



Wildlife Species of Special Concern

NH Fish & Game Department
Nongame & Endangered Wildlife Program



Definitions:

'Special Concern': Species of wildlife that are either 'Near-Threatened Species' (Category 1) or 'Recently Recovered Species' (Category 2).

Category 1: Species that could become Threatened in the foreseeable future if action is not taken. Existing threats are such that the species could decline to Threatened status if conservation actions are not taken. In some cases, further survey work may support removing a species from the 'special concern' list but existing information must indicate a sufficient level of threat or concern.

Category 2: Species which were recently removed from the state endangered and Threatened species list (i.e. recovered) and where conservation action is desired to ensure the species continues towards full recovery.

In addition, some species are designated “regional responsibility species” through the use of an “R” appended to one of the previous categories. These are species for which at least 50% of their continental range occurs in the northeastern United States (United States Fish and Wildlife Service Region 5, consisting of all states between Maine and West Virginia plus the District of Columbia). Because of this high regional responsibility, actions to protect these species and/or their habitat will benefit the species' global population. Regional responsibility species were identified during the development of a regional list of Species of Greatest Conservation Need.

Purpose/Uses of Special Concern List:

The NH wildlife ‘Special Concern’ list is intended to help prioritize, in addition to other tools such as the Endangered & Threatened wildlife list, conservation actions for wildlife. A few uses of the list include:

- The list is a tool for prioritizing research needs and conservation actions of wildlife species.
- The presence of ‘Special Concern’ species in a particular area may enhance grant application competitiveness for land acquisition.
- The presence of ‘Special Concern’ species should be considered when making habitat management decisions, especially on conservation parcels.
- The list is a tool for identifying species that need additional data collected in order to evaluate whether species should be listed as endangered or Threatened in future or removed from the Special Concern list.
- List identifies species that need tracking because they have recently been delisted from the NH Endangered & Threatened species (NHFG FIS 1000) list due to recovery.

- Species listed on the Special Concern list are candidates for consideration in environmental review through the DES Wetlands Rules (Env-Wt 313.03 (b) (4)) which require applicants to demonstrate that the project avoids and minimizes impacts to habitat and reproduction areas for species of concern. (Note: Including a species as ‘Special Concern’ does not automatically result in the species being included in Environmental Review at NHFG).

Special Concern Revision Process (2017 Revision):

Special Concern species were proposed during the 2016 Endangered & Threatened Species (NHFG FIS 1000) revision process which included a technical review by taxonomic experts. Once the Endangered and Threatened species list was finalized (effective March 24, 2017), the Wildlife Action Plan Implementation Team (WAPIT) discussed the Special Concern list, made modifications based on expert review, and voted on the final list. Members of WAPIT included: John Kanter (NHFG-Wildlife Division), Mike Marchand (NHFG-Wildlife Division), Emily Preston (NHFG-Wildlife Division), Sandra Houghton (NHFG-Wildlife Division), Heidi Holman (NHFG-Wildlife Division), Brendan Clifford (NHFG- Wildlife Division), Matt Carpenter (NHFG-Fisheries Division), Pamela Hunt (NH Audubon), Pete Bowman (NH Natural Heritage Bureau), and David Patrick (NH Chapter of The Nature Conservancy).

Process to Update List:

The Special Concern list will be evaluated and updated as needed, but at least as frequently as revisions to the Endangered and Threatened species list. Species of wildlife may be proposed for listing or delisting at any time but a strong justification must be provided and an analysis must be conducted similar to what was completed for other species during the 2016 Endangered and Threatened species list revision. New proposals for listing or delisting should be submitted to the NH Nongame and Endangered Wildlife Coordinator. The Nongame & Endangered Wildlife Coordinator, in consultation with biological staff at NH Fish & Game and the Wildlife Action Plan Implementation Team (WAPIT) will decide whether a revision is warranted. Revisions to the list will be documented, in a similar manner as previous reviews, by date.



