

Species Status Assessment

Common Name: Eastern Fairy Shrimp **Date Updated:** 2025-01-07
Scientific Name: *Eubbranchipus holmanii* **Updated By:** tgh/mds
Class: Branchiopoda
Family: Chirocephalidae

Species Synopsis

The Eastern Fairy Shrimp is a vernal pool obligate that is confirmed only from western Long Island, although it is likely more common than is known. Little research has been conducted on New York's fairy shrimp despite other biodiversity inventories of vernal pools. Fairy shrimp are difficult to identify to species and exist as adults for just a brief window in spring, complicating inventories.

I. Status

a. Current legal protected Status

Candidate:

b. Federal: Not listed

c. New York: Not listed; SGCN

b. Natural Heritage Program

i. Global: G5

ii. New York: SNR

Tracked by NYNHP? No

Other Ranks:

COSEWIC: Not listed in Canada

IUCN Red List: Not assessed by IUCN Red List

Northeast Regional SGCN: Watchlist [Assessment Priority]

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		
Northeastern US	Yes	Unknown	Unknown	Unknown		Watchlist [Assessment Priority]
New York	Yes	Unknown	Unknown	Unknown		
Connecticut	Yes	Unknown	Unknown	Unknown	SNR	
Massachusetts	No	-	-	-		
New Jersey	Yes	Unknown	Unknown	Unknown	S3	
Pennsylvania	Yes	Unknown	Unknown	Unknown	SNR	
Vermont	No	-	-	-		
Ontario	No	-	-	-		
Quebec	No	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

There are no regular statewide vernal pool monitoring programs although there are local efforts. Most focus on amphibians rather than invertebrates.

Trends Discussion

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

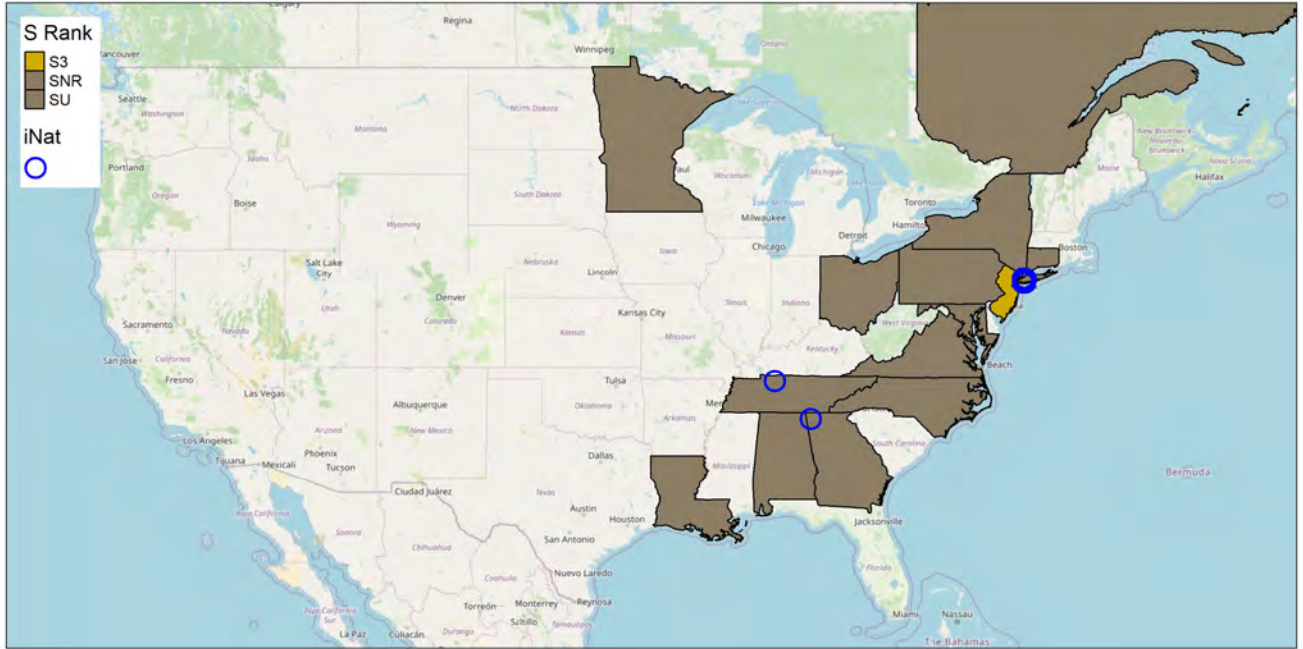


Figure 11: *Eubranchipus holmanii* North American distribution. Points show research-grade iNaturalist observations.



Figure 22: *Eubranchipus holmanii* regional distribution as reported at <https://northeastwildlifediversity.org/rsgcn>.

III. New York Rarity

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

See rangewide map. Eastern Fairy Shrimp are confirmed in New York only from western Long Island.

Years	# of Records	ccount	% of quads in State
Pre-1995	0	0	0
1995-2004	0	0	0
2005-2013	0	0	0
2014-Present	16	1-2	0

Table 1. Number of observations of *Eubbranchipus holmanii* 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.

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%	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):

NatureServe broad habitat types: TEMPORARY POOL

NY Natural Heritage Communities: Vernal pool

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/ Increase
Yes	Yes	Declining	Likely since European settlement

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:

Typically found in clear cool to cold water with neutral to low pH, in well vegetated ephemeral pools

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

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	(development)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
5. Biological Resource Use	5.3 Logging & Wood Harvesting	-	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.

Table 2. Threats to Eastern fairy shrimp.

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

Yes: X

No:

Unknown:

Vernal pools have no protection in federal wetland law. Until 2025, they had no state protection in New York unless designated wetlands of Unusual Local Importance. Therefore, unless protected at the town level, they could easily be developed or the forest surrounding them harvested. Now, vernal pools can more easily be protected if they meet amphibian productivity thresholds and are known to DEC. Protecting vernal pools will protect rare fairy shrimp.

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 *Eubbranchipus holmanii*.

Action Category	Action	Description
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation Planning	Site/area protection
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation Planning	Resource/habitat protection
C.8 Research and Monitoring	C.8.1.1.1 Characterization, demographic study, population, or inventory	Inventory
C.8 Research and Monitoring	C.8.1.0.0 Basic research and status monitoring	Habitat associations

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:

Fitzpatrick, J.F., Jr. 1983. How to Know the Freshwater Crustacea. Wm. C. Brown Co. Publishers. Dubuque, Iowa. 277 pp.