

Species Status Assessment

Common Name: Ebony boghaunter **Date Updated:** January 12, 2023

Scientific Name: *Williamsonia fletcheri* **Updated By:**

Class: Insecta

Order: Odonata

Family: Corduliidae

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

A North American species, the ebony boghaunter (*Williamsonia fletcheri*) is found in the Canadian provinces of Manitoba, Ontario, Quebec, New Brunswick, and Nova Scotia (Charlton 1985, Abbott 2007). In the United States, it is known from Wisconsin, Michigan, New York, Vermont, New Hampshire, Massachusetts, and Maine (Donnelly 2004, Abbott 2010). In New York, a 1947 record exists from Chenango Valley State Park in Broome County; however, this record has not been relocated despite efforts by many odonatologists (Donnelly 1999). There are currently 5 extant locations in the state. Heron Marsh in Franklin County and Perch River Swamp in Jefferson County were documented in the 1990s (New York Natural Heritage Program 2010). New locations recorded during the NY Dragonfly and Damselfly Survey (NYDDS) include a marsh on the Raquette River and a bog near Oseetah Lake, both in Franklin County. In addition, a new population was discovered in Oswego County in 2023 (New York Natural Heritage Program 2024). Other appropriate habitats in northern New York should be searched in May and June to try to document new locations for this species. Mead (2003) notes that populations tend to be very small and susceptible to local extinction, so known populations should be monitored in the future and threats to the habitat should be assessed. *Williamsonia fletcheri* is found in sphagnum bogs, fens, and swamps with open pools near woodlands (Nikula et al. 2003), often with soupy sphagnum pools (Massachusetts NHESP 2003).

I. Status

a. Current legal protected Status

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

ii. **New York:** Not listed, SGCN

b. Natural Heritage Program

i. **Global:** G4

ii. **New York:** S1 **Tracked by NYNHP?:** Yes

Other Ranks:

-NYS 2025 SGCN Status: Species of Greatest of Conservation Need

-IUCN Red List:

-Northeast Regional Rank (White et al. 2015):

Status Discussion:

White et al. (2010) indicated the S-rank should remain as S1 (5 or fewer occurrences, or few remaining acres or miles of stream, or factors demonstrably making it especially vulnerable to extinction rangewide or in New York State).

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Unknown	Unknown			Choose an item.
Northeastern US	Yes	Unknown	Unknown			Choose an item.
New York	Yes	Unknown	Unknown			Yes
Connecticut	No	Unknown	Unknown			Choose an item.
Massachusetts	Yes	Unknown	Unknown			Yes
New Jersey	No	Unknown	Unknown			Choose an item.
Pennsylvania	No	Unknown	Unknown			Choose an item.
Vermont	Yes	Unknown	Unknown			Yes
Ontario	Yes	Unknown	Unknown			Choose an item.
Quebec	Yes	Unknown	Unknown			Choose an item.

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 New York State Dragonfly and Damselfly Survey (NYDDS) was conducted from 2005-2009 but there are no organized, regular monitoring or survey activities directed toward this species or to sites where it has been documented.

