

COOPER'S HAWK - ACCIPITER COOPERII

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Accipitriformes Family: Accipitridae Genus: Accipiter Species: A. cooperii

Habitat:

Biomes: Cooper's Hawks are forest and woodland birds, but our leafy suburbs seem nearly as good. These lanky hawks are a regular sight in parks, quiet neighborhoods, over fields, at backyard feeders, and even along busy streets if there are trees around.

Distribution:

In US: Native to the North American continent and found from Southern Canada to Northern Mexico. As in many birds of prey, the male is smaller than the female. The birds found east of the Mississippi River tend to be larger on average than the birds found to the west. Their breeding range extends from southern Canada to northern Mexico. They are generally distributed more to the south than the other North American accipiters, the sharp-shinned hawk and the northern goshawk. Birds from most of the Canadian and northern U.S. range migrate in winter, and some Cooper's hawks winter as far south as Panama.

In Other Countries: ^^^^

Holistic Description: Among the bird world's most skillful fliers, Cooper's Hawks are common woodland hawks that tear through cluttered tree canopies in high speed pursuit of other birds. You're most likely to see one prowling above a forest edge or field using just a few stiff wingbeats followed by a glide. With their smaller lookalike, the Sharp-shinned Hawk, Cooper's Hawks make for famously tricky identifications. Both species are sometimes unwanted guests at bird feeders, looking for an easy meal (but not one of sunflower seeds).

Species Richness: NO SUBSPECIES

Population Dynamic: However, one threat facing Cooper's hawks today is the degradation and loss of habitat. Management activities like logging may make their former habitat unsuitable for breeding. As a natural predator of almost any North American bird smaller than itself, the Cooper's hawk may inadvertently deplete populations of rarer, conservation-dependent species. The American kestrel, whose populations have experienced considerable decrease, may be one species which has suffered from the extensive predation of the recovered Cooper's hawk population.

Evolution and Systematics:

Evolution: Recorded in late Pleistocene (< 0.5 million years before present) deposits from California, New Mexico, and Florida.

Systematics: Largest individuals in southeast, smallest in northwest, eastern intermediate (significant differences among males, not among females). Longer-toed individuals found in east, perhaps reflecting greater proportion of avian prey in diet. Plumage of northwestern populations darker red than that of their eastern counterparts. CHECK DISTRIBUTION (IN US)

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length:

Male

Length: 14.6-15.3 in (37-39 cm)

Weight: 7.8-14.5 oz (220-410 g)

Wingspan: 24.4-35.4 in (62-90 cm)

Female

Length: 16.5-17.7 in (42-45 cm)

Weight: 11.6-24.0 oz (330-680 g)

Wingspan: 29.5-35.4 in (75-90 cm)

Coloration: Adults are steely blue-gray above with warm reddish bars on the underparts and thick dark bands on the tail. Juveniles are brown above and crisply streaked with brown on the upper breast, giving them a somewhat hooded look compared with young Sharp-shinned Hawks' more diffuse streaking.

General Body Features: A medium-sized hawk with the classic accipiter shape: broad, rounded wings and a very long tail. In Cooper's Hawks, the head often appears large, the shoulders broad, and the tail rounded.

Special Features of the Body: The eyes of this hawk, as in most predatory birds, face forward, enabling good depth perception for hunting and catching prey while flying at top speeds. They have hooked bills that are well adapted for tearing flesh of prey.

Special Features of the Head and Sensory Organs: 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, 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: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Cooper's Hawks have short, powerful wings and a long tail; these adaptations give them the ability to be highly maneuverable in dense forest habitats.

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: The adult male is significantly smaller than the average female, which weighs 330 to 700 g (12 to 25 oz) and measures 42 to 50 cm (17 to 20 in) long. Its wingspan ranges from 62 to 94 cm (24 to 37 in). CHECK DIMENSIONS.

Differences Between Juvenile Stage and Adult: Immatures have yellow eyes and have a brown cap, with brown upper parts and pale underparts with thin black streaks mostly ending at the belly. Their tail is brown on top and pale underneath, barred with dark bands.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Cooper's Hawks show the classic accipiter flight style: a few stiff wingbeats followed by short glides. But in pursuit of prey their flight becomes powerful, quick, and very agile, allowing the bird to thread its way through tree branches at top speed. Courting birds display by flying with slow wingbeats, then gliding with wings held in a V. Males make a bowing display to females after pairing and before beginning to build the nest.

