

Appendix A: Birds

Eastern Whip-poor-will

Antrostomus vociferus

Federal Listing	N/A
State Listing	SC
Global Rank	
State Rank	S3
Regional Status	Very High



Photo by Pamela Hunt

Justification (Reason for Concern in NH)

Eastern Whip-poor-wills have been exhibiting a rangewide decline, including range retraction, since the mid-1900s. Evidence for this decline comes from the Breeding Bird Survey, Breeding Bird Atlases, and multiple anecdotal accounts. Although BBS data are generally poor for this species, they indicate annual declines of ~6% in NH, 3% in BCR 14, and 4% in BCR 30 from 1966 to 2013 (Sauer et al. 2014). Repeated Breeding Bird Atlases have documented declines in occupancy of approximately 50% (Cadman et al. 2007, McGowan and Corwin 2008, Renfrew 2013, Massachusetts Audubon Society 2014). Whip-poor-wills are considered an SGCN in most states where they occur (all states in the Northeast), and were identified as a Regional SGCN in USFWS Region 5. Loss of habitat and potentially changes in food supply have both been identified as major threats to populations of this species.

Distribution

Occurs from northeastern Texas and north Georgia north to southeast Manitoba, southern Quebec, and parts of New Brunswick and Nova Scotia (Cink 2002). At the northern edge of this range it is sparsely distributed and may be limited by habitat.

In New Hampshire, the species occurs statewide but was historically most common south of the White Mountains (Foss 1994). While this general range has not changed, there is evidence of retraction from the north, western highlands, and coastal plain. Concentrations exist in central Carroll County (Ossipee pine barrens and vicinity) and southeastern Merrimack County and adjacent towns.

Habitat

Eastern Whip-poor-wills inhabit areas of dry soils and open understory, especially in pine and oak woodlands (Cink 2002). They prefer to forage in open areas, such as fields, clearings, regenerating clear cuts, recent burns, and power line rights-of-way (Wilson 2003, Hunt 2013). Dry soil, which contributes to the sparse understory that whip-poor-wills prefer, may also allow for better drainage of the leaf litter where the birds lay their eggs, although definitive data are lacking. In New Hampshire, whip-poor-will records during the Breeding Bird Atlas were all from areas below 1200' elevation (Foss 1994). During a study in the Piscataquog River watershed in 2003, whip-poor-will records were concentrated in the northeastern quarter of the watershed. A preliminary analysis of habitat at points where whip-poor-wills were detected suggests that birds were more likely to occur in areas identified by aerial photography as "dry pine forest," "gravel pit," or "disturbed" (Hunt 2006).

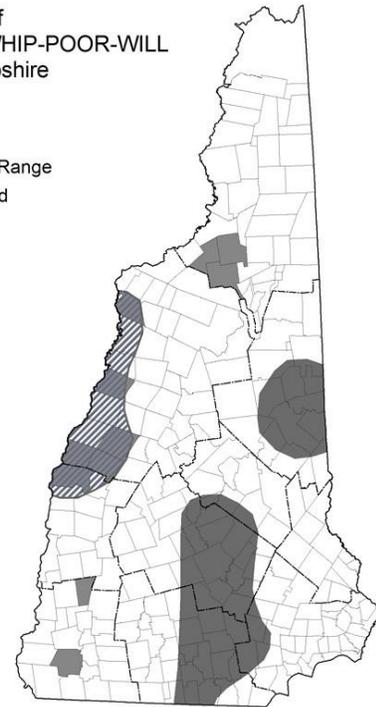
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NH Wildlife Action Plan Habitats

- Hemlock Hardwood Pine Forest
- Appalachian Oak Pine Forest
- Northern Hardwood-Conifer Forest
- Pine Barrens
- Shrublands

Distribution of
EASTERN WHIP-POOR-WILL
in New Hampshire

■ Current Range
▨ Localized



Distribution Map

Current Species and Habitat Condition in New Hampshire

Based on the available data, statewide whip-poor-will populations are declining. Data from current strongholds (Ossipee, Merrimack valley) suggest that the species remains common in these areas, although there are no comparable baseline data on abundance prior to 2003, when current surveys began. See also Justification.

Population Management Status

Whip-poor-will populations are not currently managed in New Hampshire.

Regulatory Protection (for explanations, see Appendix I)

- Migratory Bird Treaty Act (1918)

Quality of Habitat

Limited information. Within whip-poor-will concentration areas, local abundance can be quite variable, suggesting high intra-regional variability in habitat quality. In the absence of management (harvest and/or fire), habitat suitability is likely to decline over time even in these areas. See also pine barrens habitat profile.

