

Bird Declines Are Reaching a Tipping Point

R2Rbirds.org; r2r@georgetown.edu

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When Road to Recovery initiated its approach to reverse staggering continental avian declines, we began by asking "Which species do we need to work on first?" to identify specific limiting factors and causes of declines and to support the teams of scientists and practitioners dedicated to recovering their populations. Identifying causes of declines species-by-species can pinpoint different threats and limitations for species living in the same habitats throughout their annual cycles. Incorporating species-specific knowledge ensures that broader ecosystem or habitat initiatives will benefit multiple species without the most urgently declining species slipping through the cracks.

Scientists at R2R have identified **112 Tipping Point** bird species that require immediate, focused scientific action to pinpoint causes of declines and develop strategies for recovery. R2R's goal is to guide and support teams of practitioners (species working groups or recovery teams) in the U.S. and Canada dedicated to recovering bird populations. R2R integrates biological and social science to co-produce solutions that advance species towards sustainable recovery.

To assess Tipping Point species vulnerability and urgency, we relied on data already available in the [Avian Conservation Assessment Database \(ACAD\)](#)—a database maintained by Partners in Flight (PIF) and housed at Bird Conservancy of the Rockies (Partners in Flight 2024). The recent global ACAD update (December 2023) incorporated data used by R2R to assess urgency, resulting in a single conservation assessment for both Watch List and Tipping Point species. All Tipping Point species exhibit **high vulnerability to extinction** and worrisome **population declines** as described below. We further identify three levels of alert—based on the severity of both long-term and short-term declines, or for species lacking monitoring data, a combination of expert-assigned vulnerability scores—that signify the degree of **urgency** in addressing these declines: **Red-**, **Orange-**, and **Yellow--Alert species**.

High Vulnerability to Extinction: Vulnerability in the ACAD is assessed by carefully scoring a series of independent factors (Population Size, Breeding and Non-breeding Distribution, Threats, and Trend) that are combined into a single Combined Conservation Score (CCS) that ranges from 4 to 20 (see the [ACAD Handbook](#) for a thorough description; Panjabi et al. 2024). Species that meet a threshold of CCS > 13 are considered to be highly vulnerable and are placed on the ACAD **Watch List**. Species with high scores across multiple factors (CCS > 16) are on the ACAD Red Watch List.

Population Decline: Based on the latest long-term population trend data for U.S./Canada species, we identified those Watch List species that are estimated to have lost 50% or more of their total adult breeding population since 1970. These species are assigned a Population Trend (PT) score = 5 in the ACAD. This analysis mirrors the survey data used to assess population change for 529 species in Rosenberg et al. (2019), updated with data through 2021 and including a complete re-analysis of shorebird trend data by Paul Smith (Smith et al. 2023).

Urgency: To assess urgency, we examined population trajectories for each species based on the most recent analysis of BBS and other survey data (updated through 2021). By comparing long-term trends (back to 1970 for most species; to 1980 for shorebirds) with the most recent population trajectories (defining "recent" as a 3-generation time frame), we identified species in three urgency categories:

Red Alert: Species that qualify for ACAD Red Watch List based on multiple high vulnerability scores, usually including perilously low population size and steeply declining or unknown population trend.

Orange Alert: Corresponds with ACAD Orange Watch List; species with very large long-term population loss (> 75%); OR species with large long-term loss (>50%) and with continued or accelerated recent declines resulting in a loss $\geq 30\%$ over the most recent 3 generations or a half-life < 30 years. Also includes a few conservation-reliant species that are beginning to recover but still require urgent attention.

Yellow Alert: Corresponds with a subset of ACAD Yellow Watch List species that have experienced large long-term population loss ($\geq 50\%$), but now show relatively stable or even increasing populations over the most recent 3-generation period. These species may be responding to current conservation efforts but still require recovery to healthier population levels.

Poorly Monitored Species: For many species included in the ACAD Watch List based on a combination of small global population or distribution and high threats, we lack long-term monitoring data to compare long-term and recent trends, yet we can assess their urgency based on ACAD scores. For these poorly monitored species, we use a combination of expert-assigned scores to assign each to either Red-, Orange-, or Yellow-Alert categories; they are denoted with an asterisk in the list below.

