

CANYON WREN - CATHERPES MEXICANUS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Troglodytidae Genus: Catherpes Baird, 1858 Species: C. mexicanus

Habitat:

Biomes: Similar to the rock wren in habitat, the canyon wren prefers steeper rocky environments, particularly in arid landscapes and deep canyons and terrain (sometimes including buildings, woodpiles, and rock fences).

Distribution:

In US: Resident, although individuals may make short seasonal movements. It ranges from southern British Columbia in the Okanagan Valley and western and southern Idaho and southern Montana south through central Wyoming, Colorado throughout much of Mexico south to western Chiapas. It occurs east to southwest Oklahoma and in the Edwards Plateau of west-central Texas.

In Other Countries: NONE

Holistic Description: Found throughout the arid mountain country and canyonlands of western North America, the Canyon Wren nests and feeds in narrow rock crevices. Often, it announces its presence by its beautiful and distinctive song, a loud cascade of musical whistles.

Species Richness: 3 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Reported from only one late Pleistocene (late Rancholabrean, North American Land Mammal Age, <400,000 years before present) locality, which is Shelter Cave, New Mexico.

Systematics: Size varies geographically. Northern individuals generally smaller than those in southern parts of range. Larger, rufous-colored individuals found in southern portion of range, throughout Mexico; smaller and grayer individuals in northern portion of range, from s. British Columbia through Baja California, Mexico.

Number of Species: 3 SUBSPECIES

Number of Genera: 3 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 4.5-6.1 in (11.4-15.4 cm) Weight: 0.3-0.7 oz (9.9-18.3 g)

Wingspan: 7.1-7.9 in (18-20 cm)

Coloration: Upperparts rusty brown with a grayish head and back, having varying amounts of white spotting dorsally. The lower face, throat, and upper breast white. The belly chestnut, with varying amounts of black and white speckling. Bright rusty rufous tail barred with black, with no terminal black band. Head dorsoventrally flattened, with a long, slender, slightly decurved bill.

General Body Features: Small songbird. Brown body. White throat. Bright rufous, barred tail. Long, thin, decurved bill.

Special Features of the Body: CHECK SPECIAL ADAPTATIONS FOR PREY.

Special Features of the Head and Sensory Organs: A long, slender bill and flattened head allow this bird to probe deeply into crevices in search of insect and spider prey, and short legs lower its center of gravity, allowing it to easily forage under rocks and in tight spaces.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: CHECK SPECIAL ADAPTATIONS FOR PREY.

Any Special Internal Anatomy: CHECK SPECIAL ADAPTATIONS FOR PREY.

Sexual Dimorphisms: Small wren, sexes alike in plumage. Total length: mean 13.0 cm (11.4–15.4, n = 286); mass: male mean 11.8 g (9.9–18.3, n = 79), female mean 11.1 g (9.1–14.2, n = 38)

Differences Between Juvenile Stage and Adult: Juvenile similar to adult, but upperparts appear more textured and less spotted, and flanks lack barring.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Gleans spiders and insects from rock surfaces, often from tight crevices.

Locomotion: Hops on rocks while foraging, examining crevices for spiders and insects, occasionally uttering single call notes. Also flies readily, moving across canyons and from rock to rock. Moves rapidly on and under rocks and into crevices. Often spreads its legs while probing, so that its breast and center of gravity are low to the ground. **Quite nimble; able to quickly climb upward as well as downward on rocky surfaces. This is enabled by relatively short tarsi which lowers its center of gravity, and by large feet with long hallux and claws. All claws are strongly decurved with sharp tips. In climbing a**

large boulder, a Canyon Wren usually does not progress directly vertically but obliquely. Feet are kept wide apart while the bird advances with the upper foot and braces itself with the lower foot.

Communication and Perception: Song is a musical descending cascade of liquid notes. Call is a loud, metallic buzz.

Home Range: Breeding territory size averaged 0.91 ha, and winter territories 1.44 ha. Holds breeding and foraging territories. Foraging territories reported as 16-20 ha in s. California; foraging appears to be restricted to within territorial boundaries. Individuals may range during the day and hold large territories, causing them to be widely spaced and at low densities in some areas in Arizona.

Degree of Sociality: Solitary, maintaining intraspecific territories during the breeding and winter seasons.

Level of Aggression: NO DATA.

Migration: Resident.

Predators:

Predators: Snakes, corvids, hawks and falcons, and rock squirrels.

