

RED-TAILED HAWK - BUTEO JAMAICENSIS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Accipitriformes Family: Accipitridae Genus: Buteo
Species: B. jamaicensis

Habitat:

Biomes: Red-tailed Hawks occupy just about every type of open habitat on the continent. This includes desert, scrublands, grasslands, roadsides, fields and pastures, parks, broken woodland, and (in Mexico) tropical rainforest. Red-tailed hawks have shown the ability to become habituated to almost any habitat present in North and Central America. Their preferred habitat is mixed forest and field, with trees or alternately high bluffs that may be used as nesting and perching sites. It occupies a wide range of habitats and altitudes, including deserts, grasslands, nearly any coastal or wetland habitat, mountains, foothills, coniferous and deciduous woodlands and tropical rainforests. Agricultural fields and pasture which are more often than not varied with groves, bluffs or streamside trees in most parts of America may make nearly ideal habitat for breeding or wintering red-tails. Some red-tails may survive or even flourish in urban areas.

Distribution:

In US: The red-tailed hawk breeds from nearly north-central Alaska, the Yukon, and a considerable portion of the Northwest Territories, there reaching as far as a breeder as Inuvik, Mackenzie river Delta and skirting the southern shores of Great Bear Lake and Great Slave Lake. Thereafter in northern Canada, breeding red-tails continue to northern Saskatchewan and across to north-central Ontario east to central Quebec and the Maritime Provinces of Canada, and south continuously to Florida. There are no substantial gaps throughout the entire contiguous United States where breeding red-tailed hawks do not occur. Along the Pacific, their range includes all of Baja California, including Islas Marías, and Socorro Island in the Revillagigedo Islands. On the mainland, breeding red-tails are found continuously to Oaxaca, then experience a brief gap at the Isthmus of Tehuantepec thereafter subsequently continuing from Chiapas through central Guatemala on to north Nicaragua. To the south, the population in highlands from Costa Rica to central Panama is isolated from breeding birds in Nicaragua. Further east, breeding red-tailed hawks occur in the West Indies in north Bahamas (i.e. Grand Bahama, Abaco and Andros) and all larger islands (such as Cuba, Jamaica, Hispaniola and Puerto Rico) and into the northern Lesser Antilles (Virgin Islands, Saint Barthélemy, Saba, Saint Kitts and Nevis, being rare as a resident on Saint Eustatius and are probably extinct on Saint Martin). The typical winter range stretches from southern Canada south throughout the remainder of the breeding range.

In Other Countries: ^^^^

Holistic Description: This is probably the most common hawk in North America. If you've got sharp eyes you'll see several individuals on almost any long car ride, anywhere. Red-tailed Hawks soar above open fields, slowly turning circles on their broad, rounded wings. Other times you'll see them atop telephone poles, eyes fixed on the ground to catch the movements of a vole or a rabbit, or simply waiting out cold weather before climbing a thermal updraft into the sky.

Species Richness: 14 SUBSPECIES

Population Dynamic: STABLE POPULATION

Evolution and Systematics:

Evolution: Widely recorded in late Pleistocene and Holocene of North America, and in the West Indies. The fossils are all from deposits in the Great Plains. The earliest records are from the Chadronian-Orellan boundary North American Land Mammal Age 31 million yr before present to the early Hemphillian.

Systematics: Considerable but complicated variation across vast geographic range, making trends difficult to summarize. Various populations in West and in Middle America are polymorphic, but polymorphism is absent or rare in others. Tendency toward smaller size in West Indies, se. Alaska, and Middle America. Southern populations generally more richly colored ventrally. Breast band tends to weaken from north to south and from west to east. Some evidence of Gloger's rule, at least in eastern populations, with increasingly heavily marked birds in colder north. 14 SUBSPECIES. The subspecies Harlan's hawk is sometimes considered a separate species (B. harlani).

Number of Species: 14 SUBSPECIES

Number of Genera: 14 SUBSPECIES

Physical Characteristics:

Size and Length:

Male

Length: 17.7-22.1 in (45-56 cm)

Weight: 24.3-45.9 oz (690-1300 g)

Wingspan: 44.9-52.4 in (114-133 cm)

Female

Length: 19.7-25.6 in (50-65 cm)

Weight: 31.8-51.5 oz (900-1460 g)

Wingspan: 44.9-52.4 in (114-133 cm)

Coloration: Most Red-tailed Hawks are rich brown above and pale below, with a streaked belly and, on the wing underside, a dark bar between shoulder and wrist. The tail is usually pale below and cinnamon-red above, though in young birds it's brown and banded. "Dark-morph" birds are all chocolate-brown with a warm red tail. "Rufous-morph" birds are reddish-brown on the chest with a dark belly.

