



Olive Warbler, photo by ©Gordon Karre

Conservation Profile

Species Concerns	
Silvicultural Practices Climate Change (droughts)	
Conservation Status Lists	
USFWS ¹	BCC List (BCR 34, R2)
AZGFD ²	Tier 1C
DoD ³	No
BLM ⁴	No
PIF Watch List ^{5b}	No
PIF Regional Concern ^{5a}	Regional Stewardship BCR 34
Migratory Bird Treaty Act	
Covered	
PIF Breeding Population Size Estimates ⁶	
Arizona	12,000
Global	1,900,000 ●
Percent in Arizona	.63%
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	
Steller's Jay, Hairy Woodpecker, Hepatic Tanager, Pygmy Nuthatch, Acorn Woodpecker, Grace's Warbler, Plumbeous Vireo, Western Bluebird	

Breeding Habitat Use Profile

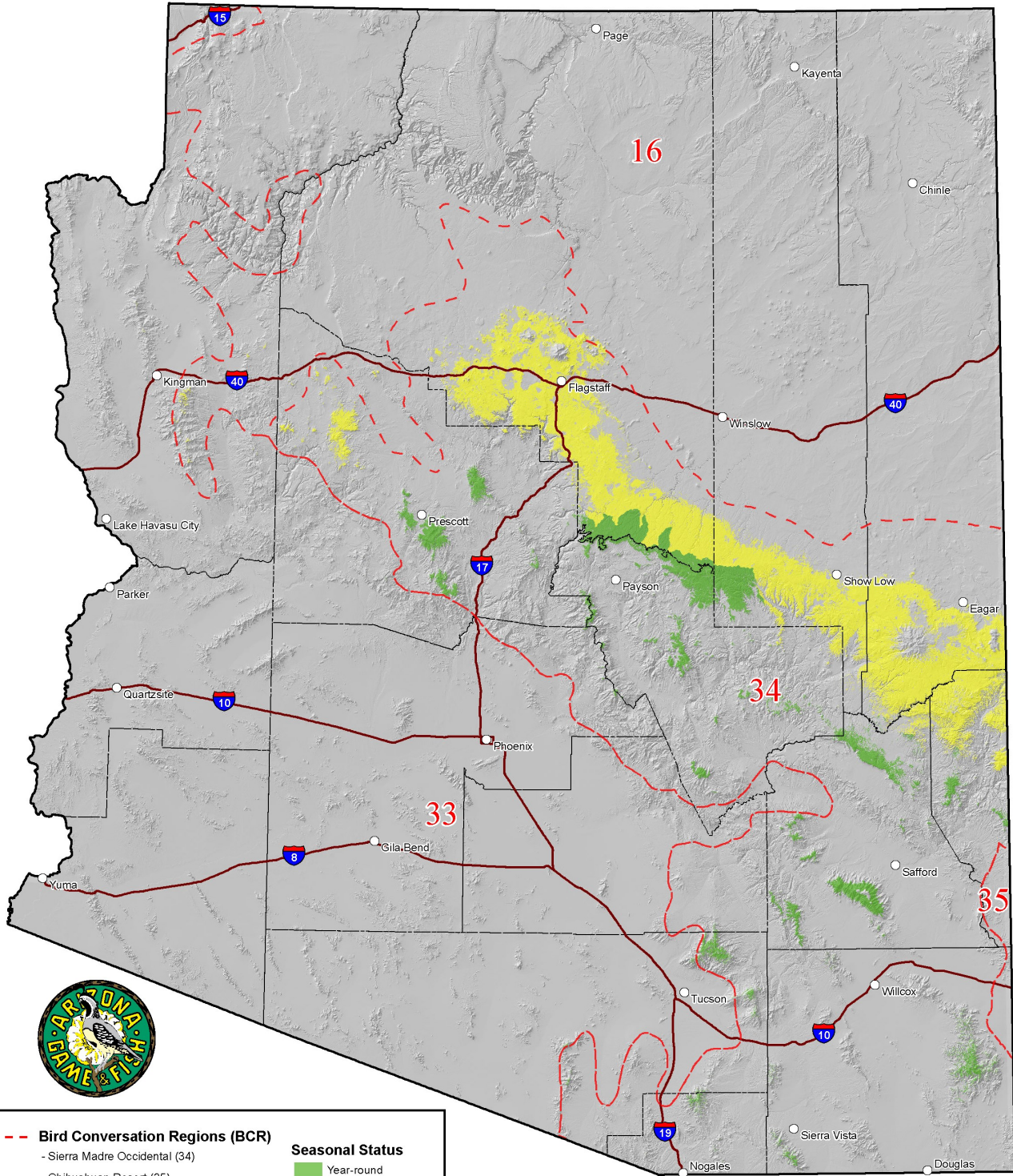
Habitats Used in Arizona	
Primary: Ponderosa Pine Secondary: Madrean Pine-Oak Woodland	
Key Habitat Parameters	
Plant Composition	Ponderosa, Apache and Chihuahua pines, Douglas Fir, oak spp.
Plant Density and Size	Tall pines for breeding (>70 feet height); otherwise unknown
Microhabitat Features	Needle cluster at end of tall pine branches; otherwise unknown
Landscape	Unknown
Elevation Range in Arizona	
6,400 – 9,500 feet ⁹	
Density Estimate	
Territory Size: No data ⁸ Density: 4 – 22 pairs/100 acres	

