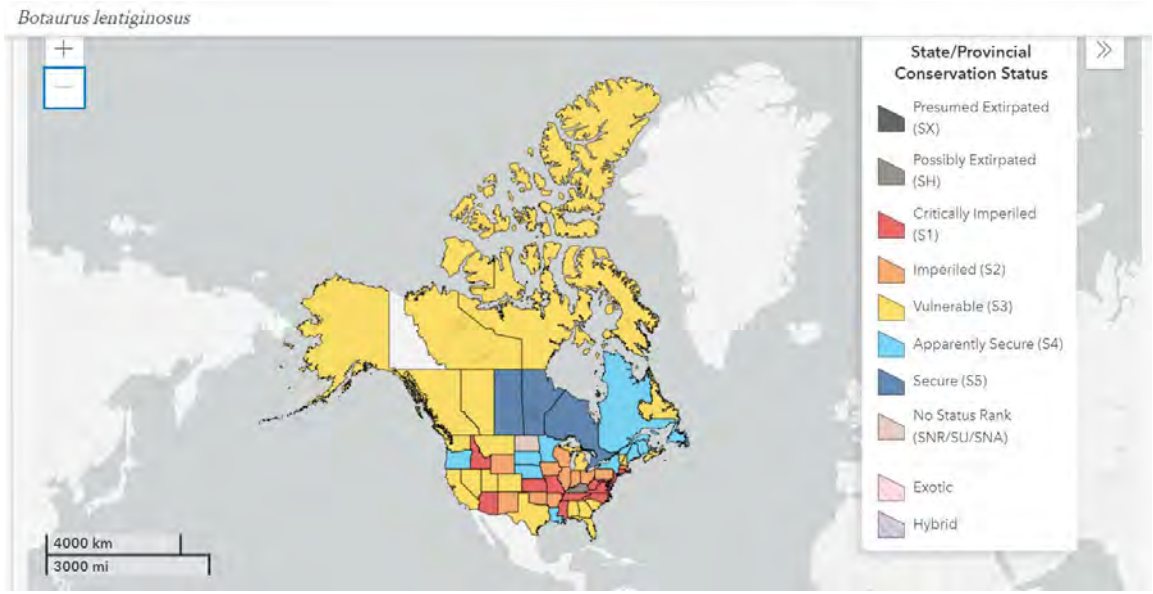

Figure 3. Conservation Status of American bittern in North America (NatureServe 2023)