NH Wildlife - Special Concern List



Insects – Dragonflies and Damselflies

Common Name	Scientific name	Category	Overview of Rationale
Pine Barrens Bluet	<i>Enallagma recurvatum</i>	1R	Regional endemic. Only one known site in NH (but likely overlooked). If other sites exist, they are likely in the rapidly developing southeastern portion of the state. Northeast Regional Species of Greatest Conservation Need.
Rapids Clubtail	<i>Gomphus quadricolor</i>	1	Appears relatively common at some sites, but range is disjunct and some subpopulations appear small. Species of regional concern. Recently listed as Endangered in Canada (at northern edge of range).
Skillet Clubtail	<i>Gomphus ventricosus</i>	1	Only known from 3-4 sites in NH, where it appears rare. Surveys in 2007-2015 failed to relocate this species on the Connecticut River, and it remains rare on the Merrimack River.
Coppery Emerald	<i>Somatochlora georgiana</i>	1	Endemic subpopulation in southeastern New England. The single known site in NH is protected, but if others occur they would likely be in rapidly developing area of state.
Kennedy's Emerald	<i>Somatochlora kennedyis</i>	1	Not documented in state since 2006 and may have declined, although detection is difficult. Surveys in other northeastern states have failed to find it (NY) or found it rarely (ME). Moderate concern in Northeast Odonata Assessment.

Insects – Tiger Beetles

Common Name	Scientific name	Category	Overview of Rationale
Appalachian Tiger Beetle	<i>Cicindela ancocisconensis</i>	1R	In the absence of comprehensive surveys to determine changes in range, it appears this species is secure where it occurs and does not warrant additional conservation prioritization as Threatened/Endangered at this time. Northeast Regional Species of Greatest Conservation Need.
Margined Tiger Beetle	<i>Cicindela marginata</i>	1	Previously believed extirpated but rediscovered in 2014. This species bears watching given its restriction to the heavily impacted coastal portion of NH and reliance on impacted dune/salt marsh interface habitats. However, a recent publication suggests that regional declines may not be as strong as previously believed, so Threatened or Endangered status may not be warranted until more data are available.

Insects – Bumblebees

Common Name	Scientific name	Category	Overview of Rationale
Yellow Bumble Bee	<i>Bombus fervidus</i>	1	There is a lack of NH data but the high level of regional/national concern for this species justifies its listing as Special Concern.
American Bumble Bee	<i>Bombus pennsylvanicus</i>	1	There is a lack of NH data but the high level of regional/national concern for this species justifies its listing as Special Concern. Northeast Regional Species of Greatest Conservation Need.
Yellow-banded Bumble Bee	<i>Bombus terricola</i>	1	There is a lack of NH data but the high level of regional/national concern for this species justifies its listing as Special Concern. Northeast Regional Species of Greatest Conservation Need.

Insects – Butterflies and Moths

Common Name	Scientific name	Category	Overview of Rationale
Monarch Butterfly	<i>Danaus plexippus</i>	1	This species is in decline throughout the North American continent. There is little to no data for NH. The major threats to the species are agricultural practices (primarily in the Midwest) and habitat loss on their wintering grounds in Mexico. Conservation actions in NH are primarily public education on pesticide use and creation of wildflower habitat. Concern in the northeast has inspired NEAFWA to join the Monarch Joint Venture (MJV), with NH representing NEAFWA on the MJV steering committee.
Sleepy Duskywing	<i>Erynnis brizo</i>	1	This species is widespread across much of the U.S, although it appears to be in decline in eastern portions of range. As an indicator species of pine barrens habitat it warrants conservation status. Identified as a species of conservation concern in a review of rare shrubland Lepidoptera of New England (Wagner et al. 2003). Warrants Special Concern status as an indicator species of pine barrens; larvae feed on scrub oak and black oak.
Edwards' Hairstreak	<i>Satyrrium edwardsii</i>	1	Pine barrens obligate that feeds on scrub oaks. Limited distribution in the state. Vulnerable in the Northeast and critically imperiled in Maine. Presence of the formica ant is a critical feature to their occupancy of a site. Does not occupy all available habitat across the range in MA, PA and southern NJ. Northeast Regional Species of Greatest Conservation Need.
Barrens Itame	<i>Speranza exonerata</i>	1	Identified as species of conservation concern in a review of rare shrubland Lepidoptera of New England (Wagner et al. 2003). Warrants Special Concern status as an indicator of high quality pitch pine barrens, believed to feed on scrub oak or lowbush blueberry. Although trends are largely unknown, this species is likely less common than historically due to loss and alteration of preferred habitats. As a northeastern endemic with absence and scarcity across its range, it warrants conservation. Absent from Concord pine barrens, but has been detected in Ossipee

