

Species Status Assessment

Common Name: Painted Wood Fly **Date Updated:** 2024-10-15
Scientific Name: *Blera pictipes* **Updated By:** Ashley Ballou
Class: Insecta
Family: Syrphidae

Species Synopsis

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

The Painted Wood Fly is known from Ontario in Canada (NatureServe 2024). Its range in the U.S. includes Texas, Oklahoma and northern Florida, north to southern Michigan and southeastern Maine (NatureServe 2024, Skevington et al. 2019).

This species is rare throughout its range (Skevington et al. 2019). In New York it was ranked an S1; it is known from just five scattered occurrences in the state, only one of which is recent. It relies exclusively on old growth deciduous forests for breeding, a rare and threatened habitat.

I. Status

a. Current legal protected Status

i. **Federal:** Not Listed **Candidate:** No
ii. **New York:** Unprotected

b. Natural Heritage Program

i. **Global:** G4G5
ii. **New York:** S1 **Tracked by NYNHP?** On Active Tracking List

Other Ranks:

- New York 2025 SGCN status: High Priority Species of Greatest Conservation Need
- COSEWIC: Not listed in Canada
- IUCN Red List: Not assessed by IUCN Red List
- Northeast Regional SGCN: Not listed

Status Discussion:

The Painted Wood Fly is rare throughout its range (Skevington et al. 2019). In New York it was ranked an S1; it is known from just five scattered occurrences in the state, only one of which is recent. It relies exclusively on old growth deciduous forests for breeding, a rare and threatened habitat.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Unknown	Unknown	Unknown		
Northeastern US	Yes	Unknown	Unknown	Unknown		No
New York	Yes	Unknown	Unknown	Unknown	S1	No
Connecticut	No	Unknown	Unknown	Unknown	SNR	
Massachusetts	No	Unknown	Unknown	Unknown	SNR	
New Jersey	No	Unknown	Unknown	Unknown	SNR	
Pennsylvania	No	Unknown	Unknown	Unknown	SNR	
Vermont	No	-	-	-		
Ontario	No	Unknown	Unknown	Unknown	SU	
Quebec	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 Empire State Native Pollinator Survey (ESNPS) was conducted from 2017-2021, but there are no organized, regular monitoring or survey activities directed toward this species or to sites where they have been documented. Some regular monitoring may occur at protected sites that Heritage staff revisit if they occur on state properties, as part of OPRHP or State Lands inventory work.

Trends Discussion

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

The species is historically (1999 and earlier) known from four scattered counties throughout the state, on Long Island and in Ulster and Onondaga Counties. More recently it has been confirmed in Cattaraugus, Westchester, and Dutchess Counties, and again in Richmond County (White et al. 2022). Despite survey effort as part of a statewide pollinator survey, this species was not found again in Onondaga, Ulster, or Suffolk Counties.

