Species Status Assessment

Common Name:	Purple Sandpiper	**Date Updated:**	2024-12-20
Scientific Name:	*Calidris maritima*	**Updated By:**	tgh
Class:	Aves		
Family:	Scolopacidae		

Species Synopsis

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

Purple sandpiper was formerly placed in the genus *Erolia*; no subspecies are currently recognized. This sandpiper breeds in northern Canada, Iceland, and Greenland, and winters along the seacoasts of the North Atlantic. In New York, it is common during the winter on the coasts of Long Island where there are rocky shorelines. Robust population trends are difficult to determine because of a lack of systematic surveys, but a slight and non-significant declining trend has been documented for the North American population over the past 40 years.

I. Status

a. Current legal protected Status

i. Federal: Not listed **Candidate:**

ii. New York: Not listed: protected native

b. Natural Heritage Program

i. Global: G5

ii. New York: SNRN **Tracked by NYNHP?**

Other Ranks:

New York 2025 SGCN status: Species of Greatest Conservation Need
COSEWIC: Not listed in Canada
IUCN Red List: Least Concern
Northeast Regional SGCN: RSGCN
U.S. Shorebird Conservation Plan: Species of Low Concern

Status Discussion:

Purple sandpiper is a locally very common winter visitant along the coast of New York. It is uncommon at Niagara Falls and rare at the Great Lakes. The U.S. Shorebird Conservation Plan (2001) estimates populations of wintering purple sandpipers in North America to be around 15,000.

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Unknown	Unknown	Unknown for US		
Northeastern US	Yes	Unknown	Unknown	Unknown		RSGCN
New York	Yes	Unknown	Unknown	Unknown		
Connecticut	Yes	Unknown	Unknown	Unknown	SNA	
Massachusetts	Yes	Unknown	Unknown	Unknown	S4N	Yes
New Jersey	Yes	Unknown	Unknown	Unknown	S4N	Yes
Pennsylvania	Yes	Unknown	Unknown	Unknown	SNA	
Vermont	Yes	Unknown	Unknown	Unknown	SNA	
Ontario	Yes	Unknown	Unknown	Unknown	S2N	
Quebec	Yes	Unknown	Unknown	Unknown	S3M	

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):

Trends Discussion

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

Breeding Bird Survey data do not accurately sample this species, but wintering occurs in areas that are surveyed by Christmas Bird Counts. CBC data suggest a slight decline in Canada since 1983 and the United States since 1977.

This species has undergone a small or statistically insignificant decrease over the last 40 years in North America (data from Breeding Bird Survey and/or Christmas Bird Count: Butcher and Niven 2007). From an analysis of multiple data sets including Christmas Bird Count data, Andres (2009) assigned a status of “strong evidence of decline” for purple sandpiper.

Limited systematic information prevents thorough assessment of population trends. In North America, a recent analysis of shorebird numbers in Canada’s Maritime Provinces, Quebec, and Ontario (e.g., Morrison et al. 2000a, 2000b) show predominantly negative trends across these regions, with a statistically significant decline ($p < 0.05$) in Quebec.

