Red-naped Sapsucker, photo by ©Robert Shantz

Conservation Profile

Species Concerns

Habitat Degradation
Aspen Decline
Climate Change (habitat loss)

Conservation Status Lists

USFWS\(^1\)
AZGFD\(^2\)
DoD\(^3\)
BLM\(^4\)
PIF Watch List\(^{5b}\)
PIF Regional Concern\(^{5a}\)

Migratory Bird Treaty Act
Covered

PIF Breeding Population Size Estimates\(^6\)

| Arizona | 6,600 ● |
| Global  | 2,000,000 ● |
| Percent in Arizona | 0.33% |

PIF Population Goal \(^b\)
Maintain

Trends in Arizona

Historical (pre-BBS) Unknown
BBS\(^7\) (1968 – 2013) Not given

PIF Urgency/Half-life (years)\(^{5b}\) > 50

Monitoring Coverage in Arizona

BBS\(^7\) Not adequate
AZ CBM Not covered

Associated Breeding Birds
Downy Woodpecker, Violet-green Swallow, Warbling Vireo, House Wren, Hermit Thrush, Yellow-rumped Warbler, Western Tanager

Breeding Habitat Use Profile

Habitats Used in Arizona
Primary: Mixed Conifer-Aspen Forest
Secondary: Montane Riparian

Key Habitat Parameters

Plant Composition
Mixed conifer species: Douglas fir, white fir, and ponderosa pine; deciduous tree presence important, especially aspen and riparian; pine-oak woodland in winter only\(^8\)

Plant Density and Size
Tendency toward more open forests but versatile; mature live stands large enough to create cavities; prefers trees > 12 inches DBH for nesting\(^9\)

Microhabitat Features
Aspen groves greatly increase value of mixed-conifer stands for this species\(^8,9\)

Landscape Features
Unknown

Elevation Range in Arizona
6,850 – 9,800 feet\(^6\)

Density Estimate
Territory Size: 5 – 10 acres\(^9\)
Density: 2 – 5 birds/100 acres (up to 20/acre in ideal habitat)\(^9\)

Natural History Profile

Seasonal Distribution in Arizona

Breeding Mid-April – July\(^9\)
Migration February – April; September – October
Winter October – February; in southern Arizona

Nest and Nesting Habits

Type of Nest Cavity\(^9\)
Nest Substrate Live aspen, or conifer snag\(^9\)
Nest Height Above ground, > 2 feet\(^9\)

Food Habits

Diet/Food Sap, fruit, and arthropods\(^9\)
Foraging Substrate Deciduous trees and shrubs; conifers in winter

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

Last Update: April 2023
In Arizona, Band-tailed Pigeons breed in the forested highlands from the northwestern corner of the state to the southeastern sky islands and locally on Navajo Nation lands in the northeast (Martin 2005). They winter largely south of the Mexico border, but depending on local food resources, some winter irregularly in southeastern, and less frequently, central Arizona (Keppie and Brown 2000).

**Habitat Description**

Band-tailed Pigeons occur in montane mixed conifer, Madrean pine-oak, pinyon-juniper and Gambel oak mixed with ponderosa pine, but they are generally absent from the latter, if a major oak component is missing (Martin 2005). In high elevations of Arizona, they occupy forests with pine, Douglas-fir, and spruce-fir communities that feature berry-producing shrubs, and oak or pinyon pine. In northern Arizona, nesting habitat consists of 16-67% canopy cover that includes nesting trees with 5.5-36.5 inches DBH (Blackman et al 2013). In the Pacific northwest, nesting habitat consists of 60-200 trees/acre that includes nesting trees with 6-13 inches DBH (Keppie and Brown 2000). Band-tailed Pigeons feed on acorns, manzanita fruits, elderberry, and berries (Monson and Phillips 1981). In southeastern Arizona, they occasionally forage in chaparral, riparian woodlands, desert grassland, and Sonoran Desertscrub (Braun et al. 197).

**Microhabitat Requirements**

Interior populations nest primarily in tall conifers, such as ponderosa pine and Douglas-fir, and in taller oaks. Band-tailed Pigeons are almost entirely vegetarian in their food habits, and they primarily forage on fruits and nuts of trees in forests during nesting (Keppie and Brown 2000). Several studies also report the use of mineral springs and salt blocks, which may contain essential nutrients.

**Landscape Requirements**

Little is known about the area requirements, landscape settings, and disturbance distances needed by Band-tailed Pigeons. Until further details are studied, it is advisable to protect large landscapes that contain suitable habitats for this species.
General Information

Distribution in Arizona

Red-naped Sapsuckers occur in scattered mountain ranges across Arizona’s northeastern, eastern, and central regions. The largest population is in the White Mountains, but they also nest along the Mogollon Rim, San Francisco Peaks, Kaibab Plateau, Chuska Mountains, and in other high mountain ranges (Sitko and Corman 2005). Red-naped Sapsuckers also winter in Arizona, primarily in the central and southeastern regions, but with scattered records throughout the state (Walters et al. 2002).

