



Yellow-billed Cuckoo, photo by ©Gordon Karre

## Conservation Profile

Species Concerns	
Declining and Small Population Surface Water Diversions/Groundwater Pumping Excessive Livestock Grazing Climate Change (prolonged drought)	
Conservation Status Lists	
USFWS <sup>1</sup>	ESA –Threatened; BCC List (BCRs 16,33,34)(Western DPS)
AZGFD <sup>2</sup>	Tier 1A
DoD <sup>3</sup>	Yes
BLM <sup>4</sup>	Yes (Western DPS)
PIF Watch List <sup>5b</sup>	Common Bird in Steep Decline
PIF Regional Concern <sup>5a</sup>	No
Migratory Bird Treaty Act	
Covered	
PIF Breeding Population Size Estimates <sup>6</sup>	
Arizona	480 ●
Global	Unknown
Percent in Arizona	Unknown
PIF Population Goal <sup>5b</sup>	
Stabilize	
Trends in Arizona	
Historical (pre-BBS)	Declined with loss of native riparian forests
BBS <sup>7</sup> (1968 – 2013)	-3.98 ○
PIF Urgency/Half-life (years) <sup>5b</sup>	
29	
Monitoring Coverage in Arizona	
BBS <sup>7</sup>	Not adequate (in West)
AZ CBM	Not covered
Other	Species Specific Surveys
Associated Breeding Birds	
Cooper's Hawk, Black-chinned Hummingbird, Willow Flycatcher, Brown-crested Flycatcher, Yellow Warbler, Yellow-breasted Chat, Song Sparrow, Summer Tanager	

## Breeding Habitat Use Profile

Habitats Used in Arizona	
Primary: Lowland Riparian Woodlands Secondary: SE. AZ: Wooded Washes & Foothill Drainages	
Key Habitat Parameters	
Plant Composition	Fremont cottonwood, Goodding's and other willows, Arizona walnut, velvet ash, mesquite, tamarisk; In SE AZ: also wooded washes with netleaf hackberry and mesquite; and foothill drainages with sycamore and oak <sup>8,9</sup>
Plant Density and Size	Mosaic of different-age stands of multiple species of native riparian trees and shrubs, including active recruitment zones, areas of dense vertical foliage diversity, and usually access to surface water or summer monsoonal humidity <sup>9</sup>
Microhabitat Features	Dense stands of tall thickets and trees at the 33-foot height interval <sup>10</sup> ; shrubs and trees that produce large insects
Landscape	Optimal habitat is ≥ 90 acres of intact native riparian woodland mosaic that includes ≥ 2.5 acres of very dense thickets, with at least some under 33 feet high <sup>10</sup>
Elevation Range in Arizona	
100 – 5,000 feet (locally to 7,000) <sup>8</sup>	
Density Estimate	
Territory Size: 50 acres (range 20 – 125) <sup>9</sup> Density: 8 – 26 birds/100 acres <sup>9</sup> ; variable	

## Natural History Profile

Seasonal Distribution in Arizona	
Breeding	June – September <sup>8</sup>
Migration	Late May – June; August – late September; occasionally to mid-October <sup>8</sup>
Winter	Absent
Nest and Nesting Habits	
Type of Nest	Platform of twigs <sup>9</sup>
Nest Substrate	Primarily riparian trees and large shrubs <sup>8,9</sup>
Nest Height	3 – 45 feet <sup>8,9,10</sup>
Food Habits	
Diet/Food	Primarily large insects, frogs, lizards <sup>9</sup>
Foraging Substrate	Tree and shrub foliage