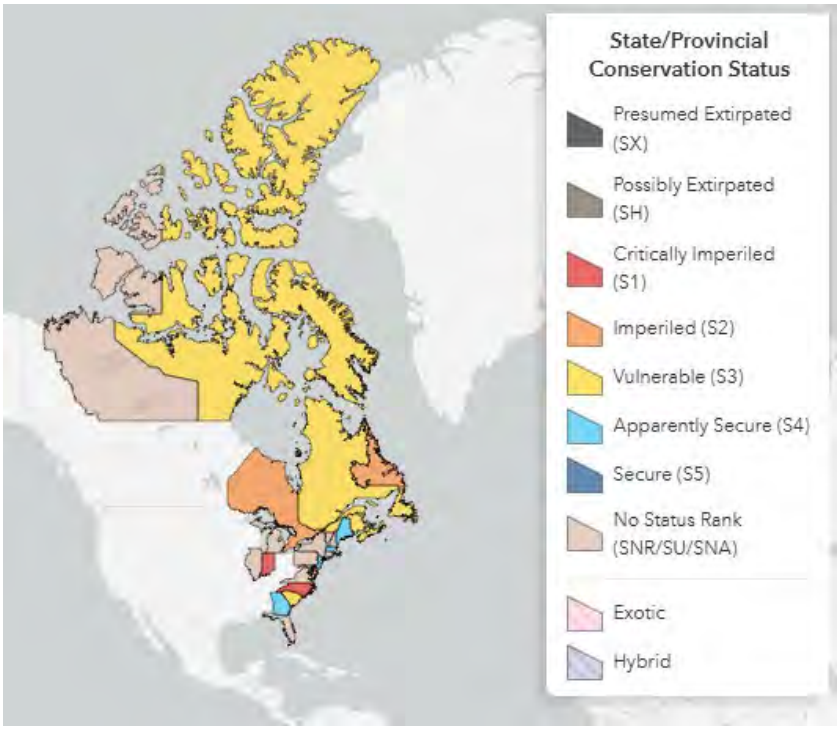

Figure 1. Conservation status of purple sandpiper in North America (NatureServe 2024).

