



Elegant Trogon, photo by © Dominic Sheronoy

## Conservation Profile

Species Concerns	
Small Populations	
Mining and Quarrying	
Climate Change (Droughts)	
Increased Fire Intensity	
Recreation	
Conservation Status Lists	
USFWS <sup>1</sup>	BCC List (BCR 34, US)
AZGFD <sup>2</sup>	Tier 1B
DoD <sup>3</sup>	No
BLM <sup>4</sup>	No
PIF Watch List <sup>5b</sup>	Yellow List
PIF Regional Concern <sup>5a</sup>	BCR 34
Migratory Bird Treaty Act	
Covered	
PIF Breeding Population Size Estimates <sup>6</sup>	
Arizona	183 pers. comm. R. Taylor (2018)
Global	200,000
Percent in Arizona	.09%
PIF Population Goal <sup>5b</sup>	
Reverse Decline	
Trends in Arizona	
Historical (pre-BBS)	Local increases <sup>8</sup>
BBS <sup>7</sup> (1968 – 2013)	Not given
PIF Urgency/Half-life (years) <sup>5b</sup>	
Insufficient Data	
Monitoring Coverage in Arizona	
BBS <sup>7</sup>	Not adequate
AZ CBM	Not covered
Other	Elegant Trogon Survey
Associated Breeding Birds	
Whiskered Screech-Owl, Mexican Whip-poor-will, Arizona Woodpecker, Northern Flicker, Dusky-capped Flycatcher, Sulphur-bellied Flycatcher, Mexican Jay, Painted Redstart, Hepatic Tanager	

## Breeding Habitat Use Profile

Habitats Used in Arizona	
Primary: Montane Riparian Woodlands	
Secondary: Madrean Pine-Oak Woodlands	
Key Habitat Parameters	
Plant Composition	Sycamore most important; also evergreen oaks, pines, juniper, madrone, maple, and cypress <sup>8,9</sup>
Plant Density and Size	Well-shaded woodlands with dense vegetation and considerable undergrowth <sup>9</sup>
Microhabitat Features	Large sycamores favored; perennial water flows may be important for retaining sycamores <sup>9</sup>
Landscape	Juxtaposition of sycamore riparian and pine-oak woodland for foraging <sup>7</sup> ; most nests < 1,000 feet from water <sup>9</sup> ; area requirements unknown
Elevation Range in Arizona	
3,650 – 6,300 feet <sup>8</sup>	
Density Estimate	
Territory Size: 200 – 500 acres <sup>9</sup>	
Density: 1 – 2 pairs/mile of linear transect <sup>9</sup>	

