

The White Mountain High Elevation Forest Important Bird Area

The New Hampshire Important Bird Area Program is part of a national and international effort to identify areas that provide critical habitat to birds during some stage of their annual cycle. In New Hampshire the program is a partnership of the Audubon Society of New Hampshire, the New Hampshire Fish and Game Department, and the University of New Hampshire Cooperative Extension. IBAs are identified based on strict scientific criteria, including 1) the presence of threatened or endangered species, 2) other species and habitats of conservation concern, and 3) areas where birds congregate during breeding, migration, or winter. It is hoped that recognition of IBAs can help guide future conservation and research efforts at areas that meet these criteria.

The White Mountain High Elevation Forest IBA meets categories 1 and 2 of the IBA criteria, as follows:

1) Threatened and endangered species

Of 17 recently-active Peregrine Falcon nests in New Hampshire, 12 are in or near the White Mountain National Forest (WMNF), and 7 of these are located above or near 2500 feet. This is a significant portion of the state population of this threatened raptor. Peregrines nest on cliffs, and an important component of their conservation involves restricting access to these cliffs during the breeding season. New Hampshire Audubon has conducted extensive outreach to the rock climbing community to inform them of falcon biology and conservation, and some climbers have been instrumental in peregrine banding efforts as part of this partnership.

2) Other species and habitats of conservation concern

The high-elevation spruce-fir forests of the Northeast are home to one of the most range-restricted bird species in North America, the Bicknell's Thrush, which is found only in portions of the northeastern United States (NY, VT, NH, ME) and southeastern Canada (Quebec, New Brunswick, Nova Scotia). Recent estimates place the total world population of this species between 60,000 and 100,000 individuals. Based on habitat availability, this estimate places roughly 40% of the world population – 24-40 thousand birds – in NH. Of these, the majority are in the White Mountains. Estimates of the Bicknell's Thrush population for the WMNF are on the order of 7000 birds, but these estimates are based on a different model than that used for the entire population. Suffice it to say that a significant portion of the world population inhabits the high-elevation spruce-fir forests of northern New Hampshire.



In addition to Bicknell's Thrush, several other species of state or regional concern breed in montane conifer forests. These include Spruce Grouse, American Three-toed Woodpecker, Boreal Chickadee, and Bay-breasted and Blackpoll Warblers. All of these either show population declines or are generally rare in the state, and thus bear watching even if they are generally widespread. Several other high-elevation birds are of less concern, but these nonetheless are quite representative of the habitat, among them Yellow-bellied Flycatcher, Dark-eyed Junco, Ruby-crowned Kinglet, and Gray Jay. In addition, more generalized species – such as Swainson's Thrush, Magnolia Warbler, White-throated Sparrow, and Purple Finch – can also occur in high-elevation spruce fir in high densities.

Beyond the issues specific to Peregrine Falcons mentioned above, the birds of montane conifer forests are most likely to be influenced by factors operating outside of New Hampshire. Because development and logging are prohibited at high-elevations of the WMNF, these forests are most threatened by large-scale changes resultant from atmospheric pollution. For example, among the predicted effects of climate change is an upward migration of habitats on mountains. Over time, this would result in much of New Hampshire's high-elevation spruce-fir disappearing from more southerly mountaintops. Similarly, acid deposition may be causing spruce die-off at high elevation, and there is increasing evidence for mercury accumulation. The direct effects of such subtle habitat changes on Bicknell's Thrush and other birds are poorly known, but it is reasonable to assume that they will be affected in some way, perhaps even by disappearing in parts of their range. It is thus important to keep out-of-state influences in mind when planning for bird conservation at a local scale.

For the purposes of the NH IBA Program, the White Mountain High Elevation Forest IBA is defined as areas between 2500 and 5000 feet in the WMNF. This includes areas under other ownership adjacent to the WMNF such as Mount Moosilauke, but not additional high elevation areas to the north or south.

For more information on the New Hampshire Important Bird Area Program, contact:

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More details on the IBA Program are also available on the N.H. Audubon web site.