Species Status Assessment

Common Name: Bird dropping moth **Date Updated:** January 18, 2024

Scientific Name: *Cerma cora* **Updated By:** Hollie Shaw

Class: Insecta

Family: Noctuidae

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

There are only two *Cerma* species in New York. *Cerma cora* (bird dropping moth) is rarely misidentified. Prior to 2000, the only known extant occurrence in New York was in the Albany Pine Bush with possibly extirpated populations in Ithaca and Horseheads (NYNHP 2024b). Since 2000, this species was rediscovered in Ithaca (iNaturalist 2024) and there are newly discovered locations in 13 counties at approximately 14 sites (iNaturalist 2024, NYNHP 2024a).

The range is from southern Canada south to Florida and Texas, but it is absent in large parts of this area (e.g., apparently Rhode Island, Connecticut, New Jersey, Delaware, Maryland, most of Ohio (one pre-1900 occurrence) and most or all of West Virginia and Virginia). It is also absent, especially northward, from the majority of seemingly suitable habitats even in states where it is present. In addition, most states with known localities have very few populations. Several states most likely have five or less known recent occurrences (NYNHP 2024). However, there are currently approximately 14 known locations in New York in 13 counties (iNaturalist 2024, NYNHP 2024a). It seems possible that additional populations are in the state.

I. Status

a. Current legal protected Status

i. **Federal:** not listed **Candidate:** no

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

b. Natural Heritage Program

i. **Global:** G3G4

ii. **New York:** S1S2 **Tracked by NYNHP?:** Yes

Other Ranks:

-IUCN Red List: not listed

-Northeast Regional SGCN: watchlist (assessment priority)

Status Discussion:

NatureServe (2024) states that the global status needs to be reviewed.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Unknown	Unknown		Not listed	-
Northeastern US	Yes	Increasing	Increasing	Post-2000 (iNaturalist 2024)	Watch list	No
New York	Yes	Increasing	Increasing	2003-2023	Not listed, SGCN	Yes
Connecticut	No	-	-			-
Massachusetts	Yes	Increasing	Increasing	2014-2022 (Mass Moths 2024)	Current Heritage Rank is Historical. Mass Moths (2024) reports extant populations.	No
New Jersey	Yes	Unknown	Unknown		Not listed, SGCN	Yes
Pennsylvania	Yes	Unknown	Unknown			No
Vermont	No	-	-			-
Ontario	Yes	Unknown	Unknown		Not listed	-
Quebec	Yes	Unknown	Unknown		Not listed	-

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):*

Bird dropping moth is not monitored and there are no known regular surveys.

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

Bird dropping moths have been found in several more counties in the state indicating an increase in distribution and population (iNaturalist 2024, NYNHP 2024a). According to Mass Moths (2024), this species has also been rediscovered in Massachusetts.