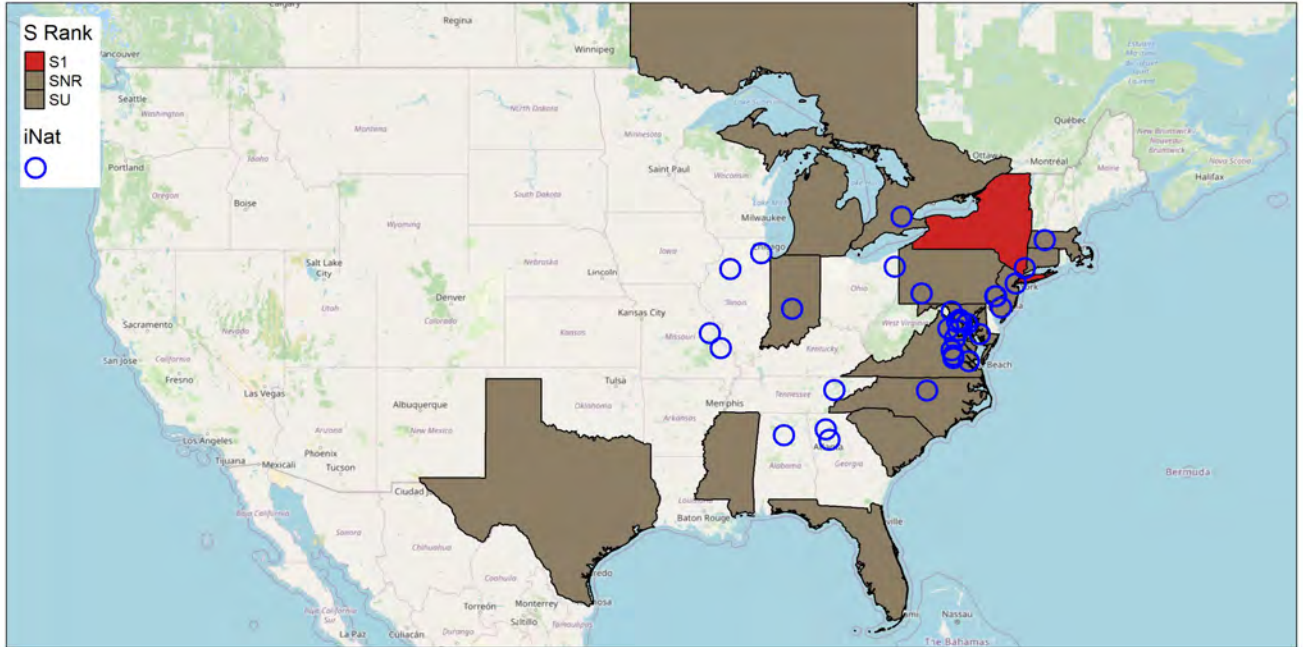


Figure 1: *Blera pictipes* North American distribution. Points show research-grade iNaturalist observations.

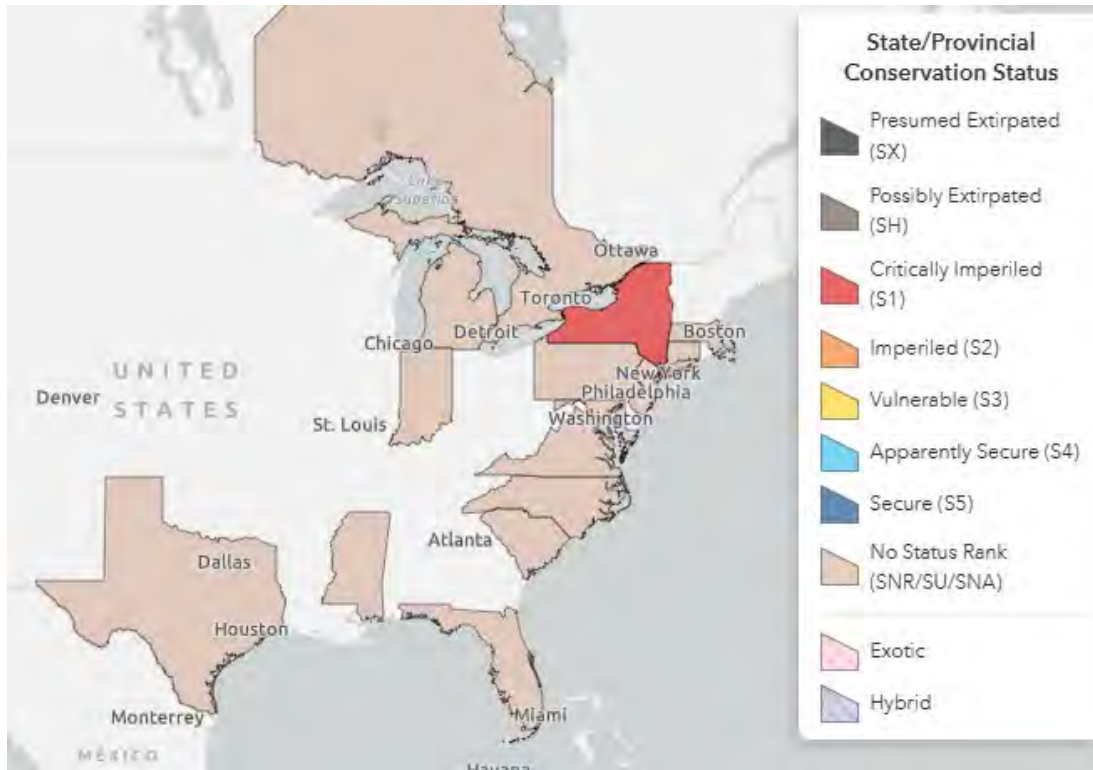


Figure 2. Conservation status of *Blera pictipes* in North America (NatureServe 2024).