General Body Features: Red-tailed Hawks are large hawks with typical Buteo proportions: very broad, rounded wings and a short, wide tail. Large females seen from a distance might fool you into thinking you're seeing an eagle. (Until an actual eagle comes along.)

Special Features of the Body: Like all hawks, they have excellent vision and see in color. Strong, sharp talons enable them to catch their prey while their hooked beaks are designed for ripping and tearing pieces of meat. These birds are among the largest raptors in the world. They have a wingspan of about 4 feet and can weigh up to 4 lbs. This large size gives them the strength and bulk necessary to catch prey that smaller raptors could not handle.

Special Features of the Head and Sensory Organs: Red-tailed hawks have keen eyesight and can spot prey from great distances. They prefer hunting in open areas where prey cannot hide from their superior vision. The birds often soar in wide circles over fields in search of food. Unlike the quick dive of a falcon, red-tailed hawks dive in a slower controlled way once prey has been located. For the most part, these birds are adapted to hunt for small mammals such as mice, squirrels and rabbits. Other prey items may include lizards, frogs, snakes, fish, bats and smaller bird species.

Dentition: LAMELLAE/GIZZARD/BEAK

Special Features of the Limbs and Digits: The talons and feet of red-tailed hawks are relatively large for a Buteo hawk, in an average sized adult red-tail the "hallux-claw" or rear talon, the largest claw on all accipitrids, averages about 29.7 mm (1.17 in). In fact, the talons of red-tails in some areas averaged of similar size to those of ferruginous hawks which can be considerably heavier and notably larger than those of the only slightly lighter Swainson's hawk. This species may exert an average of about 91 kg (201 lb) of pressure per square inch (PSI) through its feet. Owing to its morphology, red-tailed hawks generally can attack larger prey than typical Buteo hawks and will seemingly select the largest prey of up to their own size available at the time that they're hunting.

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: As is the case with many raptors, the red-tailed hawk displays sexual dimorphism in size, as females are up to 25% larger than males. As is typical in large raptors, frequently reported mean body mass for Red-tailed Hawks are somewhat higher than expansive research reveals

Differences Between Juvenile Stage and Adult: Furthermore, immature hawks are usually lighter in mass than their adult counterparts despite averaging somewhat longer winged and tailed. Juveniles have pale brownish tail with several (usually 7-9) dark bars of uniform width (approximately 5 mm).

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Red-tailed Hawks are large, sharp-taloned birds that can be aggressive when defending nests or territories. They frequently chase off other hawks, eagles, and Great Horned Owls. Courting birds fly with legs hanging beneath them, or chase and swoop after each other, sometimes locking talons (see Cool Facts). Mated pairs typically stay together until one of the pair dies.

Locomotion: Walks on ground using slow, awkward steps; most often exhibited while feeding on carrion. Hops on ground in energetic, erratic fashion while chasing insect prey or confronting snakes. Normal, flapping flight is generally slow (2.6 beats/s), ponderous, and direct. Ground speed estimated at up to 62 km/h, and air speed up to about 90 km/h. Maneuverable enough to successfully hunt in thick stands of conifer. Thermal and declivity currents are used for soaring, and weather conditions can influence soaring incidence. More likely to soar in light winds; "kites" in strong winds, particularly on hillsides that face into the wind, likely using deflection updrafts for lift.

Communication and Perception: Adults make a hoarse, screaming kee-eeee-arr. It lasts 2-3 seconds and is usually given while soaring. During courtship, they also make a shrill chwirr, sometimes giving several of these calls in a row.

