

Introduction to North American Raptor Conservation Species Assessments

In the assessments, we provide a summary of the continental and regional migration count trends through 2023 for each species using data from 80 migration count sites across North America, spanning from Canada to Mexico. 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 or wintering ranges in response to climate change and other factors (Bolgiano, 2013; Paprocki, et al, 2017). Our goal is to provide accurate population trend summaries and highlight species of concern.

Another factor to consider in viewing the trends is that other species (e.g., Golden Eagle, Peregrine Falcon) have resident populations that may not be well-represented in the migration count data. Therefore, it is important to review 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/>), for a complete picture of the population status of many raptor species. In these assessments, we also briefly discuss CBC trends where those data augment 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). The CBC data represented here only show trends where the confidence interval for the trend derived does not include zero.

Red-tailed Hawk (*Buteo jamaicensis*)

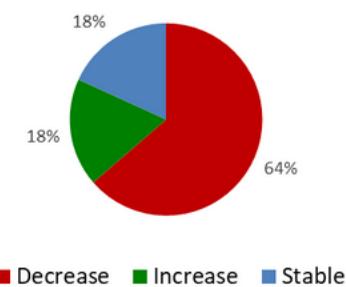
The 10-year migration count trends for the Red-tailed Hawk suggest a mix of stable and declined counts across North America as 33.3% of sites recorded stable counts over the last decade. Decreased observations were observed for 50% of the sites, and 17% of sites reported an increase. Regionally, many sites report declines, with 64% of sites in the East region documenting declines, 50% in the Central region showing declines, and 64% in the West region showing declines. Contrastingly, only 20% of sites in the Gulf region documented declines, with the remaining sites being split equally between increasing and stable trends (see pie charts and trend maps below). Similarly, twenty-year count trends also reflect a mix of stable and declined counts. The Central and East regions represent the majority of decreased counts over this span.



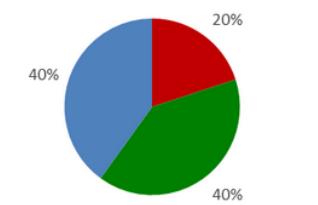
Winter survey data from the Christmas Bird Count (CBC) show relatively stable 10-year trends continent-wide with the annual percent change in population reported to be an increase of 1.7%

from 2009-2022. In the East Region, declines of wintering birds were noted in Ontario, Louisiana, North Carolina, and Florida. Possible declines were also noted in nearby states or provinces. Contrastingly, 10-year abundance trend data from eBird documented a median decline of -6% for this species from 2012-2022. Steep declines were documented in Canada (median decline of -14.2%), while increases in population were seen in the southern portions of this species range. The two data sources combined suggest there may be some localized declines in this species in northeastern provinces and states that warrants investigation. Declines observed in migration counts could be due to Red-Tailed Hawks decreasing their migratory behavior in response to climate change. However, the declines in winter population estimates suggest research is needed on this still common species. The Red-tailed Hawk is listed as a *Species of Least Concern* globally by the IUCN Red List. The species can readily thrive in human dominated landscapes. Red-tailed Hawks are vulnerable to collisions, electrocution, poaching, lead poisoning, rodenticides, contaminants, and environmental contaminants.

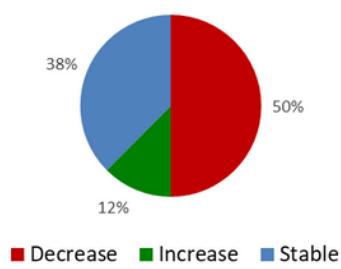
**Red-tailed Hawk, West
2014-2023 (n=11)**



**Red-tailed Hawk, Gulf
2014-2023 (n=6)**



**Red-tailed Hawk, Central
2014-2023 (n=8)**



**Red-tailed Hawk, East
2014-2023 (n=53)**