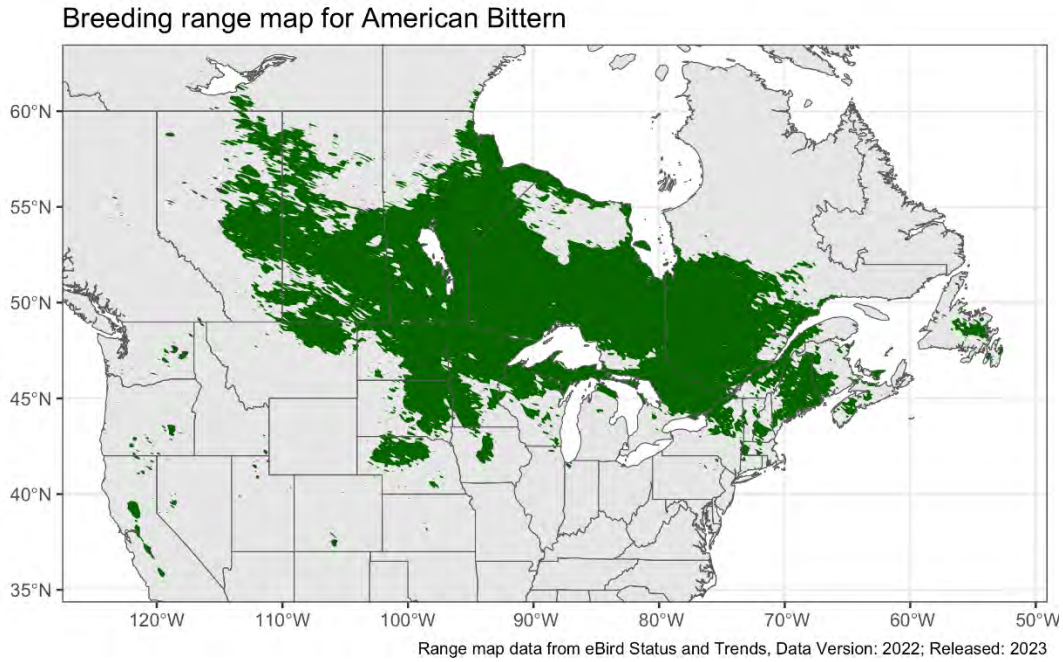

Figure 4. Breeding range of American bittern in North America (eBird).

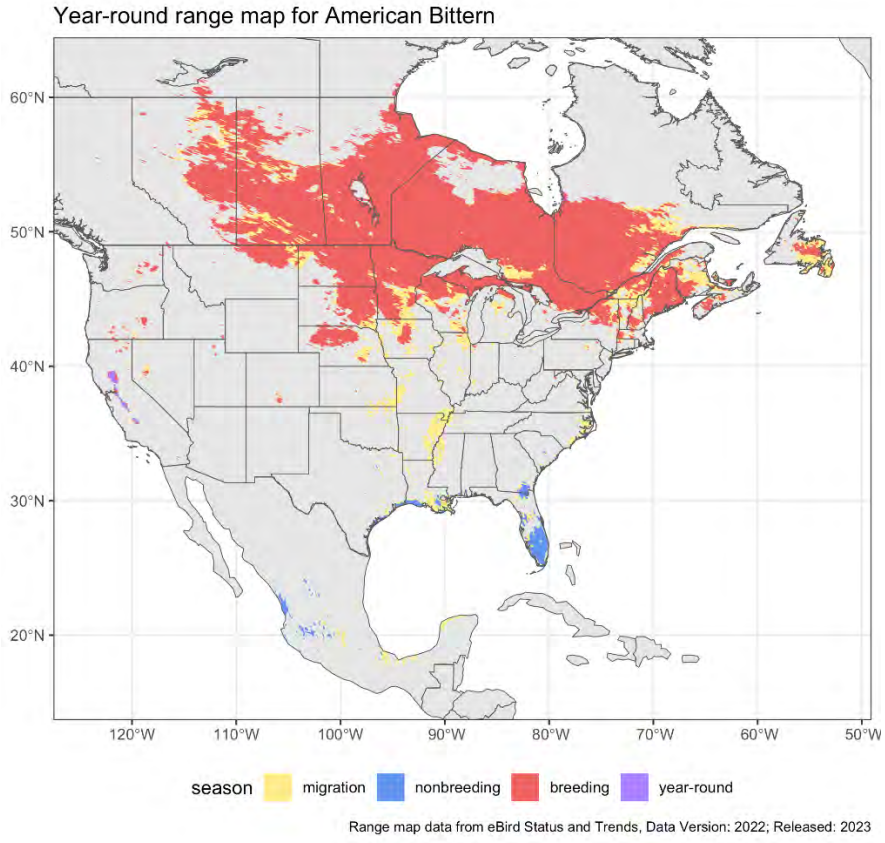

Figure 5. Year-round range of American bittern (eBird).

