

BARN OWL - TYTO ALBA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Strigiformes Family: Tytonidae Genus: Tyto Species: T. alba

Habitat:

Biomes: Barn Owls live in open habitats across most of the lower 48 United States and extend into a few parts of southern Canada (as well as in much of the rest of the world). These include grasslands, deserts, marshes, agricultural fields, strips of forest, woodlots, ranchlands, brushy fields, and suburbs and cities. They nest in tree cavities, caves, and in buildings (often barns but also including Yankee Stadium). In the Andes they occur as high as 13,000 feet elevation.

Distribution:

In US: The barn owl is the most widespread landbird species in the world, occurring in every continent except Antarctica. Its range includes all of Europe, most of Africa apart from the Sahara, the Indian subcontinent, Southeast Asia, Australia, many Pacific Islands, and North, Central and South America. In general it is considered to be sedentary, and indeed many individuals, having taken up residence in a particular location, remain there even when better foraging areas nearby become vacant.

In Other Countries: ^^^^

Holistic Description: Ghostly pale and normally strictly nocturnal, Barn Owls are silent predators of the night world. Lanky, with a whitish face, chest, and belly, and buffy upperparts, this owl roosts in hidden, quiet places during the day. By night, they hunt on buoyant wingbeats in open fields and meadows. You can find them by listening for their eerie, raspy calls, quite unlike the hoots of other owls. Despite a worldwide distribution, Barn Owls are declining in parts of their range due to habitat loss.

Species Richness: 28 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Earliest fossil of T. alba is from the Quaternary (2-2.5 million years ago). Fossils of Tyto alba known from the Quaternary of Arizona, California, Florida, New Mexico, Texas, the West Indies, Mexico, Brazil, Europe, and Israel; and from the Holocene (< 10,000 years ago) of New Zealand.

Systematics: Sometimes known as Common Barn-Owl, and members of the same genus, Tyto, are also known as monkey-faced owls. In older North American literature, sometimes found under name Tyto perlata. Highly variable in size and proportions, e.g. wing and tail length and relative length of bill and tarsus, in extent of feathering on tarsus, and in coloration.

Number of Species: 28 SUBSPECIES

Number of Genera: 28 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 12.6-15.8 in (32-40 cm) Weight: 14.1-24.7 oz (400-700 g)

Wingspan: 39.4-49.2 in (100-125 cm)

Coloration: Barn Owls are pale overall with dark eyes. They have a mix of buff and gray on the head, back, and upperwings, and are white on the face, body, and underwings. When seen at night they can appear all white.

General Body Features: These medium-sized owls have long, rounded wings and short tails, which combine with a buoyant, loping flight to give them a distinctive flight style. The legs are long and the head is smoothly rounded, without ear tufts.

Special Features of the Body: The barn owls unusual facial disc helps them locate their prey. It captures and focuses sound into its ears which are positioned, one slightly above the other, next to the eyes. Their hearing is so acute that they can capture a mouse in total darkness.

Special Features of the Head and Sensory Organs: ^^^^^^

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: The barn owls feathers are adapted for silent flight. The edges of their flight feathers are hairy and their body feathers are downy soft, so there is no rustling of feathers when they move. The hairy edges slow down their flight. The ability to make a surprise attack is far more important than speed.

Any Special Internal Anatomy: When surprised in its roost or nest barn owls react by crouching, spreading wings, fluffing feathers and hissing. If approached by an intruder they will stand bolt upright and look as slender as possible (like a stick) eyes slightly open - "I'm watching you".

Sexual Dimorphisms: Females significantly larger than males in body mass, total length, beak length, tarsus length, foot length and width, and wing loading, but not in wing chord or tail length. Female plumage typically darker than that of males but sexes overlap in this regard.

Differences Between Juvenile Stage and Adult: Nestlings are covered in white down, but the heart-shaped facial disk becomes visible soon after hatching. Juvenile plumage takes the form of a second natal down, grayish-white to buff, which replaces neoptile at 10-15 d of age and is long and dense toward base, fluffy on tips; short on legs, short tufts on toes.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Nocturnal

Activity: Barn Owls fly slowly over open fields at night or dusk with slow wingbeats and a looping, buoyant flight. They use their impressive hearing, aided by their satellite-dish-shaped faces, to locate mice and other rodents in the grass, often in complete darkness. Barn Owls are usually monogamous and mate for life, although there are some reports of males with more than one mate. Males attract their mates with several kinds of display flights, including a “moth flight” where he hovers in front of a female for several seconds, his feet dangling. He also displays potential nest sites by calling and flying in and out of the nest. After the pair forms, the male brings prey to the female (often more than she can consume), beginning about a month before she starts laying eggs. Barn Owls defend the area around their nests, but don’t defend their hunting sites; more than one pair may hunt on the same fields.

Locomotion: Walks on ground with an awkward-looking side-to-side lurch. Runs rapidly, often with aid of wing flapping when pressed. Climbs very well; can scale vertical surfaces. Buoyant; deep, rather slow wingbeats. Hunting flights slow but capable of speeds of 80 km/h.