Habitat Description

Red-naped Sapsuckers nest in high-elevation mixed conifer forests, which typically have a deciduous forest component or a wooded riparian drainage (Sitko and Corman 2005). They nest in cavities (generally in deciduous trees) and depend on sapwells as a foraging source, which they usually drill into deciduous trees or shrubs, such as cottonwood, aspen, water birch, chokecherry, alder, and willows (Walters et al. 2002). In winter, they occur in riparian areas, rural and urban neighborhoods, and parks with exotic deciduous trees, pine-oak, and other oak habitats (Walters et al. 2002).

Microhabitat Requirements

While the basic nesting habitat for Red-naped Sapsuckers is mixed conifer forests, deciduous trees, especially aspen, are important for both foraging and nesting (Walters et al. 2002). They prefer live deciduous trees with DBH ≥ 12 inches and heart rot for nesting due to the ease of excavating cavities (Walters et al. 2002). Foraging Red-naped Sapsuckers hunt for insects during the nesting season, usually in deciduous shrubs and trees, and they cluster sapwells throughout their breeding territory (Walters et al. 2002).

Landscape Requirements

Area requirements and landscape requirements have not been studied for Red-naped Sapsuckers, nor have their responses to land uses and forestry practices.
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.

<table>
<thead>
<tr>
<th>Threat</th>
<th>Details</th>
<th>Threat Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture</strong></td>
<td>May impact recruitment of riparian tree species and aspen</td>
<td>Medium</td>
</tr>
<tr>
<td>• Livestock farming and ranching</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Natural System Modifications</strong></td>
<td>Fire could remove key feeding/nesting trees, but may open forest stands allowing for aspen regeneration.</td>
<td>Medium</td>
</tr>
<tr>
<td>• Fire and Fire suppression</td>
<td>Accelerated aspen decline is a concern, possibly related to climate change; heavy elk browsing of young aspen and scrub willow stands</td>
<td></td>
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<tr>
<td>• Other ecosystem modifications</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Climate Change</strong></td>
<td>Both threats may increase rate of aspen decline; may impact mixed conifer/deciduous tree components if unadaptable to climatic changes</td>
<td>High</td>
</tr>
<tr>
<td>• Ecosystem encroachment</td>
<td></td>
<td></td>
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<tr>
<td>• Changes in precipitation and hydrological regimes</td>
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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

Unsustainable livestock grazing can cause degradation of riparian areas by impacting recruitment of riparian shrubs and trees, including aspen. Livestock spend more time in mesic habitat types than in uplands, and so they have proportionally greater impacts on the deciduous woodlands that support Red-naped Sapsuckers.

**Recommended Actions:**

1. Encourage sustainable livestock grazing or exclusion of livestock in the most important areas for Red-naped Sapsucker, especially aspen and montane riparian habitats.
2. Provide alternate water sources to keep livestock out of sensitive riparian areas.
3. Promote the importance of healthy aspen and riparian areas with agency partners, landowners, and the public, including informational materials on the threats to these important habitats.
**Natural System Modifications:**
- Fire and fire suppression
- Other ecosystem modifications

**Climate Change:**
- Ecosystem encroachment
- Changes in precipitation and hydrological regimes

Recent evidence suggests western aspen clones can experience catastrophic loss from disease and sudden mortality. While this is well-documented throughout the region, little is known of the current status of Arizona aspen stands. Climate change is one of the suspected causes of accelerated aspen decline. With prolonged droughts predicted from climate models, aspen and other deciduous woodlands interspersed with coniferous forests are likely threatened. This, coupled with excessive browsing of aspen saplings and scrub willows by elk, deer, and livestock, leads to concern. Due to the Red-naped Sapsucker’s close association with aspen and other deciduous woodlands, causes of aspen die-offs and the status of higher elevation woody riparian communities are critically important in conservation planning for this species.

**Recommended Actions:**

1. Implement a climate-change oriented monitoring or repeated status assessment program for aspen stands and montane riparian areas.
2. Promote grazing and fire management practices that support aspen regeneration.
3. Manage for groups of aspen stands of different age classes in a larger forest complex to ensure continual availability of older trees and snags (> 12 inches DBH) for nesting.
4. Use elk and cattle exclosures to promote the growth of regenerating aspen and scrub willow stands.
5. Manage elk populations to reduce excessive browsing pressure on regenerating aspen and scrub willow stands.
6. Strategically conserve and monitor the highest value areas in current aspen stands and adjacent deciduous and coniferous woodlands within Red-naped Sapsucker range.

**Research and Monitoring Priorities**

1. Delineate and evaluate stand condition in current aspen stands and adjacent deciduous and coniferous deciduous/deciduous mixed woodlands. Identify the highest-value areas that are within the Red-naped Sapsucker’s breeding range for strategic conservation action and monitoring.
2. Develop a monitoring program for Red-naped Sapsucker populations that takes into account possible distribution shifts in response to climate change and aspen decline.
3. Determine area and landscape requirements of Red-naped Sapsuckers, including responses to artificial disturbances and minimum distance buffers.
Literature Cited


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


Recommended Citation