

Species Status Assessment

Common Name: Blue Corporal **Date Updated:** 2025-03-02
Scientific Name: *Ladona deplanata* **Updated By:** Erin L. White
Class: Insecta
Family: Libellulidae

Species Synopsis

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

Blue Corporal is known from Texas east to Florida and northward to New York and New Hampshire (NatureServe 2025).

Recent survey efforts have expanded the known range of this species into five counties in southern NY and Long Island and the trend is likely increasing in NY since 2005. The number of records since 2005 could be partially indicative of increased survey efforts and increased use of iNaturalist (iNaturalist 2025, White *et al.* 2010). White *et al.* (2010) calculated a revised draft S-rank of S2S3 from S4. Assuming iNaturalist records are confirmed, the rank remains an S2S3.

The species is known from coastal plain ponds, peatlands, as well as lake and pond shorelines in the Northeast (White *et al.* 2015).

I. Status

a. Current legal protected Status

i. Federal: Not Listed **Candidate: No**
ii. New York: Unprotected

b. Natural Heritage Program

i. Global: G5
ii. New York: S2S3 **Tracked by NYNHP?** On Active Tracking List

Other Ranks:

NYS 2025 SGCN Status: Species of Greatest Conservation Need

COSEWIC: Not listed in Canada

IUCN Red List: Least Concern

Northeast Regional SGCN: Not Listed; R4 vulnerability, shared responsibility

Status Discussion:

White *et al.* (2010) calculated a revised draft S-rank of S2S3 from S4. Assuming iNaturalist records are confirmed, the rank remains an S2S3.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Unknown	Unknown	Unknown		
Northeastern US	Yes	Unknown	Unknown	Unknown		
New York	Yes	Unknown	Unknown	Unknown	S2S3	No
Connecticut	Yes	Unknown	Unknown	Unknown	S2	Yes
Massachusetts	Yes	Unknown	Unknown	Unknown	S3	No
New Jersey	Yes	Unknown	Unknown	Unknown	S4	No
Pennsylvania	Yes	Unknown	Unknown	Unknown	S3	Yes
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):

The New York State Dragonfly and Damselfly Survey (NYDDS) 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

Recent survey efforts have expanded the known range of this species into five counties in southern NY and Long Island and the trend is likely increasing in NY since 2005. The number of records since 2005 could be partially indicative of increased survey efforts and increased use of iNaturalist (iNaturalist 2025, White *et al.* 2010).

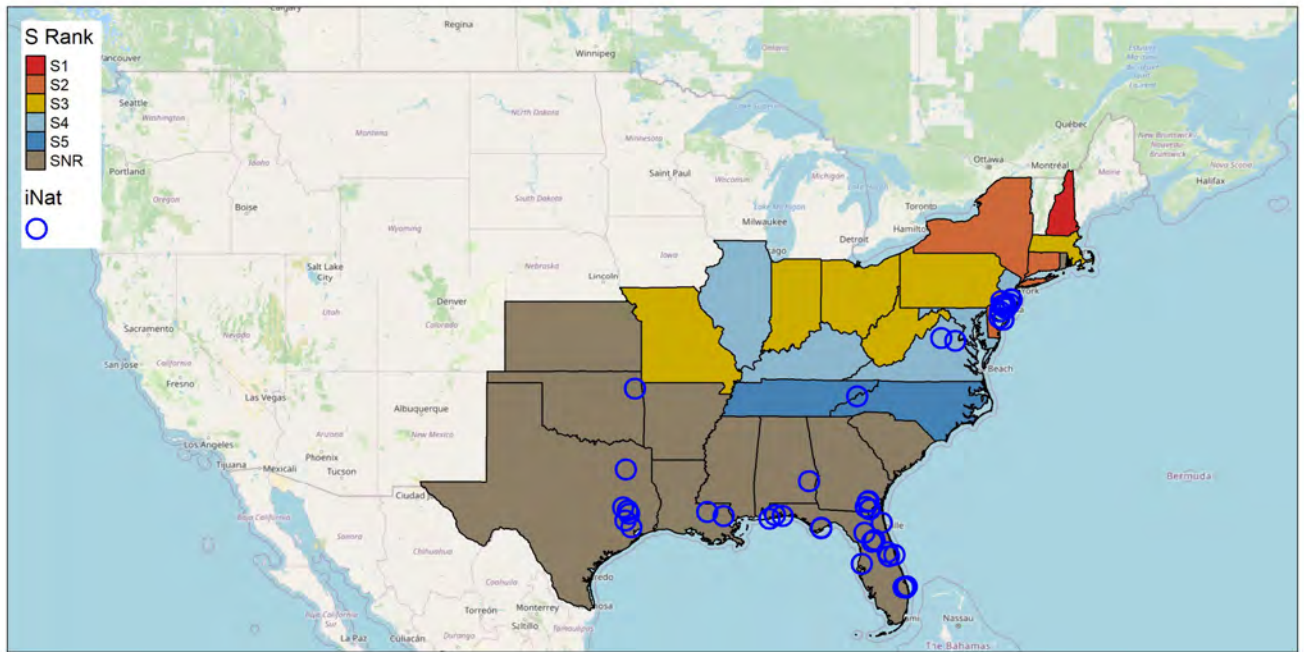


Figure 11: *Ladona deplanata* North American distribution. Points show research-grade iNaturalist observations.