Communication and Perception: Barn Owls don’t hoot the way most owls do; instead, they make a long, harsh scream that lasts about 2 seconds. It’s made mostly by the male, who often calls repeatedly from the air. Females give the call infrequently. A softer, more wavering version of this is termed a purring call. Males use it to invite a female to inspect a nest site, and females use it to beg for food from the male. Barn Owls also make a loud, 3-4 second hiss at intruders or predators that disturb the nest.

Home Range: Appears to defend only immediate vicinity of nest, but not foraging areas. Two or more pairs often nest in close proximity and may share the same foraging habitat.

Degree of Sociality: Solitary or in pairs when not breeding. In Utah, pairs often begin roosting together in November in what will be the nest site; many males continue to roost with the female as she incubates but most roost elsewhere after the young hatch.

Level of Aggression: Intraspecific intruders near nest sites are chased and may be attacked with claws. Barn Owls are often mobbed by other birds, particularly corvids, when flushed from their roosts in daylight. Most commonly the owl's only reaction is to escape its tormentors by evasive flight to shelter or occasionally in ascending flights. A Barn Owl was seen to easily outclimb a harassing Common Raven; another was observed giving a threat display from a rock ledge after being chased there by two Common Ravens.

Migration: Nonmigratory. Although young Barn Owls may disperse hundreds of miles from where they hatched, adult Barn Owls don’t seem to migrate seasonally, even in the farthest-north parts of their range.

Predators:

Predators: Stoats, Great Horned Owl, Golden Eagle, Red Kite, Goshawk, Buzzard, Peregrine Falcon, Lanner, Eagle Owl, and Tawny Owl.

Anti-Predator Defenses: NONE

Diet and Nutrition:

Adult Diet: Barn Owls eat mostly small mammals, particularly rats, mice, voles, lemmings, and other rodents; also shrews, bats, and rabbits. Most of the prey they eat are active at night, so squirrels and chipmunks are relatively safe from Barn Owls. They occasionally eat birds such as starlings, blackbirds, and meadowlarks. Nesting Barn Owls sometimes store dozens of prey items at the nest site while they are incubating to feed the young once they hatch.

Juvenile Diet: ^^^

Special Adaptations for Getting Prey: Hunts mostly at night, beginning about one hour after sunset and ending about one hour before sunrise. Prey is captured with the feet and usually nipped through the back of the skull with the bill. Long legs facilitate penetration into long vegetation and snow to catch prey. Most prey is swallowed whole; those too large to swallow are eaten piecemeal with heads of bird occasionally discarded.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Commonly monogamous but several reports of polygyny.

Mating Season: February to June

Courtship: Display flights by male begins courtship, accompanied by advertising calls. Sexual chases follow where male pursues female with both screeching. Also used in courtship are moth flights -- male hovers with feet dangling in front of perched female for several seconds. Male gives advertising call repeatedly while flying in and out of potential nest site. He brings food to female starting about one month before egg laying; copulation usually follows. Often, more prey is brought than the female can consume, and it accumulates at the nest.

Territoriality: HOME RANGE

Mating: Both sexes solicit copulation by crouching in front of the other; female may solicit by swaying and vibrating wings. Copulation occurs every few minutes when nest site is being chosen; male mounts, grasps the female's neck and balances with spread wings; vent contact is made every 2–3 s; copulation is long (10–20 s). Copulation continues but with decreasing frequency through incubation and young rearing; female preens male following copulation.

Nesting: Barn Owls put their nests in holes in trees, cliff ledges and crevices, caves, burrows in river banks, and in many kinds of human structures, including barn lofts, church steeples, houses, nest boxes, haystacks, and even drive-in movie screens. The female makes a simple nest of her own regurgitated pellets, shredded with her feet and arranged into a cup. Unlike most birds, owls may use their nest sites for roosting throughout the year. Nest sites are often reused from year to year, often by different owls.

Egg-Laying: Clutch Size: 2-18 eggs Number of Broods: 1-3 broods Egg Length: 1.5-1.7 in (3.9-4.4 cm) Egg Width: 1.2-1.3 in (3.1-3.4 cm) Incubation Period: 29-34 days Nestling Period: 50-55 days Egg Description: Dull white, often dirtied by the nest.

Hatching and Incubation/Gestation: Helpless, covered in white down.

Development: Altricial (naked, eyes closed) and nidicolous (stay in nest). Young utter faint food call and discomfort twitter, unable to rise; first down sparse grayish white on the upperparts, front of tarsus and toes, pink bare areas on sides of neck, central belly, and back, bill ivory colored.