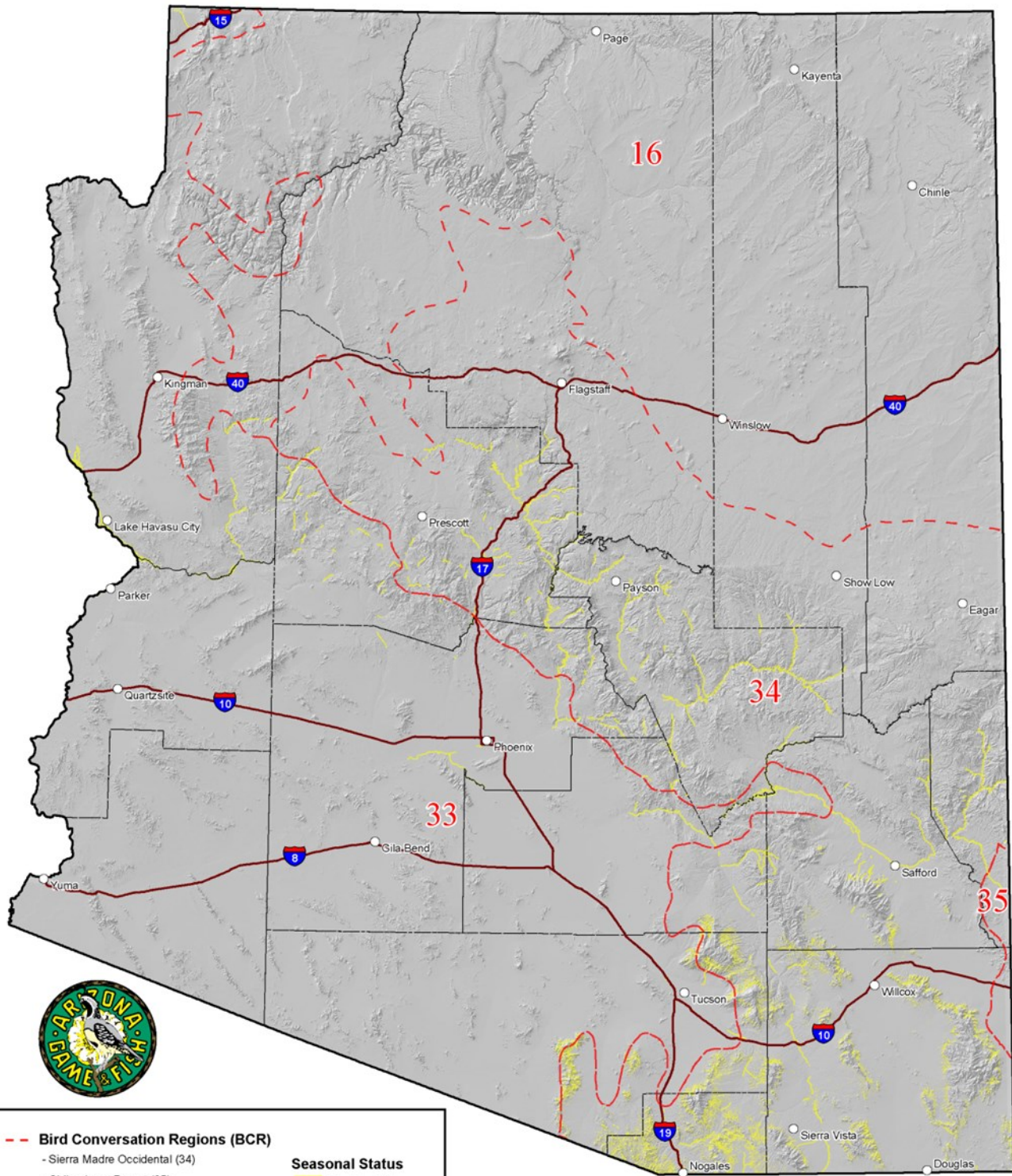
SPECIES ACCOUNT ● YELLOW-BILLED CUCKOO *Coccyzus americanus*



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

Last Update: October 2023

# Distribution of Yellow-billed Cuckoo



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

**SPECIES ACCOUNT ● YELLOW-BILLED CUCKOO *Coccyzus americanus***



## General Information

The Arizona population of the Yellow-billed Cuckoo falls within the western Distinct Population Segment (DPS), which is situated west of the continental divide. The Western Yellow-billed Cuckoo was listed as Threatened under the Endangered Species Act in 2014. This account specifically addresses the Arizona segment of the western Distinct Population Segment.

