



Yellow-eyed Junco, photo by ©Bill Radke

Conservation Profile

Species Concerns	
Climate Change (Droughts)	
Fire (frequency, intensity, timing)	
Conservation Status Lists	
USFWS ¹	No
AZGFD ²	Tier 1B
DoD ³	No
BLM ⁴	No
PIF Watch List ^{5b}	No
PIF Regional Concern ^{5a}	Stewardship Species – BCR 34
Migratory Bird Treaty Act	
Covered	
PIF Breeding Population Size Estimates ⁶	
Arizona	470,000 ●
Global	4,300,000 ●
Percent in Arizona	10.93%
PIF Population Goal ^{5b}	
Maintain	
Trends in Arizona	
Historical (pre-BBS)	Unknown
BBS ⁷ (1968 – 2013)	Not given
PIF Urgency/Half-life (years) ^{5b}	
Insufficient Data	
Monitoring Coverage in Arizona	
BBS ⁷	Not adequate
AZ CBM	Not covered
Associated Breeding Birds	
Mexican Whip-poor-will, Cordilleran Flycatcher, Hermit Thrush, Red-faced Warbler, Painted Redstart	

Breeding Habitat Use Profile

Habitats Used in Arizona	
Primary: Mixed Conifer-Aspen Forest	
Secondary: Madrean Pine-Oak Woodland	
Key Habitat Parameters	
Plant Composition	Douglas fir, white fir, ponderosa pine, scattered aspen at higher elevations; Chihuahua and Apache pine, evergreen oaks, alligator juniper, and madrone ⁸
Plant Density and Size	Mix of large conifers (ponderosa pine or Douglas fir) and open flat areas or slopes covered in grass, bracken fern and forbs ⁹
Microhabitat Features	Cool, moist, shaded ground with scattered low ground vegetation, shrubs and abundant leaf litter and downed limbs/trees ⁹
Landscape	Shaded canyons within the coniferous forest matrix, other landscape requirements unknown ¹⁰
Elevation Range in Arizona	
5,300 – 10,000 (most above 6,000) feet ⁹	
Density Estimate	
Territory Size: 2 acres (range = 1 – 3.5) ⁹	
Density: No data	