Parental Care: All brooding by the female; begins immediately after hatching and lasts variably until oldest young is about 25 days old. In large broods, youngest nestlings may be only about 11–13 days old when female stops brooding but apparently are kept warm by their nest mates. Male brings food to the nest but only female feeds the young. Initially prey is torn into small pieces and given to the young bill to bill

Lifespan: 4 years

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Barn Owls are difficult to count because they're nocturnal and secretive, so population sizes are hard to estimate. Owing in part to this difficulty, the North American Breeding Bird Survey could not detect a significant population change between 1966 and 2014, although it appears that their numbers have slightly increased in that time. Partners in Flight estimates a global breeding population of 2 million, with 7% living in the U.S. and 2% in Mexico. They rate a 9 out of 20 on the Continental Concern Score and are not on the 2016 State of the Birds Watch List. Barn Owls are threatened by the conversion of agricultural land to urban and suburban development, and the loss of suitable nesting sites such as large, hollow trees and old buildings. Changes to agricultural fields and grasslands can also affect Barn Owls through changes to their prey populations. Barn Owls were affected by the use of DDT-related pesticides, and they may be susceptible to poisons used against rodents, since they form a large part of the owls' diet. Because Barn Owls hunt by flying low over fields, they are often hit by cars; planting hedgerows alongside roads can help prevent this from happening. Nest boxes (of the correct size) have helped Barn Owl populations recover in areas where natural nest sites were scarce.

Conservation Efforts: ^^^^^^

Extra Facts:

1. Barn Owls swallow their prey whole—skin, bones, and all. About twice a day, they cough up pellets instead of passing all that material through their digestive tracts. The pellets make a great record of what the owls have eaten, and scientists study them to learn more about the owls and the ecosystems they live in.
2. Up to 46 different races of the Barn Owl have been described worldwide. The North American form is the largest, weighing more than twice as much as the smallest race from the Galapagos Islands.
3. Barn Owl females are somewhat showier than males. She has a more reddish and more heavily spotted chest. The spots may indicate the quality of the female. Heavily spotted females get fewer parasitic flies and may be more resistant to parasites and diseases. The spots may also stimulate the male to help more at the nest. In an experiment

where some females' spots were removed, their mates fed their nestlings less often than for females whose spots were left alone.

4. The Barn Owl has excellent low-light vision, and can easily find prey at night by sight. But its ability to locate prey by sound alone is the best of any animal that has ever been tested. It can catch mice in complete darkness in the lab, or hidden by vegetation or snow out in the real world.
5. The oldest known North American Barn Owl lived in Ohio and was at least 15 years, 5 months old.

Notable Species:

1. T. a. Alba - W Europe from the British Isles south to the Maghreb and west along Mediterranean coastal regions to NW Turkey in the north and the Nile in the south, where it reaches upstream to NE Sudan.
2. T. a. Furcata - Cuba, Jamaica, Cayman Islands (rare or possibly extirpated on Grand Cayman).
3. T. a. Tuidara - South American lowlands east of the Andes and south of the Amazon River all the way south to Tierra del Fuego; also on the Falkland Islands.
4. T. a. Guttata - C Europe north of the Alps from the Rhine to Latvia, Lithuania and Ukraine, and south to Romania, NE Greece and the S Balkans. Intergrades with alba at the western border of its range.
5. T. a. Pratincola - North America from S Canada south to C Mexico; Bermuda, Bahamas, Hispaniola; introduced to Lord Howe Island (now extirpated) and in 1958 to Hawaii.
6. T. a. Punctatissima - Endemic to the Galápagos islands.
7. T. a. Poensis - Endemic to Bioko, if not the same as affinis.
8. T. a. Thomensis - Endemic to São Tomé Island. A record from Príncipe is in error.
9. T. a. Affinis - Sub-Saharan Africa, including the Comoros, Madagascar, Pemba and Unguja islands; introduced to the Seychelles. Intergrades with alba around the Egypt-Sudan border.
10. T. a. Guatemalae - Guatemala or S Mexico through Central America to Panama or N Colombia; Pearl Islands.
11. T. a. Bargei - Endemic to Curaçao and maybe Bonaire in the West Indies.
12. T. a. Contempta - NE Andes from W Venezuela through E Colombia (rare in the Cordillera Central and Cordillera Occidental) south to Peru.
13. T. a. Schmitzi - Endemic to Madeira and Porto Santo islands in the E Atlantic.
14. T. a. Ernesti - Endemic to Corsica and Sardinia in the Mediterranean.
15. T. a. Gracilirostris - Endemic to the East Canary Islands (Chinijo Archipelago, Fuerteventura, Lanzarote; perhaps formerly also on Lobos).
16. T. a. Detorta - Endemic to the Cape Verde Islands.
17. T. a. Erlangeri - Crete and southern Aegean islands to Cyprus; Near and Middle East including Arabian Peninsula coastlands, south to Sinai and east to SW Iran.
18. T. a. Hellmayri - NE South American lowlands from E Venezuela south to the Amazon River.
19. T. a. Bondi - Endemic to Roatán and Guanaja in the Bay Islands.
20. T. a. Niveicauda - Endemic to Isla de la Juventud.