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

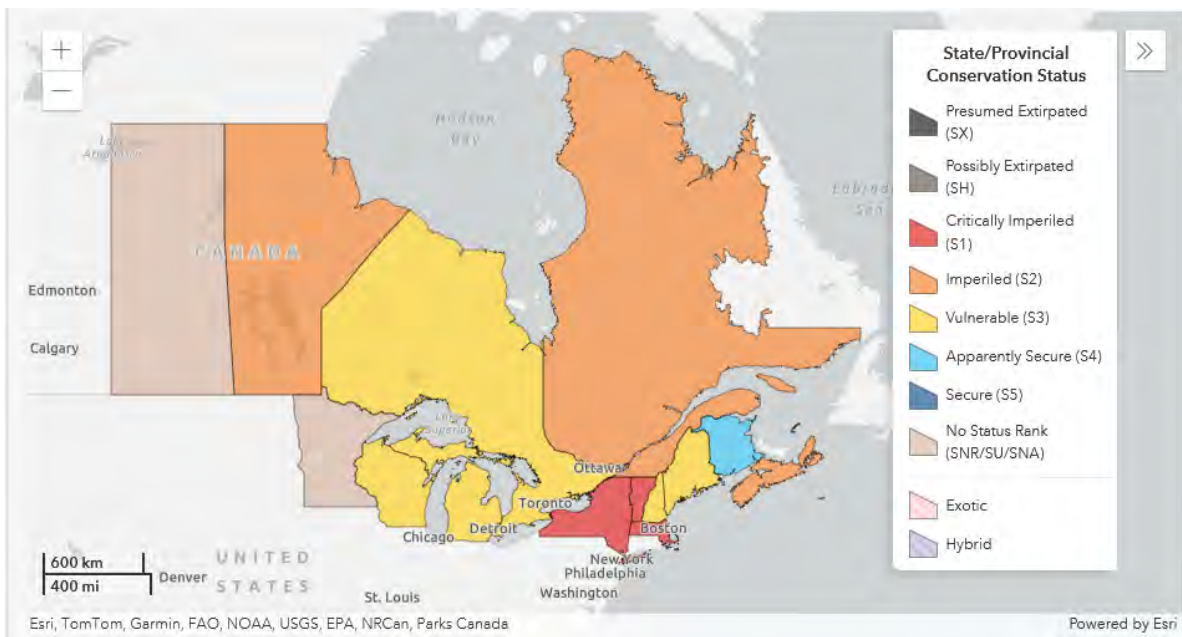


Figure 1. *Williamsonia fletcheri* range wide distribution and status (NatureServe)

