Species Status Assessment

Common Name: Southern spreadwing **Date Updated:** January 2, 2024

Scientific Name: *Lestes australis* **Updated By:** Erin L. White

Class: Insecta

Family: Lestidae

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

There is some taxonomic confusion within the *Lestes disjunctus* complex. Two subspecies were previously recognized, *Lestes disjunctus disjunctus* and *Lestes disjunctus australis*, but were separated by Donnelly (2003). Early records were often confused with *L. forcipatus* (Westfall and May 1996). It resides primarily in flowing waters, but also turns up infrequently on lakes/reservoirs. It is on its extreme northeastern range margin in NYS, and hence it may be confined to the southern portion of the state (St. Lawrence record unconfimed, iNaturalist 2023).

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?:** Yes

Other Ranks:
-2025 SGCN Status: Species of Greatest Conservation Need
-IUCN Red List: Least Concern

-Northeast Regional Rank (White et al.2015): R4R5, shared responsibility

Status Discussion:

Reflective of its name, this species is primarily distributed throughout the southern US and is on its northern range margin in New York (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 and post 2000	R4R5	No

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
New York	Yes	Unknown	Unknown	Pre and post 2005	S2S3; SPCN	No
Connecticut	Yes	Declining	Declining	Pre and post 2000	S1	No
Massachusetts	No	-	-			-
New Jersey	Yes	Unknown	Stable	Several records in 2000s	S4	No
Pennsylvania	Yes	Unknown	Unknown		S4	No
Vermont	No	-	-			-
Ontario	No data	Unknown	Unknown	Unclear--Donnelley (2004) shows dots in ON, but not recognized as occurring in ON on NatureServe website		-
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 (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):*

White *et al*., (2015) found increases in county-level distributions since 2005 throughout the northeast. In NYS, this species (Fig. 2) was known to occupy 8 counties along the southernmost reaches of the state (Donnelly 2004), three counties were occupied during NYDDS (White *et al*., 2010), and there are confirmed records from Rockland, Schuyler, and Suffolk Counties post-2010, with additional probable records from Cattaraugus, St. Lawrence, and Richmond Counties (iNaturalist 2023). I cannot confirm the iNaturalist records from Cattaraugus and St. Lawrence Counties from the photos (or most other sightings from photos alone) and records of photos of females can't be confirmed as the character they show is a dark ovipositor, which is "often" true of australis, but not definitive of separating from disjunctus. In my opinion, these sites would need male specimens to examine microscopically in order to confirm and male and female presence would confirm breeding at the site. However, it does appear the NY range has remained roughly stable from the confirmed records in recent years, though it has not been reported from five counties where it was observed pre-2005 which could indicate a decline (stable to decline is estimated) (Abbott 2023). Trends are difficult to discern in several adjacent states possibly because of taxonomic confusion.