Locomotion: Occasionally runs or walks on ground to pursue or retrieve prey, or to gather nesting materials. Several rapid wingbeats alternate with brief glides in usual flight, averaging 47 km/h (range 37-88 km/h) in migration, but much faster and more highly maneuverable when attacking prey or predators. Flight muscle mass provides reserve power for acceleration during attacks or sustained transport of heavy prey. Usually flies close to ground or below tree canopy when hunting or approaching and departing nest, but may carry prey at 30-100 m altitude.

Communication and Perception: Outside of the breeding season, Cooper's Hawks tend to be silent. The most common call is a loud, grating cak-cak-cak, 2-5 seconds long, given by both sexes in defense of the nest. This call is also given during courtship. Males frequently make a kik call to tell their mates where they are; females make this call too, but less often. Females make a whaa call when approaching or receiving food from males.

Home Range: A relatively small area around the nest is defended and intruders are evicted from this territory whenever possible. Hunting ranges may be large and could have little, if any, overlap with the breeding territory.

Degree of Sociality: Apparently solitary outside breeding season. Small groups in migration probably incidental, not social. Sexes roost apart in pre-incubation stage of nesting.

Level of Aggression: Breeding individuals are generally more likely to respond aggressively to conspecific intruders of the same sex. Observations of 11 responses of breeding Cooper's Hawks to heterospecific nest area intruders showed that males responded 64%, females 9% and both members 27%. A captive male elicited repeated strikes and threat posture from a wild male (both adults) when tethered near a nest, but only calls and weak threats from the resident female. An adult female at the nest showed no defensive reactions to nearby conspecifics in Juvenile plumage. Presumed threat display is with lowered head, raised "crest", outstretched wings, spread tail, often accompanied by alarm calls.

Migration: Short to medium-distance migrant. Cooper's Hawks can be found wintering over most of the continental United States. Some birds migrate as far south as southern Mexico and Honduras.

Predators:

Predators: Raccoon, Great Horned Owl, American Crow, Red-tailed Hawk, Northern Goshawk.

Anti-Predator Defenses: Adults direct threat postures, alarm calls, attacks, or chases at potential predators near nest, with males assuming most such defense in pre-incubation stage. Intensity of such responses to human intrusion varies among individuals and probably with stage of nesting and prior experience, but individuals rarely strike humans. Many breeding pairs are inconspicuous, neither vocalizing nor behaving aggressively in the presence of humans, instead leaving the immediate vicinity of the nest

Diet and Nutrition:

Adult Diet: Cooper's Hawks mainly eat birds. Small birds are safer around Cooper's Hawks than medium-sized birds: studies list European Starlings, Mourning Doves, and Rock Pigeons as common targets along with American Robins, several kinds

of jays, Northern Flicker, and quail, pheasants, grouse, and chickens. Cooper's Hawks sometimes rob nests and also eat chipmunks, hares, mice, squirrels, and bats. Mammals are more common in diets of Cooper's Hawks in the West.

Juvenile Diet: ^^^^^

Special Adaptations for Getting Prey: CHECK ADAPTATIONS/FEATURES

Reproduction:

Mode of Reproduction: Monogamous. One record of helping at the nest, in which two males (one adult and one subadult) provisioned for one adult female, and all three birds defended the nest. Sex ratio skewed towards males in eggs, nestlings and fledglings. Divergent growth rates in larger female and smaller male nestlings apparently does not lead to skewed nestling sex ratios through siblicide or male starvation.

Mating System: ^^^^^

Mating Season: March to June

Courtship: Displays generally involve slow, exaggerated wingbeats, alternated by gliding with wings held in a dihedral. During these displays, tail coverts may be flared laterally. An already paired male, less often a female, may give bowing display to mate before nest building bouts ensue.

Territoriality: HOME RANGE

Mating: Copulation also follows most male prey deliveries. Male flies to female's tree perch to copulate; female may solicit by tilting to horizontal on perch. Male mounts, usually from flight, and balances with spread wings. One or both sexes give context-specific call while copulating. No post-copulatory displays evident. Brief but frequent copulations throughout 30 d pre-laying period, with no temporal peaks apparent. Copulations throughout day but more frequent in early morning. Total copulations per clutch estimated 372, among highest reported for birds.