III. New York Rarity

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

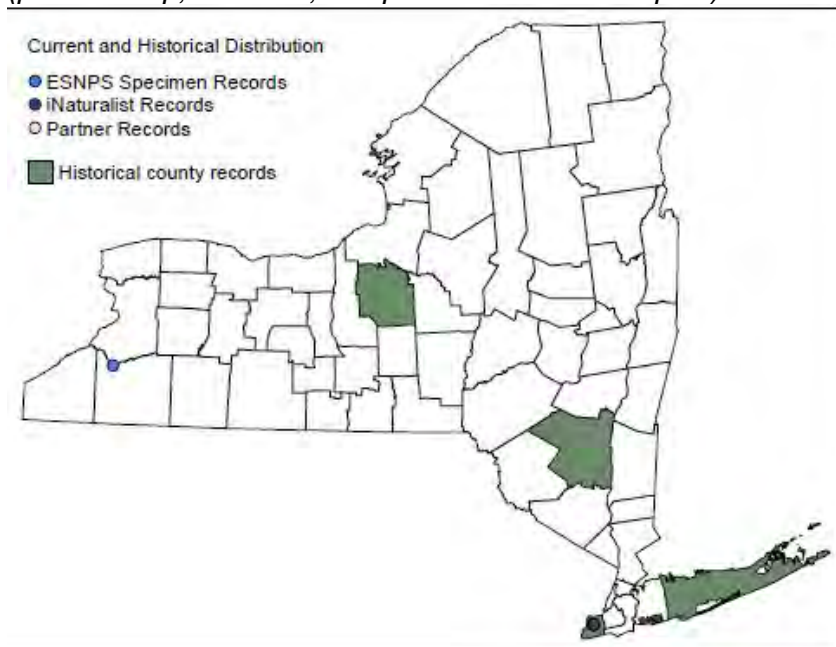


Figure 3: NYS distribution for *Blera pictipes* based on ESNPS data.

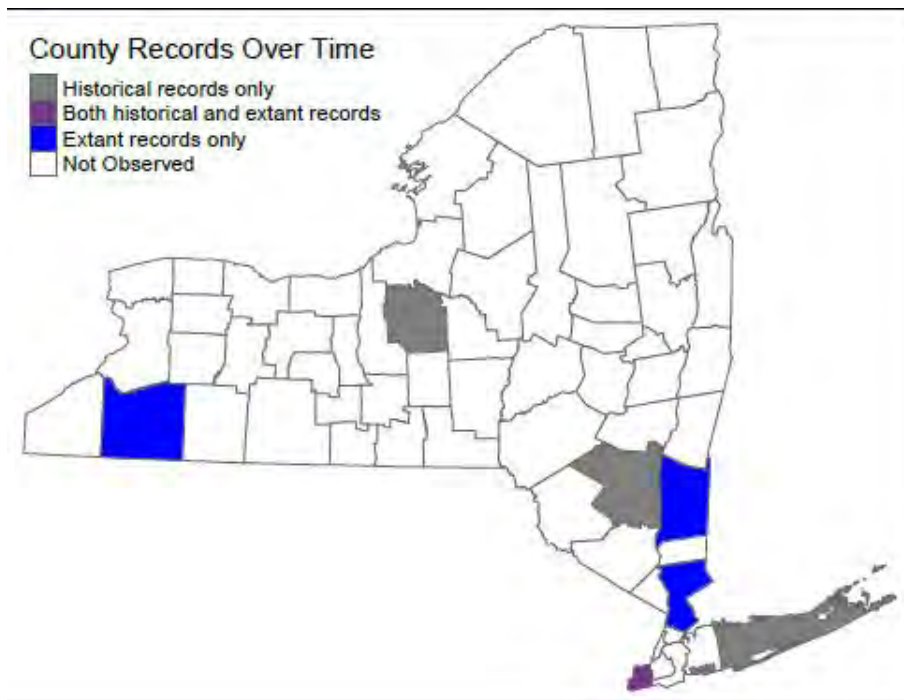


Figure 4: NYS distribution for *Blera pictipes* based on ESNPS data.