## Natural History Profile

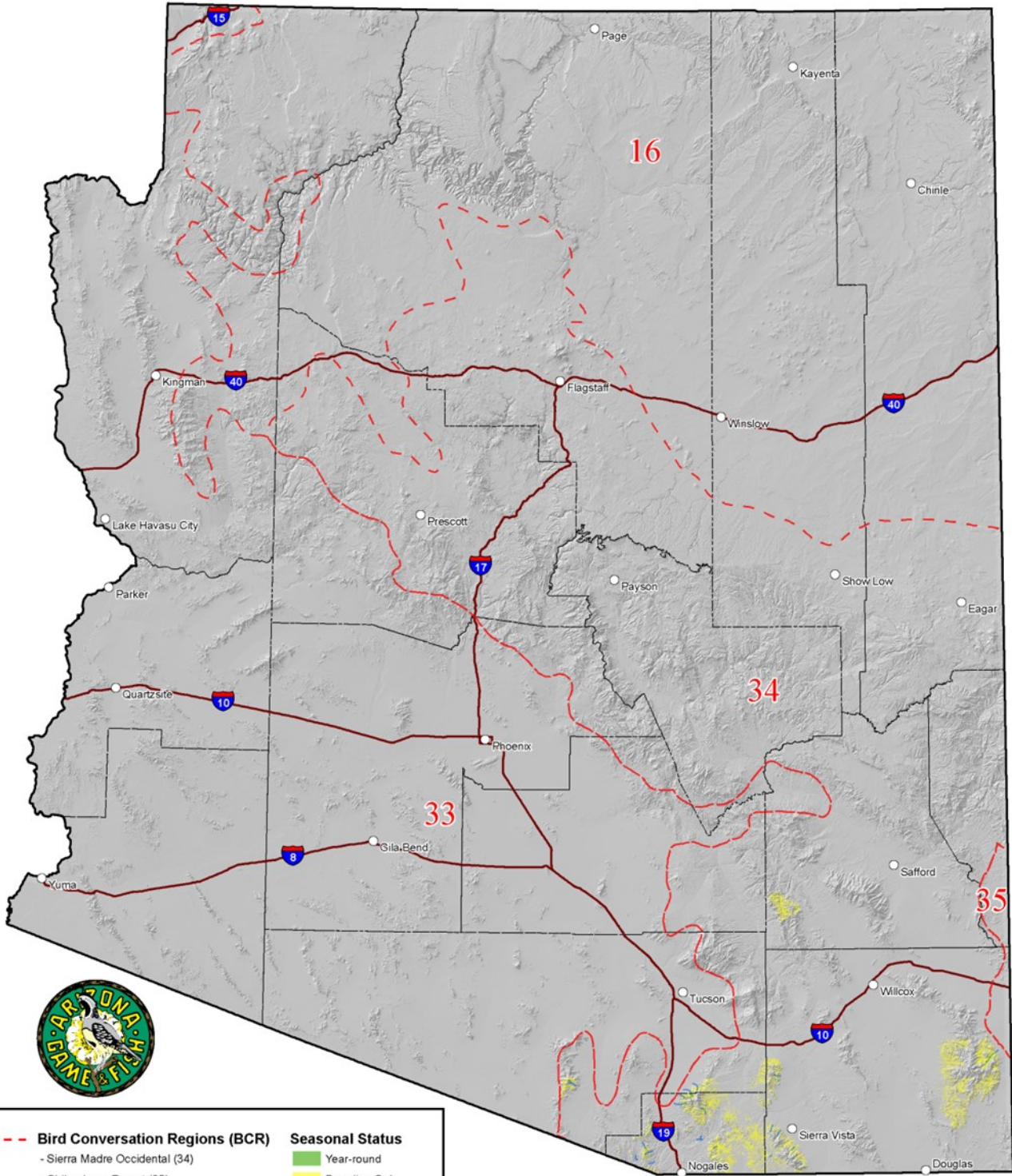
Seasonal Distribution in Arizona	
Breeding	Mid-April – August <sup>8,9</sup>
Migration	April – May; September – October
Winter	Some remain to winter, often at slightly lower elevations <sup>7</sup> ; November – April
Nest and Nesting Habits	
Type of Nest	Tree cavity <sup>9</sup>
Nest Substrate	Sycamore; occasionally oak, pine, willow, and other riparian trees <sup>8,9</sup>
Nest Height	8 – 49 feet <sup>8,9</sup>
Food Habits	
Diet/Food	Fruits and insects, occasionally lizards <sup>9</sup>
Foraging Substrate	Trees and taller shrubs



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

Last Update: October 2023

# Distribution of Elegant Trogon



-- Bird Conservation Regions (BCR)		Seasonal Status	
- Sierra Madre Occidental	(34)	<span style="color: green;">■</span>	Year-round
- Chihuahuan Desert	(35)	<span style="color: yellow;">■</span>	Breeding Only
- Sonoran & Mojave Deserts	(33)	<span style="color: blue;">■</span>	Winter Only
- Southern Rockies & Colorado Plateau	(16)	<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span>	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

Within the U.S., Elegant Trogons nest only in the southeastern region of Arizona (and irregularly in the adjacent Peloncillo and Animas Mountains in New Mexico), where they reach the northernmost edge of their global distribution (Kunzmann et al. 1998). They nest in mountain canyons and foothill drainages, primarily in the Chiricahua, Huachuca, Santa Rita, Patagonia, and Pajarito/Atascosa mountain ranges (Corman 2005), and locally as far north as the Galiuro Mountains. Nearly all of the known U.S. breeding sites for Elegant Trogons are within lands administered by the Coronado National Forest. Most Elegant Trogons in Arizona migrate south to winter in Mexico. However, a small but increasing number now winter in the state, typically at slightly lower elevations.