## Distribution in Arizona

During migration and their brief breeding season, Yellow-billed Cuckoos in Arizona primarily occur in the scattered remaining riparian gallery forests. Concentrations include the central and southeastern regions of the state and west locally to the lower Colorado River (Corman 2005). They also occur during the breeding season in riparian and evergreen oak woodland drainages in the mountain foothills of extreme southeastern Arizona (MacFarland and Horst 2015). Yellow-billed Cuckoos only occur in Arizona during the nesting season and during migration. They winter in South America (Hughes 2020).

## Habitat Description

In the southwest Yellow-billed Cuckoos are found in lowland riparian forest vegetation, including Fremont cottonwood, Goodding's willow, velvet ash, Arizona walnut, mesquite, and some tamarisk (Corman 2005). Throughout most of the state, they are rarely detected in the slightly higher drainages dominated by alder or sycamore. However in southeastern Arizona (south of the Gila River) where summer humidity is often higher and more consistent, Yellow-billed Cuckoos also use intermittent drainages and larger washes with mesquite and netleaf hackberry woodlands, as well as in or near mountain foothill drainages dominated by Madrean evergreen oaks and sycamores (Corman 2005, MacFarland and Horst 2015). In this region of the state, cuckoos can breed along narrow stringers of mature trees found in drier reaches, in narrow drainages, and in more sparsely treed savannahs, although at a lower density than in more extensive riparian stands along perennial drainages. Tree species for nesting may include cottonwood, willow, boxelder, sycamore, hackberry, ash, walnut, mesquite, oak, acacia, elderberry, and tamarisk, as well as other species. Drainages may be perennial, intermittent, or ephemeral.

Yellow-billed Cuckoos prefer riparian woodlands with at least some portion having high foliage density, particularly below 33 feet in height (Gaines and Laymon 1984), canopy heights of 17 – 100 feet, and 70% canopy closure. In California researchers found Yellow-billed Cuckoos prefer a shrub understory with heights of 3 – 20 feet (Laymon and Halterman 1989). The subcanopy can include some tamarisk, but sites that are dominated by tamarisk are infrequently used. Multi-aged stands of native riparian woodlands and active vegetation recruitment zones are key factors in maintaining breeding populations of Yellow-billed Cuckoos (McNeil et al. 2013, M. Haltermann pers. comm.)

## Microhabitat Requirements

Yellow-billed Cuckoos in the western U.S. mostly place their nest in willows, but also in cottonwood, mesquite, hackberry, soapberry, alder, tamarisk, sycamore, walnut, boxelder, acacia, seep willow (*Baccharis spp.*), and oak (Swarth 1914, Hamilton and Hamilton 1965, Gaines and Laymon 1984, Groschupf 1987, Corman and Magill 2000, MacFarland and Horst 2015). Typically there is a fairly high percentage of vegetation cover directly above and several meters around the nest (Laymon et al. 1997, Halterman 2005, McNeil





et al. 2013). Yellow-billed Cuckoos have a short breeding cycle, relatively rapid nestling growth rates, and a short but high demand for their main prey of large insects (Wallace et al. 2013). They forage primarily in riparian trees and shrubs, but also regularly in adjacent habitats such as desertscrub, oak woodlands, and mesquite grasslands. Hughes (2020) reported them foraging in nearby orchards. In Arizona, this includes pecan groves.

## Landscape Requirements

Yellow-billed Cuckoo home range size varies by location, habitat type, breeding status, and individual bird. The rule for critical habitat designation states that riparian habitat patches greater than 200 acres are considered optimum in the species' larger range, although in the southwestern United States patches less than 40 acres may be used for breeding (U.S. Fish and Wildlife Service 2021). These smaller patch sizes are collectively important for cuckoo recovery (U.S. Fish and Wildlife Service 2021). However, when evaluating habitat suitability, the surrounding habitat must be taken into consideration. Western Yellow-billed Cuckoos typically have large home ranges during the breeding season, spanning a variety of habitat types and can range up to 700 acres per individual (Halterman 2009, Laymon et al. 1997, Laymon and Williams 2002, Sechrist et al. 2012, McNeil et al. 2010, 2013).

