

# EXECUTIVE SUMMARY

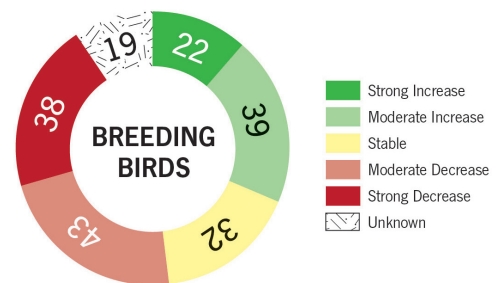
## *The State of New Hampshire's Birds: A Conservation Guide*

Birds have long been recognized as environmental indicators. From the oft-repeated tale of miners' canaries, to Silent Spring, to Spotted Owls in old-growth forest, we've relied on or pointed to birds to help us avoid environmental catastrophe. This need is just as crucial today, with recent estimates that North America has lost over three billion birds in the last 50 years spurring conservationists to new action (<https://www.3billionbirds.org/>). The actions needed are often broad in scale, sometimes spanning continents, but even these are ultimately implemented at a local scale. Right here in New Hampshire there are things you can do to help "our" birds, even if they don't recognize our arbitrary political boundaries. In 2011, NH Audubon produced the first statewide overview of bird populations and conservation, and is proud to present this update to that information.



### What This Report is all About

The evidence presented in this publication documents our current understanding of how birds are doing. This new *State of New Hampshire's Birds: A Conservation Guide* presents data on population trends and threats for the over 190 species that breed in the varied habitats of the Granite State. We've added new information on birds that pass through or winter here, and expanded coverage of threats to birds when they're not in the state. Most importantly, we've updated and expanded the list of actions that people can take to help birds both here and beyond our borders.



### What the Data Show

#### 193 species breed in New Hampshire

- 81 are decreasing;  
38 of these by more than 50% since 1966
- 61 are increasing
- 32 are stable
- For 19 we don't know their population trend

Forest birds are doing relatively well, only 16% are strongly declining, while 14% are strongly increasing.

One third of all species that use shrubby or grassy habitats are in strong decline.

Over half of nesting aerial insectivores (swifts, swallows, flycatchers) are in strong decline.

The farther a species migrates, the more likely it is to be declining; 38% of those that spend the winter in South America are only half as common as they were 50 years ago.

Conservation activity has led to dramatic recoveries in waterfowl and birds of prey.

## Threats to New Hampshire's Birds

New Hampshire's birds are under threat, as they are across North America as a whole. While the number of species that are increasing or stable is roughly the same as the number declining, the declines are almost always stronger than the increases, and in certain habitats the declines predominate. Knowing the threats to different habitats allows us to best implement conservation actions that help them – and the birds that rely on them.

Habitat loss is ongoing and pervasive and the most significant threat to birds in North America.

- Development, including buildings, roads, and other infrastructure, destroys habitat outright.
- Remaining habitat is usually fragmented, often to the detriment of nesting birds.
- Some habitats depend on management, and decline in its absence.
- Habitat loss outside of New Hampshire can be an even worse threat to migratory birds.

People have introduced other dangers into birds' environments.

- Predation by domestic cats is the second most significant threat to birds – cats kill millions of birds a year.
- Millions more die from collisions with windows, towers, and other structures.
- Pollution of waterways, oceans, and land is pervasive, and its impacts on birds still poorly known.

Climate Change is a game changer.

- Coastal areas will be lost to sea level rise.
- Habitats may shift or change in composition.
- Disrupted weather patterns can affect birds throughout their annual cycles.

## What We Can Do

Priorities for bird conservation in New Hampshire are fourfold:

- conserve important habitats,
- manage habitat where most appropriate,
- mitigate existing threats,
- gather data that can inform our understanding of limiting factors.

Although we've done a good job protecting forest, we still need to maintain large forest blocks, especially in the southern portion of the state. Along the coast, critical habitats important for nesting or migration remain threatened by development and climate change. Grasslands and shrublands need careful management to continue as viable habitat. At the same time, not all threats are tied to habitats, and there is an ongoing need to take action to reduce the pervasive sources of mortality – be it from cats, collisions, or contaminants.