Natural History Profile

Seasonal Distribution in Arizona	
Breeding	April – July ⁹
Migration	Mostly non-migratory, but some movement in March – April; likely October – November
Winter	Some downslope movement in winter
Nest and Nesting Habits	
Type of Nest	Cup ⁸
Nest Substrate	Conifer needle clusters, also mistletoe clumps in pines ^{8,10}
Nest Height	30 – 70 feet ⁸
Food Habits	
Diet/Food	Insects ⁸
Foraging Substrate	Crowns of pines ⁸



Distribution of Olive Warbler



-- Bird Conservation Regions (BCR)

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

Seasonal Status

- Year-round
- Breeding Only
- Counties

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

SPECIES ACCOUNT ● OLIVE WARBLER *Peucedramus taeniatus*



General Information

Distribution in Arizona

Olive Warbler occurs along the Mogollon Rim and scattered forests through central and southeastern Arizona. The species has expanded its breeding range northwest, into the San Francisco and Kendrick Peaks region and Santa Maria Mountains in Yavapai County (Corman 2005). Recently it has also been detected as far north as the South Rim of Grand Canyon National Park and is likely now nesting in the Hualapai Mountains, near Kingman (eBird 2019). Some of Arizona's population is apparently migratory, especially those north of the Mogollon Rim, and some individuals also descend to slightly lower elevations into foothill oaks and sycamore-lined drainages in winter. Olive Warbler reaches the northern-most extension of its global range in Arizona (Lowther and Nosedal 1997).

Habitat Description

Olive Warbler occurs primarily in taller, open ponderosa pine forests. It is also regularly found in mixed-conifer with Douglas fir and white fir (Lowther and Nosedal 1997, Corman 2005). In southeastern Arizona, it is often encountered in Madrean pine-oak forests typically dominated with Chihuahua, Apache, and ponderosa pines. These forests often have an understory with some oak, juniper, and madrone (Corman 2005), although oak is not necessary for Olive Warblers to use the habitat. Olive Warblers nest and forage almost exclusively in pine (Lowther and Nosedal 1997), so the presence of pines is likely a strict habitat requirement. Migration habitat is apparently similar to breeding habitat (Lowther and Nosedal 1997), as the species is seldom encountered at sites lacking pines. More study is needed.

Microhabitat Requirements

Most recorded Olive Warbler nests were from needle clusters of the outer branches of pine trees (Lowther and Nosedal 1997). However, very little research has been done on Olive Warbler nests, and most information is at least 30 years old (except Corman 2005). Similarly, foraging is reportedly focused on the canopy of pine trees, but occasional use of oaks has been noted (Lowther and Nosedal 1997). Both areas of microhabitat requirements warrant further study.



Conservation Issues and Management Actions

High Stewardship Responsibility/Small Population

Most of the U.S. population (75%) of Olive Warblers breed in Arizona (USFWS 2008). It is currently not very well covered by Breeding Bird Survey routes or other monitoring programs. Therefore, Arizona plays a key role in estimating U.S. trends and the conservation of the species.

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	Details	Threat Level
Biological Resource Use <ul style="list-style-type: none"> Logging and wood harvesting 	Harvest of large trees likely detrimental	Medium
Natural System Modifications <ul style="list-style-type: none"> Fire and fire suppression Other ecosystem modifications 		Medium
Climate Change <ul style="list-style-type: none"> Ecosystem encroachment Changes in precipitation and hydrological regimes (drought) 	Drought can impact foraging habitat	High

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

Biological Resource Use:

- Logging and wood harvesting

Logging practices that harvest large pine trees are likely detrimental to Olive Warbler if they occur in nesting areas. However, responses of Olive Warbler to logging practices have yet to be studied.

Recommended Actions:

- Determine effects of different logging practices on nesting Olive Warblers. Until data are available on specific habitat requirements of Olive Warblers and their responses to silvicultural practices, encourage forest management in areas occupied by Olive Warbler that favors the retention of healthy pine trees that may serve as nesting and foraging sites.



Natural System Modifications:

- Fire and fire suppression
- Other ecosystem modifications

Climate Change:

- Ecosystem encroachment
- Changes in precipitation and hydrological regimes (drought)

Recommended Actions:

1. Delineate current strongholds for Olive Warblers and examine land use practices in these areas; implement practices that provide key habitat requirements for this species (i.e., retention of pine trees).
2. Design a monitoring plan for Olive Warbler that takes into account the current and future range expansion and local extirpations in light of effects of climate change.
3. Determine Olive Warbler population responses to fire.
4. Study habitat requirements and effects of various land uses on Olive Warbler populations. Use this knowledge to design specific recommendations for beneficial management practices.

Research and Monitoring Priorities

1. Develop monitoring and/or inventory plans that capture most populations of Olive Warbler in Arizona; consider a coordinated monitoring collaboration with Mexico and New Mexico. The monitoring plan should actively account for range expansions and local extirpations that may be the result of climate change and clarify population status, distributional changes, and habitat needs.
2. Determine basic habitat requirements, such as nest site variables, landscape composition, minimum patch sizes, foraging habitat requirements, and post-breeding habitat requirements of Olive Warbler.
3. Determine responses to land use practices, logging, habitat fragmentation from roads and infrastructure, and fire, as well as disturbance distances for nesting Olive Warbler.
4. Develop conservation plans for ponderosa forest management that addresses habitat requirements of Olive Warblers.

Literature Cited

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Recommended Citation

Arizona Bird Conservation Initiative and Sonoran Joint Venture. 2023. Olive Warbler (*Peucedramus taeniatus*) Species Account. Available at <https://sonoranjv.org/accounts/olive-warbler.pdf>

