

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.

Northern Harrier (*Circus hudsonius*)

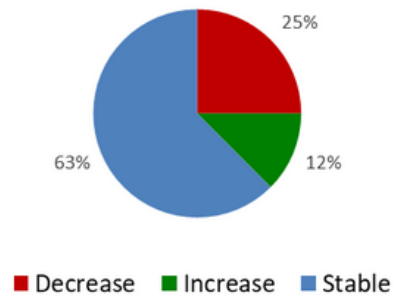
The 10-year migration count trends for the Northern Harrier across North America shows 47.5% of sites recorded stable counts, 30% recorded decreases and 22.5% of sites showed increasing trends. The decreasing counts were present in every region. The 20-year count trends suggest more stable numbers. Regional patterns show clusters of declining counts in West and East (see map).

Winter survey data from the Christmas Bird Count (CBC) show mostly stable 10-year trends continent-wide from 2009-2022. However, declines are noted in numbers wintering in southern states surrounding the Gulf as well as Quebec and other parts of Canada. A similar trend is seen in long-term eBird abundance data from 2012-2022. These data report a decline of 23.8% for the Northern Harrier across its range, with the sharpest declines in population abundance seen in Canada (28% decline).

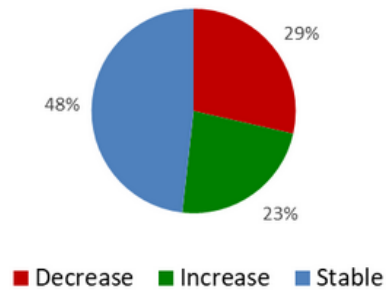


The Northern Harrier is listed as Threatened or Endangered in New England and is Threatened in Pennsylvania and some eastern states. It is a *Species of Conservation Concern* in Oregon, the Great Plains, the Southwest, and the Intermountain West, primarily due to loss of grassland habitat. It is listed as a *Species of Least Concern* by the IUCN Red List. More research is needed to understand the observed declines in migration counts throughout this species' range. Habitat loss, climate change, and an increase in diseases such as West Nile virus may all be shaping the trends in this species.

**Northern Harrier, Central
2014-2023 (n=8)**



**Northern Harrier, East
2014-2023 (n=52)**



**Northern Harrier, Gulf
2014-2023 (n=5)**

