

Species Status Assessment

Common Name: Gorgone checkerspot **Date Updated:** March 2025

Scientific Name: *Chlosyne gorgone* **Minor Edits By:** NYSDEC Wildlife Section

Class: Insecta

Family: Nymphalidae

Species Synopsis

The species ranges from Alberta east to southwest Manitoba and southern Ontario; south through the Great Plains to central New Mexico, central Texas, Louisiana, and central Georgia. Isolated populations occur in the Appalachians and the east slope of the Rocky Mountains (Butterflies and Moths of North America 2012).

The subspecies taxonomy of this species is uncertain. Klots (1951) and Gatrell (1998, 2001a) restricted the name, *Chlosyne gorgone*, to populations in the Georgia and South Carolina Sand Hills region. A western subspecies has been named *Chlosyne gorgone carlota*. Klots (1951) considered mountain populations in adjacent northern Georgia to be intergrades between the two subspecies. Newly discovered populations in the North Carolina mountains have been considered neither of these subspecies (Gatrell 2001). There is some doubt that the western Carolina and Georgia population cluster includes three subspecies. However, southeastern populations of this butterfly may or may not prove to be taxonomically distinct from what is now called *Chlosyne gorgone carlota* and within these there may be some clinal north to south variation. Even when taken together, the entire species is of conservation concern (Schweitzer and Wagner 2011).

DEC is not aware of any additional data or new information on population trends or threats to this species since the last SWAP revision in 2015. This species was listed as SPCN in 2015, but with the removal of this status in the 2025 revision it has been changed to SGCN.

I. Status

a. Current legal protected Status

i. **Federal:** Not listed **Candidate:** _____

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

b. Natural Heritage Program

i. **Global:** G5

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

Other Ranks:

-IUCN Red List: N/A

-Northeast Regional SGCN: N/A

Status Discussion:

The species range is widespread but in many areas, SNR unranked or not in review.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Unknown	Unknown			-
Northeastern US	Yes	Unknown	Unknown			-
New York	Yes	Unknown	Unknown			Yes
Connecticut	No	-	-			-
Massachusetts	No	-	-			-
New Jersey	No	-	-			-
Pennsylvania	No	-	-			-
Vermont	No	-	-			-
Ontario	No	-	-			-
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*):

None

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

Trend information for this species is unknown.

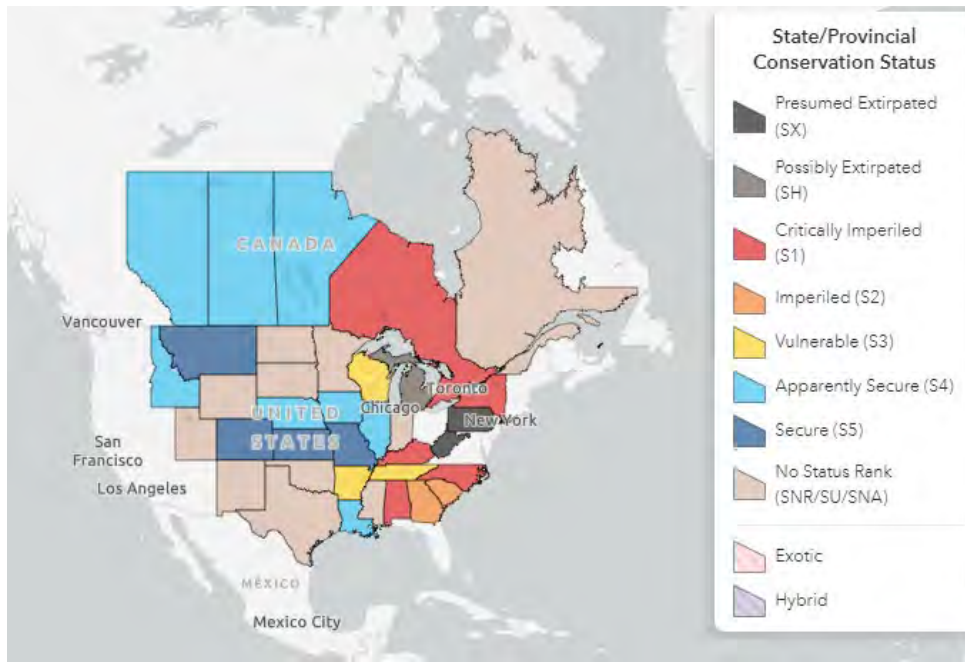


Figure 1. Conservation status of gorgone checkerspot in North America (NatureServe 2024).



Figure 2. Occurrence of the gorgone checkerspot in New York (New York Nature Explorer 2009).