It is also critical that we consider the full annual cycle of birds when making conservation decisions, since the most important actions might not be the ones we can take here in New Hampshire, but the ones we need to encourage or facilitate on a much larger scale, from shorebirds' arctic nesting grounds to the South American forests where so many of "our" migrants spend the winter.



*After habitat loss, predation by domestic cats is the most significant threat to birds in North America. Keeping cats indoors can prevent unnecessary bird deaths, and also makes for safer and healthier pets.*



*Beach closures for nesting shorebirds are a common management tool, including in New Hampshire, where they serve to minimize disturbance to Piping Plovers.*





REBECCA SUOMALA

Populations of the Purple Finch (our state bird) have declined by over 80% since the 1960s.

## Some of the Biggest Challenges

### Early Successional Species are in Steep Decline

Of the 60 species that breed in shrubby or grassland habitats, over a third have lost 50% of their populations in the last 50 years. The list of declining species includes such iconic birds as the Bobolink, Eastern Towhee, and American Kestrel. Loss of habitat to forest maturation, development, or agriculture is the main threat to birds of these habitats. Since we can't manage all such habitat, we need to identify priority areas for management.

### Double Trouble: Aerial Insectivores and Insect Populations

Some of the most dramatic declines we're seeing in New Hampshire's birds, and elsewhere in North America, are in a group known as aerial insectivores. These are the swifts, swallows, flycatchers, and nightjars (i.e. whip-poor-will) – all species that specialize on insects captured in flight. Of our 18 species, almost half (8) have declined by at least 50% in the last 50 years, and another four are showing smaller but significant declines. These trends are possibly tied to the increasingly-likely scenario that insect populations themselves are declining rapidly – the so-called “insect apocalypse.” Unfortunately, biologists are just starting to understand the threats to both insects and aerial insectivores, but they likely include intensive agriculture (e.g., pesticides) and climate change both here and in South America. Still common, but rapidly-declining, species like the Barn Swallow and Chimney Swift may be the “coal mine canaries” of the 21st Century.

### What Happens in Vegas *Doesn't* Stay in Vegas

With the exception of 29 species that essentially don't migrate, most of New Hampshire's breeding species head south for the winter. For dozens more, the Granite State *is* their winter destination, or at least a rest stop on their way to warmer climes. A critical aspect of migratory bird conservation is that we can't pay attention to just a single stage in a species' annual cycle, and things that happen outside the nesting season may be more important than what's going on in our local forests, wetlands, and yards. We can conserve most of a species' breeding habitat, but if it faces serious threats in migration or winter it will continue to decline. An excellent example for this principle is the Bicknell's Thrush, a much-sought denizen of high-elevation forests in the White Mountains. In the fall, however, the entire global population of this thrush flies south to the Caribbean, where the vast majority of them spend the winter on the island of Hispaniola. Two countries share this island: Haiti and the Dominican Republic, and both have lost over 50% of their native forest. “Our” thrushes are forced into smaller and/or degraded patches of habitat, where they may not even survive to make their trip north the following spring. Another example: the hundreds of sandpipers and plovers we see on our coastal beaches each fall are perhaps only halfway through a marathon journey from arctic Canada to South America. What happens to them here, from habitat loss to human disturbance, can affect their chances of surviving their migration.

### Climate Change Touches Everything

The effects of climate change on birds are varied and often conjectural, but there are some pretty obvious negatives. Coastal birds in particular are already finding their salt marsh and beach habitats increasingly flooded, and likely to be significantly reduced in size as sea levels rise. For Saltmarsh Sparrows, there may be no place to go because existing marshes cannot shift inland due to existing development. Warming ocean temperatures result in shifting food webs that can reduce prey availability for terns and other seabirds, while on land we are likely to see complicated and unpredictable habitat changes that will affect some birds more than others.