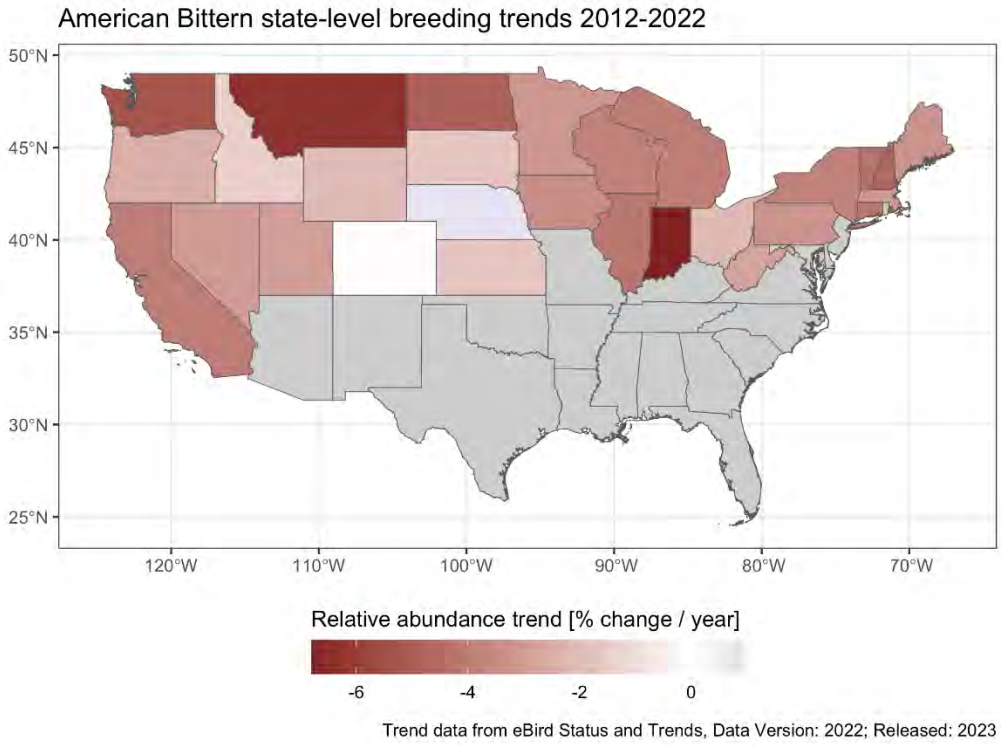

Figure 6. Breeding trends, by state, of American bittern (eBird).

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

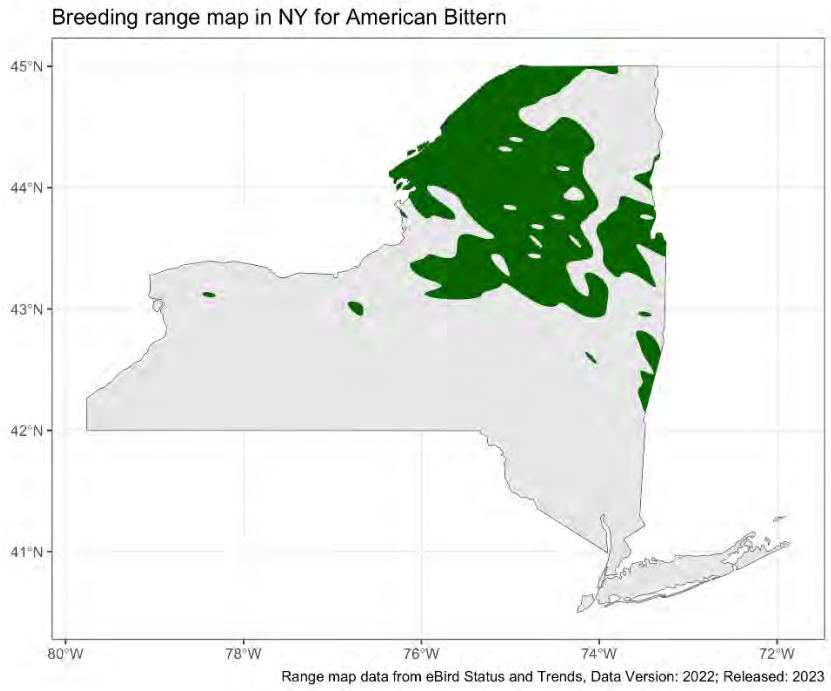

Figure 7. New York breeding range of American bittern (eBird).