Years	Observations	# of Counties	% of counties in State
Pre-2000	5	4	6.5
2000-2023	9	4	6.5

Table 1. Number of observations of *Blera pictipes* grouped by the dates known to be extant (repeat observations (element occurrences) include the years spanning first observation to last observation) and the number and percent of total of counties these observations fall within for New York State.

Details of historic and current occurrence:

New York lies along the northern range margin of this more southerly species. Specimens have been documented at four counties since 2000 including Cattaraugus, Dutchess, Westchester, and Richmond (White et al. 2022).

Historically, 1999 and earlier, the species is known from four counties including Suffolk, Richmond, Ulster, and Onondaga Counties.

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):

Mixed Northern Hardwoods

Coastal Hardwoods

Habitat or Community Type Trend in New York

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

These pollinators live in old growth deciduous forests (Skevington et al. 2019) with senescent trees where the larvae live in tree rot-holes, wet heart rot cavities and decaying stumps. Greene (1923) found pupa in the frass of a dead Tuliptree (*Liriodendron tulipifera*) stump in mid-April in Virginia. Because the larvae are filter feeders, conditions within the forest must remain stable and humid (Rotheray et al. 2001). Adults are known to take nectar and pollen from *Physocarpus* and *Prunus* (Skevington et al. 2019). Other *Blera* species also visit *Heracleum*, *Viburnum*, *Cornus*, *Sassafras*, *Crataegus*, *Hydrastis*, *Rhododendron*, *Acer*, *Rosa*, *Rubus*, *Berberis*, *Valeriana*, *Potentilla*.

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):

Flight times are mid-May to Early July. Recent records from New York have been from May 12 and June 1 (iNaturalist 2024, White et al. 2022). Up to 20% of larvae in a population might extend development for two years (diapause) since they are known to be freeze tolerant. This indicates a semi-voltine development strategy, thereby helping to circumvent population

extirpation during unfavorable breeding conditions (cool, rainy June) in a given year (Rotheray et al. 2016).

VI. Threats

Because the larval habitat is confined to standing senescent trees or very old large decayed stumps found in intact stands of late successional forest, this hover fly is threatened by modern forestry and land management practices that remove trees from stands before they can reach old age (>100 years) (Speight 2015). *Blera* appear to be able to withstand severe genetic bottlenecks, thus allowing viable populations to persist in fragmented woodlands so long as the microclimatic integrity of the late successional forest ecosystem remains intact (Rotheray et al. 2012). Additional threats facing our focal saproxylic hover flies and beetles include habitat loss and degradation, invasive plants and pathogens, pesticides, and climate change (White et al. 2022). Habitat shifting and alteration, droughts, and more frequent severe weather events due to climate change is expected to impact saproxylic flies and beetles.

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.3 Tourism & Recreation Areas	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
4. Transportation & Service Corridors	4.2 Utility & Service Lines	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
4. Transportation & Service Corridors	4.1 Roads & Railroads	Choose an item.	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.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	8.1.1 Terrestrial animals (wood-boring insects)	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	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.4 Pathogens	Choose an item.	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.
11. Climate Change	11.3 Changes in Temperature Regimes	Choose an item.	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	11.5.1 Storms & severe weather	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to *Blera pictipes*.

Action Category	Action	Description
C.7 Legislative and Regulatory Framework or Tools	C.7.1.3.0 Create, amend, or influence regulation	Policies and regulations
C.9 Education and Training	C.9.2.0.0 Training and individual skill development	Training

Table 3. Recommended conservation actions for *Blera pictipes*.

VII. References

This SSA drew heavily from these resources:

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Originally prepared by	Ashley Ballou
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