Summary of Urgency Alert Levels and Definitions

Alert	ACAD Watch List	Definition and Rule Set
Red	Red Watch List	Combined Conservation Score (CCS) > 16; OR CCS = 16 and PT + TB/TN = 9 or 10
Orange	Orange Watch List	Not Red Watch List; Long-term loss $\geq 75\%$; OR Long-term loss $\geq 50\%$ and Short-term loss $\geq 30\%$ or Half-Life ≤ 30 years; OR CCS = 16 and PS = 5
Yellow	Yellow Watch List	Not Red or Orange Watch List; Long-term loss $\geq 50\%$ (PT = 5) BUT short-term loss < 30% and Half-Life > 30 years; OR any other factor score = 5 (extremely high vulnerability).

Tipping Point Species

Scientists for the Road to Recovery initiative have identified **112 Tipping Point species** in need of focused and immediate scientific action to pinpoint causes of declines and to support practitioners dedicated to recovering their populations. Note that all of these species are also **Watch List species**, and some are already listed as Endangered, Threatened, or Special Concern under federal legislation in the U.S. (ESA) or Canada (SARA). An asterisk denotes Poorly Monitored species, for which urgency is assessed through expert-assigned vulnerability scores. Nomenclature and taxonomy reflect the most recent update to the American Ornithological Union, Clements, and eBird (cf. Clements et al. 2025).

Red-Alert Species (44)

Mottled Duck
 Steller's Eider* (ESA)
 Spectacled Eider* (ESA)
 Greater Sage-Grouse (SARA)
 Gunnison Sage-Grouse* (ESA)
 Greater Prairie-Chicken (SARA)
 Lesser Prairie-Chicken* (ESA)
 Allen's Hummingbird
 Ridgway's Rail* (ESA)
 Black Rail*
 Whooping Crane (ESA)
 Wilson's Plover
 Mountain Plover (SARA)
 Bristle-thighed Curlew*
 Hudsonian Godwit
 Kittlitz's Murrelet*
 Scripps's Murrelet*
 Guadalupe Murrelet*
 Craveri's Murrelet*
 Yellow-billed Loon
 Townsend's Storm-Petrel*
 Ashy Storm-Petrel*
 Band-rumped Storm-Petrel*
 Cape Verde [Fea's] Petrel*
 Bermuda Petrel* (ESA)
 Black-capped Petrel*
 Hawaiian Petrel* ('ua'u) (ESA)
 Pink-footed Shearwater* (SARA)
 Red-faced Cormorant
 California Condor (ESA)
 Florida Scrub-Jay* (ESA)
 Yellow-billed Magpie
 Bendire's Thrasher
 LeConte's Thrasher
 Bicknell's Thrush* (SARA)
 Brown-capped Rosy-Finch*
 Cassia Crossbill*
 Chestnut-collared Longspur
 (SARA)
 Thick-billed Longspur (SARA)
 Bachman's Sparrow
 Saltmarsh Sparrow*
 Baird's Sparrow (SARA)
 Tricolored Blackbird*
 Golden-cheeked Warbler*

Orange-Alert Species (36)

King Eider
 Long-tailed Duck
 Black Swift (SARA)
 Chimney Swift (SARA)
 Rufous Hummingbird
 King Rail (SARA)
 Black-bellied Plover
 American Golden-Plover
 Piping Plover (ESA, SARA)
 Hudsonian Whimbrel
 Short-billed Dowitcher
 Long-billed Dowitcher
 Lesser Yellowlegs
 Greater Yellowlegs
 Ruddy Turnstone
 Red Knot (ESA, SARA)
 Stilt Sandpiper
 Buff-breasted Sandpiper (SARA)
 Sanderling
 Pectoral Sandpiper
 Semipalmated Sandpiper
 Dovekie
 Short-billed Gull
 Western Gull
 Great Black-backed Gull
 Glaucous Gull
 Least Tern (ESA)
 Pelagic Cormorant
 Sprague's Pipit (SARA)
 Evening Grosbeak (SARA)
 Gray-crowned Rosy-Finch
 LeConte's Sparrow
 Eastern Towhee
 Bobolink (SARA)
 Kirtland's Warbler
 Pyrrhuloxia

