Species Status Assessment

Common Name: Discoid Long-horned Beetle **Date Updated:** 2024-12-20

Scientific Name: *Acmaeops discoideus* **Updated By:** M. Schlesinger

Class: Insecta

Family: Cerambycidae

Species Synopsis

Other than its extreme rarity, little is known about this beetle. It was detected in just a single county (Albany) in the 2017-2020 Empire State Native Pollinator Survey, but was known from four counties historically, including Long Island. Surveys by DEC's Forest Health Research Lab for southern pine beetle using Lindgren funnel traps catch 1-2 beetles per year at the Albany Pine Bush, but nowhere else in the state (L. Somers, personal communication).

I. Status

a. Current legal protected Status

i. Federal: **Candidate:**

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:

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Unknown	Unknown	Unknown		

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
Northeastern US	Yes	Unknown	Unknown	Unknown		
New York	Yes	Unknown	Unknown	Unknown	S1	
Connecticut	Unknown	-	-	-		
Massachusetts	Unknown	-	-	-		
New Jersey	Unknown	-	-	-		
Pennsylvania	Unknown	-	-	-		
Vermont	Unknown	-	-	-		
Ontario	Unknown	-	-	-		
Quebec	Unknown	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

DEC's Forest Health Research Lab conducts funnel trap surveys around the state targeting southern pine beetle that have detected this species at the Albany Pine Bush.

Trends Discussion

Figure 1. Conservation status of *Acmaeops discoideus* in North America (NatureServe 2025).

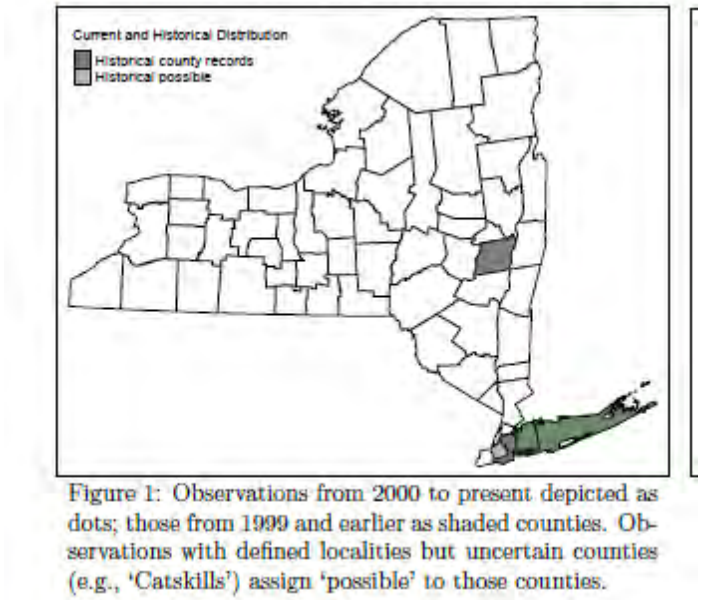

Figure 1: Observations from 2000 to present depicted as dots; those from 1999 and earlier as shaded counties. Observations with defined localities but uncertain counties (e.g., 'Catskills') assign 'possible' to those counties.

Figure 2. County records over time for *Acmaeops discoidus* from the Empire State Native Pollinator Survey.

There are historical records for three of four counties on Long Island, and records for "Long Island" could apply to any of the four LI counties (Kings, Queens, Nassau, Suffolk). This species has not been documented in recent years on Long Island, like many other apparent pine barrens specialists.

Years	Observations	# of Counties	% of counties in State
Pre-2000	10	4	6.5
2000-2023	2	1	1.6

Table 1. Number of observations of *Acmaeops discoideus* 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.

III. New York State Rarity

Details of historic and current occurrence:

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Unknown	Unknown

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):

Likely habitats based on current and historical occurrences:

a. Pine Barrens
b. Coastal Coniferous Barrens

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/ Increase
Yes	Unknown	Declining	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:

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):

VI. Threats

Very little is known about this species. Threats facing saproxylic beetles in general include habitat loss and degradation, invasive plants and pathogens, pesticides, and climate change (White et al. 2022). Habitat shifting and alteration, droughts, and more frequent severe weather events due to climate change is expected to impact saproxylic beetles. Pine barrens specialists like A. discoideus are often threatened by fire suppression.

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

Table 2. Threats to *Acmaeops discoideus*.

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
7. Natural System Modifications	7.1 Fire & Fire Suppression	7.1.2 Suppression in the fire regime	Unknown	Unknown	Unknown	Unknown	Unknown

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:

Table 3. Recommended conservation actions for *Acmaeops discoideus*.

Action Category	Action	Description
C.8 Research and Monitoring	Inventory	Monitoring of existing populations and continued surveys for others.
C.8 Research and Monitoring	Habitat associations	Determine habitat needs of larval beetles.

VII. References

This SSA drew heavily from these resources:

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:

NatureServe. 2025. NatureServe Explorer. Page last published 1/31/25. https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.808680/Acmaeops_discoideus. Accessed February 21, 2025.

White, E., M. Schlesinger, and T. Howard. 2022. The Empire State Native Pollinator Survey 2017 - 2021. New York Natural Heritage Program. 1–78 pages. https://www.nynhp.org/documents/178/ESNPS_Final_Report_30June2022.pdf.

Originally prepared by	Matthew Schlesinger
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