Home Range: Highly territorial during breeding season. Territories 3-dimensional; conspecifics flying above defended airspace are usually unchallenged. Boundaries often follow well-defined physical features and remain remarkably stable year-to-year, and even decades, regardless of turnover of individuals. Size of defended area not well-documented, but mean of 33 territories in Oregon was 2.3 km². Mean size of 16 territories in Luquillo Experimental Forest in Puerto Rico was 124 ha, with smallest territories located in areas with high slope and easterly aspects. Nests may occur in clusters within a habitat,

with regular spacing within a cluster. Minimum internest distance reported -- 0.32 km. Nesting densities may be related to perch distribution as well as food availability. Territoriality relaxed in northern range during winter; several birds may gather in close proximity around local food source, especially carrion. After northern-breeding individuals migrate and settle into southern over-wintering areas, however, they may become aggressive and actively defend territories

Degree of Sociality: Typically occur singly or in pairs. May gather in small groups around abundant food source in winter or flock together during migration. These are assemblages gathered in relation to temporary environmental opportunities (easily obtained food or favorable soaring conditions) and involve little or no social interaction.

Level of Aggression: Generally aggressive. Intruders in breeding territory may be chased and attacked with wings and talons (feet open); these encounters sometimes include talon locking (grappling) between territory holder and interloper. Intra- and interspecific aggression reduced and sporadic outside breeding season. Aggressive encounters during migration include vocalizations, talon locking, and aerial displays. In New Mexico, two dead females with talons locked together were recovered under a power transformer in January; they had apparently been electrocuted during an aggressive.

Migration: Resident or short-distance migrant. Most birds from Alaska, Canada, and the northern Great Plains fly south for a few months in winter, remaining in North America. Birds across the rest of the continent typically stay put, sharing the countryside with northern arrivals.

Predators:

Predators: Great Horned Owl and Corvids

Anti-Predator Defenses: NONE

Diet and Nutrition:

Adult Diet: Mammals make up the bulk of most Red-tailed Hawk meals. Frequent victims include voles, mice, wood rats, rabbits, snowshoe hares, jackrabbits, and ground squirrels. The hawks also eat birds, including pheasants, bobwhite, starlings, and blackbirds; as well as snakes and carrion. Individual prey items can weigh anywhere from less than an ounce to more than 5 pounds.

Juvenile Diet: ^^^^^

Special Adaptations for Getting Prey: CHECK FEATURES

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Typically monogamous, but 3 adults reported at 1 nest each in California and Wisconsin. Usually maintain pair bonds until death of a partner, at least in non-migratory (resident) populations, but acquisition of a new mate can occur rapidly after the death of 1 member of the pair.

Mating Season: Feb to July

Courtship: Prenesting displays typically consist of both birds soaring in wide circles at high altitudes and the male performing maneuvers similar to the Sky-dance. After several series of dives and ascents, the male slowly approaches the female from above, extends his legs and touches or grasps her momentarily. Frequently, both birds dangle their legs during aerial maneuvers. The birds may grasp one another's beak or interlock talons and spiral toward the ground. Two birds thus engaged struck the ground before releasing one another; both flew away apparently unharmed. These aerial acrobatics may last 5–10 min and include courtship feeding. One member of a pair (presumably the male) attempted unsuccessfully to pass a snake to his mate as she rolled over (feet skyward) in mid-air to reach it. Piercing screams and quiet, raspy calls often accompany courtship flight displays.

Territoriality: HOME RANGE

Mating: Typically, copulation occurs when the female terminates courtship flight and postures from a perch. The female postures by tilting forward until her body is nearly horizontal and fluttering her wings loosely several times. The male spirals down to her and alights on her back, often steadying himself by flapping his wings or bracing them on nearby branches. Copulation usually lasts 5–12 s. Copulation may be followed by a period of soaring and aerial acrobatics or, less frequently, by quiet perching.

Nesting: Red-tailed Hawks typically put their nests in the crowns of tall trees where they have a commanding view of the landscape. They may also nest on a cliff ledge or on artificial structures such as window ledges and billboard platforms. Both members build the nest, or simply refurbish one of the nests they've used in previous years. Nests are tall piles of dry sticks up to 6.5 feet high and 3 feet across. The inner cup is lined with bark strips, fresh foliage, and dry vegetation. Construction takes 4–7 days.

Egg-Laying: Clutch Size: 1–5 eggs Number of Broods: 1 brood Egg Length: 2.2–2.7 in (5.5–6.8 cm) Egg Width: 1.7–2.0 in (4.3–5 cm) Incubation Period: 28–35 days Nestling Period: 42–46 days Egg Description: White or buffy, blotched or speckled with buff, brown, or purple.

