

# Species Status Assessment

**Common Name:** Cyrano darner

**Date Updated:** April 2025

**Scientific Name:** *Nasiaeschna pentacantha*

**Minor Edits By:** NYSDEC

Wildlife Section

**Class:** Insecta

**Family:** Aeshnidae

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

This large dragonfly is the only member of its genus in North America and although it is very rare in New York, it is a habitat generalist. It can be found in both lentic and lotic habitats including slow swampy rivers, acidic peatlands and well vegetated ponds. In New York nearly the entire range in the southeastern part of the state appears to have become uninhabited in favor of locales further to the north. Although it appears to be faring well coast-ward in other eastern states, it appears to have declined precipitously in New York including formerly occupied coastal areas, including Long Island.

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:** S2S3 **Tracked by NYNHP?:** No

### **Other Ranks:**

-NYS 2025 SGCN Status: SGCN

-IUCN Red List: Least Concern

-Northeast Regional SGCN: Not listed

### **Status Discussion:**

Although this darner seems to be faring well in the northeastern US and Canada, its status in New York seems to have declined abruptly post-NYDDS. Many fewer inhabited counties were located compared to historical records and its S rank was revised lower post- NYDDS. Only five site records were found between 2005-2009 (White *et al.*, 2010).

## II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Unknown	Unknown			-
Northeastern US	Yes	Unknown	Increasing	Pre-post 2000		-
New York	Yes	Unknown	Declining	Pre-NYDDS to 2005-2009 (White et al., 2010)		Yes
Connecticut	Yes	Unknown	Stable	Since mid 1990s		-
Massachusetts	Yes	Unknown	Unknown			-
New Jersey	Yes	Unknown	Stable	2000s		-
Pennsylvania	Yes	Unknown	Unknown			Yes
Vermont	Yes	Unknown	Unknown			Yes
Ontario	Yes	Unknown	Unknown			-
Quebec	Yes	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

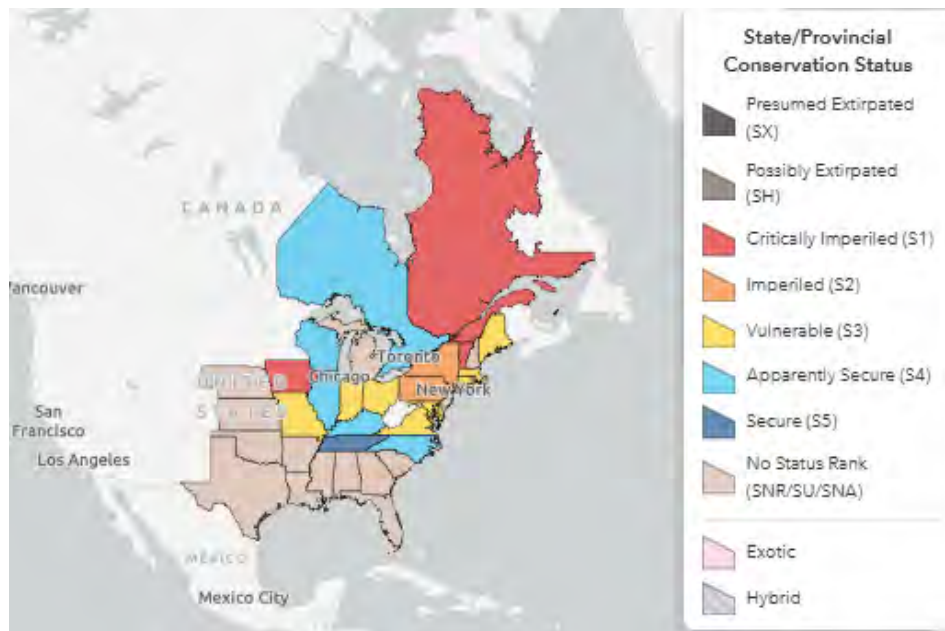
**SGCN?:** Yes; No; Unknown; (blank) or Choose an item