Natural History Profile

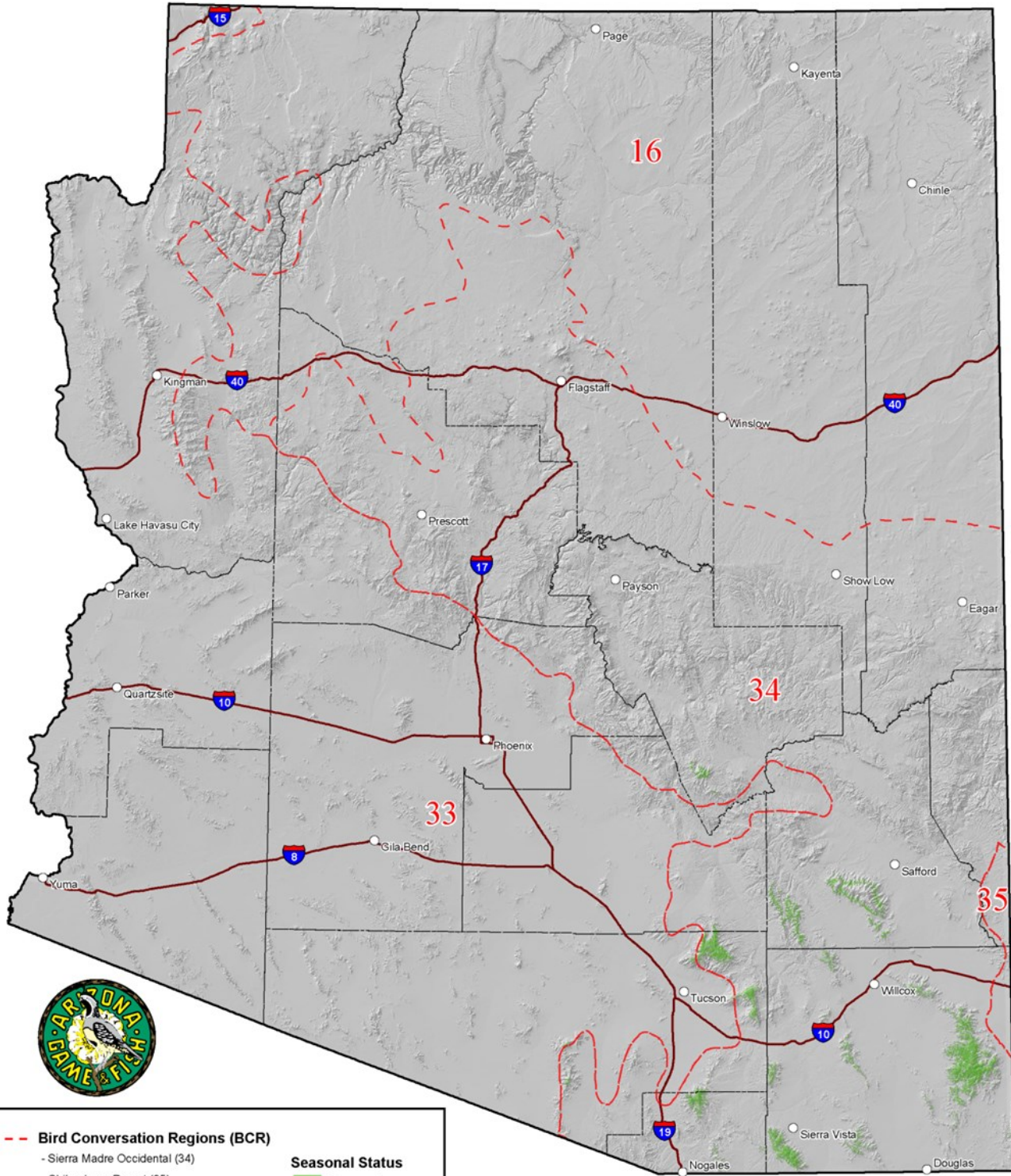
Seasonal Distribution in Arizona	
Breeding	Mid-March – mid-August ⁸
Migration	Year-round resident
Winter	Lower elevations October – February
Nest and Nesting Habits	
Type of Nest	Cup ⁹
Nest Substrate	Ground; often on slopes; low shrubs ⁹
Nest Height	Ground; occasionally 1 – 2 feet, seldom higher ⁸
Food Habits	
Diet/Food	Insects in summer; seeds in winter ⁹
Foraging Substrate	Ground



Confidence in Available Data: ● High ● Moderate ○ Low ^ Not provided

Last Update: October 2023

Distribution of Yellow-eyed Junco



-- Bird Conservation Regions (BCR)

- Sierra Madre Occidental (34)
- Chihuahuan Desert (35)
- Sonoran & Mojave Deserts (33)
- Southern Rockies & Colorado Plateau (16)

Seasonal Status

- Year-round
- Counties

This map represents the predictive distribution for an individual species. AZGFD warrants no guarantees of accuracy or currency of the data represented.



General Information

Distribution in Arizona

Yellow-eyed Juncos occur in high elevations of sky islands of southeastern Arizona, from the Santa Rita to the Chiricahua mountains, and as far north as the Pinal Mountains (Corman 2005). They reach the northernmost extent of their global range in southern Arizona. They are primarily year-round residents (Sullivan 1999). However, some individuals descend to lower mountain slopes and adjacent wooded drainages in fall and winter (Lundblad and Conway 2020).

Habitat Description

Yellow-eyed Juncos are most abundant in forested drainages that are cool, moist, and shaded, while they are largely absent from dry forest drainages (Corman 2005). However, at higher elevations (> 8,000 feet) they can be found on sunny, relatively dry ridges and mountain tops (C. Lundblad pers. com.). Ground cover usually consists of scattered to lush, continuous grass clumps, small shrubs, forbs, ferns, downed trees, and abundant leaf litter (Sullivan 1999, Corman 2005). Yellow-eyed Junco habitat includes high-elevation Madrean pine-oak with Chihuahuahua, Apache, and ponderosa pines and an understory of oak, juniper, and Arizona madrones, as well as mixed conifer with Douglas fir, white fir, ponderosa pine, and aspen (Corman 2005). Less commonly, Yellow-eyed Juncos occur in sycamore-dominated canyons, pure ponderosa pine, and subalpine forests (Corman 2005).