## The Good News: There is Always Hope

### Forest Birds are Doing Well

Almost 100 species nest in New Hampshire's varied forests, and the good news is that only 16 of them are declining strongly (loss of 50% of their populations in 50 years). Almost as many species (14) are increasing strongly (population doubled or more), several of which are colonizing New Hampshire from the south. Unfortunately, some of the most at-risk species are familiar songbirds like the Wood Thrush, Scarlet Tanager, and Rose-breasted Grosbeak. Ongoing development, and the resulting loss or fragmentation of forests, remains a threat in New Hampshire. Our most strongly declining forest birds are also long-distance migrants that face threats, usually related to habitat loss, throughout the year.

### Conservation Can Make a Difference

Some of our greatest success stories include waterfowl and birds of prey, which have benefited from actions begun decades ago to remove or mitigate threats. Waterfowl such as the colorful Wood Duck were once quite scarce in the Granite State, but have bounced back as a result of habitat protection, reduced hunting pressure, and provision of nest boxes. With the banning of DDT in the 1970s, and help from reintroduction programs, Bald Eagles, Ospreys, and Peregrine Falcons have come back in force and continue to expand. Ongoing work with terns and Piping Plovers on the seacoast is also bearing fruit. Recovering at-risk populations takes a lot of work, but these and other examples show that it's possible once you identify the problems.

### There are Things Anyone Can do to Help

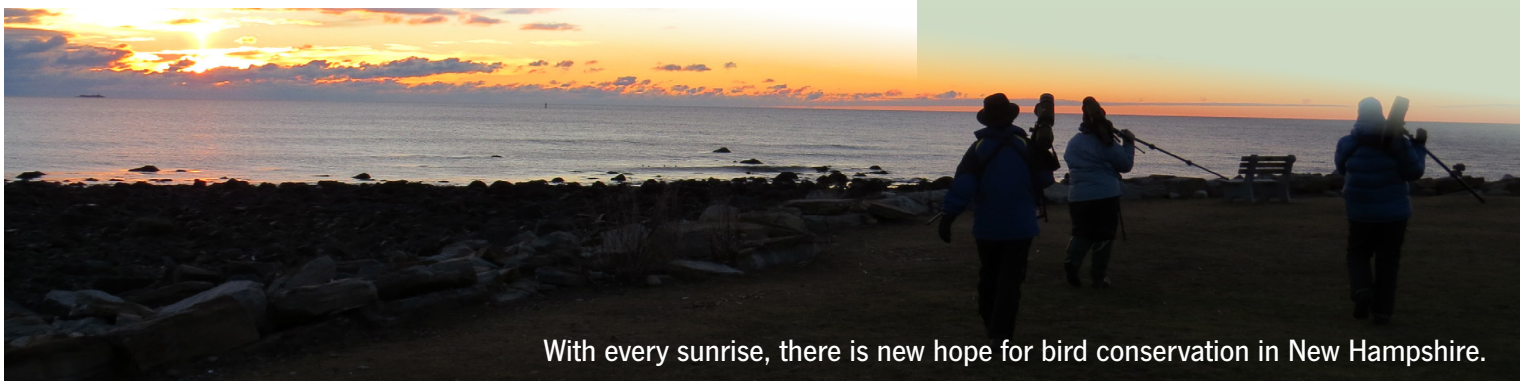
Some of the most pervasive threats to birds are dispersed across the landscape, and while each alone may not be directly implicated in any given species' decline, their cumulative effects cannot be ignored. Birds killed by domestic cats or by flying into windows number in the billions each year, and yet these two sources of mortality are easily preventable. Climate change or tropical deforestation are harder threats to address, but even there individuals can make incremental differences through their actions – or by simply making their voices heard.



PAM HUNT

### Top Ten Things You Can Do to Help New Hampshire's Birds:

1. Keep your cat indoors
2. Treat windows to minimize fatal bird collisions
3. Avoid harmful pesticides and products grown with them
4. Drink bird-friendly coffee
5. Create a bird-friendly yard
6. Manage habitat for birds
7. Conserve priority land for breeding, migration, and wintering
8. Advocate for smart growth and strong environmental policy
9. Don't disturb birds during vulnerable periods
10. Help collect data



With every sunrise, there is new hope for bird conservation in New Hampshire.

PAM HUNT