Yellow-Alert Species (32)

Northern Pintail
 Black Scoter
 Eastern Whip-poor-will (SARA)
 Yellow Rail* (SARA)
 American Oystercatcher*
 Snowy Plover*
 Bar-tailed Godwit*
 Wandering Tattler*
 Rock Sandpiper
 Marbled Murrelet (ESA, SARA)
 Ivory Gull* (SARA)
 Horned Grebe
 Short-tailed Albatross*
 Manx Shearwater*
 Sargasso [Audubon's] Shearwater*
 Reddish Egret*
 Spotted Owl* (ESA, SARA)
 Red-cockaded Woodpecker
 Olive-sided Flycatcher (SARA)
 Pinyon Jay
 Wood Thrush (SARA)
 Black Rosy-Finch*
 Black-chinned Sparrow
 Field Sparrow
 Harris's Sparrow (SARA)
 Sagebrush Sparrow
 Henslow's Sparrow (SARA)
 Chihuahuan Meadowlark
 Golden-winged Warbler (SARA)
 Cerulean Warbler (SARA)
 Prairie Warbler
 Grace's Warbler

References:

Clements, J. F., P. C. Rasmussen, T. S. Schulenberg, M. J. Iliff, J. A. Gerbracht, D. Lepage, A. Spencer, S. M. Billerman, B. L. Sullivan, M. Smith, and C. L. Wood. 2025. The eBird/Clements checklist of Birds of the World: v2025. Downloaded from <https://www.birds.cornell.edu/clementschecklist/download/>

Panjabi1, A.O., A.E. Shaw, P.J. Blancher, K.V. Rosenberg, M.A. Gahbauer, B. Bateman, A. Smith, D.W. Demarest, W.E. Easton, R. Dettmers and T. Will. 2024. Avian Conservation Assessment Database Handbook, Version 2024. Partners in Flight Technical Series No. 8.3. <https://pif.birdconservancy.org/wp-content/uploads/2024/06/PIF-ACAD-Handbook-2024.pdf>

Partners in Flight. 2024. Avian Conservation Assessment Database, version 2024. Available at <https://pif.birdconservancy.org/avian-conservation-assessment-database/>. Accessed on 8 December 2025.

Rosenberg, K. V., A. M. Dokter, P. J. Blancher, J. R. Sauer, A. C. Smith, A. O. Panjabi, J. C. Stanton, P. A. Smith, L. Helft, M. Parr, P. P. Marra. 2019. Decline of the North American avifauna. *Science* 366:120-124. <https://doi.org/10.1126/science.aaw1313>

Smith, P. A., A. C. Smith, B. Andres, C. M. Francis, B. Harrington, C. Friis, R. I. G. Morrison, J. Paquet, B. Winn, S. Brown. 2023. Accelerating declines of North America's shorebirds signal the need for urgent conservation action. *Ornithological Applications*, Volume 125, Issue 2, 1 May 2023, duad003, <https://doi.org/10.1093/ornithapp/duad003>

Update Notes

R2R staff will make periodic updates to the Tipping Point Species list. We will update information on U.S. and Canadian listing status as that information becomes available. We will update avian nomenclature and taxonomy annually in keeping with changes as published by the AOS, eBird and, starting in 2026, by [AviList](#). Vulnerability status (the bases of the Alert categories) will be updated in synchrony with changes in the [ACAD](#), usually every 2-3 years.

10 December 2025: *Gray-crowned Rosy-Finch* added as an Orange TP species, mistakenly omitted from previous list. *Lewis's Woodpecker* removed from Yellow alert list as a result of adjustments to ACAD (June 2024). Nomenclature and taxonomy revised to conform with 2025 AOS and Clements updates. Hyperlinks corrected and additional references included.