Home range estimates for radio-telemetered Yellow-billed Cuckoos within the San Marcial Reach of the Rio Grande in New Mexico varied from 12 to 697 acres, and averaged 202 acres (Sechrist et al. 2009). However, average cuckoo home ranges can be smaller, as on the South Fork of the Kern River in California (Laymon et al. 1997) where they averaged only 42 acres. Among individuals in a study on the Rio Grande, Dillon and Moore (2000) found a broad range of home range estimates among individuals (~ 4 to 530 acres). Therefore, smaller habitat patches should not be overlooked when considering possible cuckoo habitat.

Along the lower Colorado River, mean riparian woodland patch size of sites occupied by Yellow-billed Cuckoos is 90 acres (McNeil et al. 2013). Minimum patch size requirement is estimated to be 25 acres (> 110 yards wide), including at least 2.5 acres of dense nesting habitat (Laymon and Halterman 1989). Connectivity between habitat patches may also be important for dispersal and migration (Laymon and Halterman 1989). Habitat patch occupation by Yellow-billed Cuckoos can vary from year to year based on annual precipitation and, possibly more likely, annual fluctuations in appropriate food availability (Halterman 2008, Johnson et al. 2010, Halterman et al. 2016).

## Conservation Issues and Management Actions

### Population Decline (High Stewardship Responsibility)

Western Yellow-billed Cuckoos have experienced major population declines and a drastic reduction in breeding range within the past 60 years due to habitat loss, local extirpations, and low colonization rates (Laymon and Halterman 1987). They nest later than most other riparian birds and their populations can fluctuate locally depending on food availability, which makes population trend monitoring difficult. However, California populations declined by 65 – 96% in the span of 10 years in the 1980s (Laymon and Halterman 1987). Western populations of the Yellow-billed Cuckoo were federally listed as Threatened in October



2014. The majority of western Yellow-billed Cuckoos breed in Arizona, which plays a major role in sustaining the western population.

### 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.

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

Threat	Threat Level
<b>Residential and Commercial Development</b> <ul style="list-style-type: none"> <li>Housing and urban areas</li> </ul>	Medium
<b>Agriculture</b> <ul style="list-style-type: none"> <li>Livestock farming and ranching</li> </ul>	High
<b>Human Intrusions and Disturbance</b> <ul style="list-style-type: none"> <li>Recreational activities</li> <li>Work and other activities</li> </ul>	Medium
<b>Natural System Modifications</b> <ul style="list-style-type: none"> <li>Fire and fire suppression</li> <li>Dams and water management/use</li> </ul>	High
<b>Invasive and Other Problematic Species</b> <ul style="list-style-type: none"> <li>Invasive non-native/alien species</li> </ul>	Medium
<b>Pollution</b> <ul style="list-style-type: none"> <li>Air-borne pollutants (pesticides)</li> </ul>	Medium
<b>Climate Change</b> <ul style="list-style-type: none"> <li>Ecosystem encroachment</li> <li>Changes in temperature regimes</li> <li>Changes in precipitation and hydrological regimes</li> </ul>	High

#### Agriculture:

- Livestock farming and ranching

Unsustainable livestock grazing reduces riparian tree and shrub recruitment and woodland foliage density, which are essential habitat features for Yellow-billed Cuckoos. Fortunately, elimination or a reduction of unsustainable grazing can restore native riparian habitat areas and Yellow-billed Cuckoo populations (Laymon and Halterman 1989, Krueper et al. 2003). Similarly, riparian habitat restoration projects that improve habitat suitability may be colonized by Yellow-billed Cuckoos within only a few years, as demonstrated in habitat creation sites of the Lower Colorado River Multi-Species Conservation Program (e.g., McNeil et al. 2013; [www.lcrmscp.gov](http://www.lcrmscp.gov)).



