

## Introduction to North American Raptor Conservation Species Assessments

We provide species assessments based on trend analyses through 2019 from more than 65 raptor migration count sites across North America spanning from Canada to Mexico.

In the 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 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 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.

### Northern Harrier (*Circus hudsonius*)

The 10-year migration count trends for Northern Harrier suggest stable or decreasing populations across North America with 56% of sites showing no statistically significant changes and 43% showing decreases in counts during this period. The decreasing counts with only one exception are in the East Region (see pie charts and trend maps below). The 20-year count trends (not shown) similarly show stable populations except in the East where 13 of 18 trends are decreasing (Central Region: 2 stable; East Region: 7 stable, 19 decrease; Gulf Region: 5 stable; West Region: 5 stable, 1 increase). In particular, both the 10-year and 20-year trends are decreasing at Cape May, New Jersey, the site with the highest counts of Northern Harrier. Conversely, winter survey data from the Christmas Bird Count (CBC) show mostly stable 10-year trends continent-wide and in the Eastern Region, as 46 of 64 states and provinces, including 23 of 30 in the Eastern Region, show no statistically significant changes. The Northern Harrier is a species of conservation concern primarily due to loss of grassland habitat. More research is needed to understand the observed declines in migration counts in the East.



Photo by David Brandes