### **Monitoring in New York** (*specify any monitoring activities or regular surveys that are conducted in New York*):

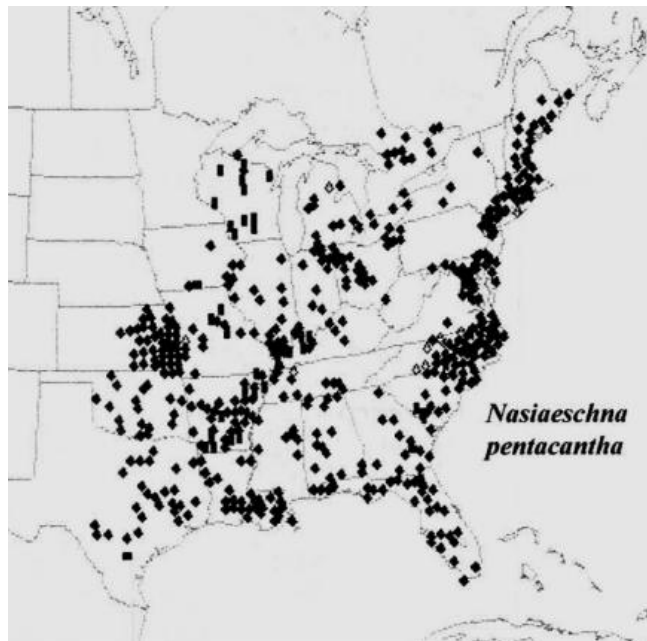
The New York State Dragonfly and Damselfly Survey (NYSDDS) was conducted from 2005-2009 but there are no organized, regular monitoring or survey activities directed toward this species or to sites where it has been documented.

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

Unlike in New York, plenty of new records of this species were discovered during the recent New Hampshire and Maine odonate Atlases (Brunelle and DeMayanadier, 2005; Hunt, 2012). This very large distinctive dragonfly is not likely to be overlooked, although there is some evidence that while the adults are difficult to find, the exuviae can be surprisingly widespread (Pollard and Berrill, 1992).



**Figure 1.** Conservation status of *Nasiaeschna pentacantha* in North America.



**Figure 2.** Distribution of the Cyrano damer in the United States and Canada (Donnelly 2004).

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

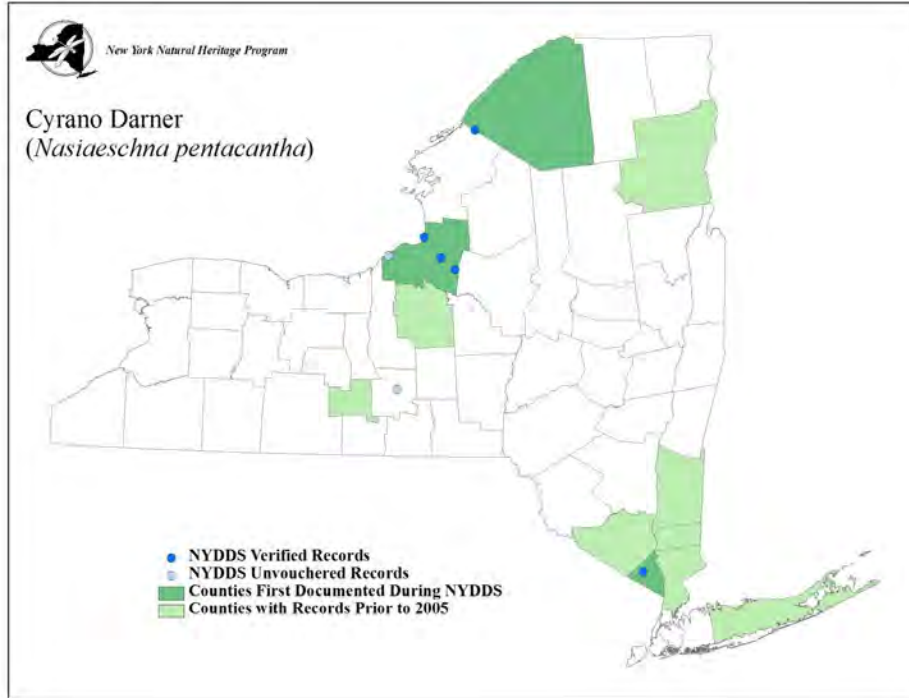


Figure 3. Occurrence records of the Cyrano darner in New York (White *et al.* 2010).

**Details of historic and current occurrence:**

Historically this dragonfly was fairly widely distributed from central NYS eastward, with a cluster of occurrences in extreme southeastern NYS and Long Island.

NYDDS data show that besides one record in Rockland County, *N. pentacantha* has virtually disappeared from the southern half of NYS where it was historically contiguous with robust gulf and Atlantic coastal populations in the eastern US. However, there were only five individual site records for this species during NYDDS, most of which were in Oswego County (White *et al.*, 2010).

