Species Status Assessment

Common Name: Henry's elfin **Date Updated:** 02/21/2025

Scientific Name: *Callophrys henrici*

Updated By: NYSDEC Herp and Invertebrate Unit

Class: Insecta

Family: Lycaenidae

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

I. Status

a. Current legal protected Status

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

ii. **New York:** Special concern; HPSGCN

b. Natural Heritage Program

i. **Global:** G5

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

Other Ranks:
-IUCN Red List:

-Northeast Regional SGCN:

Status Discussion:
The status of this species is poorly known in New York. There are former records from the Albany Pine Bush from the late 1800s until the late 1970s, and one record from 1984, but there is little chance that a population of this species is there now, especially since this is not a pine barrens species and the actual location for the 1984 observation was not made in appropriate habitat. It was believed to be potentially extirpated from New York as of 2015 (New York State Wildlife Action Plan 2015). However, this species has since been recorded at 12 unique locations in northern New York since 2015 (NatureServe Explorer 2024). Thus, the species appears to be persisting in New York though there is not enough data available to accurately inform trends. It is likely that the historic status once believed was due to lack of observation, not lack of presence, and that its true presence has been overlooked (NatureServe Explorer 2024).

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Increasing	Increasing			-
Northeastern US	Yes	Increasing	Increasing			-

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
New York	Yes	Stable	Stable			
Connecticut	Yes	Unknown	Unknown		Special concern	Yes
Massachusetts	Yes	Increasing	Increasing			No
New Jersey	No data	Stable	Stable			No
Pennsylvania	No data	Stable	Stable			No
Vermont	No					
Ontario	Yes	Increasing	Increasing			
Quebec	No data	Unknown	Unknown			

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: none.

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

Both short-term and long-term trends are unknown though the species is present at several locations in central and northern New York (New York Natural Heritage Program 2025).

