

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 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).*

Broad-winged Hawk (*Buteo platypterus*)

The 10-year migration count trends for the Broad-winged Hawk suggest a mostly stable population trend across North America as 82% of 72 sites reported no significant change in counts and 11% of the sites, all of which were located in the Eastern Region, reported a decrease during this span. Counts were stable in the Central and Gulf Regions, with one site increasing in the West Region (see pie charts and trend maps below). Of the 53 Eastern Region sites, 15% showed declines. Sites with declines were predominantly located in inland region along the Eastern Appalachians and in Piedmont. Hook Mountain, New York, Scott’s Mountain, New



Photo by Bill Moses

Jersey, and Militia Hill, Pennsylvania, show declines for the recent decade and may be sampling similar populations. Counts with highest annual counts near the Great Lakes and in the Gulf Region observed stable numbers. The 20-year count trends (not shown) showed stable and increased counts (East Region: 21 stable; Central Region: 2 stable; West Region: 2 stable, 3 increase; Gulf Region: 4 stable, 1 increase). Cardel, Veracruz, has the highest average count of Broad-winged Hawks for the 10-year period, 865,408 and has reported a stable count trend.

The Broad-winged Hawk primarily overwinters in Central and South America and is not well represented on winter surveys such as the Christmas Bird Count (CBC) except in Florida. A very small number of Broad-winged Hawks winter in the United States, however data from the CBC suggest the number may be increasing perhaps representing a winter range shift. The Broad-winged Hawk is listed by the IUCN Red List as a Species of Least Concern, however, the species is currently listed as a species of Conservation Need in 13 eastern states. Though western populations seem to be increasing, particularly in Western Canada, Broad-winged Hawks nest and winter in large forests and are sensitive to forest fragmentation. Regional declines of eastern populations appear to be occurring in areas undergoing urbanization and suburban sprawl. Deforestation of tropical forests for agriculture may be a current threat to the species' wintering range. Broad-winged Hawks continue to be threatened by unrestricted shooting practices in Latin America, along with threats from capture for the wildlife trade and food. Mortality due to vehicle collisions are frequently reported. More research is needed to determine the extent to which these factors impact the global Broad-winged Hawk population.