Insects – Butterflies and Moths *continued*

Common Name	Scientific name	Category	Overview of Rationale
Broad Sallow Moth (Barrens Xylotype)	<i>Xylotype capax</i>	1	Identified as species of conservation concern in a review of rare shrubland Lepidoptera of New England (Wagner et al. 2003). Although trends are largely unknown, this species is likely less common than historically due to loss and alteration of preferred habitats. Warrants Special Concern status as an indicator species of pine barrens, larvae feed on either scrub oak or blueberry. Has been identified at four locations in recent surveys.
Pine Barrens Zanclognatha Moth	<i>Zanclognatha martha</i>	1	Identified as species of conservation concern in a review of rare shrubland Lepidoptera of New England (Wagner et al. 2003). Recent surveys have found this species to be present in appropriate habitat in New Hampshire, but still endemic to pine barrens warranting Special Concern status as an indicator species. Has been identified at 10-15 locations statewide during recent surveys.
Bird Dropping Moth (Cora Moth)	<i>Cerma cora</i>	1	Identified as species of conservation concern in a review of rare shrubland Lepidoptera of New England (Wagner et al. 2003). Warrants Special Concern status as an indicator of high quality pitch pine barrens, rare throughout most of its range. Collected at Mast Yard in 2007, has not been detected in Ossipee or Concord in recent years
Phyllira Tiger Moth	<i>Grammia phyllira</i>	1	Sandy grassland specialist found within pine barren habitat. Lepidoptera require habitat conditions that result from fire or similar natural disturbance. In the absence of disturbance, and with increasing fragmentation, their populations may not be self-sustaining. Documented food source includes lupine, although may not be the only native food source. Only record in recent years from NHANG in 2012
A noctuid moth	<i>Zale lunifera</i>	1	Identified as a species of conservation concern in a review of rare shrubland Lepidoptera of New England (Wagner et al. 2003). Recent surveys have found this species to be present in appropriate habitat in New Hampshire, but still endemic to pine barrens warranting Special Concern status as an indicator species.

Fish

Common Name	Scientific name	Category	Overview of Rationale
Blueback Herring	<i>Alosa aestivalis</i>	1R	Significant declines in some rivers. Fishway count data may underestimate spawning populations below dams. Northeast Regional Species of Greatest Conservation Need.
Alewife (sea run only)	<i>Alosa pseudoharengus</i>	1R	Stable or increasing populations. Responding well to restoration efforts but there are still a number of threats. Northeast Regional Species of Greatest Conservation Need.
American Shad	<i>Alosa sapidissima</i>	1	Recent increase in population in Merrimack and Connecticut Rivers. Only remnant populations in Coastal Rivers.
American Eel	<i>Anguilla rostrata</i>	1	Rangewide decline, but access to habitat in New Hampshire is improving.

Fish *continued*

Common Name	Scientific name	Category	Overview of Rationale
Northern Redbelly Dace	<i>Chrosomus eos</i>	1	Limited records, but populations may be underrepresented in fish survey database.
Finescale Dace	<i>Chrosomus neogaeus</i>	1	Limited records, but populations may be underrepresented in fish survey database.
Lake Whitefish	<i>Coregonus clupeaformis</i>	1	Very little information on population status.
Banded Sunfish	<i>Enneacanthus obesus</i>	1R	NH distribution overlaps the rapidly developing southern part of the state. Highly dependent on intact, vegetated shoreline habitat, which is impacted by shorefront development. Northeast Regional Species of Greatest Conservation Need.
Redfin Pickerel	<i>Esox americanus americanus</i>	1	NH distribution overlaps the rapidly developing southern part of the state. Much of its habitat in NH has been degraded.
Swamp Darter	<i>Etheostoma fusiforme</i>	1	NH distribution overlaps the rapidly developing southern part of the state. Difficult to survey. Vulnerable to habitat degradation due to changes in hydrology, erosion and sediment deposition due to impervious surface runoff. Northeast Regional Species of Greatest Conservation Need.
Rainbow Smelt (sea run only)	<i>Osmerus mordax</i>	1	Significant range contraction on east coast. Angler survey, fyke net data, egg deposition surveys, and anecdotal angler reports suggest significant declines in Great Bay population.
Sea Lamprey	<i>Petromyzon marinus</i>	1	Populations remain well below historic abundance. Access to spawning habitat may be limited by dams. May be impacted by declines in marine host species.