**Recommended Actions:**

1. Reduce grazing activities in or near potentially suitable and suitable foraging and breeding habitat. Consider a “leaf drop to bud break” grazing strategy.
2. Conduct Yellow-billed Cuckoo standardized protocol surveys (Halterman et al. 2016) to determine presence in potentially suitable and suitable foraging and breeding habitat.
3. Use barriers, fencing, signage, road closures, and other measures to protect potential breeding and foraging habitat from livestock grazing and other uses such as: off-road vehicle use, mining activities (including sand/gravel extraction), tree harvesting (mesquite, oaks), and incompatible recreation use.
4. If exclusion of detrimental land uses is not feasible, encourage compromises that may include livestock exclosures near potential Yellow-billed Cuckoo breeding sites (2.5 acres of woodland thickets per 25 acres of riparian forest) and active water management solutions that retain the viability of riparian woodlands, such as maintaining minimum instream flows during drought conditions.

**Natural System Modifications:**

- Dams and water management/use
- Other ecosystem modifications

Habitat loss and fragmentation of riparian forests are universally recognized as the source of historic declines in Western Yellow-billed Cuckoo populations (Laymon and Halterman 1987, Hughes 2020). These losses are largely a result of dewatering of streams and rivers, impoundments, floodplain conversion for agricultural uses, and flood control measures. For instance, in a 10-year span starting in the late 1970s, an estimated 31% of cottonwood-willow stands along the lower Colorado River were lost, resulting in an estimated 16% decrease in Yellow-billed Cuckoo populations (Hughes 2020). Secondary effects of habitat degradation of native riparian woodlands involved the invasion of tamarisk, resulting in loss of Yellow-billed Cuckoo habitat where it became dominant (Laymon and Halterman 1987).

**Recommended Actions:**

1. Retain systems with natural or altered hydrology that provide suitable breeding and foraging habitat.
2. Avoid construction or other habitat alteration activities in or near potentially suitable and suitable foraging and breeding habitat during periods recommended by USFWS, generally May 25 – September 30.
3. Restrict campfires in or near potentially suitable and suitable foraging and breeding habitat, particularly in dispersed camp areas, to reduce the potential of damaging wildfires.

**Invasive and Other Problematic Species:**

- Invasive non-native/alien species

Tamarisk is a symptom of water management that alters the natural flow regime (timing, magnitude, duration, and frequency of flow). Although it is an invasive, non-native species, Yellow-billed Cuckoos nest in tamarisk when native trees are also present. In most of Arizona, if flows return to normal, native trees will outcompete tamarisk in riparian zone. Poff et al. (1997) give an in-depth discussion about a paradigm for river conservation and restoration.

**Pollution:**

- Air-borne pollutants

Pesticides can be a concern if they occur near Yellow-billed Cuckoo breeding habitat and affect the availa-



bility of large insects (Hughes 2020).

*Recommended Actions:*

1. Avoid use of pesticides and herbicides in or near potentially suitable and suitable foraging and breeding habitat.

Protection and Enhancement of Existing Yellow-billed Cuckoo Habitats

1. Determine extent and intensity of land uses affecting existing Yellow-billed Cuckoo habitats in Arizona, including levels and seasons of livestock grazing, levels of groundwater pumping affecting instream flows and floodplain connectivity, diversions and impoundments of instream flows, degree of tamarisk dominance, and levels of pesticide use in adjoining areas.
2. If native riparian vegetation can be maintained successfully in the long-term (depending on hydrological conditions), supplement existing degraded areas with plantings of preferred breeding and foraging plants to accomplish increased foliage cover (see habitat description for details).
3. Focus conservation efforts on large habitat patches (25 – 90 acres or more), and regard smaller patches as potential dispersal and migration habitat that can connect larger patches.
4. Develop an outreach plan focusing on the importance of intact riparian areas, inadvertent damages from certain land uses, and the value of maintaining these areas for both wildlife and people.
5. Retain ground cover, understory, midstory, and overstory vegetation.
6. Retain upland vegetation to maintain healthy watersheds and allow for natural water infiltration and transport across the landscape.

