# Species Status Assessment

**Common Name:** A noctuid moth **Date Updated:** March 2025

**Scientific Name:** *Orthodes obscura* **Minor Edits By:** NYSDEC Wildlife Section

**Class:** Insecta

**Family:** Noctuidae

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

Information regarding the biology of *Orthodes obscura* is incomplete. In New York, two specimens were collected in 1996, within sandstone pavement barrens in the towns of Clayton and Lyme, Jefferson County (New York Natural Heritage Program 2013). Further research is needed to determine this species' distribution, habitat preferences, life history, and threats.

The species is currently known from two locations in Jefferson County (NYSDEC SGCN Experts Meeting).

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 to indicate a need for change in SGCN status.

## I. Status

### a. Current legal protected Status

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

ii. **New York:** Not listed

### b. Natural Heritage Program

i. **Global:** G5

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

**Other Ranks:**

-NYS 2025 SGCN Status: SGCN

-IUCN Red List: N/A

-Northeast Regional SGCN: N/A

**Status Discussion:**

This species could not be accurately ranked due to lack of information on its biology. Additional monitoring could discover new populations. This species is listed as critically imperiled in New York; apparently secure in Ontario, Canada; and has not been assessed in Alberta, Canada (NatureServe 2012).

## 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 | Stable | Stable | 2005 | | Yes |
| **Connecticut** | No | - | - | | | - |
| **Massachusetts** | No | - | - | | | - |
| **New Jersey** | No | - | - | | | - |
| **Pennsylvania** | No | - | - | | | - |
| **Vermont** | No | - | - | | | - |
| **Ontario** | No data | - | - | | | - |
| **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):*

Intermittent surveys have been conducted in pine barren communities of Long Island.