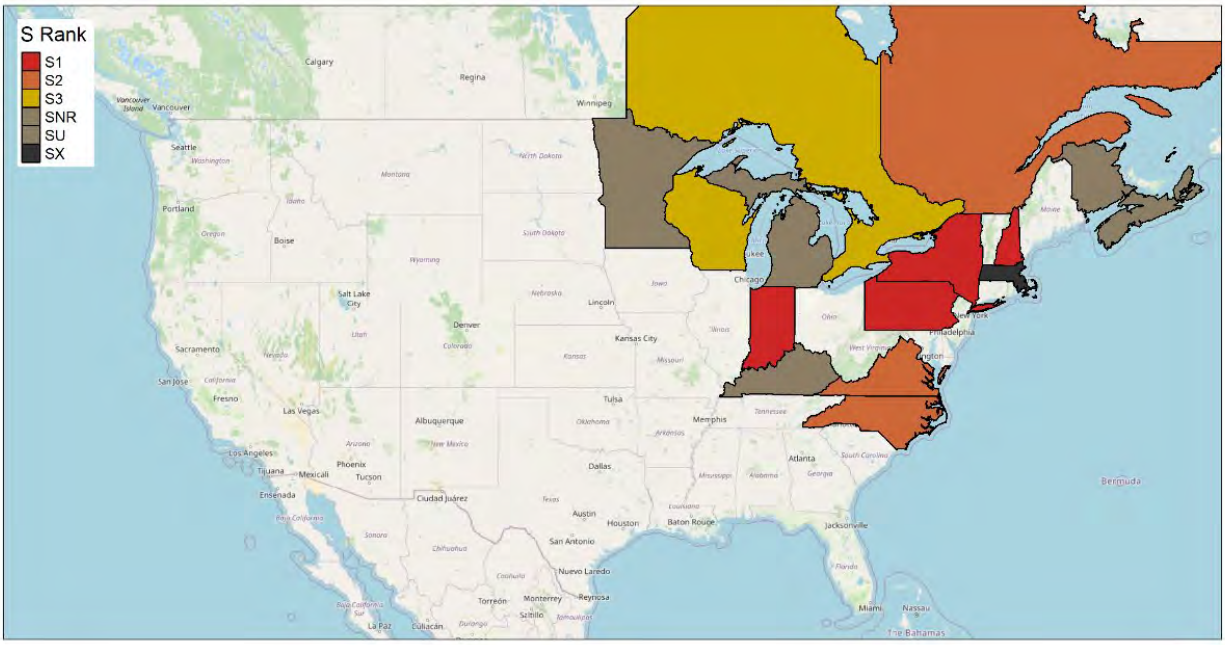

Figure 1. *Cerma cora* distribution and/or status
(Distribution may not be complete. Source: NatureServe 2024)

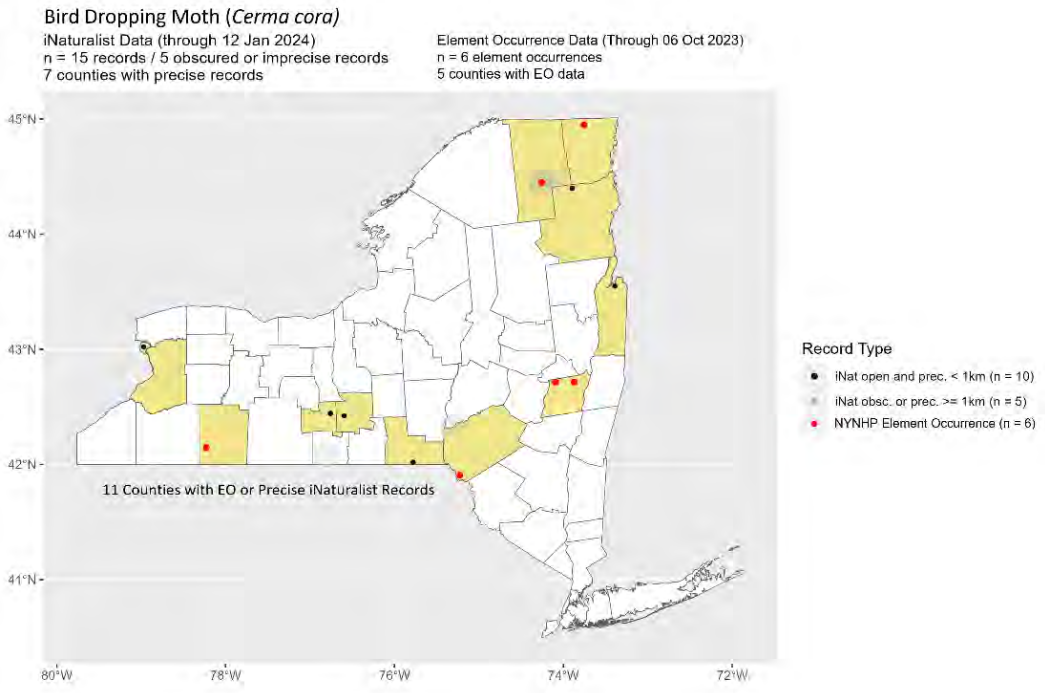

Figure 2. *Cerma cora* distribution (iNaturalist 2024, NYNHP 2024a)

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

Years	# of Records	# of Counties	% of State
Pre-2000	3	3	10-15%
2000- 2023	14	13	30-35%

Table 1. Records of *Cerma cora* in New York.