Habitat Protection Status

Highly variable, although there is considerable protection of suitable habitat in the vicinity of the two concentration areas in Carroll and Merrimack Counties

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Habitat Management Status

Habitat management has not been implemented for this species, although BMPs have been developed (Hunt 2013). Ongoing efforts to restore fire to the Ossipee pine barrens will likely be beneficial to this species in the long term.

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 due to development (Threat Rank: Medium)

Ongoing residential and commercial development results in permanent loss of habitats for wildlife. Because many of the habitats used by whip-poor-wills are in river valleys and/or on well-drained soils, they may be more vulnerable to this threat.

Species impacts from declines in prey abundance (Threat Rank: Medium)

There is anecdotal evidence that populations of large moths (e.g., Saturnidae, Sphingidae) are lower now than in past decades (c.f. Schweitzer 2004). Because whip-poor-wills consume large numbers of these insects (also beetles), one hypothesis for their decline is a decline in prey populations. There is limited empirical evidence for this, although in Ontario a recent study indicate some tendency for insect populations (moths or beetles) to be higher near locations where whip-poor-wills were more frequently detected (P. English, pers. comm.). At present, mechanisms behind possible insect declines are poorly known, but likely include historical and current pesticide use and possibly biological control agents (e.g., *Compsilura concinnata*) introduced to combat Gypsy Moths (*Lymantria dispar*) (Schweitzer 2004, Elkinton and Boettner 2004).

Habitat degradation and conversion from a lack of management resulting in succession (Threat Rank: Medium)

In the absence of disturbance or management, the early successional and edge habitats preferred by this species generally revert to closed forest systems that are not heavily used (Hunt 2013). See also forest and shrublands profiles.

Habitat degradation due to fire suppression and associated succession (Threat Rank: Medium)

In the absence of fire, pine barrens have fewer open areas and develop a more dense understory of oaks or other plants. Whip-poor-wills tend not to occur in such areas (Hunt 2013). See also pine barrens profile.

Disturbance and mortality from subsidized or introduced predators (Threat Rank: Medium)

Because whip-poor-wills nest on the ground, they are vulnerable to a broad suite of predators. To the extent that many such predators (e.g., skunks, raccoons, feral cats) occur in higher densities in developed landscapes, whip-poor-will populations in such areas may be at higher risk.

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List of Lower Ranking Threats:

Disturbance to nest sites from recreational activity

Actions to benefit this Species or Habitat in NH

Investigate habitat use in peripheral populations

Specific Threat (IUCN Threat Levels): None

Specific Action: Research, survey or monitoring - fish and wildlife populations

Objective:

Determine if habitat use in smaller peripheral populations is similar to that in core populations

General Strategy:

Using methods developed for whip-poor-will focal areas, collect data on species' distribution elsewhere in NH and determine the habitat features selected by the birds in these smaller populations

Political Location:

Statewide

Watershed Location:

Whip-poor-will habitat management

Primary Threat Addressed: Habitat degradation and conversion from a lack of management resulting in succession

Specific Threat (IUCN Threat Levels): Natural system modifications

Objective:

Increase availability and suitability of habitat for Eastern Whip-poor-wills

General Strategy:

In areas where whip-poor-wills occur in reasonable numbers, enhance local habitat through a combination of burning, timber harvest, and other vegetation management.

Political Location:

Carroll County, Merrimack County

Watershed Location:

Androscoggin-Saco Watershed, Merrimack Watershed

Prey Availability Research

Specific Threat (IUCN Threat Levels): None

Objective:

Determine if prey populations are potentially limiting

General Strategy:

Assess relative abundance of prey items (especially large moths) in areas used by whip-poor-wills and compare these data to unoccupied sites with apparently suitable habitat.

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Political Location:

Statewide

Watershed Location:

References, Data Sources and Authors

Data Sources

Trends from published Breeding Bird Atlases, BBS, and unpublished NH data. Habitat information from the literature and NH-specific studies. Distribution data from Atlases, literature, and NHBR/NH eBird.

Data Quality

Although whip-poor-wills are nocturnal, and thus not well-covered by programs such as the BBS, there are generally good regional data on distribution changes based on Breeding Bird Atlases. A standardized protocol now in use in several states shows promise to yield better trend data in the future.

2015 Authors:

Pamela Hunt, NHA

2005 Authors:

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