Habitat Creation and Enhancement of Unoccupied Areas

1. Delineate and protect areas that have the potential for creation or enhancement of large patches (25 – 90 acres or more) of native riparian woodland that include multi-layered canopies, multiple tree age classes, active tree recruitment, and dense thickets.
2. Determine actions needed and feasibility to revegetate or enhance these areas, including providing sufficient instream flows to maintain native riparian vegetation and protection from detrimental land use.
3. Develop enhancement or habitat creation projects that address Yellow-billed Cuckoo habitat needs for establishing and maintaining native riparian plantings and natural plant recruitment. Details are available in Anderson and Laymon (1989) and in reports at [www.lcrmscp.gov](http://www.lcrmscp.gov).

**Human Intrusions and Disturbance:**

- Recreational activities
- Work and other activities

Yellow-billed Cuckoos are sensitive to disturbances near the nest and are likely to desert nests when disturbed. This can be a significant concern because they have a very short breeding season and their ability to re-nest is limited (Hughes 2020).

*Recommended Actions:*

1. Avoid construction, excessive noise, and recreational activities that may adversely affect migrating and breeding Yellow-billed Cuckoos during periods recommended by USFWS (May 25 – September 30).



2. Regulate public access to nesting sites by managing the number of Yellow-billed Cuckoo researchers in a given area.
3. Restrict public access to recently planted revegetation sites to avoid damaging growing vegetation.
4. Place barriers and/or signage in or near known or potentially suitable Yellow-billed Cuckoo breeding habitat to discourage trespass vehicles, illegal wood harvesting (i.e. mesquite, oak), group day-use, and use of dispersed camp sites.
5. Minimize noise disturbance in or near potentially suitable and suitable foraging and breeding habitat from May 25 – September 30.

### Climate Change:

- Ecosystem encroachment
- Changes in temperature regimes
- Changes in precipitation and hydrological regimes

As with other riparian-obligate birds, the Yellow-billed Cuckoo is sensitive to any habitat degradation from prolonged drought. This species also requires large (ideally > 90 acre) stands of relatively intact riparian woodland cover during the breeding season, especially in years of low insect productivity. Dewatering of streams from reduced snowpack and low summer precipitation can result in widespread losses of mature trees and shrubs, as well as reduced tree recruitment.

### Recommended Actions:

1. Conduct revegetation and enhancement activities on large river reaches that are currently unoccupied by Yellow-billed Cuckoos but have potential to provide habitat.
2. Determine the risk of dewatering from prolonged droughts for river reaches in proposed critical habitat.
3. Determine and avoid land uses that compound the habitat-degrading effects of prolonged droughts.
4. Develop and implement a mitigation plan for the above land uses, which may include changes in agricultural practices, grazing regimes, surface flow use, and ground-water pumping; restoration of riparian forests in other river reaches; and negotiating minimum instream flows during drought years.

### Research and Monitoring Priorities

1. Conduct Western Yellow-billed Cuckoo movement studies in less traditional habitats to determine home range, habitat use, and migration routes, including mountain foothill drainages of southeastern Arizona and in narrow riparian drainages throughout Arizona.
2. Conduct Western Yellow-billed Cuckoo movement studies to determine use of foraging habitat, including habitat types used, size, and distance from breeding sites.
3. Conduct movement studies on Western Yellow-billed Cuckoos to determine length of time, movement, and turnover on breeding sites.
4. Evaluate habitat characteristics in less traditional Western Yellow-billed Cuckoo breeding and foraging habitats, including mountain foothill drainages of southeastern Arizona and in narrow riparian drainages throughout Arizona.
5. Conduct effectiveness monitoring on habitat enhancement and revegetation sites for Western Yellow-billed Cuckoos.
6. Determine quantitative effects of pesticide and herbicide applications in or near occupied locations on





cuckoo populations and their prey.