### Habitat Description

Elegant Trogons occur in mountain canyons and some foothill drainages with large sycamores and within Madrean pine-oak woodlands that include oaks, Apache and Chihuahuahua pines, Douglas fir, alligator juniper, cypress, and maples (Corman 2005). Most areas used by Elegant Trogons are either well-shaded woodlands with dense riparian thickets, or pine-oak woodlands with significant undergrowth (Hall 1996). Elegant Trogons may prefer canyons with permanent water flows, but the relationship is unclear (Taylor 1980, Hall 1996). They are often found in vegetation surrounding riparian areas, but they rarely use areas dominated by xeric shrubs (Kunzmann et al. 1998). Within much of their Arizona breeding range, the combination of sycamores, pines, and oaks appears to be critical for Elegant Trogon habitat suitability (Hall 1996).

### Microhabitat Requirements

Most Elegant Trogons in Arizona nest in cavities in sycamores, but they also use various species of oaks, pines, cottonwood, walnut, and willows (Hall 1996, Kunzmann et al. 1998). Elegant Trogons cannot excavate tree cavities themselves. Instead, they use natural cavities or those created by Northern Flicker or, less frequently, Acorn Woodpecker (Taylor 1994, Hall and Karubian 1996). Nest cavity height in Arizona, ranges from 8 – 49 feet (Taylor 1980, Taylor 1994). Despite attempts to attract Elegant Trogons to artificial nest boxes, they are not known to use them (Hakes 1983). During the nesting season, Elegant Trogons forage on a variety insects found on various species of oaks and fruits of mostly broad-leaved shrubs and trees, such as chokecherry, grape, and buckthorn (Taylor 1980, Hall 1996, Kunzmann et al. 1998). Little is known of their winter diet in Arizona.

### Landscape Requirements

Area requirements and disturbance distances have not been studied in depth. However, the relationship between nesting success and rate of human visitation in a canyon was examined by Hall (1996). For 26 nests in high-visitation (relatively high disturbance) canyons, and 22 nests in low-visitation (relatively low disturbance) canyons, researchers found no difference in nest success. Nevertheless, further research is needed and human disturbance remains a concern (Corman 2005). Elegant Trogon habitat use appears restricted to landscapes that feature both mature sycamores and pine-oak communities, whether these have permanent water flows in the drainage or not. However, one set of studies found that most nests in Arizona were located within 1,000 feet of perennial water (references in Kunzmann et al. 1998).





## Conservation Issues and Management Actions

### Small Population

A high portion of the U.S. breeding population of Elegant Trogons resides in Arizona. Its U.S. range extends sparingly into the adjacent Peloncillo and Animas mountains in New Mexico. This leaves Arizona not only with most of the responsibility for protecting this species in the U.S., but also provides Arizona the opportunity to make great strides toward its conservation.

### 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
<b>Residential and Commercial Development</b> <ul style="list-style-type: none"> <li>Tourism and recreation areas</li> </ul>	Medium
<b>Energy Production and Mining</b> <ul style="list-style-type: none"> <li>Mining and quarrying</li> </ul>	High
<b>Biological Resource Use</b> <ul style="list-style-type: none"> <li>Logging and wood harvesting</li> </ul>	Medium
<b>Human Intrusions and Disturbance</b> <ul style="list-style-type: none"> <li>Recreational activities</li> </ul>	Medium
<b>Natural System Modifications</b> <ul style="list-style-type: none"> <li>Fire and fire suppression</li> </ul>	High
<b>Climate Change</b> <ul style="list-style-type: none"> <li>Ecosystem encroachment</li> <li>Changes in precipitation and hydrological regimes</li> </ul>	High

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

#### Energy Production and Mining:

- Mining and quarrying

Many of the southeastern Arizona mountain ranges that are home to the U.S. breeding populations of Elegant Trogons have pending or existing mine claims. Establishment or expansion of some mines could jeopardize local populations.