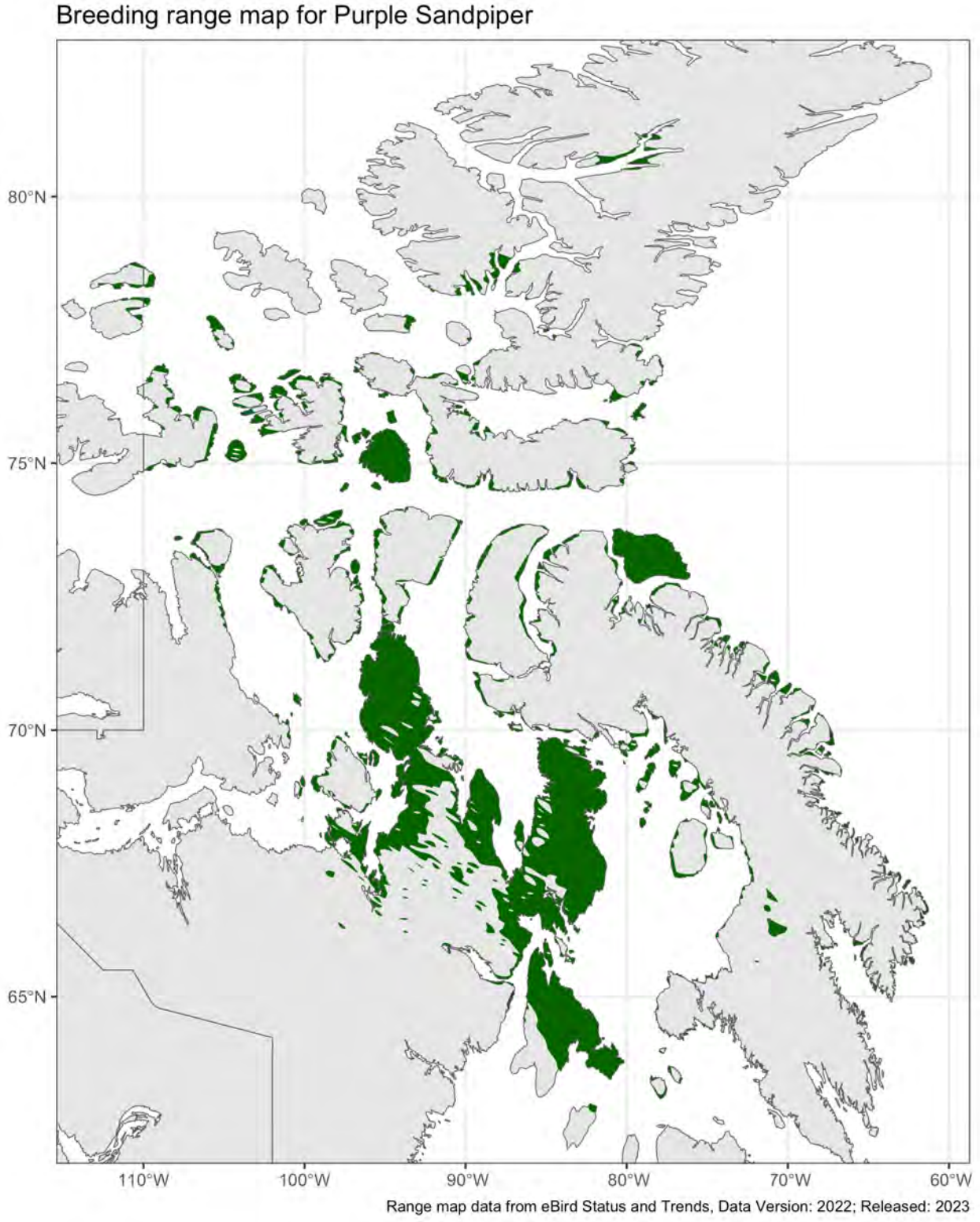

Figure 2. Breeding range for purple sandpiper (eBird).

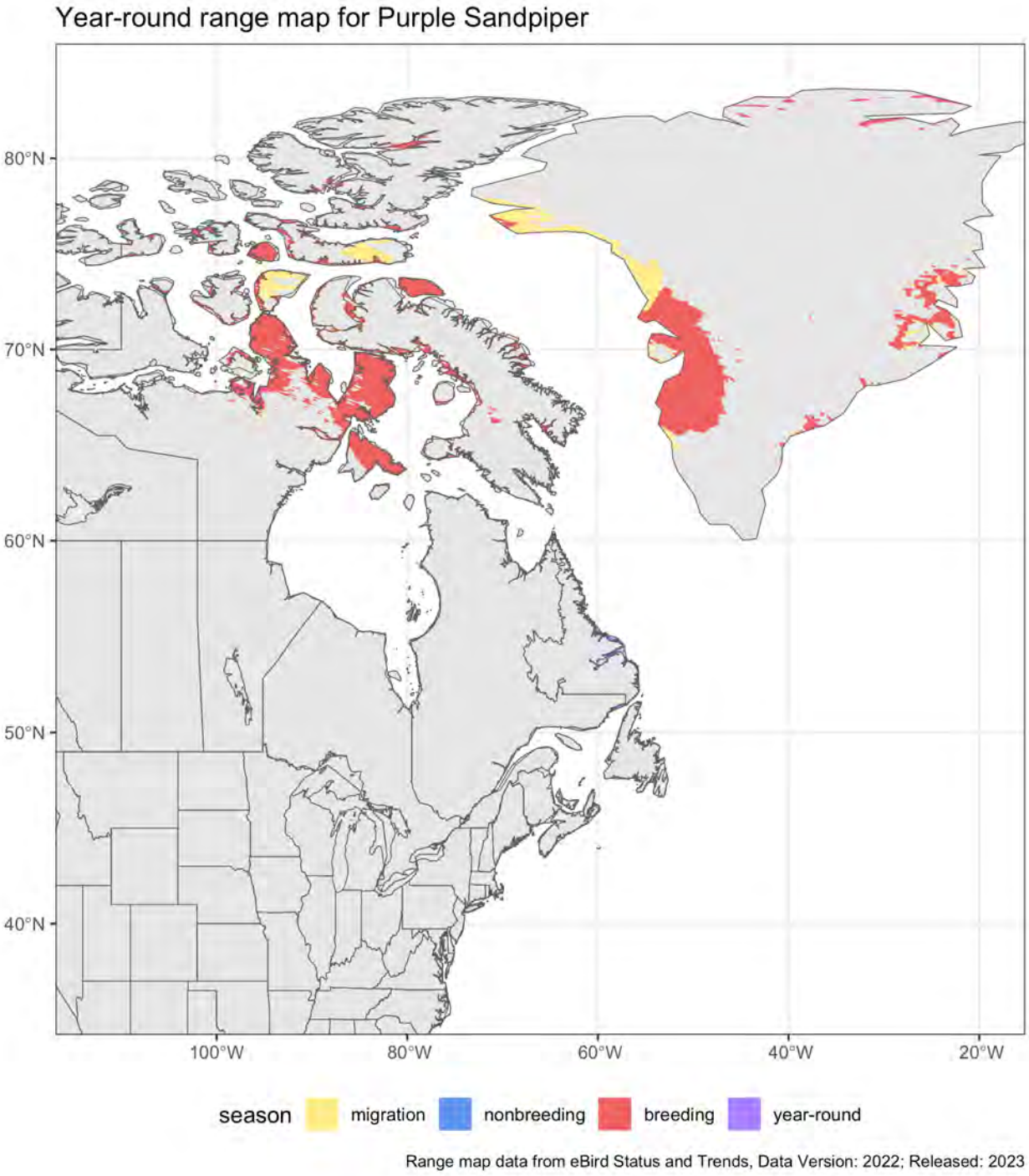

Figure 3. Full (year-round) range for purple sandpiper (eBird).