Figure 22: *Ladona deplanata* regional distribution as reported at <https://northeastwildlifediversity.org/rsgcn> and found in a regional odonate project.

III. New York Rarity

(provide map, numbers, and percent of state occupied)

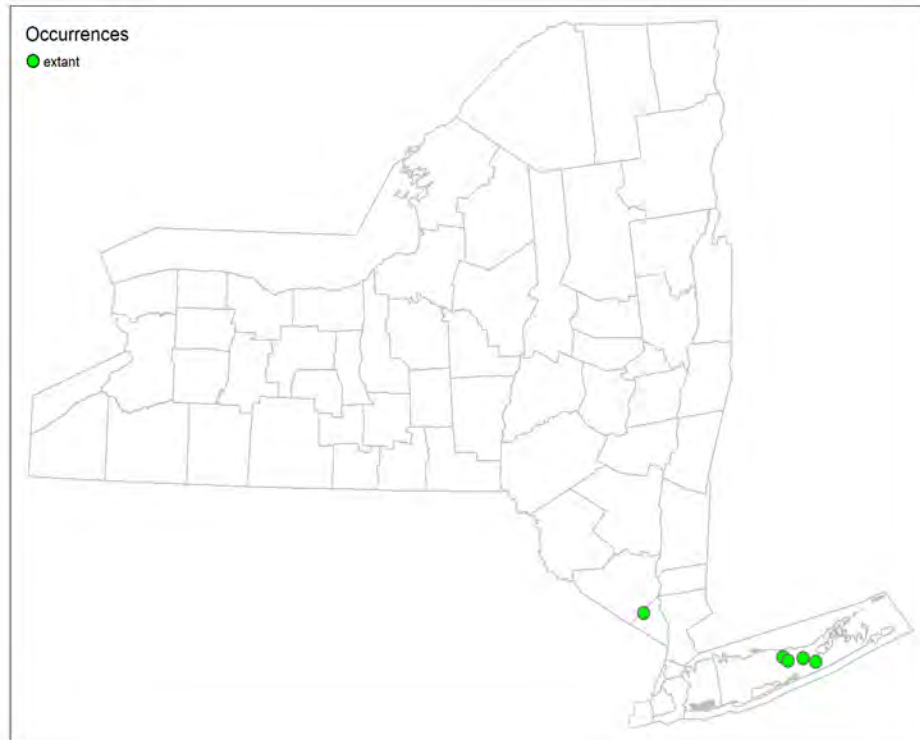


Figure 33: NYS distribution for *Ladona deplanata* based on element occurrence data.

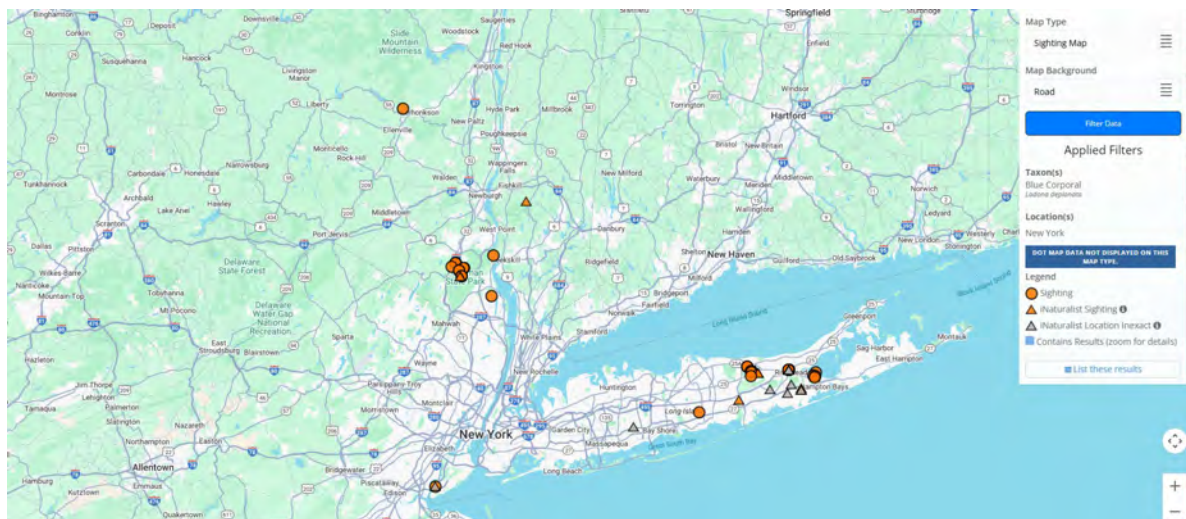


Figure 44: NYS distribution for *Ladona deplanata* based on Odonata Central (Abbott 2025).

Table 1. Number of observations of *Ladona deplanata* 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.