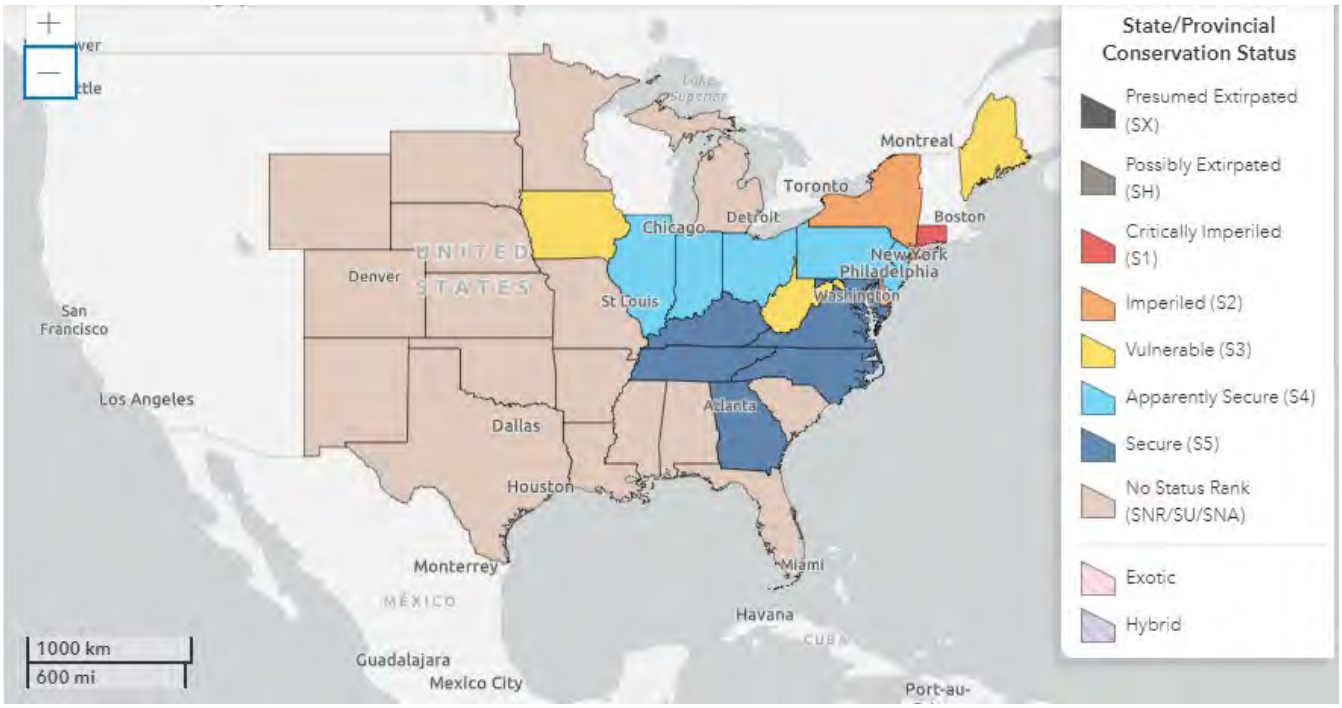

Figure 1. Conservation status of the Southern Spreadwing in North America (NatureServe 2023).

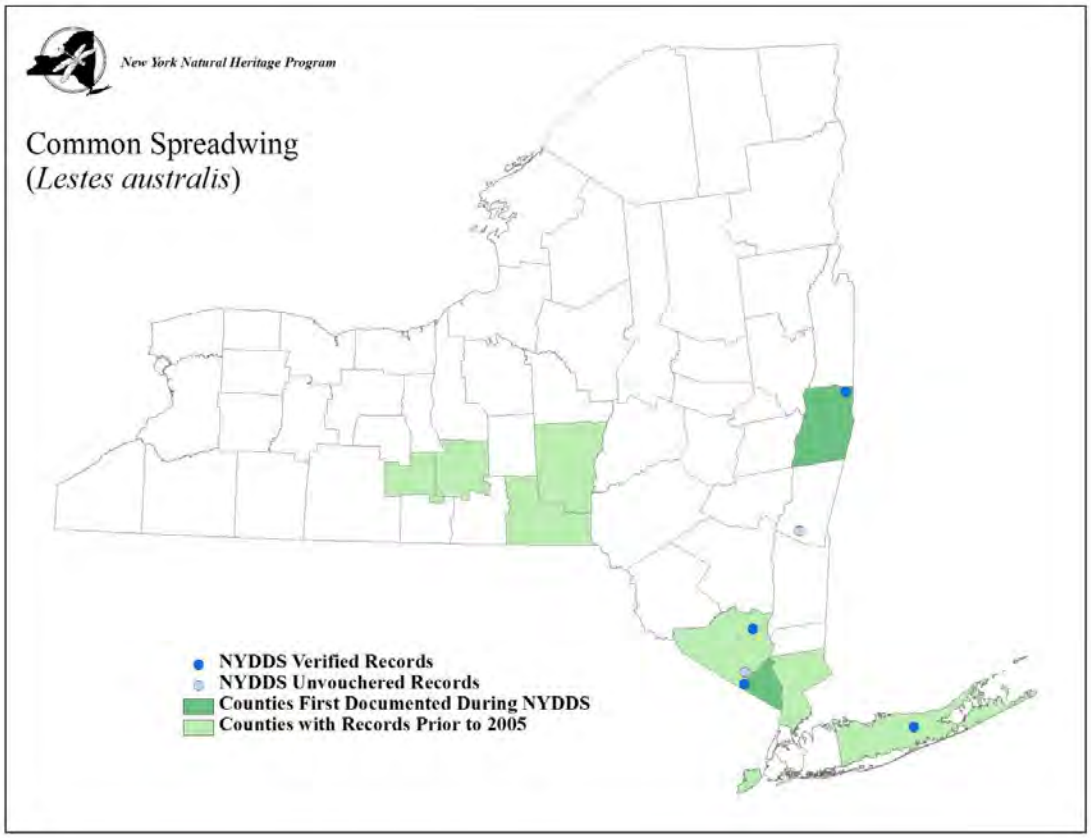

Figure 2. Occurrence record of the Southern Spreadwing in New York during the NYDDS (White *et al.* 2010).

