

Appendix A: Birds

Ruddy Turnstone

Arenaria interpres [M,W]

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

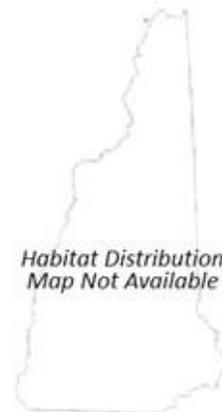
Ruddy Turnstones breed across the arctic from Alaska to Siberia, and have an extensive wintering range along south temperate and tropical coastlines worldwide (Nettleship 2000). In New Hampshire the species is relatively uncommon, and limited to the immediate coast and Isles of Shoals. Most occur during migration in August and September, with lesser numbers in May. There are also a few winter records, but the species is quite rare between November and April.

Habitat

During the non-breeding season, turnstones forage primarily on rocky shorelines, although they will occasionally use beaches and mudflats.

NH Wildlife Action Plan Habitats

- Coastal Islands
- Estuarine
- Dunes



Distribution Map

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Current Species and Habitat Condition in New Hampshire

Populations of many long-distance migrant shorebirds are believed to be in steep decline, and for this reason several species are considered priorities for future conservation. Although data for Ruddy Turnstone is somewhat equivocal, most recent assessments suggest its populations in North America are stable or increasing (Morrison et al. 1994, Morrison et al. 2006, Andres 2009)

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 beaches and salt marsh areas are protected from development, but such protection does not preclude recreation use that may constitute an important threat to migrating shorebirds.

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).

Disturbance from human activities (walking, running dogs, shellfish harvest) (Threat Rank: Medium)

Disturbance results from recreational use of beaches or other habitats that shorebirds need for roosting and feeding during migration. People, pets, or vehicles using these habitats regularly flush birds, causing them to both expend energy in avoidance flights and reduce energy intake via foraging.

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Studies of shorebird behavior combined with physiological models suggest that repeated disturbance can reduce individual birds' chances of successfully completing migration (Harrington and Drilling 1996, Burger et al. 2007).

List of Lower Ranking Threats:

Habitat degradation and disturbance from oil spills

Habitat conversion and degradation from human climate change response

Habitat degradation from dredging and the dumping of spoils

Mortality from unregulated hunting in the Caribbean

Species impacts from the harvest of important prey items (Horseshoe Crabs)

Habitat conversion and degradation from storm-altered deposition patterns

Disturbance from phenology shifts

Species impacts from siltation, acidification, fresh-water inputs, and increased temperatures

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

Manage human activity relative to shorebird stopover

Primary Threat Addressed: Disturbance from human activities (walking, running dogs, shellfish harvest)

Specific Threat (IUCN Threat Levels): Human intrusions & disturbance

Objective:

Minimize disturbance of migrating shorebirds

General Strategy:

Manage human disturbance through beach closures, dog restraints, outreach, volunteer "wardens,"

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and other means as identified. This would only need to occur during peak migration periods and primarily at key sites identified through shorebird monitoring.

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.

Political Location:
Northeast

Watershed Location:
Statewide

References, Data Sources and Authors

Data Sources

Most data on shorebird use of the Hampton-Seabrook estuary come from a study by NH Audubon in 2006-07 (McKinley and Hunt 2008), while general data on distribution and abundance of all species 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.

2015 Authors:

Pamela Hunt, NHA

2005 Authors:

Literature

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Burger, J., S.A. Carlucci, C.W. Jeitner, and L. Niles. 2007. Habitat choice, disturbance, and management of foraging shorebirds and gulls at a migratory stopover. *J. Coastal Research* 23: 1159-1166.

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

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Harrington, B., and N. Drilling. 1996. Investigations of effects of disturbance to migratory shorebirds at migration stopover sites on the U.S. Atlantic coast. Report to U.S. Fish and Wildlife Service. Manomet Observatory, Manomet, MA.

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.

Nettleship, David N. 2000. Ruddy Turnstone (*Arenaria interpres*), 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/537doi:10.2173/bna.537>.