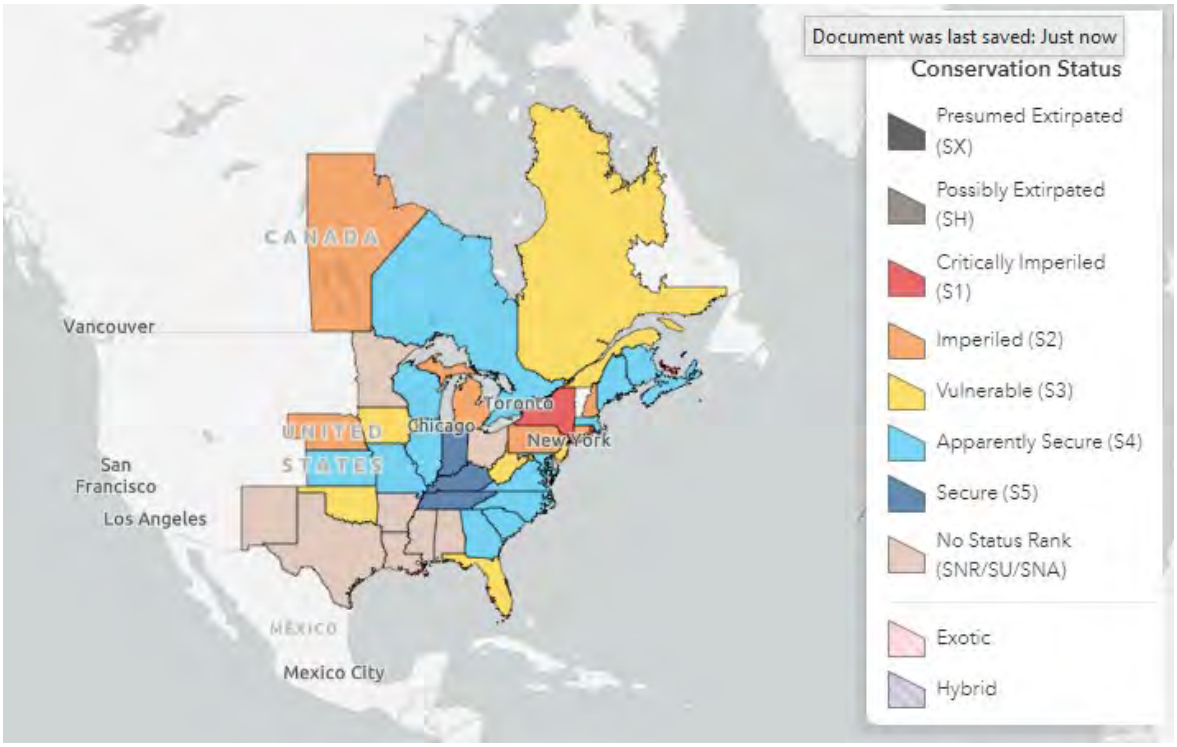

Figure 1. Conservation status of Henry's elfin in North America (NatureServe 2024).

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

Years	# of Records	# of Distinct Waterbodies/Locations	% of State
Pre-2000	1	1	0-5
2000- 2024	12	12	5-10

Table 1. Records of *Callophyrs Henrici* in New York.

Details of historic and current occurrence:

This species was recorded in Albany County in 1989. It was recorded by Tim McCabe in the Albany Pine Bush, Albany County in 2012 (Expert meeting). Since 2015, it has been recorded in iNaturalist by trusted sources in Jefferson, Oneida, St. Lawrence, and Franklin Counties (New York Natural Heritage Program 2025).

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	

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):*

Unknown in New York.

Habitat or Community Type Trend in New York

This species has been observed in sandy pine barrens, bogs and peatlands, and shrubby forests. As such, it is likely a habitat generalist, but more data is necessary to understand habitat preferences in New York.

Habitat Specialist?	Indicator Species?	Pollinator Species?	Habitat/ Community Trend	Time frame of Decline/Increase
Unknown	No	Choose an item.	Unknown	

Habitat Discussion:

Henry's elfin is demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery (Butterflies and Moths of North America 2012). Regional populations

vary on larval host plant preference, and as its preferred host plants in New York are yet unknown, it is difficult to assess this species' habitat preferences.

V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/ Catadromous?
Yes	(blank)	(blank)	Yes	(blank)	(blank)

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):*

Adults tend to perch one to several meters high on evergreen or recently expanded foliage. The location of egg deposition on plants varies with the plant species. On American holly (Ilex opaca), an egg is laid on the center of an old host leaf just before bud break, while on redbud (Cercis canadensis), eggs are laid on flowers and buds. Caterpillars eat buds and young leaves, and pupate in litter at the base of the host plant. Chrysalids overwinter (Butterflies and Moths 2012). Where redbud is the caterpillar host, its flowers are the main nectar supply for adults. In other places, flowers of plants that are not the caterpillar host are used for nectar including willows (Salix spp.), wild plum (Prunus Americana) and hawthorn (Crataegus spp.), and swamp privet (Forestiera spp.)(Butterflies and Moths 2012). The larval food plant in New York is not known. Blueberry (Vaccinium spp.) is often reported but has never been documented. Species in the holly family would be the most likely native food plants, but introduced buckthorns will probably eventually become the main food plants. There is only one brood range- wide. The flight season is poorly documented in New York, but is presumably most of May with a few stragglers into June, and probably starts at the end of April in some years southward. The larvae mature within a month unless the weather is still cold (NYNHP 2011).

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

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	(habitat loss/ degradation)	Unknown	Unknown	Unknown	Unknown	Unknown
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	8.1.1 Terrestrial animals (spongy moth outbreaks)	Unknown	Unknown	Unknown	Unknown	Unknown
7. Natural System Modifications	7.1 Fire & Fire Suppression		Unknown	Unknown	Unknown	Unknown	Unknown
7. Natural System Modifications	7.3 Other Ecosystem Modifications	7.3.2 Vegetation succession	Unknown	Unknown	Unknown	Unknown	Unknown

Table 2. Threats to Henry's elfin.

