M. Carson, D. Oleyar, D. Ethier, L. Goodrich, D. Brandes, J. Brown, and J. Sodergren. 2025. *The Raptor Population Index: 2023 Species Assessments*. Available at http://rpi-project.org/2023/assessments2023.php

Introduction to North American Raptor Conservation Species Assessments

We provide species assessments based on trend analyses through 2023 from 80 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 over time, 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).* The CBC data represented here only show trends where the confidence interval for the trend derived does not include zero.

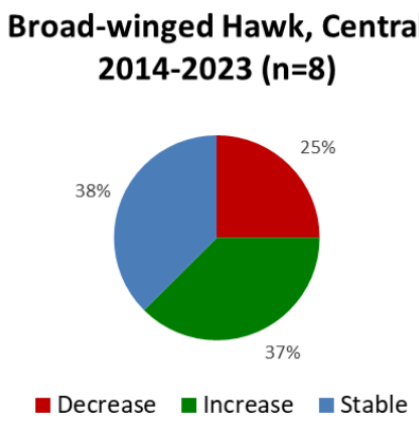
Broad-winged Hawk (*Buteo platypterus*)

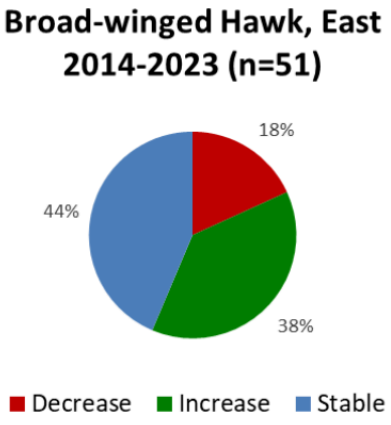
The 10-year migration count trends for the Broad-winged Hawk suggest a mostly stable population trend across North America as 44% of 78 sites reported no significant change in counts while 19% showing declines. Counts with highest annual counts are near the Great Lakes

and in the Gulf Region where most sites observed stable numbers. Cardel, Veracruz, has the highest average count of Broad-winged Hawks for the 10-year period, 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 several southern states. A small number of Broad-winged Hawks winter in the United States, however data from the CBC suggest the number may be increasing. For instance, CBC data from Texas indicates a 4.79% annual increase in hawk abundance from 2009-2021. 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 Nee*d in 14 states, primarily in the East. Contrasting with this pattern, the western populations seem to be increasing, along with Canadian populations, as indicated by 10-year abundance data from eBird (increases of 24.3% annually from 2012-2022).

Broad-winged Hawks utilize large forests for nesting and wintering and are sensitive to forest fragmentation. Regional declines of eastern populations appear to be occurring in areas undergoing extensive suburban sprawl where forest fragmentation may dominate. Deforestation of tropical forests may be a current threat to the species as well. Broad-winged Hawks continue to be threatened by shooting and illegal trapping in Central and South America. Mortality due to vehicle collisions is also frequently reported. Little is known about disease and contaminants threats although West Nile Virus has been found in dead birds in recent years.





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