III. New York Rarity

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

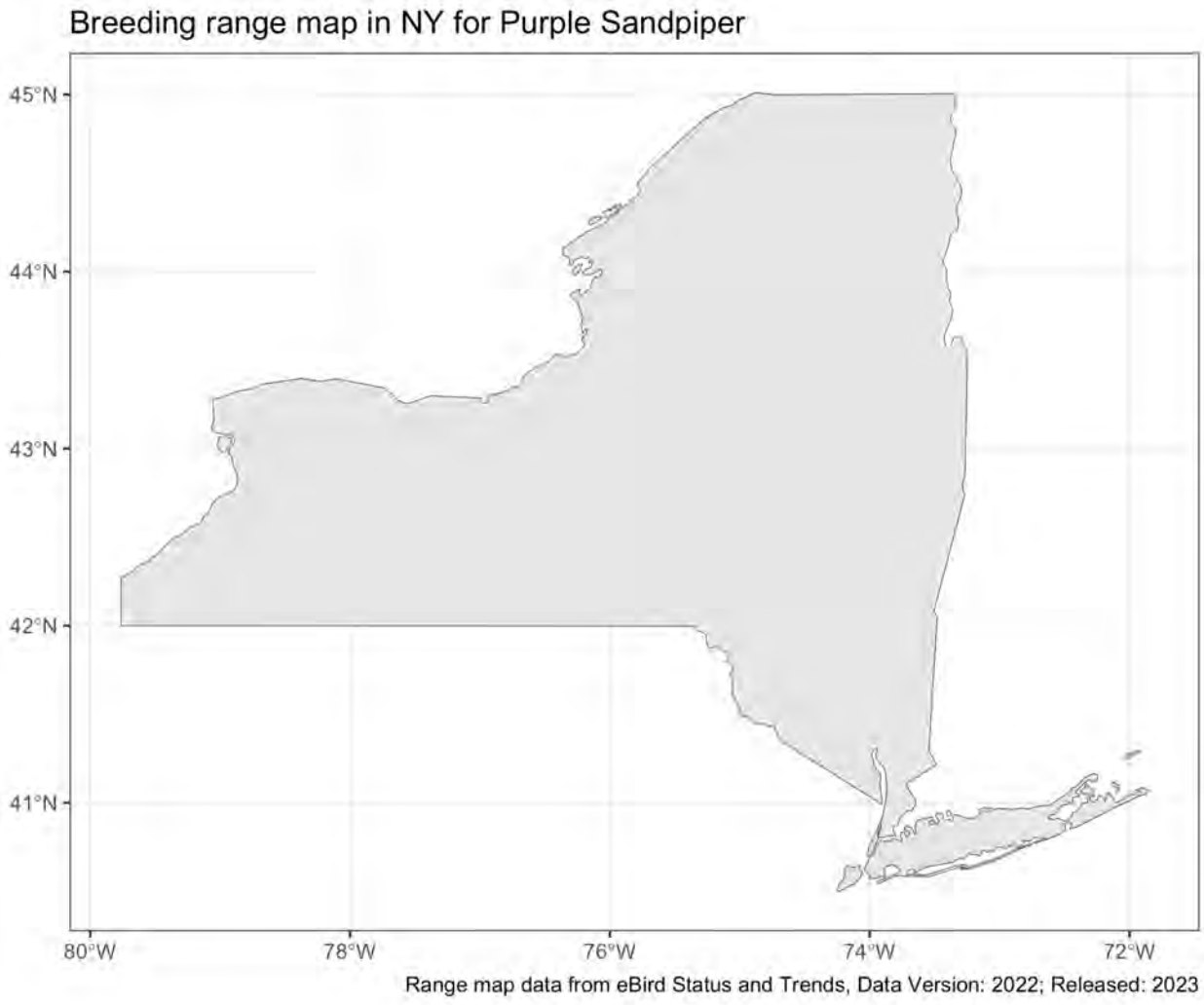

Figure 4. NYS breeding range for purple sandpiper (eBird).

