

## Introduction to North American Raptor Conservation Species Assessments

We provide species assessments based on trend analyses through 2019 from 76 raptor migration count sites across North America spanning from Canada to Panama. Synthesis of trends at the continental and regional scales can highlight species and/or regions that warrant a closer look in the case of widespread declines or highlight conservation successes in the case of widespread increases. It is important to note that the intent of long-term monitoring efforts like RPI is to identify changes overtime, not necessarily to explain them—that is where focused research efforts come into play. RPI shines a light on species and places in need of closer looks and focused efforts.

In these assessments, we provide a summary of the continental and regional migration count trends for each species and highlight species of concern. For complete and/or long-distance migrants such as Osprey, Broad-winged Hawk, Swainson’s Hawk, and Mississippi Kite, where essentially the entire population migrates out of its breeding range to a separate wintering range, the migration count trends provide a reliable assessment of actual population trends. For partial and short-distance migrants such as the Red-tailed Hawk, there is evidence that some species may be shifting their migratory behavior and/or wintering ranges in response to climate change and other factors (Bolgiano, 2013; Paprocki, et al, 2017).

Another factor to consider in viewing the trends is that some species (e.g., Golden Eagle, Peregrine Falcon) have resident populations that may not be well-represented in the migration count data. Therefore, considering results from multiple datasets, including the Christmas Bird Count (CBC, <https://netapp.audubon.org/cbcobservation/>) and Breeding Bird Survey (BBS, <https://www.pwrc.usgs.gov/bbs/results/>), can provide a more complete picture of the population status of many raptor species. In these assessments, we also briefly examine CBC trends, especially where those data inform the findings from the migration count results. The results discussed here derive from [www.audubon.org](http://www.audubon.org) and were published in *Soykan, C.U., Sauer, J., Schuetz, J.G., LeBaron, G.S., Dale, K., and Langham, G.M. 2016. Population trends for North American winter birds based on hierarchical models. Ecosphere, 7(5).*

### Sharp-shinned Hawk (*Accipiter striatus*)

One of the most frequently recorded species at the majority of watch sites, the Sharp-shinned Hawk, is also the species with the highest number of declining counts across North America between 2009 and 2019, accounting for 17% of the 219 total declining trends identified during this time span. Our results show declines in migrating Sharp-shinned Hawks at 48% of count sites, while 51% of sites show stable counts and one site displayed increased counts. Eighty-seven percent of these declines are at watch sites in the East, 8% in the West, and 5% in the Central region. The sites with the highest average counts of Sharp-shinned Hawks



Photo by Bill Moses

across the continent include Hawk Ridge, Minnesota, Cape May, New Jersey, Whitefish Point, Michigan, and Hawk Cliff, Ontario. These sites split their trends with Eastern sites recording declines. Cape May averaged 14,814 Sharp-shinned Hawks annually, with a decline of 5.45% per year in the last decade. Hawk Cliff averaged 7,750 migrants with a decline of 7.13% annually from 2009 to 2019. In the Western Great Lakes, Hawk Ridge averaged 16,287 migrants annually, with stable counts. Whitefish Point tallied an average of 9,419 migrants annually with stable numbers.

Twenty-year trends (not shown) also suggest widespread declines in migrant birds at Eastern count sites (Central Region: 2 stable; East Region: 7 stable, 19 decrease; Gulf Region: 3 stable, 1 increase, 1 decrease; West Region: 5 stable, 1 decrease).

Winter survey data from the Christmas Bird Count (CBC) show an overall mix of declines, stability, and increases across the continent for the past decade. Consistent with migration trends, declining winter numbers are seen primarily in the East and include Ontario and states bordering the Eastern Great Lakes. Northwestern states show largely stable or increasing numbers. Trends could in part reflect a shift in migratory behavior in Eastern populations but the lack of increases in the wintering populations in Northern states or provinces suggests population declines. These results emphasize the need for research to identify the cause of the Eastern and Great Lake regional declines.

Sharp-shinned Hawks are globally listed as a Species of Least Concern by the IUCN Red List with no listed designations since the 1980s. Sharp-shinned Hawks are vulnerable to habitat loss through forest removal, collisions, pesticides, environmental contaminants, and human harassment while nesting. Sharp-shinned Hawks feed primarily on small birds and inhabit large tracts of boreal forests, both of which have been identified as areas of conservation concern. Declines in prey, increases in contaminants, and possible climate change impacts should be investigated.