Details of historic and current occurrence:

Prior to 2000, there was one known extant occurrence from the Albany Pine Bush with observations from 1982 to 1990 (NYNHP 2024a). The populations from Horseheads and Ithaca were considered extirpated (NYNHP 2004b). Between 2003 and 2023, 14 new locations were found in 13 counties (iNaturalist 2024, NYNHP 2024a).

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%	Core	

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 Forest/Pine Barrens
2. Mixed Northern Hardwoods
3. Mixed Hardwood Swamp

Habitat or Community Type Trend in New York

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

This species is typically found in dry, sandy habitats including pine barrens and pavement barrens. In Florida, it has been found in hardwood wetlands and xeric pinelands. The known larval foodplant in the northern range is fire cherry (P*runus pennsylvanica*) but hawthorn species have been used in the southern part of its range (Schweitzer et al. 2018). It is possible that multiple species in the Rosaceae family serve as larval hosts.

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):*

Bird dropping moth adults are found late May through July with most observations in July in New York. There is one brood annually. Larvae eat new growth of fire cherry in the northern portion of the range. They are typically mature by July or August. The pupae overwinter in an excavated hole in the soft, dead wood of a tree (Wagner 2007, as cited in Schweitzer et al. 2018). While they do not accept the common wild black cherry (*Prunus serotina*), it is possible that other species of native cherries, plums, or hawthorns (*Crataegus* spp.) are also used. The adults are nocturnal and attracted to lights (NYNHP 2024b).

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

Besides habitat destruction from development, threats could include either too much or too little fire. There is no life stage occurring underground for this species making it susceptible to fire. In addition, it may take several years after a fire for the larval foodplant to be acceptable for this species (Schweitzer et al. 2018).

Spongy moth (*Lymantria dispar*) spraying with chemical biocides is a threat. The use of the bacterial biological agent Bt (*Bacillus thuringiensis*) on spongy moth caterpillars may also pose a threat but this isn't certain. Deer could be a significant threat if they browse on the sprouts of the foodplant, especially after after fires (New York Natural Heritage Program 2024b).
Mechanical removal of understory shrubs or chemical herbicides in occupied habitat is a threat (Schweitzer et al. 2018).

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
2. Agriculture & Aquaculture	7.1 Fire & Fire Suppression	7.1.2 Suppression in the fire regime	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to *Cerma cora*.

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

Yes: _____ **No:** _____ **Unknown:** ü

If yes, describe mechanism and whether adequate to protect species/habitat:

Some locations are on protected land, but most are on private land. It is not known if management practices on these lands are compatible with this species.

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

The precise needs of this moth are not well known. Monitoring is needed in New York. The species pupates in dead wood, where it is vulnerable to fire during most of the year (Schweitzer et al. 2018), however the habitat needs occasional fires to persist. The effects of prescribed burning on this species need to be evaluated to determine the best management practices in barrens habitats. Research issues include examining the suitability of pupation sites after fires, whether the species will quickly re-colonize foodplant sprouts after fires and, if not, how long does it take for the habitat to become suitable again (New York Natural Heritage Program 2024b). Mechanical removal and chemical treatment of the understory is not advised in occupied habitat (Schweitzer et al. 2018).

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct Habitat Management	Site Management
A.2 Direct Species Management	A.2.0.0.0 Direct Species Management	Invasive/problematic species control
B.3 Outreach	B.3.0.0.0 Outreach	Awareness and Communications
C.6 Design and Plan Conservation	C.6.0.0.0 Design and Plan Conservation	Site/Area Protection
C.6 Design and Plan Conservation	C.6.0.0.0 Design and Plan Conservation	Resource/Habitat Protection
C.7 Legislative and Regulatory Framework or Tools	C.7.0.0.0 Legislative and Regulatory Framework or Tools	Policies and Regulations

Table 3. Recommended conservation actions for *Cerma cora*.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for moths.

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

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