

# Species Status Assessment

**Common Name:** Horned clubtail      **Date Updated:** December 5, 2023

**Scientific Name:** *Arigomphus cornutus*      **Updated By:** Erin L. White

**Class:** Insecta

**Family:** Gomphidae

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

This species was discovered as a new member of New York's odonate fauna in 2006 during the NYDDS (Trybula, 2006; White *et al.*, 2010). It is known from four locations in St. Lawrence County and it is likely that it recently colonized across the St. Lawrence River from nearby populations in Canada. This forms the extreme eastern range boundary of this upper Midwestern species (Corser 2013).

## I. Status

### a. Current legal protected Status

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

ii. **New York:** Not Listed

### b. Natural Heritage Program

i. **Global:** G4

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

### Other Ranks:

-NYS 2025 SGCN Status: Species of Greatest Conservation Need

-IUCN Red List: Stable

-Northeast Regional Rank (White *et al.* 2015): R1

### Status Discussion:

Horned clubtail is known from only a handful of sites in St. Lawrence County and probably recently colonized across the St. Lawrence River from nearby populations in Ontario, Canada, forming the extreme eastern range boundary of this upper Midwestern species. This species ranges abundantly throughout the northern Midwest and parts of Canada (Corser 2013). Based on rarity, trend, and threat information, this species should remain an SGCN.

## II. Abundance and Distribution Trends

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

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
<b>Northeastern US</b>	Yes	Increasing	Increasing	Species was just new to NE US in mid 2000s		
<b>New York</b>	Yes	Unknown	Increasing	New species in the state, discovered in 2006	S1; SGCN	Yes
<b>Connecticut</b>	No					
<b>Massachusetts</b>	No					
<b>New Jersey</b>	No					
<b>Pennsylvania</b>	No					
<b>Vermont</b>	No					
<b>Ontario</b>	No data	Unknown	Unknown		S4	
<b>Quebec</b>	No data	Unknown	Unknown		S3	

*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

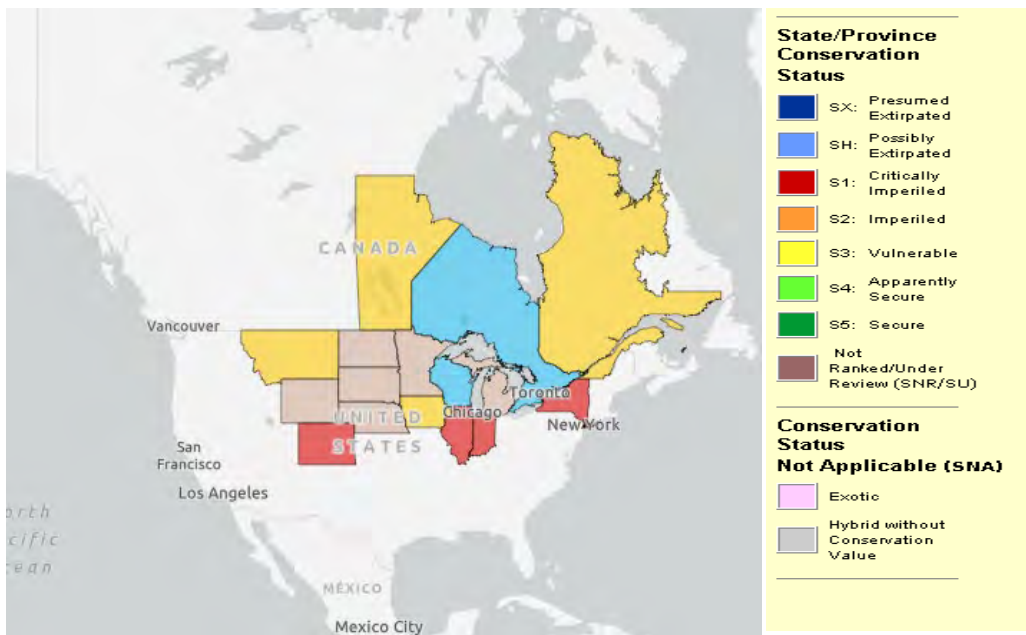
**SGCN?:** Yes; No; Unknown; (blank) or Choose an item

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

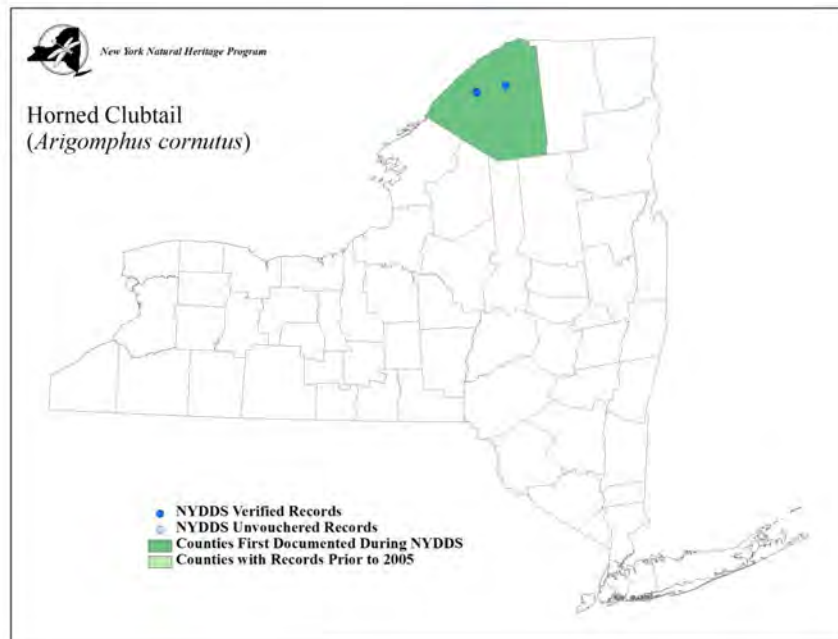
The New York State Dragonfly and Damselfly Survey (NYDDS) was conducted from 2005-2009 but there are no organized, regular monitoring or survey activities directed toward this species or to sites where it has been documented.