#### Recommended Actions:

1. Create a spatial data set that delineates both occupied and potentially suitable Elegant Trogon habitat (summer and winter). Incorporate this into conservation planning and habitat management activities.



**Biological Resource Use:**

- Logging and wood harvesting

Local, unregulated firewood harvesting (oaks and larger snags) could reduce the quality of nesting and foraging areas by reducing canopy and removal of potential nesting tree snags.

*Recommended Actions:*

1. In potential problem areas, establish signage and increase law enforcement patrols to reduce illegal firewood harvesting in both occupied and potentially suitable habitat areas (summer and winter).

**Human Intrusions and Disturbance:**

- Recreational activities

Elegant Trogons are sought after by birders and photographers. They also nest in areas that are attractive for recreation, such as campgrounds, hiking trails, and OHV trails. Unlike other land uses, these can be directly addressed through public education and may even be turned into opportunities for conservation outreach.

*Recommended Actions:*

1. Develop an outreach strategy for recreational birders and other visitors to Elegant Trogon habitat to include interpretive signs on birding ethics, conservation issues, and conservation efforts.
2. Develop and implement strategies to protect Elegant Trogon nests from disturbances, such as trail closures during the breeding season, fencing of exposed nests, and brochures with “Dos and Don’ts” for both birders and the general public.
3. Reroute OHV and hiking trails to protect critical Elegant Trogon areas, while also allowing controlled access points for Elegant Trogon viewing.

**Natural System Modifications:**

- Fire and fire suppression
- Dams and water management/use

In 2011, a wildfire burned more than 75% of Elegant Trogon range in the Chiricahua Mountains, severely impacting the breeding population. In an effort to control the fire, back burning efforts within the mid-story of some breeding areas had the unintended consequence of further harming trogon habitat, at least in the short-term. Subsequent flash flood events within this range further devastated trogon occupied habitat by scouring, opening the canopy, and destroying the understory. Any stream alteration or other water project that affects the water table in drainages has the risk of dewatering the riparian zone and losing sycamores that are important for Elegant Trogon nesting, as well as deciduous shrubs that are important for foraging. Although Elegant Trogons may not need direct access to water, they generally nest in the vicinity of surface water, most likely because the vegetation they depend on is supported by a higher water table.



*Recommended Actions:*

1. Thin forests and reduce understory loads on slopes above drainages to reduce chances of catastrophic and large-scale wildfires.
2. Minimize water projects that affect sycamore-pine-oak in areas occupied by Elegant Trogons.
3. Maintain minimum instream flows in areas where the riparian areas can be restored.
4. Discourage further water developments in Elegant Trogon breeding area.

**Climate Change:**

- Ecosystem encroachment
- Changes in precipitation and hydrological regimes

Elegant Trogons are susceptible to habitat changes that can result from reduced snowpack and prolonged droughts. They depend on shady forests and drainages with a deciduous shrub understory that provides fruits and insects. Prolonged drought conditions could reduce insects and fruit and lower water tables, resulting in reduced recruitment of sycamores and other riparian trees. If these plant communities and their water supply diminish, Elegant Trogons will likely undergo declines in Arizona.

*Recommended Actions:*

1. Delineate areas occupied by Elegant Trogons and potentially suitable areas that could be restored for more effective conservation planning.
2. Evaluate land uses that may compound the effects of prolonged drought on the sycamore-pine-oak interface areas.
3. Determine effects of land uses, such as recreation, livestock, and firewood harvesting, on Elegant Trogons and their nesting and foraging habitats.
4. Reduce negative land use impacts, particularly during periods of drought.

**Research and Monitoring Priorities**

1. Delineate currently occupied and potentially suitable Elegant Trogon habitat and create a spatial data set to improve conservation planning, habitat monitoring, and population monitoring.
2. Determine winter population size and distribution of Elegant Trogons in Arizona.
3. Determine winter habitat characteristics of Elegant Trogons in Arizona and identify winter food sources.
4. Expand the community (citizen) science annual Arizona Elegant Trogon Census coordinated by Tucson Audubon Society and others assess and monitor populations.
5. Determine responses of Elegant Trogons to land use practices in their nesting habitat to guide future management and planning efforts.



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