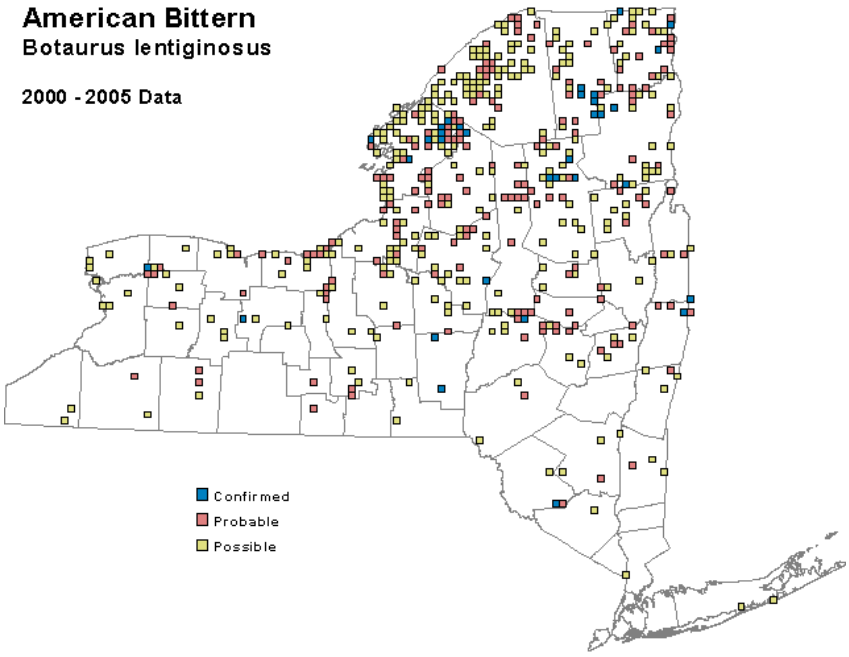

Figure 8. American bittern occurrence from second NY Breeding Bird Atlas (NYSDEC)

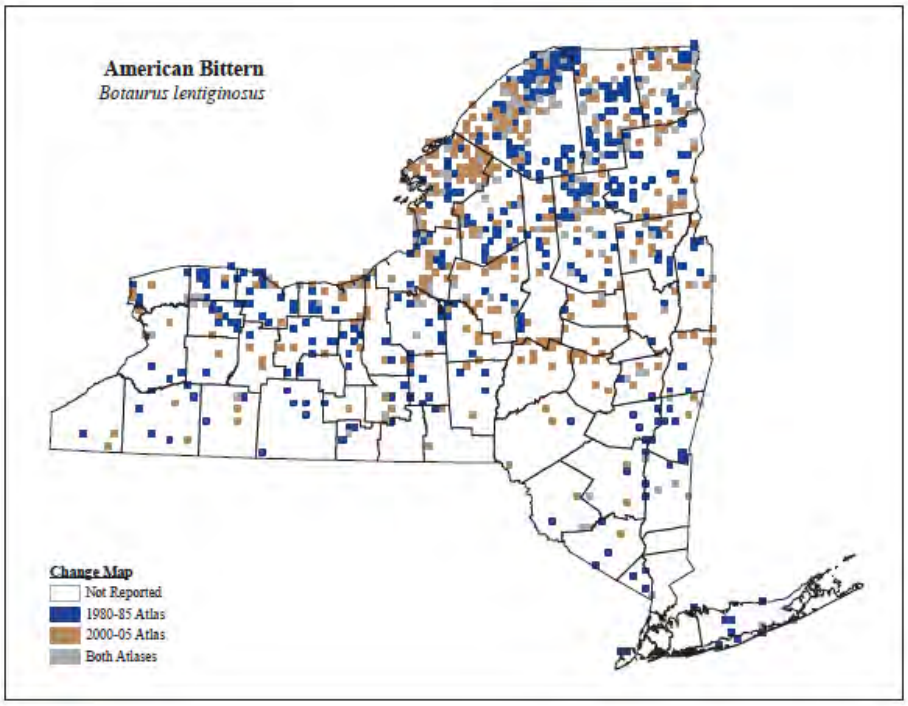

Figure 9. Change in occurrence between the first and second BBA (NYSDEC)

