

Species Status Assessment

Common Name:	Constrained Cuckoo Carder Bee	Date Updated:	2025-01-09
Scientific Name:	<i>Stelis coarctatus</i>	Updated By:	Erin L. White
Class:	Insecta		
Family:	Megachilidae		

Species Synopsis

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

Constrained Cuckoo Carder Bee is known from Saskatchewan and the northern US eastward to the coast (Discover Life 2025, NatureServe 2025).

The species was ranked an S1 as part of the ESNPS (White et al. 2022) based on rarity, trend, and threat information. There are two historical records (1999 and earlier) from Greene and Rensselaer Counties (White et al. 2022) and an unverified record from Monroe County (DiscoverLife 2025). It has been recently documented in Franklin and Onondaga counties (iNaturalist 2024, White et al. 2022) and has likely always been rare in the state.

Habitat at the Franklin County location included Northern White Cedar Swamp and Mixed Hardwood Forest (White et al. 2022).

I. Status

a. Current legal protected Status

i. **Federal:** Not Listed

Candidate: No

ii. **New York:** Unprotected

b. Natural Heritage Program

i. **Global:** GNR

ii. **New York:** S1 **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 S1 as part of the ESNPS (White et al. 2022) based on rarity, trend, and threat information. There are two historical records (1999 and earlier) from Greene and Rensselaer Counties (White et al. 2022) and an unverified record from Monroe County (DiscoverLife 2025). It has been recently documented in Franklin and Onondaga counties (iNaturalist 2024, White et al. 2022) and has likely always been rare in the state.

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	-	-	-		
Massachusetts	No	-	-	-		
New Jersey	No	-	-	-		
Pennsylvania	Yes	Unknown	Unknown	Unknown	SNR	No
Vermont	Yes	Unknown	Unknown	Unknown	S1	No
Ontario	Yes	Unknown	Unknown	Unknown	SU	
Quebec	Yes	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):

There are two historical records (1999 and earlier) from Greene and Rensselaer Counties (White et al. 2022) and an unverified record from Monroe County (DiscoverLife 2025). It has been recently documented in Franklin and Onondaga counties (iNaturalist 2024, White et al. 2022) and has likely always been rare in the state.



Figure 1. *Stelis coarctatus* North American distribution (NatureServe 2025).

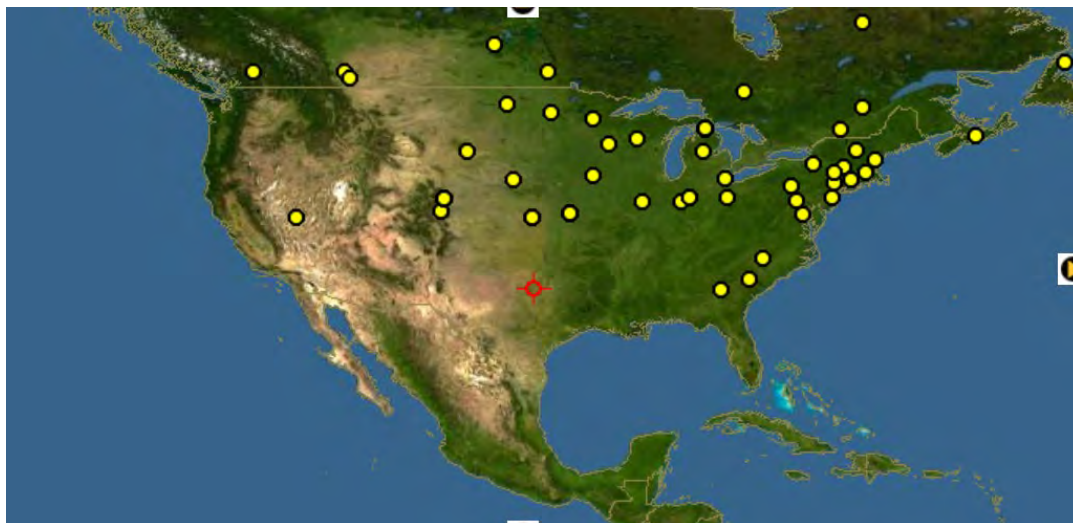


Figure 2. *Stelis coarctatus* distribution from Discover Life (2025).

III. New York Rarity

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

Years	Observations	# of Counties	% of counties in State
Pre-2000	2-3	2-3	3.2
2000-2023	2	2	3.2

Table 1. Number of observations of *Melitta eickworti* 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:

There are two historical records (1999 and earlier) from Greene and Rensselaer Counties (white et al. 2022) and an unverified record from Monroe County (DiscoverLife 2025).

There are recent (post-1999) records from Franklin and Onondaga counties in recent years (iNaturalist 2024, White et al. 2022).

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

Northern White Cedar Swamp

Mixed Hardwood Forest

Habitat or Community Type Trend in New York

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

Column options

Habitat Specialist and Indicator Species: Yes; No; Unkown; (blank) or Choose an item

Habitat/Community Trend: Declining; Stable; Increasing; Unkown; (blank) or Choose an item

Habitat Discussion:

Habitat at the Franklin County location included Northern White Cedar Swamp and Mixed Hardwood Forest (White et al. 2022).

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):

Recent NY observations have been in June and early July (iNaturalist 2025, White et al. 2022).

VI. Threats

Threats facing *Stelis coarctatus* and other stem-nesting bees include habitat loss from conversion of shrublands to agriculture, fire, logging and wood harvesting, invasive plants and pathogens, pesticides, and climate change (White et al. 2022). Kammerer et al. (2020) found that warmer winters will result in fewer bees and solitary bees are more sensitive to drought conditions, which are predicted in the Northeast as a result of climate change.

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
2. Agriculture & Aquaculture	2.1 Annual & Perennial Non-Timber Crops	(agricultural expansion/conversion of shrublands)	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.
7. Natural System Modifications	7.1 Fire & Fire Suppression	(fire)	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.
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	(warmer winters result in fewer bees)	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 (solitary bees more sensitive to drought)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to *Stelis coarctatus*.

Action Category	Action	Description
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.7.0.0.0 Legislative and regulatory framework or tools	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 *Melitta eickworti*.

VII. References

This SSA drew heavily from these resources:

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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:

DiscoverLife. 2025. Online. Available at: <http://www.discoverlife.org/> [Accessed January 9, 2025].

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

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Kammerer, M., Goslee, S.C., Douglas, M.R., Tooker, J.F. and Grozinger, C.M., 2021. Wild bees as winners and losers: Relative impacts of landscape composition, quality, and climate. *Global change biology*, 27(6), pp.1250-1265.

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.

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.

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

Wilson, J.S. and O.M. Carril. 2016. A guide to North America's bees: The bees in your backyard. Princeton University Press: Princeton and Oxford.

Originally prepared by	Erin L. White
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