Amphibians

Blue-spotted/Jefferson Salamander	<i>Ambystoma laterale/ jeffersonianum</i>	1	NH range of Jefferson is extremely limited and habitat is at risk. Blue-spotted is widely distributed in New Hampshire but available data indicates it is much less common than spotted salamanders and its habitat is vulnerable to conversion. Difficulty in distinguishing these two species argues for Special Concern status for the complex rather than different categories for the two species. Future research may argue for separate listing status for species.
Northern Leopard Frog	<i>Lithobates pipiens</i>	1	Limited occurrences currently known. Populations in vulnerable habitats.

Reptiles

Common Name	Scientific name	Category	Overview of Rationale
Wood Turtle	<i>Glyptemys insculpta</i>	1R	High risk in much of southern NH. Vulnerable to development, collection, roads, stream alterations, some agricultural practices, and life history traits which require extremely high adult survival. Relatively few populations with high numbers of turtles. Threats make species eligible for Threatened status but statewide (excluding higher elevation areas) distribution keeps at Special Concern. Northeast Regional Species of Greatest Conservation Need.

Reptiles *continued*

Common Name	Scientific name	Category	Overview of Rationale
Smooth Greensnake	<i>Opheodrys vernalis</i>	1	Anecdotal long-term declines in species. Declines in primary habitat used and sensitive to pesticides. Northeast Regional Species of Greatest Conservation Need.

Birds

Common Name	Scientific name	Category	Overview of Rationale
Spruce Grouse	<i>Falciennis canadensis</i>	1	Although NH populations and range appear stable, potential habitat shifts resulting from climate change are an important threat, and the Spruce Grouse should remain Special Concern in light of this risk. Additional risks include loss of stands retaining spruce grouse structure requirements and the potential habitat impacts (structure and distribution) of forest pests.
Least Bittern	<i>Ixobrychus exilis</i>	1	First confirmed breeding in state in Salem in 2014 and currently reliable at only two sites (irregular occurrence at 2-3 more, but far from annual). In the absence of clearly defined threats, this species is best considered rare rather than actually at risk. This may change if clear threats are identified in the future.
Bald Eagle	<i>Haliaeetus leucocephalus</i>	2	Delisted from state Threatened in 2016 as the NH population has doubled roughly every five years, and is now above 50 territorial pairs. Continued management and technical assistance is needed. Species will continue to be protected under Federal and State Bald & Golden Eagle Acts.
Sora	<i>Porzana carolina</i>	1	Available data suggest that Soras are much rarer in NH than during the first Breeding Bird Atlas, and the species is suspected to be declining regionally. However, population does not appear significantly changed in last 10-15 years, so retained as Special Concern pending better data on status and/or threats.
Common Gallinule	<i>Gallinula galeata</i>	1	Remains the rarest of the regularly occurring marsh birds in NH, with no breeding noted since the Breeding Bird Atlas in the early 1980s. Sites occupied at that time have not been used in recent years, and there are very few breeding season records of any kind. Declines from the 1990s persist, and the species may no longer breed regularly in the state. There could be a case made for removal in this regard, but at present it is best to treat this species in the same manner as the other rare wetland species.
Willet	<i>Tringa semipalmata</i>	1	Salt marsh obligates are largely at risk to habitat loss from sea level rise or tidal restriction. Willet populations appear stable in the region.