Next to habitat loss, spongy moth (*Lymantria dispar*) spraying is a potential threat, but the severity cannot be assessed. Prescribed burning is also a potential threat because the food plant is unknown, which makes it impossible to design prescribed burns appropriately for this species, leaving survival in locations such as the Albany Pine Bush largely to chance. Survival of pupae in the leaf litter during fire is unlikely. It is also possible that lack of fire could threaten the habitat. Mosquito and black fly spraying in wetlands could threaten bog or swamp populations of this species (NYNHP 2011).

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:

The management needs are unknown at this time since food plant is unknown and the habitat requirements are unclear in New York. It is known that the pupae reside in the leaf litter and are vulnerable to fires (NYNHP 2011).

The primary research need is to learn the food plants and habitats in New York in order to effectively inventory this species. Since the species has been recently documented in several counties of central and northern New York, particularly in coniferous wetlands, it is suggested that survey efforts be concentrated in those habitats.

Conservation actions following IUCN taxonomy are categorized in the table.

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct habitat management	
A.2 Direct Species Management	A.2.0.0.0 Direct species management	Invasive/Problematic species control
B.3 Outreach	B.3.1.4.0 Public outreach and information	Develop fact sheets and other materials to educate the public about at risk Lepidoptera
C.6 Design and Plan Conservation	C.6.0.0.0 Design and plan conservation	Site/Area Protection Resource/Habitat Protection

Action Category	Action	Description
C.7 Legislative and Regulatory Framework or Tools		Policies and Regulations
C.8 Research and Monitoring	C.8.1.1.0 Field research	Determine habitat needs of all life stages, ascertain food plants, and determine relationship between food availability and species numbers
C.8 Research and Monitoring	C.8.1.1.1 Characterization, demographic study, population, or inventory	Conduct inventory of species within historical range.
C.8 Research and Monitoring	C.8.1.1.1 Characterization, demographic study, population, or inventory	Statewide baseline survey
C.8 Research and Monitoring	C.8.1.1.1 Characterization, demographic study, population, or inventory	Investigate metapopulation dynamics
C.8 Research and Monitoring	C.8.1.1.1 Characterization, demographic study, population, or inventory	Conduct taxonomic research
C.8 Research and Monitoring	C.8.1.5.3 Analyzing threats or their impacts	Determine the effect of Bacillus thuringiensis kurstaki (BTK) used in spongy moth sprayings
C.8 Research and Monitoring	C.8.1.5.3 Analyzing threats or their impacts	Determine the actual sensitivity of species to chemical formulations, particularly diflubenzuron and other common agricultural pesticides
C.9 Education and Training	C.9.0.0.0 Education and Training	Training

Table 3. Recommended conservation actions for Henry's elfin.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for other butterflies, and for Henry's elfin in particular.

Fact sheet:
____ Develop fact sheets and other outreach material to educate the public about species at risk Lepidoptera.
Habitat management:
____ Determine best management regimes for species in each locality.
Habitat research:
____ Determine precise habitat needs of all life stages.

____ Ascertain food plants.
____ Determine the relationship between food availability and species numbers.

Invasive species control:

____ Identify species which impact negatively on butterfly populations.
____ Determine the best control method for those exotic species with minimal repercussions for butterfly populations.

Life history research:

____ Investigate the metapopulation dynamics of those species which appear to have distinct populations.
____ Establish the duration of all life stages.
____ Taxonomic research for related species.

Other action:

____ Determine the actual sensitivity of species to chemical formulations, particularly diflubenzuron and other commonly used agricultural pesticides.
____ Determine the effect of Bacillus thuringiensis kurstaki (BTK) used in spongy moth sprayings on various species.

Population monitoring:

____ Inventory of species within historical range.

Statewide baseline survey:

____ Survey all species to more adequately define the list of species that need to be addressed.

VII. References

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