Microhabitat Requirements

Yellow-eyed Juncos build nests on sloping ground, under a dense tuft of grass, mats of dead western bracken ferns, shrubs, woody debris (including downed limbs and logs), or rocks that provide cover (Sullivan 1999, Corman 2005, C. Lundblad pers. comm.) Little else is known about nest site requirements. They foraging on the ground and in the shrub and lower tree layer, and prefer shaded areas over sunny locations for foraging as well as nesting (Sullivan 1999; C. Lundblad pers. comm.) Few details are known about plant species that provide foraging substrate.

Landscape Requirements

Little is known about minimum patch size requirements or other landscape variables, such as distance to water. The species appears to be tolerant of human disturbance and often nests near campgrounds, frequently used trails, and other disturbed areas, but the effects of these and other land uses on Yellow-eyed Juncos are unknown.



Conservation Issues and Management Actions

Threats Assessment

This table is organized by Salafsky et al.'s (2008) standard lexicon for threats classifications. Threat level is based on expert opinion of Arizona avian biologists and reviewers. We considered the full lexicon but include only medium and high threats in this account.

Threat	Threat Level
Agriculture <ul style="list-style-type: none"> Livestock farming and ranching 	Medium
Biological Resource Use <ul style="list-style-type: none"> Logging and wood harvesting Gathering terrestrial plants 	Medium
Natural System Modifications <ul style="list-style-type: none"> Fire and fire suppression 	High
Climate Change <ul style="list-style-type: none"> Ecosystem encroachment Changes in precipitation and hydrological regimes 	High

In the following section we provide more detail about threats, including recommended management actions. Threats with similar recommended actions are grouped.

Agriculture

- Livestock farming and ranching

Biological Resource Use:

- Logging and wood harvesting
- Gathering terrestrial plants

Nearly all Yellow-eyed Junco occupied areas are on U.S. Forest Service land in areas where timber harvest is negligible (Corman 2005), so current practices may demonstrate good land stewardship. Because fallen logs are important nest sites, collecting of dead/down fuelwood could impact this species if too widespread. Likewise, salvage logging after wildfires and other logging operations should attempt to maintain downed woody debris for ground-nesting birds (C. Lundblad pers. comm.) Western bracken fern may be collected for human consumption in some areas. This is unlikely to be widespread but coincides with early portions of the nesting cycle and may contribute to nest failure in heavily traveled areas (e.g., Santa Catalina Mountains). Although more study is needed, unsustainable grazing may reduce required ground cover for successful nesting.

Recommended Actions:

1. Conduct strategic outreach that highlights how Yellow-eyed Juncos and other bird species benefit from



- limiting timber harvest activities in sensitive areas.
- 2. Minimize timber harvest activities in areas occupied by Yellow-eyed Juncos.
- 3. Manage or minimize removal of dead/down wood either for personal fuelwood or via commercial and salvage timber removal in areas occupied by Yellow-eyed Juncos to ensure adequate nesting habitat.

Natural System Modifications:

- Fire and fire suppression

Fire and fire management have the potential for both direct and indirect impacts on Yellow-eyed Juncos, across temporal and spatial scales. Managing for a “restored” natural fire regime that includes frequent, low intensity fires during the appropriate season should benefit this species and prevent wholesale failure of entire nesting seasons, which might result from large, catastrophic wildfires (C. Lundblad pers. comm.) Because Yellow-eyed Juncos often prefer shady, cool forest environments, particularly at lower elevations, catastrophic stand-replacing fires almost certainly cause a local loss of Yellow-eyed Juncos, particularly in the first one to two years after fire. Following the initial loss of habitat, the grassy, brushy, and debris-laden fire areas may then become very good junco habitat.

Because of Yellow-eyed Juncos’ ground-nesting habits, even low-intensity fire has the potential to directly cause major nesting failures. Most natural fires in these areas historically occurred towards the end or after the nesting season, but prescribed fires are often implemented earlier in the spring or summer (C. Lundblad pers. comm.) Ideally, prescribed low-intensity ground fires would be timed not to coincide with the nesting season of ground-nesting birds.