7. Coordinate with non-governmental organizations and state and federal agencies in the southwest U.S. and northwest Mexico to conduct coordinated Western Yellow-billed Cuckoo range-wide surveys to assess current population and distribution.

## Literature Cited

Anderson, B.W. and S.A. Laymon. 1989. Creating habitat for the Yellow-billed Cuckoo (*Coccyzus americanus*). Gen. Tech. Rep. PSW-110. USDA Forest Service.

<sup>4</sup>Arizona Bureau of Land Management Sensitive Species List – March 2017.

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

Corman, T.E. and R.T. Magill. 2000. Western yellow-billed cuckoo in Arizona: 1998-1999 survey report. Nongame and Endangered Wildlife Program Technical Report 150. Arizona Game and Fish Department, Phoenix, Arizona.

<sup>8</sup>Corman, T. E. 2005. Yellow-billed Cuckoo. In: Arizona Breeding Bird Atlas. Corman, T.E., and C. Wise-Gervais (eds.) University of New Mexico Press. Albuquerque, NM.

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

Dillon, K.G. and D. Moore. 2000. Yellow-billed Cuckoo Breeding Habitat Use: Radio Telemetry on the Middle Rio Grande, New Mexico 2019. Bureau of Reclamation Technical Service Center Fisheries and Wildlife Resources Group.

<sup>10</sup>Gaines, D.A. and S.A. Laymon. 1984. Decline status and preservation of the Yellow-billed Cuckoo in California. *Western Birds* 15(2):49 – 80.

Groschupt, K. 1987. Status of the yellow-billed cuckoo (*Coccyzus americanus occidentalis*) in Arizona and West Texas. U.S. Fish and Wildlife Service, Phoenix, AZ. Contract No. 20181-86-00731.

Halterman, M.D. 2005. Surveys and life history studies of the yellow-billed cuckoo: summer 2004. Report to the Bureau of Reclamation, Lower Colorado Regional Office, Boulder City, NV and Bureau of Land Management, Sierra Vista, Arizona. 32 pp.

Halterman, M.D. 2008. Final report for the 2006-2007 yellow-billed cuckoo project. Report to the Bureau of Reclamation, Lower Colorado Regional Office, Boulder City, Nevada.

Halterman, M.M. 2009. Sexual Dimorphism, Detection Probability, Home Range, and Parental Care in The Yellow-billed Cuckoo. Unpublished PhD dissertation. University of Nevada.