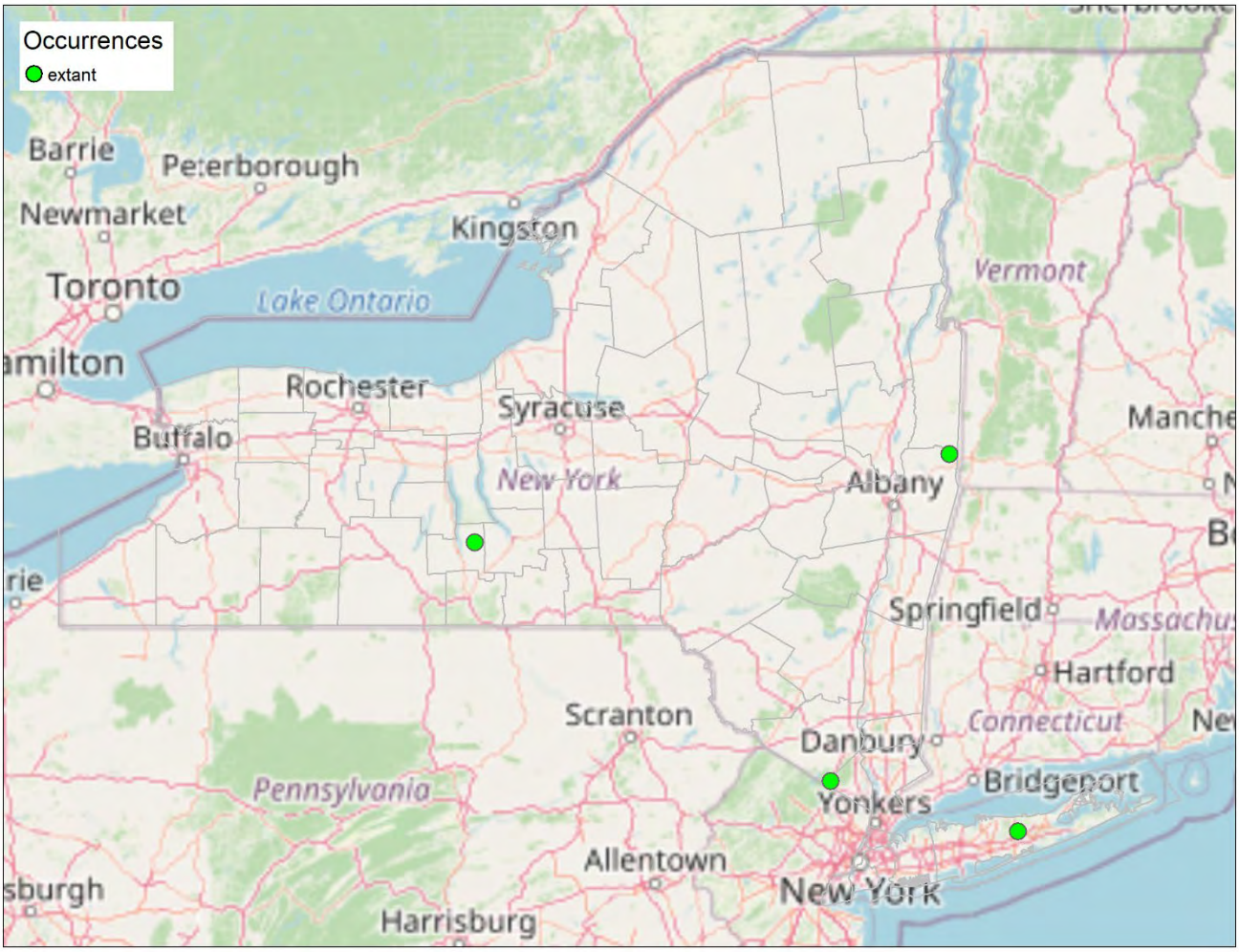

Figure 3. NYNHP element occurrence records for the Southern Spreadwing in NY (NYNHP 2023a).