Details of historic and current occurrence:

Watson (1998) reports that Christmas Bird Counts along the coast from 1960-1989 vary from 92 to 690 birds. From 1976 to 195, a total of 2,650 wintering purple sandpipers were reported in New York.

Christmas Bird Count data for New York from 1991 to 2011 totaled 3,804 individuals and averaged 181 individuals per year.

The first Breeding Bird Atlas (BBA) (1980-85) documented occupancy in 0 blocks, 0% of the survey blocks statewide (Andrle and Carroll 1988). The second BBA (2000-05) documented occupancy in 0 blocks, 0% of the survey blocks statewide (McGowan and Corwin 2008).

The third BBA (2020-25) is currently underway and utilizes a different number and layout of survey blocks across New York, making direct comparison with the first two Atlases difficult. There were 5,333 blocks in the first and second BBAs, and there are 5,710 blocks in the current BBA, of which 1,815 are considered priority blocks. To date, purple sandpiper has been documented in 2 priority blocks, 0% of all priority blocks statewide during the third BBA (NY BBA III Overview, 2024).

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%	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: Tundra, Tidal flat/shore

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/ Community Trend	Time frame of Decline/ Increase
Unknown	Unknown	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:

Rocky shores, rock jetties, breakwaters (B74BUL01NY).

Non-breeding habitat includes: rocky seacoasts and jetties, rarely along shores of large inland bodies of water, usually in rocky areas (AOU 1983).

Breeding habitat includes: Nests in mossy tundra, moorlands and heath, and coastal barren flats. Nests on ground in open, seldom far from coast.

IUCN habitat description: Behaviour This species is fully migratory (del Hoyo et al. 1996, Snow and Perrins 1998). It arrives on the breeding grounds from mid-May to mid-June where it nests in solitary pairs (del Hoyo et al. 1996) and forages in small loose groups (Snow and Perrins 1998). From July to August the adults undergo a flightless moulting period on the coast close to the nesting areas before travelling to the wintering grounds in September and November (Hayman et al. 1986). During the non-breeding season the species is gregarious and usually forms small flocks of up to 250 individuals (del Hoyo et al. 1996). Habitat Breeding The species breeds on Arctic coasts (Hayman et al. 1986) and in upland areas (Johnsgard 1981, Flint et al. 1984, Hayman et al. 1986), nesting close to the fringes of snow and ice (del Hoyo et al. 1996) on wet moss or barren rocky tundra with patches of lichen and Dryas spp., on rocky islands and islets or on shingle beaches (del Hoyo et al. 1996). It forages on dry tundra or along the moist margins of ponds, at the edges of melting snow-drifts and in areas of thick moss (Hayman et al. 1986). Non-breeding During the winter and on passage the species shows a preference for tidal rocky shores with strong wave action (Hayman et al. 1986) and suitable high-tide roosting areas (del Hoyo et al. 1996), often utilising artificial structures such as concrete sea defences and breakwaters (Hayman et al. 1986). In some northern areas (e.g. Svalbard) the species frequents mudflats, shingle beaches and coastal lagoons before and after breeding but before migrating south (del Hoyo et al. 1996). Diet Breeding During the breeding season its diet consists largely of insects (e.g. adult, larval and pupal Diptera, Ichneumon wasps and aphids) and Collembola (springtails), as well as spiders, gastropods, annelid worms and some plant material (e.g. leaves, buds, berries and seeds) (del Hoyo et al. 1996). Non-breeding On the coast the species feeds predominantly upon molluscs (especially gastropods Littorina spp. and mussels Mytilus spp.) as well as insects (e.g. beetles and Diptera), small crustaceans (e.g. amphipods), annelid worms (del Hoyo et al. 1996), small fish (Johnsgard 1981) and algae (Enteromorpha spp.) (del Hoyo et al. 1996). Breeding site The nest is a small scrape positioned in the open on tundra moss (del Hoyo et al. 1996), in hummocky tundra (Flint et al. 1984) close to tufts of Dryas spp. or Arctostaphylos spp. (Johnsgard 1981), or in rocky or pebbly areas between cliffs (Flint et al. 1984).