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

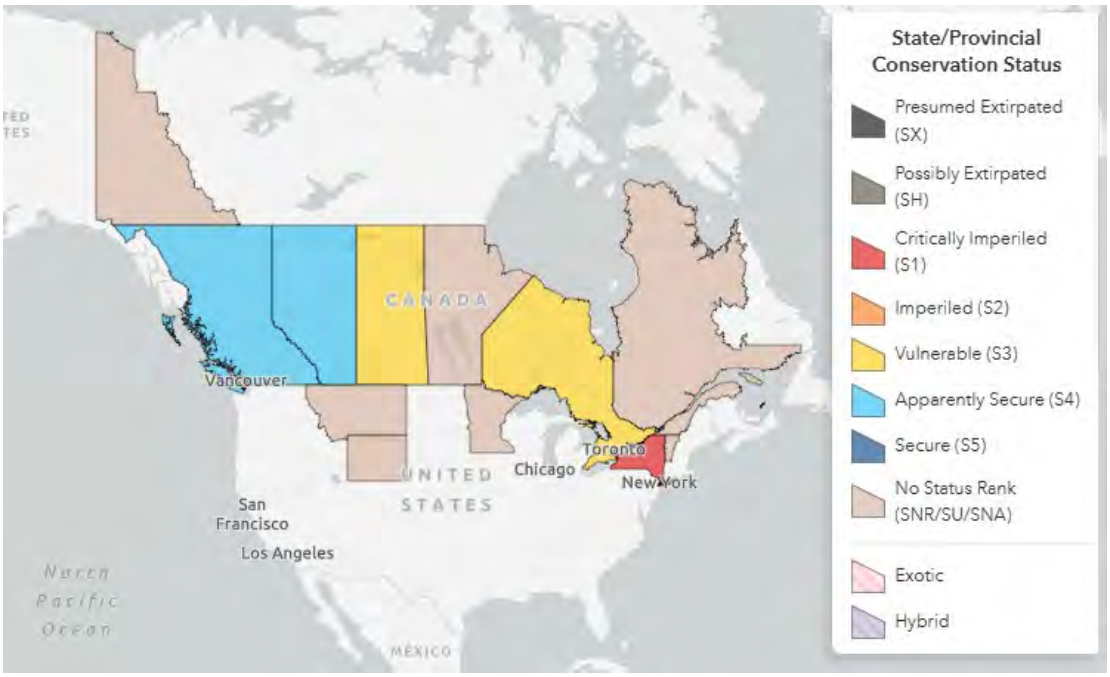


**Figure 1.** Conservation status of *Orthodes obscura* in North America (NatureServe 2024).

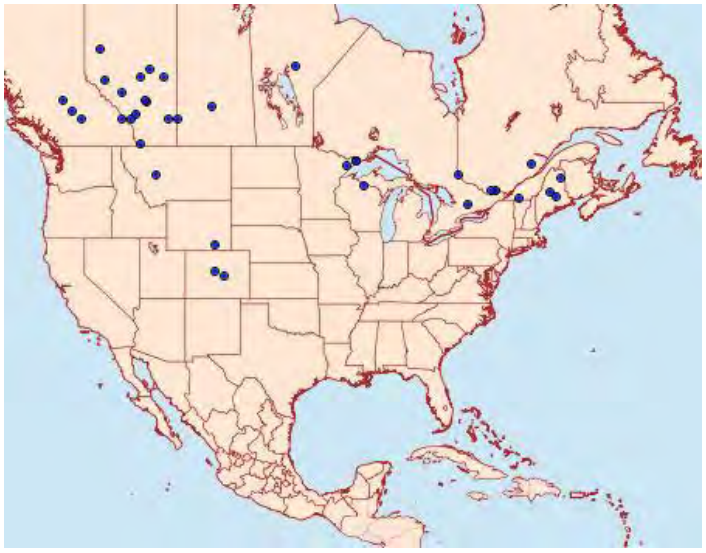

**Figure 2.** States and providences where specimens of *O. obscura* have been collected for museums and/or photographed. Some records may not be represented (North American Moth Photographers Group 2012).

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

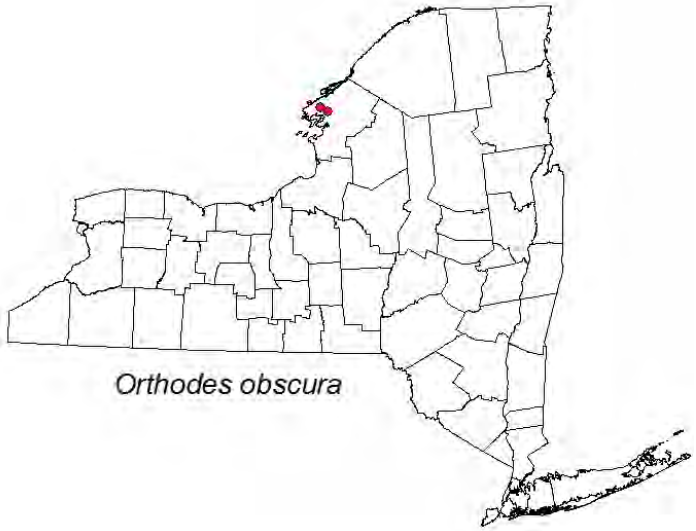


**Figure 3.** Occurrence locations of *Orthodes obscura* in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC.

### Details of historic and current occurrence:

There are no records of exact locations of occurrence for *O. obscura*; however, it historically inhabited the Northeastern Lake Ontario-St. Lawrence River Basin. This species historically inhabited the Upper Hudson River Valley and is now extirpated (NYSDEC 2005).

In 1996, this species was documented in Three Mile Creek Road Barrens and Chaumont Barrens Preserve, Jefferson County. (New York Natural Heritage Program 2013).

### 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):*

a. Erosional bluff

### Habitat or Community Type Trend in New York

| Habitat Specialist? | Indicator Species? | Pollinator Species? | Habitat/ Community Trend | Time frame of Decline/Increase |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Yes | No | Choose an item. | Unknown | |

*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:

Information regarding this species' preferred habitat is unknown. The two records of occurrence in New York were in limestone pavement barrens with exposed bedrock. The Chaumont Barrens Preserve location contains scrubby, open forest with sparse herb layers. Trees and shrubs included juniper (*Juniperus sp.)*, cedar and various deciduous species. The second location of occurrence was sparsely vegetated with 60-70% cover. Vegetation was predominantly shrubs including cedar, small birches (*Betula sp.*), *Cornus sp.* and juniper. The herb layer was mostly absent (New York Natural Heritage Program 2013).