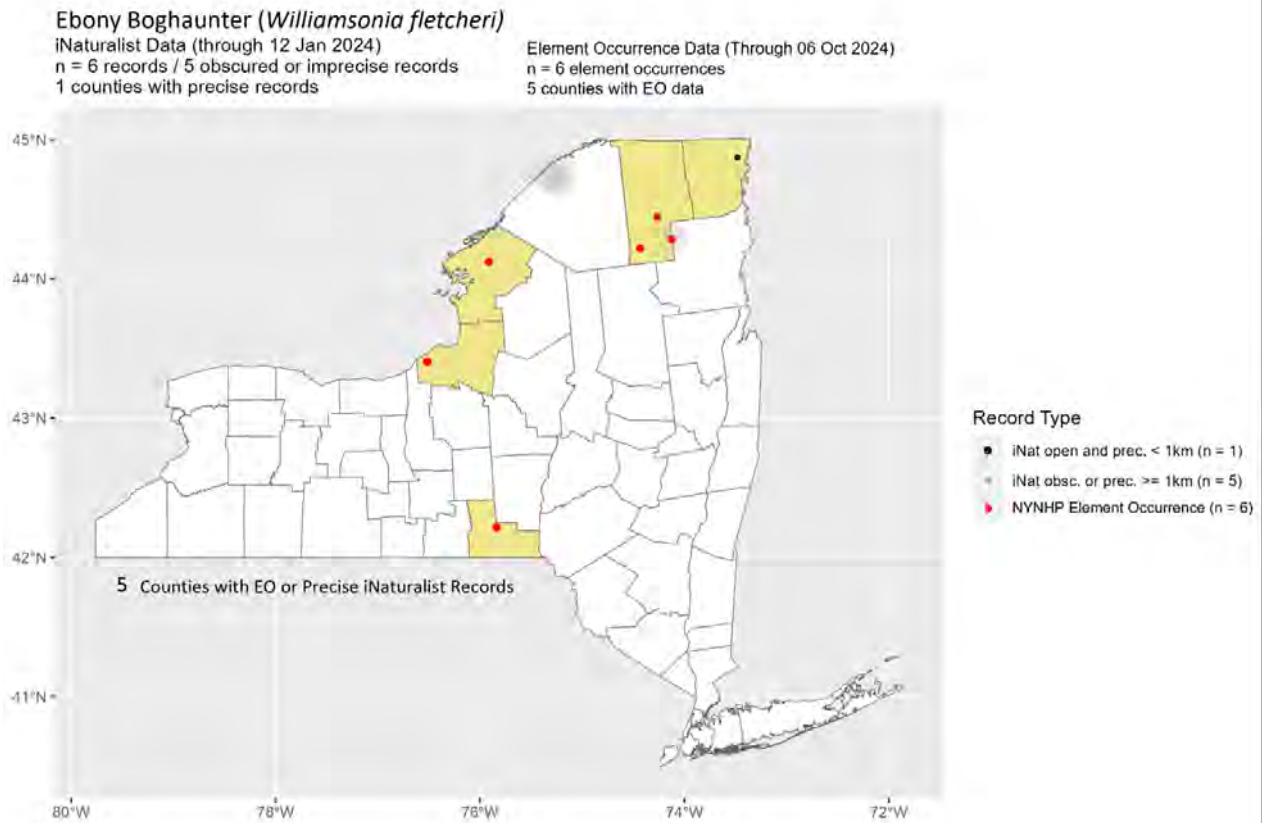


Figure 2. *Williamsonia fletcheri* element occurrence records in New York. (NYNHP)

Ebony Boghaunter
(*Williamsonia fletcheri*)

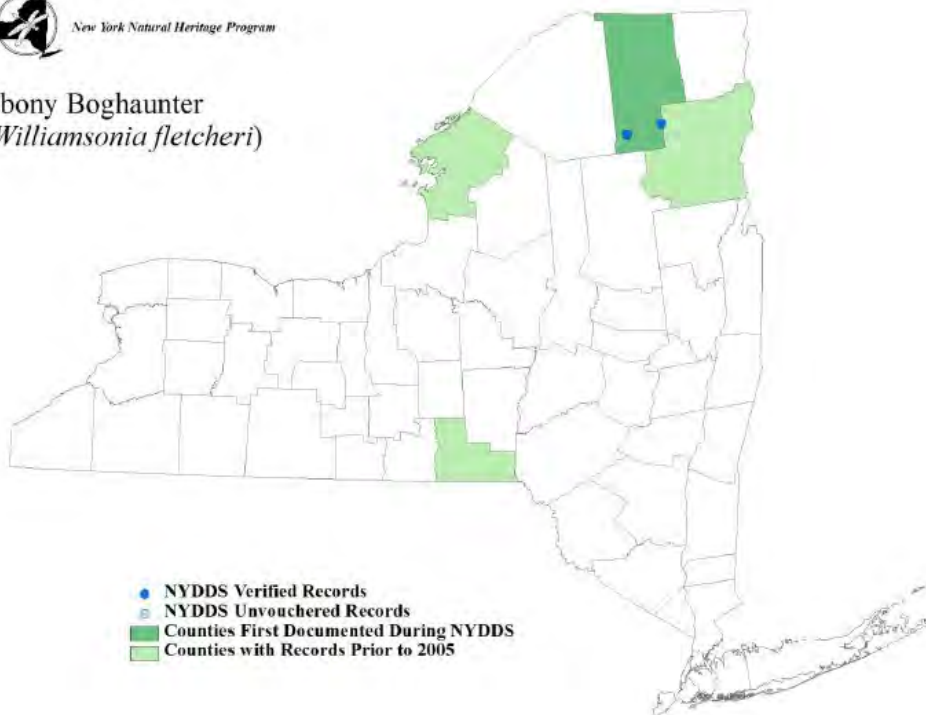


Figure 3. Occurrence records of ebony boghaunter in New York (Source: White et al. 2010 – New York Dragonfly and Damselfly Survey)

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

Years	# of New Locations	# of Known Locations	# of Known Counties	% of State
Pre-2004	3	3	3	_____
2005-2009	2	4	3	_____
2010-2023	1	5	4	_____
Total	6	5	4 (3 extant)	5% (extant)

Table 1. Records of ebony boghaunter in New York.

Details of historic and current occurrence:

This species has been documented in Broome, Franklin, Jefferson, and Oswego Counties.

A 1947 record exists from Chenango Valley State Park in Broome County; this record has not been relocated despite efforts by many odonatologists (Donnelly 1999). Records from Franklin County and Jefferson County were documented in the 1990s (New York Natural Heritage Program 2010). New locations during the NY Dragonfly and Damselfly Survey include two additional locations in Franklin County, one of which approaches the border of Essex County (White et al. 2010). A new record from Oswego County was reported in 2023 (New York Natural Heritage Program 2024), and it seems likely that it also occurs in St. Lawrence County, based on a cluster

of obscured iNaturalist records (John Vanek, NYNHP, personal communication).

If it still occurs in 5 of 62 counties, that is roughly 8% of the state, though the occupied area of those counties is extremely small. While there are likely additional undocumented populations in northern NY, the overall % of the state is certainly less than 5%.