- Halterman, M.D., M.J. Johnson, J.A. Homes, and S.A. Laymon. 2016. (Draft May 2016) A natural history summary and survey protocol for the western distinct population segment of the yellow-billed cuckoo: U.S. Fish and Wildlife Techniques and Methods, 46 pp.
- Hamilton, W.J. and M.E. Hamilton. 1965. Breeding characteristics of yellow-billed cuckoos in Arizona. *in* Proceedings of the California Academy of Sciences 32(4):405 – 432. Fourth Series.
- <sup>9</sup>Hughes, J.M. 2020. Yellow-billed Cuckoo (*Coccyzus americanus*), The Birds of North America Online (A. Poole, ed.) Ithaca: Cornell Lab of Ornithology.
- Krueper, D., J. Bart, and T.D. Rich. 2003. Response of vegetation and breeding birds to the removal of cattle on the San Pedro River, Arizona. *Conservation Biology* 17(2):607 – 615.
- Johnson, M.J., van Riper, C., III, and R. Magill. 2010. Yellow-billed cuckoo distribution and habitat associations in Arizona, 1998–1999. Pp. 197–212 *in* The Colorado Plateau IV: conservation through integration of research with natural and cultural resources (C. van Riper III, B.F. Wakeling and T.D. Sisk, eds.) University of Arizona Press, Tucson, Arizona.
- Laymon, S.A., and M.D. Halterman. 1987. Can the western subspecies of Yellow-billed Cuckoo be saved from extinction? *West. Birds* 18:19 – 25.
- Laymon, S.A., and M.D. Halterman. 1989. A proposed habitat management plan for Yellow-billed Cuckoos in California. USDA For. Serv. Gen. Tech. Rep. PSW- 110:272 – 277.
- Laymon, S.A., P.L. Williams, and M.D. Halterman. 1997. Breeding status of the Yellow-billed Cuckoo in the South Fork Kern River Valley, Kern County, California: Summary report 1985–1996. Admin. Rep. USDA Forest service, Sequoia National Forest, Cannell Meadow Ranger District, Challenge Cost-Share Grant #92–5–13.
- Laymon, S.A and P.L. Williams. 2002. Breeding Status of the Yellow-billed Cuckoo in the South Fork Kern River Valley, Kern County, California: Field Season 2001. Prepared for USDA Forest Service, Sequoia National Forest, Cannell Meadow Ranger District.
- MacFarland, J. and J. Horst. 2015. Yellow-billed Cuckoo surveys on the Coronado National Forest within eight sky island mountain ranges in southeast Arizona. Prepared for Coronado National Forest by-Tucson Audubon Society.
- McNeil, S.E., M.D. Halterman, E.T. Rose, and D. Tracy. 2010. Yellow-billed Cuckoo distribution, abundance and habitat use on the Lower Colorado River and tributaries, 2009 annual report. Submitted to Lower Colorado River Multi-Species Conservation Program, Bureau of Reclamation, Lower Colorado Region, Boulder City, NV.
- McNeil, S.E., D. Tracy, J.R. Stanek, and J.E. Stanek. 2013. Yellow-billed Cuckoo Distribution, Abundance and Habitat Use on the Lower Colorado River and Tributaries 2008–2012 Summary Report. Southern Sierra Research Station. Colorado River Multi-Species Conservation Program.



- <sup>5a</sup>Partners in Flight. 2019. Avian Conservation Assessment Database, version 2019. Accessed on March 31, 2020.
- <sup>6</sup>Partners in Flight Science Committee. 2019. Population Estimates Database, version 3.0. Accessed on March 31, 2020.
- Poff, N.L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegard, B.D. Richter, R.E. Sparks, and J.C. Stromberg. 1997. The natural flow regime: a paradigm for river conservation and restoration. *BioScience* 47(11):769 – 784.
- <sup>5b</sup>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., Salzer, D., Stattersfield, A.J., Hilton-Taylor, C., Neugarten, R., Butchart, S.H.M., Collen, B., Cox, N., Master, L.L., O'Connor, S. and Wilkie, D. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. *Conservation Biology* 22(4): 897 – 911.
- <sup>7</sup>Sauer, 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.
- Sechrist, J., V. Johanson, and D. Ahlers. 2012. Western Yellow-billed Cuckoo Radio Telemetry Study Results – Middle Rio Grande New Mexico – 2007-2008. U.S. Bureau of Reclamation, Technical Service Center, Denver, CO.
- Swarth, H.S. 1914. A distributional checklist of the birds of Arizona. *Pacific Coast Avifauna* 10:1 – 33.
- <sup>1</sup>U.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, Virginia. 85 pp.
- U.S. Fish and Wildlife Service. 2021 Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Western Distinct Population Segment of the Yellow-billed Cuckoo. *Federal Register*: 86:20798; April 21, 2021.
- Wallace, C. S. A., M. L. Villarreal, and C. van Riper III. 2013. Influence of monsoon-related riparian phenology on yellow-billed cuckoo habitat selection in Arizona. *Journal of Biogeography* 40(11):2094 – 2107.
- <sup>10</sup>Wohner, P.J., Laymon, S.A. Stanek. J.E., King. S.L., Cooper, R.J. 2020. Challenging our understanding of western Yellow-billed Cuckoo habitat needs and accepted management practices. *Restoration Ecology* 29(3).

### Recommended Citation

Arizona Bird Conservation Initiative and Sonoran Joint Venture. 2023. Yellow-billed Cuckoo (*Coccyzus americanus*) Species Account. Available at <https://sonoranjv.org/accounts/yellow-billed-cuckoo.pdf>