

Introduction to North American Raptor Conservation Species Assessments

We provide species assessments based on trend analyses through 2019 from 76 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 overtime, 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)*.

Turkey Vulture (*Cathartes aura*)

The 10-year migration count trends for Turkey Vultures suggests mostly stable populations across North America with 72% of 64 total sites showing stable counts during this span. Increasing observations were detected for 27% of the sites. Populations are mostly stable with some increases observed in all North American regions, particularly the Northeastern states and provinces. The Central Region has observed the greatest increases with 33% of sites observing increasing (see pie charts and trend maps below). Twenty-year count trends (not shown) reflect a stable population in most regions except for the East Region which observed increases at most sites during this span (Central Region: 1 increase, 1 stable; East Region: 3 stable, 16 increase, 2 decrease; Gulf Region: 2 increase, 3 stable; West Region: 1 increase, 3 stable).



Photo by David Brandes

The highest counts of Turkey Vulture are observed in the Gulf Region with an average of 955,117 at Chichicaxtle, Veracruz. Great Lakes sites, such as Detroit River, Michigan, and Holiday Beach, Ontario, also recorded high average counts with 62,978 and 44,144 for annual average respectively. Increases in counts are likely reflecting the northward expansion in the nesting range of Turkey Vultures, observed over the last decade.

Winter survey data from the Christmas Bird Count (CBC) show increasing 10-year trends in numbers continent-wide with an annual percent change in population of 3.5%. The Turkey Vulture is a species of least concern throughout its range, and as obligate scavengers, they perform valuable ecosystem services for humans through carcass disposal and disease prevention. Turkey Vultures are sensitive to nest disturbance, changes in habitat, and environmental contaminants. They benefit from traditional farming practices as well as human alteration of natural habitats, taking advantage of road kills and dumps.



