Purple Sandpiper

Calidris maritima

Federal Listing	N/A
State Listing	N/A
Global Rank	G5
State Rank	SNR
Regional Status	Very High

Photo by Pamela Hunt

Justification (Reason for Concern in NH)

Populations of several migratory shorebirds are in steep decline (Andres 2009, Winn et al. 2013). Based largely on these declines, several species were proposed as RSGCN for the Northeast, and those that occur regularly in NH are included in the 2015 NH Wildlife Action Plan.

Distribution

Purple Sandpipers breed in arctic Canada, Greenland, Iceland, Scandinavia, and Russia and winter in the northern Atlantic (eastern North America and western Europe, Payne and Pierce 2002). In New Hampshire the species occurs as a migrant and winterer, and is found from November through May. Highest densities appear to occur on the Isles of Shoals, although consistent data are limited.

Habitat

Although migratory shorebirds of some species occur inland in NH, the species treated in the 2015 Wildlife Action Plan are primarily coastal in distribution. The Purple Sandpiper is the most closely associated with marine habitats, and occurs entirely along the immediate coast, where it frequents rocky shores (including jetties and offshore islands).

NH Wildlife Action Plan Habitats

- Coastal Islands

Distribution Map

Current Species and Habitat Condition in New Hampshire

Populations of many long-distance migrant shorebirds are believed to be in steep decline (Morrison et al. 2006, Andres 2009), and for this reason several species are considered priorities for future conservation. Data for Purple Sandpiper are limited, but some suggest declines (c.f., Mittelhauser et al. 2013).

Population Management Status

Management is not currently in place for this species.

Regulatory Protection (for explanations, see Appendix I)

- Migratory Bird Treaty Act (1918)

Quality of Habitat

Unknown

Habitat Protection Status

Variable. Some of New Hampshire's coastal islands and rocky shores areas are protected from development, but such protection does not preclude sea level rise that may constitute an important threat to this species.

Habitat Management Status

Habitat is not specifically managed for this species.

Threats to this Species or Habitat in NH

Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a "medium" or "high" score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.

Habitat conversion and degradation due to sea level rise (Threat Rank: Medium)

Much of the original beach/dune/estuary system along the New Hampshire coast has been permanently altered by human infrastructure (roads, buildings, parking lots) and coastal engineering (salt marsh ditching, tidal restrictions, seawalls), with a net loss in habitats available for migrating shorebirds. Projected rises in sea level of even a few inches will further reduce available habitats (estuarine mudflats and rocky intertidal sites) that shorebirds need for roosting and feeding (Galbraith et al. 2014).

List of Lower Ranking Threats:

Habitat degradation and disturbance from oil spills

Habitat conversion and degradation from human climate change response

Disturbance from human activities (walking, running dogs, shellfish harvest)

Disturbance from phenology shifts

Actions to benefit this Species or Habitat in NH

Incorporate shorebird needs into coastal climate change planning.

Primary Threat Addressed: Habitat conversion and degradation due to sea level rise

Specific Threat (IUCN Threat Levels): Climate change & severe weather

Objective:
Ensure that human activities in response to climate change do not negatively affect important shorebird habitats or stopover sites.

General Strategy:
Provide information on shorebird habitat and important sites to local and regional planning authorities in the seacoast area. Work with these entities to ensure that the needs of migratory shorebirds are considered in climate adaptation and response plans.

Political Location:
Rockingham County

Watershed Location:
Coastal Watershed

Shorebird stopover monitoring

Objective:
Obtain data on distribution and abundance of shorebirds that can inform trends and prioritize conservation actions.

General Strategy:
Migratory shorebirds are best monitored at staging areas during migration along the Atlantic Coast, with lesser efforts directed at breeding sites and wintering areas. Because New Hampshire has such a small coast and limited shorebird habitat, it is recommended that the State rely on regional and/or national monitoring efforts to inform conservation planning. There may be specific research needs that relate to site-specific activities, in which case more targeted research or monitoring may be warranted. This may be particularly true for Purple Sandpiper, which is generally not well-monitored by other shorebird surveys due to temporal and habitat differences (Mittelhauser et al. 2013).

Political Location:
Northeast

Watershed Location:

References, Data Sources and Authors

Data Sources
General data on distribution and abundance of shorebirds are available in the New Hampshire Bird Records and eBird databases.

Data Quality
Although data on the numbers of birds that pass through New Hampshire on migration is limited, there are good data on which areas are preferred by shorebirds and the number of individuals using these at a given point in time.

Appendix A: Birds

2015 Authors:
Pamela Hunt, NHA

2005 Authors:

Literature

Andres, B.A. 2009. Analysis of shorebird population trend datasets. USFWS, 23 Jan 2009.

Galbraith, H., DesRochers, DW., Brown, S., and J.M. Reed. 2014. Predicting vulnerabilities of North American shorebirds to climate change. PLoS ONE 9(9):1-13

Mittelhauser, G.H., L. Tudor, and B. Connery. 2013. Abundance and distribution of Purple Sandpipers (*Calidris maritima*) wintering in Maine. Northeastern Naturalist 20: 219-228.

Morrison, R.I.G., B.J. McCaffery, R.E. Gill, S.K. Skagen, S.L. Jones, G.W. Page, C.L. Gratto-Trevor, and B.A. Anfres. 2006. Population estimates of North American Shorebirds, 2006. Wader Study Group Bulletin 111: 67-85.

Payne, Laura X. and Elin P. Pierce. 2002. Purple Sandpiper (*Calidris maritima*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/706doi:10.2173/bna.706.