**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	Hundreds miles

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. Boreal Forested Peatland

**Habitat or Community Type Trend in New York**

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

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 appears to be a habitat generalist, having been found in both lentic and lotic habitats during NYDDS. Habitat associations are unclear since populations were located in a heavily vegetated pond, a slow river/swamp, and a shrub bog.

**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):

Very little known, a little- studied species. There is some evidence that while the adults are difficult to find, the exuviae can be surprisingly widespread (Pollard and Berrill, 1992).

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

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
5. Biological Resource Use	5.3 Logging & Wood Harvesting	(siltation of streams)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.3 Other Ecosystem Modifications	7.3.2 Vegetation succession	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.3 Changes in Temperature Regimes	(temperature extremes)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.4 Changes in Precipitation & Hydrological Regimes	11.4.2 Droughts	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

**Table 1.** Threats to *Nasiaeschna pentacantha*

Little published information is available citing specific cases of negative impacts to bog/fen odonates, but any activities which degrade the sensitive hydrology of these habitats would threaten populations of these species. Examples include peat mining, ditching, filling, eutrophication and changes in dissolved oxygen content, direct effects of pesticides (e.g. for mosquito control or from agricultural runoff), and increases in the sediment load of the wetland (such as might result should logging occur down to the wetland edge). Natural succession could also threaten some sites as shallow pools fill in with vegetation over time (Novak 2006).

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

Yes:   X                        No:                             Unknown:       

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

Article 15 of Environmental Conservation Law provides protection of rivers, streams, lakes and ponds through the Protection of Waters permit program. This is not adequate to protect the habitat/species.

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

Any measures to reduce water contamination or hydrological alteration such as agricultural run-off, upland development, and damming that would affect flow of small forested streams should be considered when managing for this species (New York Natural Heritage Program 2011).

Action Category	Action	Description
B.3 Outreach	B.3.1.4.0 Public outreach and information	Awareness & Communications
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 2.** Recommended conservation actions for *Nasiaeschna pentacantha*.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for odonates of rivers and streams.

**Habitat monitoring:**

\* Support and encourage habitat monitoring efforts that would complete the baseline assessment of habitat quality and threats.

**Habitat research:**

\* Support and encourage research projects that will help define preferred habitat in order to guide future monitoring, restoration and habitat protection efforts.

**New regulation:**

\* Recommendations for official state endangered, threatened, and special concern listing are an anticipated result of the statewide inventory. It is expected that at least a few species will be recommended for listing and officially adding these species to the list would constitute a concrete action. Four of the species are currently listed as Special Concern, but it is possible a change in their listing status may be warranted following additional surveys.

**Population monitoring:**

\* Conduct surveys to obtain repeatable, relative abundance estimates for these species at known sites and newly discovered sites where access permission to conduct surveys is obtained (as indicated in the State Wildlife Grant Odonate Inventory Project). Maintain existing populations and, if needed and possible, establish or restore additional populations, to ensure the long-term persistence of these species in New York State.

## VII. References

- Brunelle, P.-M. and P. G. deMaynadier. 2005. The Maine damselfly and dragonfly survey. A final report. A report prepared for Maine Department of Inland Fisheries and Wildlife(MDIFW).
- Hunt, P.D. 2012. The New Hampshire Dragonfly survey: a final report. New Hampshire Audubon, Concord.
- NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <<http://www.natureserve.org/explorer>>. Accessed 23 October 2013.
- New York State Department of Environmental Conservation. (2006). *New York State Comprehensive Wildlife Conservation Strategy*. Albany, NY: New York State Department of Environmental Conservation.
- Pollard, J.B., and M. Berrill. 1992. The distribution of dragonfly nymphs across a pH gradient in south-central Ontario lakes. *Canadian Journal of Zoology* 70:878-885.
- White, Erin L., Jeffrey D. Corser, and Matthew D. Schlesinger. 2010. The New York dragonfly and damselfly survey 2005-2009: Distribution and status of the odonates of New York. New York Natural Heritage Program, Albany, New York.
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- NatureServe. 2025. NatureServe Explorer. Page last published 2/28/25. [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.110359/Nasiaeschna\\_pentacantha](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.110359/Nasiaeschna_pentacantha). Accessed April 1, 2025.

Corser, Jeffrey. 2013. *Nasiaeschna pentacantha* Status Assessment for the 2015 New York State Wildlife Action Plan. NYSDEC. Albany, New York.

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