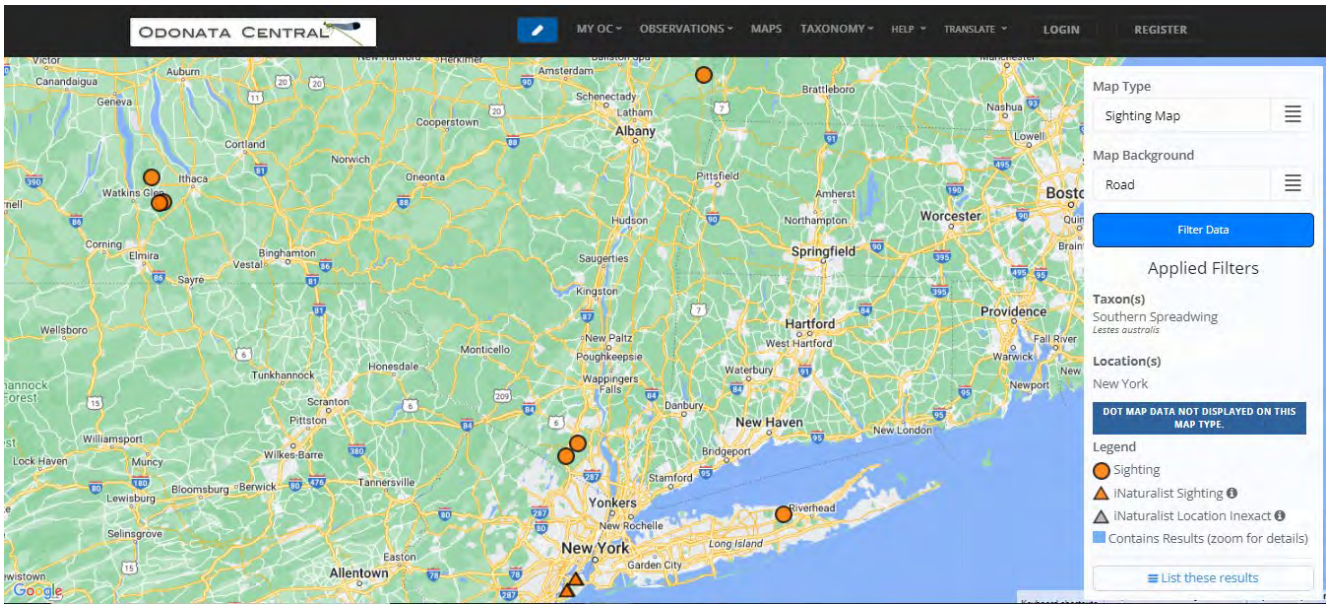

Figure 4. Distribution of the southern spreadwing in New York (Abbott 2023).

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

This species' range in NYS appears to be roughly stable, though has not been reported from five counties where it was known previously (Abbott 2023, White *et al*., 2010). It is always reported as infrequent at sites where it is found in NYS. Donnelly (2003) reported the species as uncommon in NY.

Years	# of Records	# of Counties	% of State
Pre-2005	9	8	13%
2005-2009	4	4	1-7%
2010-2023	2-8	2-6	3-10%

Table 1. Records of southern spreadwing in New York.

Details of historic and current occurrence:

This species was elevated from subspecies status in early 2000s.

Southern Spreadwing was documented at 2 ponds in Schuyler County in 2004 by Fred Sibley (Abbott 2023) and was noted by Nick Donnelly's doc map project to occur in 8 counties pre-2005 (Donnelly 2004). During the NYDDS, it was documented in Rockland, Rensselaer, Orange, and Suffolk counties (White et al. 2010). It is unclear to me why the Orange County records didn't get transcribed to appear on the map (Fig. 3). Since 2010, there has been another confirmed record in Rockland County and another confirmed location in Schuyler County (Abbott 2023). Additional observations needing confirmation (additional survey work) are from two other locations in Suffolk County, one in Cattaraugus County, one in St. Lawrence County, and three locations in Richmond County (iNaturalist 2023).

If it occurs in 8/62 counties, that is very roughly about 13% of the state, though the occupied area of those counties is rather small. There are likely additional undocumented populations in the southern portion of the state and the % of the state can be estimated to be 3-10% currently, with several recent sightings needing additional survey work to confirm.

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 of 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):*

Small farm ponds, coastal plain ponds

a. Size/Waterbody Type: Small River

b. Geology: Moderately Buffered, Neutral

c. Temperature: Transitional Cool

d. Gradient: Low-Moderate

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 somewhat of a habitat generalist. Lam (2004) notes it occurring in marshy or boggy ponds, lakes, and slow streams in the Northeast. In NY, it occurs on small farm ponds, streams and small rivers.

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):*

The flight season of adults in NYS is late May-July, possibly into August (Abbott 2023, INaturalist 2023, White *et al*., 2010).

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

Little published information is available citing specific cases of negative impacts to the various species of river dwelling odonates, but any activities which degrade the sensitive hydrology of these habitats would threaten populations. The most severe negative impacts are from changes in the natural hydrology such as the building of dams, increases in the sediment load of the river (as which may result from logging down to the river edge), changes in dissolved oxygen content, direct effects of pesticides,

and chemical contamination by runoff of agricultural or other discharge (Novak 2006, White *et al.* 2010). In New York, this species has been recorded from at least a few streams or rivers with siltier bottoms, and presumabaly lower water quality, so this species may be less sensitive to some of the above stated threats than some other riverine species.

Threats to NY Populations	
1. Natural Systems Modifications	Dams & Water Management/Use (changes in hydrology)
2. Residential & Commercial Development	Housing & Urban Areas (habitat loss)
3. Pollution	Agricultural & Forestry Effluents (runoff, siltation)
4. Climate Change & Severe Weather	Temperature Extremes
5. Climate Change & Severe Weather	Storms & Flooding

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 rivers should be considered when managing for this species.

Monitoring 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.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for odonates of bogs, fens and ponds.

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 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.

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 southern spreadwing

VII. References

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