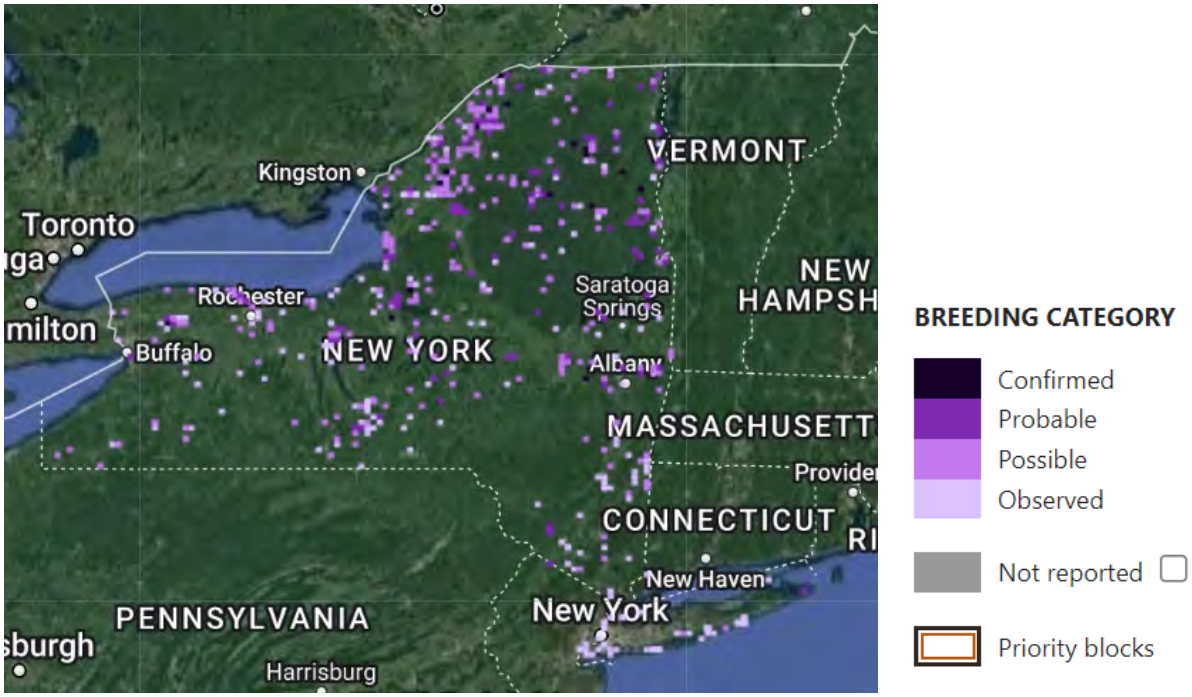

Figure 10. Records of American bittern in New York (NYS BBA III Map, 2023)

Details of historic and current occurrence:

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 534 blocks, 10% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 478 blocks, 9% of the survey blocks statewide. This represents a 10% decline in occupancy 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, American bittern has been documented in 186 priority blocks, 10% 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%	Core	

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):*

1. Freshwater Marsh
2. Great Lakes Freshwater Estuary Marsh
3. Wet Meadow/Shrub Swamp
4. Old Field Managed Grasslands
5. Native Barrens and Savannah
6. Open Alkaline Peatlands
7. Open Acidic Peatlands
8. Estuarine, Freshwater Intertidal, Tidal Wetland, Freshwater Tidal Marsh

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/Increase
No	No	Declining	Since the 1950s

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:

American bitterns breed in freshwater wetlands with tall emergent vegetation, especially larger wetlands with abundant amphibian populations, and rarely tidal marshes (Gibbs et al. 1992a). Eaton (1914) suggested that there were occurrences in New York at marshes of less than four hectares. This bittern seems to be adaptable to a wide variety of wetland habitats, ranging from margins of boreal lakes in Quebec (DesGranges and Houde 1989) to dense cattail marshes in New York (Andrle and

Carroll 1988) and can thrive at wetlands of many types as long as suitable prey and adequate cover are available (Gibbs et al. 1991). Nesting can also occur in grasslands adjacent to wetland habitat.