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):

Little is known on the demographics and life history of purple sandpipers in North America. Most of the information is based on studies in Europe. The following is from Payne and Pierce (2002).

In Svalbard, 32 birds banded as chicks returned to breeding grounds in later years; 3 nested as yearlings, 6 were first found nesting when ≥2 yr old. Most adults breed every year, except when pairs fail to reunite. No data on percentage of non-breeders in a population; difficult to distinguish non-breeders from failed breeders. Predation rate calculated according to Mayfield (1975) averaged 47%, while other nest losses or failures, as reflected by 49% survival rate, were nearly negligible (Pierce 1993). Pairs produce an average 1.9–2.5 young that survive to reach the coast. Annual reproductive success is likely to be similar between the sexes, as males and females show high mate fidelity and pair almost always breed only once/year. Lifetime reproductive success not determined to date.

VI. Threats

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
5. Biological Resource Use	5.4 Fishing & Harvesting Aquatic Resources	(rockweed)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
6. Human Intrusions & Disturbance	6.1 Recreational Activities	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.1 Domestic & Urban Wastewater	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.2 Industrial & Military Effluents	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.1 Habitat Shifting & Alteration	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.5 Storms & Severe Weather	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 1. Threats to purple sandpiper.

Pollutants including forever chemicals PCBs and DDT, oceanfront development, and marine farming threaten purple sandpipers during migration and winter. Because the birds require rockweed habitat for winter feeding, the harvesting of rockweed has been banned by the U. S. Fish and Wildlife Service in Maine refuges.

Global warming poses a threat to many species of animals and plants living on the immediate coast. Purple sandpipers in Great Britain appear to be withdrawing northward and eastward from their traditional winter range in favor of cooler climates.

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:

This species is included in the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) and is protected as a native species under the NYS Environmental Conservation Law.

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

The development of seawalls, jetties, and causeways appears to create beneficial wintering habitat for purple sandpiper.

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct habitat management	Site/Area management (posting or fencing)
B.3 Outreach	B.3.1.4.0 Public outreach and information	Awareness & Communications (educational materials)
C.6 Design and Plan Conservation	C.6.5.0.0 Conservation planning	-Site/Area protection (acquisition, easements) -Resource/Habitat Protection
C.7 Legislative and Regulatory Framework or Tools	C.7.1.3.0 Create, amend, or influence regulation	Policy/Regulations (establish seasonal use restrictions, adjust state land unit mgmt plans)
C.10 Institutional Development	C.10.2.0.0 External support and organizational development	Alliance and Partnership Development (support and participate in international shorebird conservation efforts).

Table 2. Recommended conservation actions for *purple sandpiper*.

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for transient shorebirds, which includes purple sandpiper.

Fact Sheet:

____ Develop educational materials about conservation needs of shorebirds in New York, and promote habitat protection measures.

Habitat Management:

____ As important foraging areas become known, identify potential threats and protect those habitats (ex- beaches, tidal flats, shoals, etc.) from permanent alteration, degradation, or adverse human disturbances. Management may include acquisition, easements, establishing seasonal use restrictions, and posting or fencing, etc. as is currently done for beach-nesting birds.

Habitat Research:

____ Conduct field studies to document ecology of transient shorebirds on Long Island, including important food items, habitat use (ex- importance of tidal flats) and time/activity budgets.

____ Compile data and input from birders to derive a map showing important shorebird foraging and resting areas in New York.

Other Action:

____ Provide technical support, funding, or political support as needed, to further international shorebird conservation efforts.

Population monitoring:

____ Identify specific locations, procedures, and observers (volunteer or other) for conducting annual shorebird surveys at 5-10 locations in New York, and initiate surveys as soon as possible.

State Land Unit Management Plan:

____ On state-owned or other public lands, ensure that management plans consider shorebird needs and appropriately restrict site development and seasonal uses that may adversely affect critical shorebird foraging areas.

Statewide Management Plan:

____ Develop a conservation plan for transient (non-breeding) shorebirds that regularly occur in New York, to include objectives and actions that we can assist with both inside and out of New York State.

VII. References

This SSA drew heavily from these resources:

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