## V. Species Demographic, and Life History:

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

*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):*

The biology of this species is unknown. Increased research is needed to better understand the life history and demographics of this species. Adult moths can be seen in early summer (North American Moth Photographers Group 2012).

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

Threats specific to this species have not been identified in the literature. General threats identified to affect moth species include habitat loss and degradation caused by development; habitat fragmentation; alteration of natural fire regimes; natural succession of shrubland, woodland, and barrens habitats; land clearing; coastal erosion; and sea level rise. Past use of chemical biocides to control gypsy moth and other pest insects continues to kill native Lepidoptera (Schweitzer 2004). Introduced parasitoid flies have been known to negatively affect native Lepidoptera (Boettner et al. 2000). Other threats may include invasive species, light pollution affecting reproductive success, over grazing of host plants by wild deer populations, and off-road vehicle use (NYSDEC 2005).

| Threat Level 1 | Threat Level 2 | Threat Level 3 | Spatial Extent | Severity | Immediacy | Trend | Certainty |
|---|---|---|---|---|---|---|---|
| 8. Invasive & Other Problematic Species | 8.1 Invasive Non-Native Plants & Animals | - | Choose an item. | Choose an item. | Choose an item. | Choose an item. | Choose an item. |

**Table 1.** Threats to *Orthodes obscura.*

**Are there regulatory mechanisms that protect the species or its habitat in New York?**

**Yes:** _____ **No:** _X_ **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:**

*Orthodes obsurca* was documented within Three Mile Creek Road Barrens and Chaumont Barrens Preserve. Both locations are owned by The Nature Conservancy, and are protected from future development.

| 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.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 | |

**Table 2.** Recommended conservation actions for *Orthodes obscura* (add more lines as needed).

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for other moths, and for *Orthodes obscura* in particular.

**Easement acquisition:**

____ Where appropriate, acquire easements to promote moth protection and conservation.

**Fact sheet:**

____ Create fact sheets covering moths.

**Habitat management:**

____ Determine best management regime for moth species, including fire and other forms of management.

**Habitat monitoring:**

____ Develop standardized measures of habitat parameters for each species of listed moth.

____ Investigate threats to food and host plants.

____ Monitor land development projects.

**Habitat research:**

____ Examine role of light pollution as threat to moths.

____ Determine host/ food plant.

**Life history research:**

____ Investigate the metapopulation dynamics of those species which warrant it.

____ Examine role of introduced parasites and predators in threats to moths.

**Other action:**

____ Develop standard definition of what is needed for "viable" populations of moths.

____ Research the role of pesticide use in threats to moths.

**Population monitoring:**

____ Inventory of species within historical range.

____ Develop standardized survey protocols for moths.

**Private fee acquisition:**

____ Where appropriate, encourage/assist private entities to acquire land for moth protection and conservation.

**State fee acquisition:**

____ Where appropriate, acquire land essential to moth protection and conservation.

**State land unit management plan:**

____ Incorporate needs of moths into state land management plans.

## VII. References


NatureServe. 2024. NatureServe Explorer. Page last published 11/1/24. https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.114364/Orthodes_obscura. Accessed December 6, 2024.

Last Name, First Name. Year. (Species) Status Assessment for the 2015 New York State Wildlife Action Plan. NYSDEC. Albany, New York.

Boettner, G.H., J.S. Elkington, and C.J. Boettner. 2000. Impacts of an introduced generalist parasitoid on three native species of saturniid moths. Conservation Biology 14: 1798–1806

New York Natural Heritage Program (NYNHP). 2013. Biodiversity database. Albany, New York. Accessed 27 February 2013.

New York State Department of Environmental Conservation. 2005. New York State Comprehensive Wildlife Conservation Strategy. http://www.dec.ny.gov/index.html.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University. <http://mothphotographersgroup.msstate.edu>. Accessed 27 February 2013.

Schweitzer, D.F. 2004. Gypsy Moth (*Lymantria dispar*): Impacts and Options for Biodiversity-Oriented Land Managers. NatureServe: Arlington, Virginia. 59 pp.

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| **Originally prepared by** | Shawn Ferdinand |
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| **First revision** | Samantha Hoff (February 10, 2014) |
| **Last revision** | |