Anti-Predator Defenses: When approaching its nest, Canyon Wren typically flies back and forth 3-4 times or flies around the territory before entering the nest, behavior usually associated with predator avoidance.

Diet and Nutrition:

Adult Diet: The canyon wren feeds on small insects and spiders. Since they live on large rocks, they use their long beaks to scope out small crevices. They also get their source of liquid from the insects they consume.

Juvenile Diet: ^^^^^^^^^^^

Special Adaptations for Getting Prey: Has several morphological **adaptations** for foraging and breeding in rock crevices and interstitial spaces: bill is long and slender and cranium is dorsoventrally flattened, enabling this species to probe deeply into narrow, deep crevices. Short tarsi facilitate foraging under rocks by lowering the bird's height at the shoulders without affecting locomotion. Attachment of vertebral column to the braincase has been modified. Occipital region and foramen magnum have shifted higher on braincase, thus lowering height of braincase when head is extended horizontally. This alters the foraging thrust, making it directly forward, rather than down and forward, possibly allowing the bird to reach more deeply into crevices. **AND** Gleans spiders and insects from rocky surfaces, often in concealed situations. Occasionally attempts flycatching. Observed stealing cached spiders from wasp nests.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Apparently monogamous

Mating Season: May to August

Courtship: NONE

Territoriality: HOME RANGE

Mating: Pairs remain together throughout the year; known to form pair bonds which may endure >1 breeding season. Pairs often forage together and occasionally sing spontaneously during the winter months, suggesting that pair bonds may exist to some degree throughout the year.

Nest Placement: Nests in rock caverns, crevices, cliffs, or banks; some nests attached by a stick and twig base to rock faces in caves or crevices. Nests frequently protected by a projecting ledge or shelf covering the top, and sometimes in a small crevice, cranny, or hole.

Nest Description: A cup made of twigs and other coarse material, lined with lichens, soft plant material, wool, webs, or feathers. In caverns, crevices, or attached to rock face, protected from above by ledge or shelf.

Egg-Laying: Clutch Size: 4-6 eggs Number of Broods: 1-2 broods Egg Length: 0.7-0.8 in (1.64-2.07 cm) Egg Width: 0.5-0.6 in (1.29-1.46 cm) Incubation Period: 12-18 days Nestling Period: 12-17 days Egg Description: White, with small, faint reddish-brown dots.

Hatching and Incubation/Gestation: Entirely featherless, pink, with eyes closed.

Development: Newly hatched young are altricial, entirely naked, pink, and blind, with a large mouth and abdomen.

Parental Care: The male observed feeding the brooding female. Brooding is female only. Both parents feed and care for the nestlings and fledglings.

Lifespan: Up to 5 years old.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Canyon Wren populations appear to have been stable between 1966 and 2015, according to the North American Breeding Bird Survey. However the species is not well monitored, and it may be declining in some areas. Partners in Flight

estimates a global breeding population of 400,000, with 68% living in the U.S., and 32% in Mexico. The species rates a 9 out of 20 on the Continental Concern Score. Canyon Wren is not on the 2016 State of North America's Birds' Watch List.

Conservation Efforts: ^^^^^^^

Extra Facts:

1. The vertebral column of the Canyon Wren is attached higher on the skull than it is on most birds. This modification, along with a slightly flattened skull, allows a foraging Canyon Wren to thrust its bill forward into tight crevices without bumping its head.
2. The Canyon Wren can climb up, down, and across rocks. A low center of gravity, large feet, and sharp claws aid in such locomotion.
3. The Canyon Wren is not known to drink water. It probably gets all the water it needs from its insect prey. It has been seen foraging along the sides of desert springs, but not drinking.
4. The oldest recorded Canyon Wren was a female, and at least 4 years, 10 months old when she was recaptured and rereleased during banding operations in Arizona in 2015. She had been banded in the same state in 2011.

Notable Species:

1. *C. m. mexicanus* occurring in the central and southern portions of the Mexican Plateau
2. *C. m. albifrons* occurring in the northern portion of the Mexican Plateau, into west-central through western Texas
3. *C. m. conspersus* occurring in the remaining portion of the range in the U.S. and Canada
 - a. These subspecies are distinguished by the bill of *C. m. albifrons* which is generally longer than that of *C. m. mexicanus*, and its plumage paler, with upperparts more grayish brown, with narrower black bars on tail. In *C. m. conspersus* the plumage is paler and it is smaller than *C. m. mexicanus*.