Recommended Actions:

1. Develop fire management plans that support low-intensity fires and minimize or eliminate high-intensity burns.
2. Conduct prescribed fires and forest treatments after or towards the end of the nesting season.
3. Leave dead and down woody debris in place following fires and salvage logging.

Climate Change:

- Ecosystem encroachment
- Changes in precipitation and hydrological regimes

Prolonged drought may lead to decreased vigor and increased mortality of shade trees in wet drainages, reducing cool, moist microhabitat availability for Yellow-eyed Juncos. Reduced snowpack and precipitation may result in stream bed drying. Drought may also decrease nesting success (via food limitation, increased predation risk, or other mechanisms). Sullivan (1999) noted that, “low... fledging rates occurred in drought years when nest predation rates were high.” An increase in the intensity of precipitation events could be problematic for a ground-nesting species, whose nests are prone to flooding (failures/drownings have been noted after major monsoon storms). Finally, shifting “climate-envelopes” could reduce the amount of area that is suitable for this montane species.



Recommended Actions:

1. Delineate Yellow-eyed Junco occupied areas to assess risk of habitat change resulting from prolonged droughts.
2. Develop a monitoring plan for habitat and populations of Yellow-eyed Junco that takes into account possible distributional shifts due to climate change.
3. Determine land uses that may compound impacts from climate change; work to remove or minimize these in Yellow-eyed Junco habitats.

Research and Monitoring Priorities

1. Develop a population assessment and monitoring plan to determine status and trends of Yellow-eyed Juncos in Arizona.
2. Conduct research on microhabitat and landscape requirements of Yellow-eyed Juncos, including plant species used for foraging, distance to water and role of water-dependent plants, area requirements, and responses to land uses and disturbance distances.

Literature Cited

⁴Arizona Bureau of Land Management Sensitive Species List – March 2017.

²Arizona Game and Fish Department. 2012. Arizona's State Wildlife Action Plan: 2012 – 2022. Arizona Game and Fish Department, Phoenix, AZ.

⁸Corman, T.E.. 2005. Yellow-eyed Junco. In Arizona Breeding Bird Atlas. T.E. Corman, and C. Wise-Gervais (eds.). University of New Mexico Press. Albuquerque, NM.

³Department of Defense. 2012. DoD PIF Mission-Sensitive Priority Bird Species. Fact Sheet #11. Department of Defense Partners in Flight Program.

Lundblad, C.G. and C.J. Conway. 2020. Testing four hypotheses to explain partial migration: balancing reproductive benefits with limits to fasting endurance. *Behavioral Ecology and Sociobiology* 74(26).

^{5a}Partners in Flight. 2019. Avian Conservation Assessment Database, version 2019. Accessed on March 31, 2020.

⁶Partners in Flight Science Committee. 2019. Population Estimates Database, version 3.0. Accessed on March 31, 2020.

^{5b}Rosenberg, K.V., J.A. Kennedy, R. Dettmers, R.P. Ford, D. Reynolds, J.D. Alexander, C.J. Beardmore, P. J. Blancher, R.E. Bogart, G.S. Butcher, A.F. Camfield, A. Couturier, D.W. Demarest, W.E. Easton, J.J. Giocomo, R.H. Keller, A.E. Mini, A.O. Panjabi, D.N. Pashley, T.D. Rich, J.M. Ruth, H. Stabins, J. Stanton, T. Will. 2016. Partners in Flight Landbird Conservation Plan: 2016 Revision for Canada



and Continental United States. Partners in Flight Science Committee.

Salafsky, N., D. Salzer, A.J. Stattersfield, C. Hilton-Taylor, R. Neugarten, S.H.M. Butchart, B. Collen, N. Cox, L.L. Master, S. O'Connor, and D. Wilkie. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. *Conservation Biology* 22(4): 897–911.

⁷Sauer, J.R., J.E. Hines, J.E. Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link. 2016. The North American Breeding Bird Survey, Results and Analysis 1966 – 2013, Version 2016. USGS Patuxent Wildlife Research Center, Laurel, MD. Accessed on July 1, 2016.

⁹Sullivan, K. A. 1999. Yellow-eyed Junco (*Junco phaeonotus*), The Birds of North America Online (A. Poole, ed.) Ithaca: Cornell Lab of Ornithology.

¹U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, VA. 85 pp.

Recommended Citation

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