Species Status Assessment

Common Name: Yellow-haltered Leafwalker **Date Updated:** 2025-01-09

Scientific Name: *Chalcosyrphus curvarius* **Updated By:** Erin L. White

Class: Insecta

Family: Syrphidae

Species Synopsis

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

Yellow-haltered Leafwalker is known from Alaska and northern Canada to the southwestern United States east to the Northeast (NatureServe 2024, Skevington et al. 2019).

The species was ranked an S1S2 as part of the ESNPS (White et al. 2022) based on rarity, trend, and threat information. The species is historically (1999 and earlier) known from eight counties in northern NY and the Catskills. Despite survey effort as part of a statewide pollinator survey, only four sites in three counties have been confirmed in recent years (White et al. 2022, inaturalist 2024).

The species is known from hardwood forests and are a saproxylic species with larvae occurring on decaying sap (Skevington et al. 2019).

I. Status

a. Current legal protected Status

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

ii. New York: Unprotected

b. Natural Heritage Program

i. Global: G5?

ii. New York: S1S2 **Tracked by NYNHP?** On Active Tracking List

Other Ranks:

-New York 2025 SGCN status: 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 species was ranked an S1S2 as part of the ESNPS (White et al. 2022) based on rarity, trend, and threat information. The species is historically (1999 and earlier) known from eight counties in northern NY and the Catskills. Despite survey effort as part of a statewide pollinator survey, only four sites in three counties have been confirmed in recent years (White et al. 2022, inaturalist 2024).

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	Declining	Unknown	S1S2	No
Connecticut	No	-	-	-		
Massachusetts	No	Unknown	Unknown	Unknown	SNR	
New Jersey	No	-	-	-		
Pennsylvania	No	-	-	-		
Vermont	No	Unknown	Unknown	Unknown	SNR	
Ontario	No	Unknown	Unknown	Unknown	S4	
Quebec	No	Unknown	Unknown	Unknown	SNR	

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 eight counties in northern NY and the Catskills. It has been confirmed in three counties since 2000. Despite survey effort as part of a statewide pollinator survey, four sites have been confirmed in recent years.

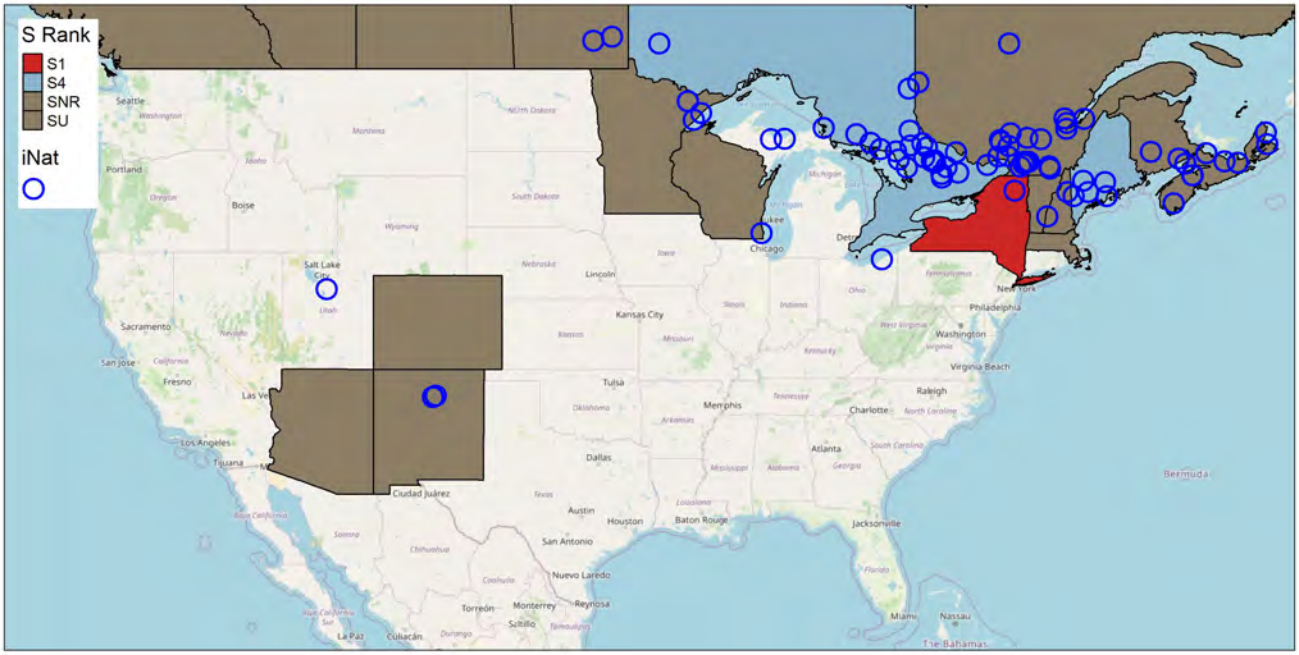

Figure 11. *Chalcosyrphus curvaria* North American distribution. Points show research-grade iNaturalist observations.

Figure 22. *Chalcosyrphus curvaria* regional distribution as reported at https://northeastwildlifediversity.org/rsgcn .

