

WHITE-WINGED DOVE - ZENaida ASIATICA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Columbiformes Family: Columbidae Genus: Zenaida
Species: Z. asiatica

Habitat:

Biomes: White-winged Doves live in dense, thorny forests, streamside woodlands, deserts full of cactus and palo verde, and, more recently, urban and suburban areas of the southern U.S. They tend to breed in the interiors of forests rather than near the edges. White-winged Doves now breed as far north as Oklahoma, possibly taking advantage of bird feeders and artificial heat sources in cities. Their breeding range extends south to Panama and east to Cuba. Throughout their range White-winged Doves prefer places where nesting habitat is interspersed with feeding habitat, like grain fields or desert cactus communities. In the winter White-winged Doves are found throughout most of their breeding range as well as in the southeastern United States, and some individuals wander widely across the continent.

Distribution:

In US: The white-winged dove is a dove whose native range extends from the south-western United States through Mexico, Central America, and the Caribbean. In recent years with increasing urbanization and backyard feeding, it has expanded throughout Texas, into Oklahoma, Louisiana and coastal Mississippi. It has also been introduced to Florida.

In Other Countries: NONE

Holistic Description: Originally a bird of desert thickets, the White-winged Dove has become a common sight in cities and towns across the southern U.S. When perched, this bird's unspotted brown upperparts and neat white crescents along the wing distinguish it from the ubiquitous Mourning Dove. In flight, those subdued crescents become flashing white stripes worthy of the bird's common name. Take a closer look and you'll see a remarkably colorful face, with bright-orange eyes and blue "eye shadow."

Species Richness: 3 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: NONE

Systematics: Highly variable in size and coloration, both individually and geographically. General trends in plumage coloration include paler and grayer birds from east to west across northern portion of range and increasingly darker- and richer-brown birds southward through mainland Middle America to Costa Rica, but paler birds in Panama.

Number of Species: 3 SUBSPECIES

Number of Genera: 3 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 29cm (11in) , Weight: 4.4-6.6 oz (125-187 g)

Wingspan: 18.9-22.8 in (48-58 cm)

Coloration: White-winged Doves are brown overall, with a dark line on the cheek. A white stripe at the edge of the folded wing becomes, as the bird takes flight, a bright flash in the middle of a dark wing. The tail is tipped in white and set off with black stripes from the gray underside. Their faces are ornately marked with a black streak on the cheek, and blue skin around the red eyes.

General Body Features: White-winged Doves are plump, square-tailed doves with relatively long, thin bills and small heads.

Special Features of the Body: These birds can fly 25 or more miles to find water. In the Sonoran Desert, they are able to obtain needed moisture from saguaro cactus fruit. When migrating they can travel in groups of up to 4000 birds to nesting sites. The mourning dove has developed the ability to drink only once per day, which allows it to thrive almost anywhere and has contributed to its huge populations and range.

Special Features of the Head and Sensory Organs: In a series of experiments in 1975 by Dr. Mark B. Friedman, using doves, their characteristic head bobbing was shown to be due to their natural desire to keep their vision constant.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: NONE

Any Special Internal Anatomy: Columbidae have unique body feathers, with the shaft being generally broad, strong, and flattened, tapering to a fine point, abruptly. In general, the aftershaft is absent; however, small ones on some tail and wing feathers may be present. Body feathers have very dense, fluffy bases, are attached loosely into the skin, and drop out easily. Possibly serving as a predator avoidance mechanism, large numbers of feathers fall out in the attacker's mouth if the bird is snatched, facilitating the bird's escape. **Like some other birds, the Columbidae have no gall bladders. Some medieval naturalists concluded they have no bile (gall), which in the medieval theory of the four humours explained the**

allegedly sweet disposition of doves. In fact, however, they do have bile (as Aristotle had earlier realized), which is secreted directly into the gut.

Sexual Dimorphisms: Female almost indistinguishable from male. Occasionally slightly duller, with less sheen, especially on crown, occiput, sides of neck, rump, and anterior underparts. Males have a slight iridescent sheen on their heads.

Differences Between Juvenile Stage and Adult: The sexes are similar, but juveniles are more brown than adults. They have a blue eye ring and their legs and feet are brighter pink/red. Young also have brown eyes. Juveniles resemble adults but lack black cheek-patch, feet dull reddish brown, head smaller, and iris brown to light orange.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: White-winged Doves walk along tree branches and on the ground; they fly in a swift and straight path. Courting and nesting males will occasionally strike bills and slap wings with each other, but they mostly defend their cooing perches and nests by calling or flailing their wings and tail. Males perform courtship flights, spiraling up into the sky and then returning to the branch he started from in a stiff-winged glide. They may also bow, puff up their necks, or fan the tail to entice females to mate; White-winged Doves are monogamous and stay together for at least one breeding season. When a predator comes to call at the nest, White-winged Doves may feign a broken wing to lead the intruder away. In other situations, they escape by flying directly into the bushes. Predators of adults or young include Great-tailed Grackles, Green Jays, Cactus Wrens, Gila Woodpeckers, Great Horned Owls, woodrats, deer mice, gray foxes, Norway rats, black rats, house cats, and snakes.

