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

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.

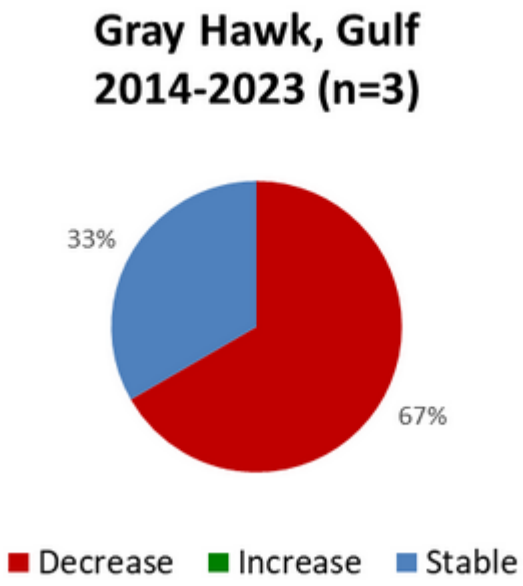
Another factor to consider in viewing the trends is that other species (e.g., Golden Eagle, Peregrine Falcon) have resident populations that may not be well-represented in the migration count data. Therefore, it is important to review results from multiple datasets, including the Christmas Bird Count (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.

Gray Hawk (*Buteo plagiatus*)

The 10-year migration count trends for the Gray Hawk suggest declining populations, with 67% of hawk count sites reporting a decline, and the remaining 33% reporting stable populations. This decline is a contrast between previously reported twenty-year count trends which suggested stable and increased fall counts (Gulf Region: 1 stable, 1 increase).

Contrastingly, the overall abundance for the Gray Hawk has increased by 19.8% annually from 2012-2022, as reported by eBird; the strongest increases are seen in Central America. These idiosyncratic declines and increases may suggest that the Gray Hawk is shifting its migratory habits or that migrating populations, which are likely the more northern nesting birds are declining. Further research is needed to understand these contrasting patterns. The Gray Hawk is a Species of Least Concern, designated by IUCN Red List, however, it is listed as a Species of Concern by the U.S. Fish and Wildlife Service and by the state of Arizona. It is listed as Threatened in Texas. In Mexico it is listed as "Subject to Special Protection''. Shooting and trapping remains a threat in the non-United States portion of its range, as multiple banded individuals have been recovered after being shot. Habitat loss due to wood cutting and overgrazing is a primary concern and has altered its

distribution in Texas and Arizona. Groundwater depletion has also resulted in withdrawal of the species from areas that were historically populated, and continued groundwater usage for development continues to threaten existing habitats.



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