Years	Observations	# of Counties	% of counties in State
pre-2005	4	2	3.2
2005-2009	22	3	4.8
2010-present	~30	5	8.1

Details of historic and current occurrence:

Blue Corporal is historically known (pre 2005) from Orange and Suffolk Counties and was observed in these counties as well as Rockland during the NYDDS (White et al. 2010). Since 2010, it has also been observed in Richmond and Putnam counties in addition to observations in the same counties (iNaturalist 2025). Known sites near Brookhaven and the Sears Bellows wetlands in Suffolk county continue to hold populations as well as several new locations (Abbott 2025, iNaturalist 2025) and there are recent observations from Lily Pond in Rockland county. As there were 96 research grade records on iNaturalist, I assumed these were valid records if they were labeled research grade, as I did not look at photos. Any number of these may not be confirmed records, though I know several of the observers and many are likely valid, especially from previously known counties. I estimate there are about 30 extant EOs.

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	~1500 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):

- 3. Very Cold, Oligo-Mesotrophic, Acidic
- 14. Warm to Cool, Oligo-Mesotrophic, Circumneutral
- 15. Warm to Cool, Oligo-Mesotrophic, Acidic
- 17. Warm to Cool, Eutrophic, Circumneutral

Habitat or Community Type Trend in New York

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

The species is known from coastal plain ponds, peatlands, as well as lake and pond shorelines in the Northeast (White et al. 2015).

IUCN habitat description: *Ladona deplanata* occurs at lakes, ponds, slow streams, and ditches with wooded or open borders and at least some mud. Common at nutrient-poor glacial lakes and ponds. Adults go to woodland to mature.

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):

Ladona deplanata has been observed from May to early July in NY (White et al. 2010, iNaturalist 2025). In other parts of their northern range, they have been observed in April (Paulson 2011).

VI. Threats

Any activity that might lead to water contamination or the alteration of natural hydrology could impact *L. deplanata* populations. Such threats might include roadway and agricultural run-off, ditching and filling, eutrophication, changes in dissolved oxygen content, and development near their habitats (NYS DEC 2005). Groundwater withdrawal is a potential threat in lentic habitats, as are invasive plant species replacing native plants required for oviposition (pers. comm. Ginger Brown).

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
4. Transportation & Service Corridors	4.1 Roads & Railroads	4.1.1 Roads	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.2 Dams & Water Management/Use	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	Choose an item. (replacing native plants needed for oviposition)					
9. Pollution	9.3 Agricultural & Forestry Effluents	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to *Ladona deplanata*

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:

The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law. The Tidal Wetlands Act protects all tidal wetland habitats and adjacent areas under Article 25 of the NYS Conservation Law.

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

Any efforts to reduce roadway and agricultural run-off, eutrophication, development of upland borders and resulting increased groundwater withdrawal, and ditching and filling activities should be considered when managing for this species (NYS DEC 2005).

Further research is needed to define the distribution and population size of the Blue Corporal. In addition, research is required to understand the habitat requirements and threats to this species, and to create appropriate management guidelines for its persistence in known locations (NYS DEC 2005).

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for odonates of brackish marshes, lakes, and ponds, and for Blue Corporal in particular:

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 either one or both of these species could be recommended for listing and officially adding these species to the list would constitute a specific action.

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.

Table 2. Recommended conservation actions for *Ladona deplanata*.

Action Category	Action
Land/water protection	1.1. Site/area protection
Land/water protection	1.2. Resource & habitat protection
Land/water management	2.1. Site/area management
Land/water management	2.2. Invasive/problematic species control
Land/water management	2.3. Habitat & natural process restoration
Education & awareness	4.2. Training
Education & awareness	4.3. Awareness & communications
Law & policy	5.2. Policies and regulations

VII. References

This SSA drew heavily from these resources:

New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry. 2023. Element Occurrence and Element Dataset. Albany, New York. [Exported 12/14/2023].

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:

Abbott, J.C. 2006-2025. OdonataCentral: An online resource for the distribution and identification of Odonata. Available at <https://www.odonatacentral.org/>. (Accessed: 3/3/2025).

Gawler, S.C. 2008. Northeastern Terrestrial Wildlife Habitat Classification. NatureServe, Boston, MA.

iNaturalist. 2025. Available from <https://www.inaturalist.org>. Accessed March 2, 2025.

New York State Department of Environmental Conservation. 2005. Comprehensive Wildlife Conservation Strategy Planning Database. New York State Department of Environmental Conservation. Albany, NY.

Northeast Fish and Wildlife Diversity. 2024. Regional Species of Greatest Conservation Need (2023). <https://northeastwildlifediversity.org/rsgcn>. Accessed January 9, 2024.

Paulson, D. 2011. Dragonflies and damselflies of the east. Princetown University Press, Princetown, New Jersey.

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.

White, E.L., J.D. Corser, P.D. Hunt, P. DeMaynadier, and M.D. Schlesinger. 2015. Prioritizing Odonata for conservation action in the northeastern USA. *Freshwater Science* (34): 1079-1093.

Originally prepared by	Erin L. White
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