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

Recent survey efforts have expanded the known range of this species eastward to New York. This probably indicates a recent range expansion, but could also simply have been due to increased attention by Odonatologists during NYDDS.



**Figure 1.** Conservation status of the Horned Clubtail in North America (NatureServe 2023).



**Figure 2 .** Occurrence records of the Horned Clubtail in New York during the NYDDS (White *et al.* 2010).

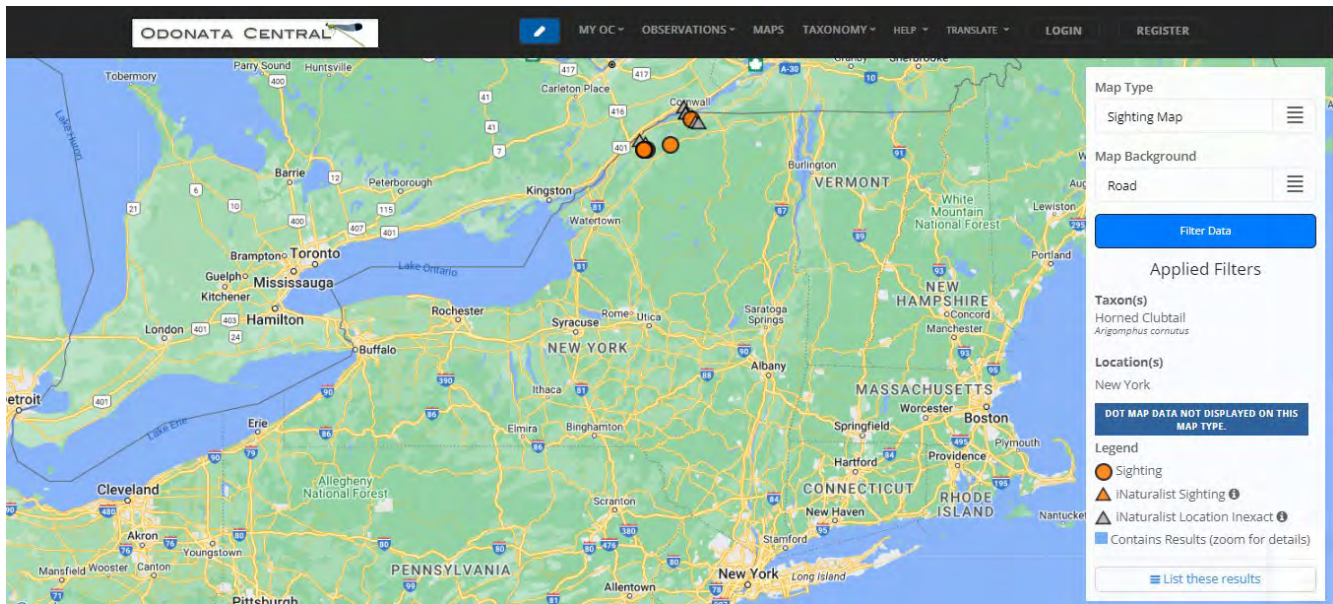


Figure 3. Distribution of the horned clubtail in New York (Abbott 2023).

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

Years	# of Records	# of Counties	% of State
Pre-2004	0	0	0
2005-2009	2	1	<1%
2010-2023	3	1	<1-2%

Table 1. Records of horned clubtail in New York.

#### Details of historic and current occurrence:

The species was first discovered in 2006 in NYS (White et al., 2010). It is known from four locations in St. Lawrence County 2006-2023 (iNaturalist 2023, NYNHP 2023).

If it occurs in 1/62 counties, that is very roughly about 1.6 % of the state, though the occupied area of those counties is rather small. There are likely additional undocumented populations in northern NY and the % of the state can be estimated to be 1-2% currently.

#### 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	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):

Freshwater Marsh (associated with boggy ponds or streams)

- a. Size/Waterbody Type:** Medium Tributary River, Mainstem River, Headwater/Creek,
- b. Geology:** Moderately Buffered, Neutral to Acidic
- c. Temperature:** Transitional Cool
- d. Gradient:** Low gradient, moderate gradient, moderate to high gradient

**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:**

In New York found at small marshy lakes, slow streams, and rivers (Trybula, 2006).

**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):

Primary flight season in late May and June, perches on lily pads and shoreline vegetation (Mead, 2003).

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

Threats to NY Populations	
Threat Category	Threat
1. Natural Systems Modifications	Dams & Water Management/Use (alteration of natural hydrology)
2. Biological Resource Use	Logging & Wood Harvesting (siltation of streams)
3. Pollution	Agricultural & Forestry Effluents (runoff)
4. Climate Change & Severe Weather	Habitat Shifting & Alteration

**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:**

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 2023).

Given the apparent range expansion suggested by the increasing number of recent records, monitoring of some subset of sites in the face of climate change may shed light on whether this is a threat to the species or a possible factor involved in the range change.

Conservation actions following IUCN taxonomy are categorized in the table.

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.

Conservation Actions	
Action Category	Action
1. Land/Water Protection	Resource and habitat protection
2. Land/Water Protection	Site/area protection
3. Land/water management	Site/area management
4. Land/water management	Habitat & natural process restoration
5. Land/water management	Invasives/problematic species control
3. Education and Awareness	Awareness & Communications
3. Education and Awareness	Training
4. Law and Policy	Policies and Regulations

**Table 3.** Recommended conservation actions for horned clubtail

**VII. References**

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