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

Details of historic and current occurrence:

Lewis County- 1970

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	~1,500 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):

1. Oak-pine forest
2. Pine barrens
3. Plantation & disturbed land & pioneer forests
4. Powerline
5. Old field managed grasslands
6. Residential rural

Habitat or Community Type Trend in New York

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

Column options

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

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

Habitat Discussion:

Habitat includes prairies, old fields, oak-pine barrens and streamsides, open areas, roadsides, meadows, pastures, forest glades, prairies, and wastelands. This species also inhabits dry, jack-pine barrens where its larvae feed on sunflower (*Helianthus* sp.). More specific habitat needs include the presence of the host plant in oak openings, oak-pine barrens, pine barrens, mesic sand prairie, mesic prairie, hillside prairie, dry-mesic prairie, dry sand prairie (Michigan Natural Features Inventory 2007).

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):

No information is available on this species in New York. Midwestern populations have three or four broods. However, *Chlosyne gorgone gorgone*, in the strictest sense, has only one generation per year. Gatrell (1998) suggested that these Sand Hill populations become univoltine due to lack of nectar in the habitat for potential later broods, especially in June through July. Mouse-eared tickseed (*Coreopsis auriculata*) is the primary source of nectar in spring (Schweitzer and Wagner 2011).

A disjunct, now possibly extinct, population cluster of *Chlosyne nycteis*, from northern New Jersey, the New York City area, and Connecticut, which used the same food plant that *Chlosyne gorgone* uses in Georgia and South Carolina, was also univoltine. Populations of *Chlosyne nycteis* that use other food plants such as *Verbesina* species are bivoltine, so univoltinism may be an adaptation to the larval food plant (Schweitzer and Wagner 2011).

Males perch or patrol to find females. Females lay eggs in clusters on underside of host plant leaves. Caterpillars form groups while they feed on leaves, until they hibernate in the third stage. One brood occurs in the north from July-August, two broods in the central part of the range from May-September, and three broods in the south from April-September. Several plants in the Asteraceae family, including sunflower (*Helianthus*) and crosswort (*Lysimachia*), are used as caterpillar host plants. Adults feed on nectar, especially from yellow flowers (Butterflies and Moths of North America 2012).

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

Threats to this species are not very well known and include lack of scientific knowledge about this species and use of pesticides and herbicides. The greatest threat is from habitat destruction for agriculture, forestry, and development. Some habitats are fire-dependent, and too much or too little prescribed fire could eliminate the butterfly (Schweitzer and Wagner 2011).

The gorgon checkerspot 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 the abundance and/or range extent of the species within the geographical area assessed will change (increase/decrease) substantially by 2050. Actual range boundaries may change. For this species, the range may expand within the assessment area (Schlesinger et al. 2011).

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)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.1 Fire & Fire Suppression	-	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.

Table 2. Threats to *Chlosyne gorgone*.

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 sites at which this species has been documented should be protected and maintained. Adequate and suitable habitat at these sites needs to be maintained including sufficient densities of the species' host plants. Maintenance and long-term preservation of the extant sites and habitats with which this species is associated depends on the promotion of fire (or an equivalent anthropogenic disturbance) as the prime ecological process driving the persistence and establishment of these natural communities. Prescribed burning can be used as a management tool to try to re-establish or replicate natural fire regimes of these systems. In areas where this species or other rare invertebrates occur or are of management concern, burning strategies should allow for ample refugia (e.g., only burning part of the available habitat at a time, burn frequency and intensity, type of fire, etc.) to minimize incidental take or other potential adverse impacts and facilitate effective post-burn survival and/or re-colonization. Research to obtain additional information on this species' life history and ecology, especially regarding this species' host plant(s) in Michigan, and efforts to assess threats to this species also are warranted (Michigan Natural Features Inventory 2007).

The Michigan Natural Features Inventory (2007) recommends that the best way to survey for this species is by conducting visual meander surveys which consist of checking for this species near larval food plants, on adult nectar sources, and in mud puddles. Surveys are done visually or using an aerial net, from the fourth week of May to the second week of August.

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

Action Category	Action	Description
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.7 Legislative and Regulatory Framework or Tools	C.7.1.3.0 Create, amend, or influence regulation	
C.7 Legislative and Regulatory Framework or Tools	C.7.2.1.0 Create or amend policies	
C.9 Education and Training	C.9.2.0.0 Training and individual skill development	Training

Table 3. Recommended conservation actions for gorgone checkerspot.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for other butterflies, and for the gorgone checkerspot 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 Gypsy 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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