Birds *continued*

Common Name	Scientific name	Category	Overview of Rationale
Arctic Tern	<i>Sterna paradisaea</i>	1	NH is at the extreme southern edge of this species' extensive range and it will likely never be common in the state. Despite an overall decline in the Gulf of Maine, the peripheral nature of the NH population does not warrant listing at this time. Although reliant on management for persistence, this species occurs at a remote location that is generally protected from regular human disturbance. Retention as Special Concern ensures continued attention to this species in conjunction with the more common species with which it co-occurs (Common and Roseate Terns). Threats are poorly known, but include predation, disturbance, depletion of prey stocks, and possibly climate change.
Chimney Swift	<i>Chaetura pelagica</i>	1	This species has shown consistent rangewide declines despite continued availability of nesting habitat and needs to be watched. NH trend is -1.88%/year.
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	1	This species has always (at least in recent decades) been an extremely rare component of NH's avifauna and is best treated as "rare" rather than Threatened or Endangered. The most recent verified record is from 2000.
American Kestrel	<i>Falco sparverius</i>	1	Consistent population declines and range retraction throughout the region.
Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	NH population declining at -7.5% per year. Surveys in 2014-16 indicate 20-60% loss of occupied areas since Atlas in 1980s. All other regional data also indicate a significant decline. Species is listed as Threatened in Canada.
Horned Lark	<i>Eremophila alpestris</i>	1	May only occur at 4-5 sites in state, all of which are airports. Apparently now extirpated from dunes in Hampton/Seabrook. Has always been rare in NH, and with a much larger global range and relatively small declines compared to other grassland birds, it does not warrant the increased attention of Threatened status.
Bank Swallow	<i>Riparia riparia</i>	1	One of the most rapidly declining birds in NH (-8.5% per year), but still widespread and locally abundant.
Bicknell's Thrush	<i>Catharus bicknelli</i>	1R	Regional endemic. NH holds over 30% of global habitat, much of it high quality. Some data suggest significant declines in White Mountains. Species of Northeast Regional Conservation Concern and recently considered for Federal listing. Remains relatively common in suitable habitat, and greatest threats are on the winter grounds. Northeast Regional Species of Greatest Conservation Need.
American Pipit	<i>Anthus rubescens</i>	1	Isolated population of ~15 pairs in Presidential Range. One of only 3-4 such sites in the Northeast.
Saltmarsh Sparrow	<i>Ammodramus caudacutus</i>	1R	Salt marsh obligates are largely at risk to habitat loss from sea level rise or tidal restriction. Recent data suggests that Saltmarsh Sparrow is declining at 9% year rangewide, but it remains common in suitable habitat in NH. Northeast Regional Species of Greatest Conservation Need.

Birds *continued*

Common Name	Scientific name	Category	Overview of Rationale
Nelson's Sparrow	<i>Ammodramus nelsoni</i>	1	Salt marsh obligates are largely at risk to habitat loss from sea level rise or tidal restriction. Recent data suggests that Nelson's Sparrow is declining at 4% year in it's Gulf of Main range, but it remains common in suitable habitat in NH. It also has an extensive range extending into eastern Canada and additional disjunct populations in the Great Plains and Hudson Bay.
Vesper Sparrow	<i>Pooecetes gramineus</i>	1	Significant declines. Now only known from fewer than 20 sites statewide, but status does not appear to have changed significantly since 2008.
Rusty Blackbird	<i>Euphagus carolinus</i>	1	Species of high regional and continental concern due to population declines. Limited data suggest absence from many formerly occupied sites in NH.

Mammals

Common Name	Scientific name	Category	Overview of Rationale
Big Brown Bat	<i>Eptesicus fuscus</i>	1	Affected by White-nose Syndrome but with less population decline.
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	1	Vulnerable due to high risks from wind power, loss of roost habitat and low reproductive rate. Lack of information on population status in NH.
Eastern Red Bat	<i>Lasiurus borealis</i>	1	Vulnerable due to high risks from wind power and low reproductive rate. Lack of information on population status in NH.
Hoary Bat	<i>Lasiurus cinereus</i>	1	Vulnerable due to high risks from wind power and low reproductive rate. Lack of information on population status in NH.
Pine/American Marten	<i>Martes americana</i>	2	Marten populations have expanded over the last 20 years, possibly related to fisher numbers declining over that same period of time. Marten habitat is fairly secure via conservation efforts such as the White Mountain National Forest, and the conservation of the larger ownerships in northern NH. Marten are an important indicator of habitat condition for older spruce fir and mixed forests in NH and have been predicted to decline due to climate change. Although down listed from Threatened, marten populations should continue to be monitored due to sensitivity in habitat changes, potential interactions with increasing fisher populations, and status as a good indicator species for habitat and climate change especially here at the edge of their range.
Long-tailed or Rock Shrew	<i>Sorex dispar</i>	1R	Distribution and abundance largely unknown. Data from Maine indicate rare. Threatened by wind turbine development. In high elevation habitat. Northeast Regional Species of Greatest Conservation Need.
Northern Bog Lemming	<i>Synaptomys borealis</i>	1	Distribution and abundance largely unknown. Generally thought less common than Southern Bog Lemmings. At southern edge of range.