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%	Peripheral	n/a

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. Boreal Forested Peatlands
2. Open Acidic Peatlands
3. Open Alkaline Peatlands

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/Community Trend	Time frame of Decline/Increase
Choose an item.	Choose an item.	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:

The habitat of *W. fletcheri* includes sphagnum bogs, fens, and swamps with open pools near woodlands (Nikula *et al.* 2003), often with soupy sphagnum pools (Massachusetts NHESP 2003). While the larvae live in these wet areas, the nearby woodland component appears essential for adult behaviors such as hunting, roosting, and mating (Charlton 1985, Massachusetts NHESP 2003). Larvae of *W. fletcheri* develop in small, open pools of water within bogs/fens or sphagnum mats (U.S. Forest Service 2010) that are often connected by ditches of standing, or slightly flowing, water (Hutchinson & Ménard 1999).

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	Yes	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):

There were two new location records during the NYDDS for *W. fletcheri*, one adult from 11 May and another from 23 June. In 2023, an adult was found emerging from its exuvia on 9 May. The flight season is from early May through early July in Wisconsin and Maine (Brunelle & deMaynadier 2005, Wisconsin Odonata Survey 2009), and May and June in Massachusetts (Massachusetts NHESP 2003). The flight season appears to be early and brief compared to most dragonflies, which may explain why they are infrequently encountered by surveyors (Charlton & Cannings 1993).

VI. Threats (from NY 2015 SWAP):

Little published information is available citing specific cases of negative impacts to bog/fen odonates, but any activities which degrade the sensitive hydrology of these habitats would threaten populations of these species. Examples include peat mining, ditching, filling, eutrophication and changes in dissolved oxygen content, direct effects of pesticides (e.g. for mosquito control or from agricultural runoff) and increases in the sediment load of the wetland (such as might result should logging occur down to the wetland edge). Natural succession could also threaten some sites as shallow pools fill in with vegetation over time (Novak 2006).

The ebony boghaunter was classified as “not vulnerable/presumed stable” (PS) to predicted climate change in an assessment of vulnerability conducted by the New York Natural Heritage Program. Available evidence does not suggest that abundance and/or range extent within the geographical area assessed with change (increase/decrease) substantially by 2050. Actual range boundaries may change (Schlesinger et al. 2011).

Threats to NY Populations	
Threat Category	Threat
1. Climate Change & Severe Weather	Habitat Shifting & Alteration
2. Climate Change & Severe Weather	Temperature Extremes
3. Pollution	Industrial & Military Effluents (acid rain, mercury)
4. Climate Change & Severe Weather	Droughts

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:

The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law. This only covers a portion of habitat used by this species and

does not protect the habitat, nor the species, enough. The Adirondack Park Agency has the authority to regulate smaller wetlands within the Adirondack Park.

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

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for odonates of bogs, fens, and ponds, and for the ebony boghaunter in particular:

Habitat monitoring:

_____ Support and encourage habitat monitoring efforts that would complete the baseline assessment of habitat quality and threats.

Habitat research:

_____ Support and encourage research projects that will help define preferred habitat in order to guide future monitoring, restoration and habitat protection efforts.

New regulation:

_____ Recommendations for official state endangered, threatened, and special concern listing are an anticipated result of the statewide inventory. It is expected that at least a few species will be recommended for listing and officially adding these species to the list would constitute a specific action.

Population monitoring:

_____ Conduct surveys to obtain repeatable, relative abundance estimates for these species at known sites and newly discovered sites where access permission to conduct surveys is obtained (as indicated in the NYDDS).

Other action:

_____ Most of these species are known from fewer than 10 locations in the state, but new populations undoubtedly remain to be discovered (White et al. 2010).

Complete Conservation Actions table using IUCN conservation actions taxonomy at link below. Use headings 1-6 for Action Category (e.g., Land/Water Protection) and associated subcategories for Action (e.g., Site/Area Protection) -

<https://www.iucnredlist.org/resources/conservation-actions-classification-scheme>

Conservation Actions	
Action Category	Action
Education and Awareness	Training
Education and Awareness	Awareness & Communications

Table 3. Recommended conservation actions for ebony boghaunter.

VII. References

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