Nesting: Cooper's Hawks build nests in pines, oaks, Douglas-firs, beeches, spruces, and other tree species, often on flat ground rather than hillsides, and in dense woods. Nests are typically 25-50 feet high, often about two-thirds of the way up the tree in a crotch or on a horizontal branch. Males typically build the nest over a period of about two weeks, with just the slightest help from the female. Nests are piles of sticks roughly 27 inches in diameter and 6-17 inches high with a cup-shaped depression in the middle, 8 inches across and 4 inches deep. The cup is lined with bark flakes and, sometimes, green twigs.

Egg-Laying: Clutch Size: 2-6 eggs Number of Broods: 1 brood Egg Length: 1.7-2.0 in (4.4-5.1 cm) Egg Width: 1.4-1.6 in (3.5-4 cm) Incubation Period: 30-36 days Nestling Period: 27-34 days Egg Description: Pale blue to bluish white.

Hatching and Incubation/Gestation: Covered in white down and weighing just 28 grams or 1 ounce, but able to crawl around nest. Altricial and nidicolous. Mass about 28 g, total length about 9 cm. Completely covered with white natal down. Cere and upper mandible pale pinkish tan; lower mandible pale gray-tan, darker distally; tarsi, feet, and talons nearly white. Egg tooth retained for about 10 d. Able to stretch neck and bob head to receive and swallow food, and to crawl to edge of nest to defecate. Cheep notes given at hatching.

Development: NONE

Parental Care: By female only. Begins immediately after hatching, ends when young about 14 d old or during rain for a few days thereafter; female also stands or crouches with outspread wings to shelter or shade young from rain or direct sunlight. Direct feeding by female only, until young about 18-21 d and able to dismember prey. Before then, female tears food into small pieces and feeds young bill to bill. When female present near nest (consistently through first 12-14 d, less and less regularly later as she begins to hunt), male delivers prey to her at nearby perch and she brings food to nest. If female absent, male delivers to nest but does not feed young.

Lifespan: Cooper's hawks live as long as 12 years in the wild. The oldest known Cooper's hawk was 20 years and 4 months old.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Cooper's Hawk populations appear to have been stable between 1966 and 2015, according to the North American Breeding Bird Survey. Partners in Flight estimates a breeding population of 700,000, with 89% spending at least some part of the year in the U.S., 22% in Mexico, and 8% breeding in Canada. The species rates an 7 out of 20 on the Continental Concern Score. Cooper's Hawk is not on the 2016 State of North America's Birds' Watch List. These hawk's stable and positive population trends are a turnaround from the mid-twentieth century, when use of the pesticide DDT and widespread shooting greatly reduced populations.

Conservation Efforts: ^^^^

Extra Facts:

1. Dashing through vegetation to catch birds is a dangerous lifestyle. In a study of more than 300 Cooper's Hawk skeletons, 23 percent showed old, healed-over fractures in the bones of the chest, especially of the furcula, or wishbone.
2. A Cooper's Hawk captures a bird with its feet and kills it by repeated squeezing. Falcons tend to kill their prey by biting it, but Cooper's Hawks hold their catch away from the body until it dies. They've even been known to drown their prey, holding a bird underwater until it stopped moving.
3. Once thought averse to towns and cities, Cooper's Hawks are now fairly common urban and suburban birds. Some studies show their numbers are actually higher in towns than in their natural habitat, forests. Cities provide plenty of Rock Pigeon and Mourning Dove prey. Though one study in Arizona found a downside to the high-dove diet: Cooper's Hawk nestlings suffered from a parasitic disease they acquired from eating dove meat.
4. Life is tricky for male Cooper's Hawks. As in most hawks, males are significantly smaller than their mates. The danger is that female Cooper's Hawks specialize in eating medium-sized birds. Males tend to be submissive to females and to listen out for reassuring call notes the females make when they're willing to be approached. Males build the nest, then provide nearly all the food to females and young over the next 90 days before the young fledge.
5. The oldest recorded Cooper's Hawk was a male and at least 20 years, 4 months old. He had been banded in California in 1986, and was found in Washington in 2006.
6. Cooper's hawk include: big blue darter, chicken hawk, flying cross, hen hawk, quail hawk, striker, and swift hawk.

Notable Species: NONE