V. Species Demographic, and Life History:

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

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):*

Remarkably little is known about the biology of this species. There is no information on age at first breeding, but it is 1 year in the closely related Eurasian Bittern. The maximum reported longevity is 8 years, 4 months. Minimal information is available on the effects of predation or parasites and disease. The species is thought to undergo extensive, post-breeding dispersal (Lowther et al. 2009). Because of extensive post-breeding dispersal (Cramp 1977), bitterns are able to colonize new areas and persist as small, isolated populations. The species also seems adaptable to a wide range of wetland habitats.

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

The most serious factor limiting populations is availability of wetland habitat. Wetland loss has been due to drainage, filling, conversion to agriculture or recreational use, siltation, and pollution. This species' entire life cycle is dependent on wetlands, yet over half the original wetlands in the conterminous U.S. have been destroyed (Tiner 1984). The most serious losses have occurred among palustrine emergent wetlands, of which about 4.75 million acres (1.92 million ha) were lost between the mid-1950s and mid-1970s (Tiner 1984). Inland, freshwater wetlands, the most important nesting and wintering areas, are among the most threatened habitats (Tiner 1984). Larger wetlands (greater than 10 ha) may support large portions of regional nesting populations, and loss of these wetlands can be critical to populations in many areas. Fortunately, many of the larger emergent marshes and marsh complexes in New York are publicly owned and managed for wildlife habitat.

Agricultural chemicals may have significant, indirect effects by entering wetlands via runoff from upland areas and reducing prey populations. Many of this bird's prey, including aquatic insects, crayfish, and amphibians, are vulnerable to agricultural pesticides.

Threat from acid rain is related to a high proportion of amphibians in the American bittern's diet. However, wetlands are typically buffered against shifts in acidity. Wading birds tend to be susceptible to many diseases such as avian cholera, botulism, lice and mites, but little is known about the effects of disease and parasites on reproduction (NatureServe 2013).

Table 1. Threats to American bitter

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	(wetland fragmentation)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
1. Residential and Commercial	1.3 Tourism & Recreation Areas	(shoreline development)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.2 Dams & Water Management/Use	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.3 Other Ecosystem Modifications	7.3.2 Vegetation succession	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	8.1.2 Terrestrial plants (purple loosestrife)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	8.1.4 Aquatic plants (phragmites, purple loosestrife)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.2 Industrial & Military Effluents	(acid deposition)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.3 Agricultural & Forestry Effluents	(runoff, siltation)	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.
11. Climate Change	11.4 Changes in Precipitation & Hydrological Regimes	11.4.2 Droughts	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.5 Storms & Severe Weather	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

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

Yes: _X_ **No: _____** **Unknown: _____**

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

American bittern is protected under the Migratory Bird Treaty Act of 1918. The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law (this will change to 7.4 acres in 2028). Small wetlands that serve as important alternate feeding sites and as "stepping stones" during movements between larger wetlands, may receive no legal protection in New York. However, small wetlands of unusual importance may be regulated.

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

Large wetlands (>12 acres) with abundant emergent vegetation need preservation, protection, and improvement (Gibbs and Melvin 1992). It is important to prevent chemical contamination, siltation, eutrophication, and other forms of pollution in marsh habitats and to control invasive species (such as phragmites and purple loosestrife). When managing large wetland complexes, manage for the full suite of wetland species (waterfowl, marsh birds, furbearers etc.) by providing a range of habitat conditions, including areas with cattails and bulrush.

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct habitat management	Site/Area management
A.1 Direct Habitat Management	A.1.1.0.0 Manage plants, animals, fungi, or bacteria	Invasive/Problematic species control
B.3 Outreach	B.3.1.4.0 Public outreach and information	Awareness & Communications
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	Site/Area Protection
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	Resource/Habitat Protection
C.6 Design and Plan Conservation	C.6.5.1.3 Develop a conservation, management, or restoration plan for protected private lands	Habitat/Natural process restoration
C.9 Education and Training	C.9.2.0.0 Training and individual skill development	Training

Table 2. Recommended conservation actions for American bittern

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