III. New York Rarity

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

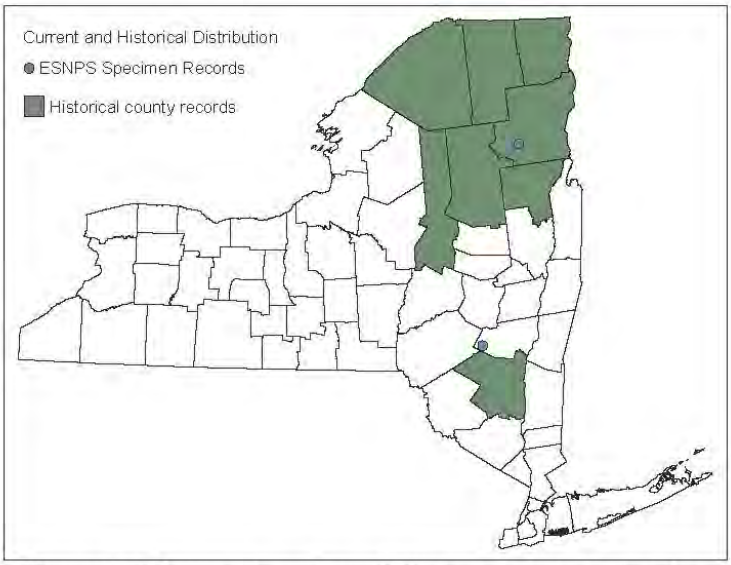

Figure 1: Observations from 2000 to present depicted as dots; those from 1999 and earlier as shaded counties.

Figure 33. NYS distribution for *Chalcosyrphus curvaria* based on ESNPS data (White et al. 2022).

Years	Observations	# of Counties	% of counties in State
Pre-2000	13	8	12.9
2000-2023	4	3	4.8

Table 1. Number of observations of *Chalcosyrphus curvaria* 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:

The species was documented two counties (Greene and Essex) in recent years as part of a statewide pollinator survey (White et al. 2022). An additional record in Essex County from 2024 and Franklin County in 2022 have been documented (iNaturalist, 2024).

Historically, 1999 and earlier, the species is known from eight counties including Clinton, Essex, Franklin, Hamilton, Herkimer, St. Lawrence, Ulster, and Warren Counties.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	~3,000 mi

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):

[Late-Successional] Mixed Northern Hardwoods

Northern White Cedar Swamp

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:

The species is known from hardwood forests and are a saproxylic species with larvae occurring on decaying sap (Skevington et al. 2019).

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 late August (Skevington et al. 2019) and the New York observations were from June and July (White et al. 2022, iNaturalist 2024).

VI. Threats

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	4.1 Roads & Railroads	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.
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	11.1 Habitat Shifting & Alteration	Choose an item. (ecosystem encroachment)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.2 Changes in Geological Regimes	Choose an item.	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 &	11.4.2 Droughts	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

	Hydrological Regimes						
11. Climate Change	11.5 Storms & Severe Weather	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to *Chalcosyrphus curvaria.*

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:

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

Suggested actions for habitat management should include maintaining standing old trees and course woody debris on the ground as breeding and larval sites. Maintaining a spring ephemeral understory, will benefit adults of this species. Limiting exposure of Yllow-haltered Leafwalker to insecticides would also benefit them. Suggested actions include avoidance of application to flowers that flies are attracted to and application of solutions or soluble powders (rather than dusts or wettable powders) to the ground in calm wind and warmer temperatures during periods of dewless nights to minimize the impact to resident native pollinator populations (Schweitzer et al. 2012).

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.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 2. Recommended conservation actions for *Chalcosyrphus curvaria*.

VII. References

This SSA drew heavily from these resources:

New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry. 2023. Element Occurrence and Element Dataset. Albany, New York. [Exported 12/14/2023].

NatureServe. 2023. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. http://www.natureserve.org/explorer. [Accessed 12/14/2023].

Additional references:

Gawler, S.C. 2008. Northeastern Terrestrial Wildlife Habitat Classification. NatureServe,Boston, MA.

iNaturalist. Available from https://www.inaturalist.org. Accessed January 9, 2025.

Meeus, I., M. J. F. Brown, D. C. De Graaf, and G. Smagghe. 2011. Effects of invasive parasites on bumble bee declines. Conservation Biology 25(4):662–671.

Miranda, G.F.G., A.D. Young, M.M. Locke, S.A. Marshall, J.H. Skevington, and F.C. Thompson. 2013. Key to the genera of nearctic Syrphidae. Canadian Journal of Arthropod Identification No. 23 (August, 2013). Available online: http://cjai.biologicalsurvey.ca/mylmst_23/mylmst_23.html

Northeast Fish and Wildlife Diversity. 2024. Regional Species of Greatest Conservation Need (2024). https://northeastwildlifediversity.org/rsgcn. Accessed January, 9, 2025.

Schweitzer, D.F., N.A. Capuano, B.E. Young and S.R. Colla. 2012. Conservation and management of North American bumble bees. NatureServe, Arlington, Virginia, and USDA Forest Service, Washington, D.C. 17 pp.

Skevington, J.H., M.M. Locke, A.D. Young, K. Moran, W.J. Crins, and S.A Marshally. 2019. Field guide to the flower flies of northeastern North America. Princeton University Press.

White, E.L., M. D. Schlesinger, and T.G. Howard. 2022. The Empire State Native Pollinator Survey (2017-2021). New York Natural Heritage Program, Albany, NY.

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