Hatching and Incubation/Gestation: Tiny and helpless, unable to raise head, and weighing about 2 ounces. Altricial and nidicolous. Hatchlings unable to raise head; lie limp for first few hours after hatching.

Development: NONE

Parental Care: Typically, female parent broods from hatching until oldest nestling reaches 30–35 d of age. Young are preened during most brooding bouts. Time spent brooding may vary greatly daily and among nests, but generally ranges from about 1–5 h/d. In captive birds, brooding gradually decreased through the brooding period. The male provides most of the food for the female and their brood from hatching, although female may occasionally vacate the nest for brief hunts. For the first 4–5 wk after hatching, prey is torn into small pieces for nestlings by the female; thereafter prey is deposited in the nest for nestlings to tear and eat.

Lifespan: Around 17 years of age.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Red-tailed Hawk populations increased throughout much of their range between 1966 and 2015, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 2.3 million with 75% spending some part of the year in the U.S., 24% in Canada, and 21% in Mexico. The species rates a 6 out of 20 on the Continental Concern Score. Red-tailed Hawk is not on the 2016 State of North America's Birds Watch List.

Conservation Efforts: ^^^^

Extra Facts:

1. The Red-tailed Hawk has a thrilling, raspy scream that sounds exactly like a raptor should sound. At least, that's what Hollywood directors seem to think. Whenever a hawk or eagle appears onscreen, no matter what species, the shrill cry on the soundtrack is almost always a Red-tailed Hawk.
2. Birds are amazingly adapted for life in the air. The Red-tailed Hawk is one of the largest birds you'll see in North America, yet even the biggest females weigh in at only about 3 pounds. A similar-sized small dog might weigh 10 times that.
3. The "Harlan's Hawk" breeds in Alaska and northwestern Canada, and winters on the southern Great Plains. This very dark form of the Red-tailed Hawk has a marbled white, brown, and gray tail instead of a red one. It's so distinctive that it was once considered a separate species, until ornithologists discovered many individuals that were intermediate between Harlan's and more typical Red-tailed Hawks.
4. Courting Red-tailed Hawks put on a display in which they soar in wide circles at a great height. The male dives steeply, then shoots up again at an angle nearly as steep. After several of these swoops he approaches the female from above, extends his legs, and touches her briefly. Sometimes, the pair grab onto one other, clasp talons, and plummet in spirals toward the ground before pulling away.
5. Red-tailed Hawks have been seen hunting as a pair, guarding opposite sides of the same tree to catch tree squirrels.
6. The oldest known wild Red-tailed Hawk was at least 30 years, 8 months old when it was found in Michigan in 2011, the same state where it had been banded in 1981.

Notable Species:

1. Caribbean Red-tailed Hawk, Jamaican Red-tailed Hawk, Red-tailed Hawk (*Buteo jamaicensis jamaicensis*), the nominate subspecies
2. Alaska Red-tailed Hawk, Alaskan Red-tailed Hawk (*Buteo jamaicensis alascensis*)
3. Eastern Red-tailed Hawk, American Red-tailed Hawk (*Buteo jamaicensis borealis*)
4. Canadian Red-tailed Hawk, Western Red-tailed Hawk, Californian Red-Tailed Hawk (*Buteo jamaicensis calurus*)
5. Florida Red-tailed Hawk (*Buteo jamaicensis umbrinus*)
6. Central American Red-tailed Hawk, Costa Rican Red-tailed Hawk (*Buteo jamaicensis costaricensis*)
7. Fuertes's Red-tailed Hawk or Fuertes' Hawk (*Buteo jamaicensis fuertesi*)
8. Tres Marias Red-tailed Hawk (*Buteo jamaicensis fumosus*)
9. *Buteo jamaicensis hadropus*
10. Socorro Red-tailed Hawk (*Buteo jamaicensis socorroensis*)
11. Cuban Red-tailed Hawk (*Buteo jamaicensis solitudinus*)
12. *Buteo jamaicensis kemsiesi*
13. Krider's Hawk, Krider's Red-tailed Hawk (*Buteo jamaicensis kriderii*)
14. Harlan's Hawk (*Buteo jamaicensis harlani*) - previously considered a full species (*Buteo harlani*) or a color morph of ssp. *calurus*. Debate about its status is still ongoing.