Locomotion: Walks across limbs or on ground. Usually flies singly, in pairs, or in small flocks, except for large feeding flights. Flight quiet, swift, and direct.

Communication and Perception: The cooing calls is hoo, hoo, hoo-hoo hoo hoo. A drawn-out "hoo-a" sound is used to tell others about the presence of a predator. Males make a series of about nine scratchy, hooting coos that alternate between a few slurred pitches, lasting 5–6 seconds; the final coo is often longer than the rest. They sing from a high perch in an open area.

Home Range: Territories of mated males tend to be smaller and better defended than unmated males and include space in which nest is constructed. Defense begins prior to courtship and nest-site selection. Size of territory may depend on nest density

Degree of Sociality: Ranges from solitary to highly gregarious. Historically, often nested in large colonies. More recently, number of large colonies declining as species moves into urban areas with more dispersed nesting trees. Often forages in large flocks.

Level of Aggression: Include rare attack flights involving males; usually performed during territorial defense associated with courtship and early stages of nesting. Flights consist of slapping wings and striking with bills.

Migration: Resident or irregular, short-distance migrant. Populations in the southern U.S. mostly stay put in the winter, but some make movements following the breeding season—not just toward the south, but also eastward and westward toward the coasts, or even northward. Some move as far south as Central America. In fall they migrate in groups of fewer than 50 doves, flying at low altitudes that are a little higher than their day-to-day flights. In spring they may join larger groups.

Predators:

Predators: Great-tailed Grackle, Green Jay, Cactus Wren, Gila Woodpecker, Great Horned Owl, Tamaulipas Crow, White-throated Magpie-Jay, Brown Jay, Woodrats, Deer Mice, Gray Fox, Norway Rat, Black Rat, House Cats, Virginia Opossum, Raccoon, Ringtail, Mongoose, Coluber, Elaphe, Lampropeltis, Masticophis, Sceloporus, Peregrine Falcons, Harri's and Cooper's Hawks, Other Raptors

Anti-Predator Defenses: Performs broken-wing display to lead predators away from nest (Wetmore 1920d, Passmore 1981). Responds to predators primarily by flying into cover. Swanson observed one individual threatened by a hawk escape into nearby dense brush.

Diet and Nutrition:

Adult Diet: Across much of its range, the vegetarian White-winged Dove eats mostly grains and other agricultural crops like wheat, sunflower, milo, corn, and safflower. It also eats fruits and large seeds from plants like spurge, panic grass, bristlegrass, Mexican jumping beans, Chinese tallow, leatherwood, saguaro, lime prickly-ash, brasil, privet, pigeonberry, and ocotillo. The White-winged Dove seems to be predisposed toward large seeds because of its large bill and gape, along with its slower eating style (it never pecks quickly, the way Mourning Doves do). White-winged Doves also commonly feed above ground level, unlike Mourning Doves, on seedheads, berries, and raised bird feeders. Like many birds, White-winged Doves consume small stones to help pulverize plant material in their gizzards, and they may eat snails and bone fragments as a source of calcium.

Juvenile Diet: Consumption of specific food items typically correlates closely with availability.

Special Adaptations for Getting Prey: Appears to locate feed visually, keying on other feeding birds. Usually forages in flocks more interior to fields than the margin. Does not probe or scratch but may rake away light litter with its bill.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Sex ratio usually 1:1. Monogamous at least through one breeding season.

Mating Season: March to May

Courtship: Male sings from a selected general-nesting site. Physical behaviors include singing, preening, bowing, spreading wings and tail, and flight. Sings 2 songs, first approximately 3 s and second 10–20 s. May repeat as often as 10 times/min during peak of courtship. Male approaches female while raising feathers and inflating neck but does not attempt direct contact; female may move away each time and then fly off with male following.

Territoriality: HOME RANGE and Defends nest site and cooing perch. Unmated males may call over areas <24 ha, but these areas often undefended and utilized by multiple males. Frequently switches cooing perch and defends occupied perch, however. Territory owner flies directly toward intruder; once intruder leaves, owner will often land at that spot. Consistent with “moving display territory”

Mating: Courtship flight: Male rises, spirals up, circling once or twice; then returns with stiff wings, seldom flapping, and gliding to perch, often in same tree from which flight was initiated. Occurs frequently and throughout day; more often in evening. Male perches on sturdy twig or branch while female rests nearby, watching behavior. Male lowers body forward, head almost below level of perch, raises wings straight up and over body, lifts and fans tail, and rocks backward to normal perching position. Repeats 8 or 9 times, for approximately 15 min. Female moves down to male for copulation, which usually occurs in nest tree, during nest-building stage. Allopreening head and neck of mate follow copulation.

