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.

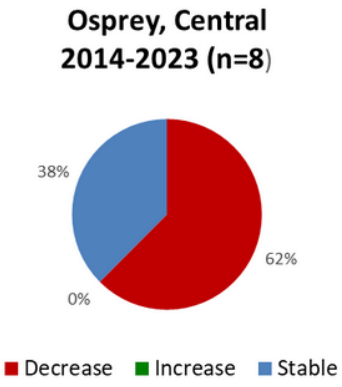
Osprey (*Pandion haliaetus*)

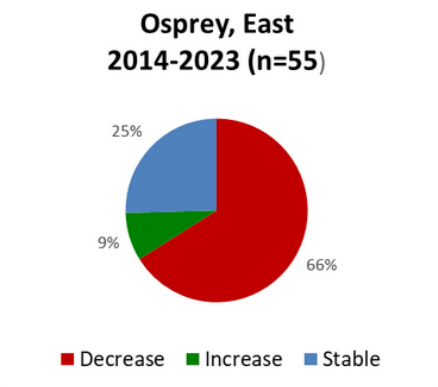
The 10-year migration count trends for the Osprey suggest widespread declining numbers across North America as 64% of 77 sites recorded declining counts and 27% recorded stable counts with few increasing trends detected. In the East Region, patterns are similar as 66% of 55 sites recorded declining counts in the last decade and 25% were stable. Most of the Gulf and Central sites reported declining counts, whereas only 37% of the Western sites reported a declining count and most showed stable numbers (see pie charts and trend maps below). Declines during the past decade seem clustered in the eastern Great Lakes and Appalachians. Twenty-year count trends (not shown), however, showed considerably mixed trends varying among regions, which may indicate that the declines are a new or worsening phenomenon.

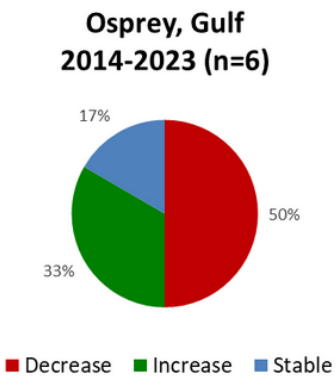
Some researchers suggest the increasing population of Bald Eagles at inland lakes and rivers may be limiting safe and suitable nesting sites for Osprey. Along the Atlantic coast, Osprey often cluster in

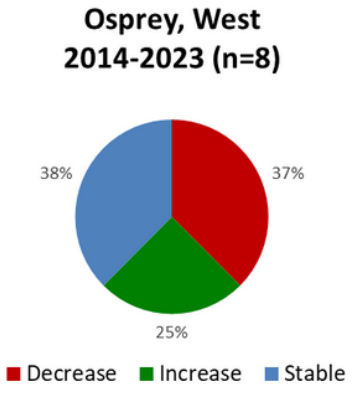
colonies and appear better able to stave off competition and predation by larger Bald Eagles, however coastal populations appear to show recent declines as well. More research is needed to understand the reasons for the observed declines. Bald Eagle predation and competition, declining food supplies, and contaminants have all been suggested.

Winter survey data from the Christmas Bird Count (CBC) only records data on Osprey in southern coastal states from Virginia to Florida and west to Texas and to California, Oregon, Washington. The trends for wintering Osprey show mostly increasing or stable abundance trends between 2009-2022 for these coastal populations, except in Washington where declines are noted. Additionally, eBird 10-year trend data indicates increasing abundance for Osprey with a population increase of 1.9% between 2012-2022. However, the eBird data indicates potential declines in other regions, such as in Canada (-16.1% over the 10-year period). The Osprey is found globally and is listed as a *Species of Least Concern* throughout its range by the IUCN Red List, but it is vulnerable to threats such as loss of habitat, increasing competition, bioaccumulation of heavy metals, and contaminants, collisions, and entanglement.









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