Nesting: The male chooses the territory and the general nesting site, while the female selects the specific nest site, usually on a tree branch or crotch under heavy shade. In cities, the doves choose large ornamental shade trees like pecan, live oak, and ash. Elsewhere, they gravitate toward the interior of dense woodlands, particularly along streams. The male gathers twigs and brings them to the female, which constructs the nest over a couple of days. Made mostly of twigs, the nest also may have weeds, grasses or Spanish moss arranged in a flimsy bowl about 4 inches across. On rare occasions it's also lined with leaves, bark, feathers, or pine needles.

Egg-Laying: Clutch Size: 1-2 eggs Number of Broods: 1-2 broods Egg Length: 1.1-1.3 in (2.7-3.2 cm) Egg Width: 0.8-0.9 in (1.9-2.3 cm) Incubation Period: 14-20 days Nestling Period: 13-18 days Egg Description: Creamy white or buff with a dull texture.

Hatching and Incubation/Gestation: Eyes closed and dark skin coated with long off-white down feathers. Weak and uncoordinated.

Development: Altricial; with dark skin and long buffy or whitish-colored down. Egg teeth at tip of upper and lower mandible, upper is larger; eyes closed; little coordination or ability to grasp, balance, or right itself if turned over. First-hatched nestling always larger than second-hatched nestling. A single nestling in a nest develops more rapidly than 2 nestlings together.

Parental Care: Both parents brood during first 7 d— male during day, female at night. When young 7 d of age, parents can leave for short periods during day, but usually remain near nest. Young brooded at night until ready to fledge. Both adults feed milky secretion formed in crop glands (“crop milk”), as in other columbids. First feeding, usually by female, occurs soon after hatching and may last >1 h. Continuously feed during first day. Adult feeds young simultaneously by holding nestlings' bills in corners of mouth, slowly administering food by pumping action in an up-and-down motion.

Lifespan: Around 10-15 years old.

Conservation:

Official Federal Status: Least Concern

Special Statutes in Individual States: NONE

Threats: White-winged Dove populations increased between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 8 million with 57% spending some part of the year in the U.S., and 34% in Mexico. The species rates an 8 out of 20 on the Continental Concern Score and is not on the 2014 State of the Birds Watch List. Humans have sharply reduced habitat for White-winged Doves (along with other animals that live in woodland interiors) by clearing land and fragmenting forests. In the early twentieth century, sportsmen hunted the doves so heavily that the populations declined in parts of their range, particularly their U.S. stronghold in the Rio Grande Valley of Texas. However, the doves seem to have found an expansive new habitat type to which they are well adapted—cities and towns, possibly because of backyard bird feeders, warm asphalt and concrete surfaces, and artificial heat sources. They have been expanding northward since the 1980s, offsetting their former decline. White-winged Doves are still hunted, but in 1971 Texas began requiring all hunters to buy White-winged Dove hunting stamps. The government sold 1.4 million stamps in the

first 30 years, generating \$8.4 million for White-winged Dove conservation. The doves are still affected by habitat loss in their original range, and like many birds they also fall victim to striking utility lines, cars, and buildings.

Conservation Efforts: ^^^^

Extra Facts:

1. In the Sonoran Desert, nesting White-winged Doves eat mostly the nectar, pollen, fruit, and seeds of the saguaro cactus. They're so dependent on the saguaro they time their migration and nesting to match its fruiting schedule. Saguaro seeds are the only small seeds that a White-winged Dove will bother with—possibly because they sit in a large, cup-shaped fruit that makes them easy to eat.
2. Like other doves and pigeons, White-winged Doves have some unusual abilities. They can suck and swallow water without moving their heads. And they use a secretion from the esophagus, known as crop milk, to feed nestlings. Both parents may consume snails and bone fragments to help their bodies create the nutritious fluid.
3. Although the White-winged Dove is mostly resident in the Southwest, it is expanding its range, and individuals can be found far afield. White-winged Doves have been seen from Alaska to Ontario, Maine, Newfoundland, and most places in between.
4. During the twentieth century, habitat loss and heavy hunting led to a serious drop in White-winged Dove populations in Texas—from as many as 12 million to fewer than 1 million by 1939. But with proactive management of hunting and the species' ability to adapt to urban living, the population rebounded to some 2.2 million by 2001, and its range is still expanding.
5. In the early 1980s, the singer Stevie Nicks introduced millions of Americans to the White-winged Dove with her song "Edge of Seventeen," which hit #11 on the Billboard charts.
6. The oldest White-winged Dove on record was at least 21 years and 9 months old. It was banded in Arizona and later recovered in Mexico.

Notable Species:

1. Z. a. Asiatica - Breeds s. Texas south through e. Mexico to Nicaragua; also se. U.S. and West Indies.
2. Z. a. Mearnsi - Breeds sw. U.S. and Baja California south possibly to Guerrero and Puebla in w.-central Mexico; also Is. Tres Marias off w. Mexico.
3. Z. a. Australis - Resident w. Costa Rica to w. Panama. Averages slightly smaller than Z. a. mearnsi with back, scapulars, and tertials somewhat darker and richer brown; foreneck and chest more reddish, wood-brown compared with Z. a. mearnsi.