

BROWN-HEADED COWBIRD - MOLOTHRUS ATER

Brown-headed cowbirds do not raise their own young, instead laying their eggs in the nests of other bird species. As a result, young cowbirds are not exposed to species-typical visual and auditory information like other birds. Despite this, cowbirds are able to develop species-typical singing, social, and breeding behaviors. A 2017 study demonstrated that cowbird brains are wired to respond to the vocalizations of other cowbirds, allowing young to find and join flocks of their own species. These vocalizations are consistent across all cowbird populations, and serve as a sort of species-recognition password. If a young cowbird is not exposed to these "password" vocalizations by a certain age, it will mistakenly imprint on the host species.

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Icteridae Genus: Molothrus Species: M. ater

Habitat:

Biomes: Brown-headed Cowbirds occur in grasslands with low and scattered trees as well as woodland edges, brushy thickets, prairies, fields, pastures, orchards, and residential areas. Brown-headed Cowbirds generally avoid forests. Development and fragmentation of forests in the eastern United States have allowed Brown-headed Cowbirds to greatly expand their range eastward. In winter, Brown-headed Cowbirds roost along with several species of blackbirds in flocks numbering more than 100,000 birds.

Distribution:

In US: They are permanent residents in the southern parts of their range; northern birds migrate to the southern United States and Mexico in winter, returning to their summer habitat around March or April. [CHECK DISTRIBUTION MAPS]

In Other Countries: ^^^^^

Holistic Description: The Brown-headed Cowbird is a stocky blackbird with a fascinating approach to raising its young. Females forgo building nests and instead put all their energy into producing eggs, sometimes more than three dozen a summer. These they lay in the nests of other birds, abandoning their young to foster parents, usually at the expense of at least some of the host's own chicks. Once confined to the open grasslands of middle North America, cowbirds have surged in numbers and range as humans built towns and cleared woods.

Species Richness: 3 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Late Pleistocene (0.5 million years before present) and Holocene fossils identified from deposits in several states, all within this species' present distribution.

Systematics: Three described subspecies are eastern ater, western obscurus, and artemisiae of the Great Basin and w. Great Plains. Subspecies reflect continental trends in size and minor differences in color; size clinically decreasing between artemisiae and obscurus. Eastern M. a. ater is intermediate. Plumage differences are more evident in females; M. a. obscurus females are palest.

Number of Species: 3 SUBSPECIES

Number of Genera: 3 SUBSPECIES

Physical Characteristics:

Size and Length:

Male

Length: 7.5-8.7 in (19-22 cm)

Weight: 1.5-1.8 oz (42-50 g)

Wingspan: 14.2 in (36 cm)

Female

Length: 6.3-7.9 in (16-20 cm)

Weight: 1.3-1.6 oz (38-45 g)

Wingspan: 15.0-12.6 in (38-32 cm)

Coloration: Male Brown-headed Cowbirds have glossy black plumage and a rich brown head that often looks black in poor lighting or at distance. Female Brown-headed Cowbirds are plain brown birds, lightest on the head and underparts, with fine streaking on the belly and a dark eye.

General Body Features: Brown-headed Cowbirds are smallish blackbirds, with a shorter tail and thicker head than most other blackbirds. The bill has a distinctive shape: it's much shorter and thicker-based than other blackbirds', almost finch-like at first glance. In flight, look for the shorter tail.

Special Features of the Body: NONE

Special Features of the Head and Sensory Organs: NONE

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: NONE

Any Special Internal Anatomy: PARASITE, NONE

Sexual Dimorphisms: The adult male is iridescent black in color with a brown head. The adult female is slightly smaller and is dull grey with a pale throat and very fine streaking on the underparts. The total length is 16–22 cm (6.3–8.7 in) and the average wingspan is 36 cm (14 in). Body mass can range from 30–60 g (1.1–2.1 oz), with females averaging 38.8 g (1.37 oz) against the males' average of 49 g (1.7 oz).

Differences Between Juvenile Stage and Adult: Resembles female, but streaked below. Above varying from dark hair brown to sooty grayish brown, the feathers with narrow pale grayish brown and whitish margins (these usually indistinct and often obsolete on pileum and hindneck), the wing coverts and tertials more broadly and conspicuously margined with dull buffy whitish.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Brown-headed Cowbirds usually forage on the ground in mixed flocks of blackbirds, grackles, and starlings. They get their name from their close association with grazing livestock (and formerly bison), which flush up insects for the birds to eat. Cowbirds fly directly, with constant wingbeats. When males sing, they often raise their back and chest feathers, lift their wings and spread their tail feathers, and then bow forward. Groups of males may do this together. Female Brown-headed Cowbirds don't build a nest or rear young. They find nests by watching quietly for signs of other birds building nests, or they flutter through vegetation trying to flush birds from their nests. When young cowbirds hatch, they may roll the other eggs out of the nest.

Locomotion: On ground, usually walk. Mean air speed of 47.8 km/h for Common Grackles, a species with which cowbirds frequently flock.

Communication and Perception: Male Brown-headed Cowbird sing a liquid-sounding series of low gurgling notes followed by thin sliding whistles, lasting slightly longer than 1 second. Song learning in cowbirds has been an interesting scientific puzzle, since the birds aren't raised by members of their own species.

Home Range: Mention defensible 3 cm diameter food source used to study dominance hierarchies in captive birds; birds performing Head-Down displays approach to 2 cm to supplant recipients.

Degree of Sociality: Gregarious. Common component of mixed-species blackbird flocks. Females respond to female Chatter calls with aggressive approaches, but morning breeding areas do overlap, one reason for host nests receiving multiple eggs. Mated males consort with and guard females from courtship behavior of other males.

Level of Aggression: Pecking—plumage fluffed, wings lifted and head forward; mostly used by females towards courting males. Fighting—strikes with spread wings, pecking and scratching, sometimes locking feet and holding opponent's feathers in bill. Supplanting—flying, walking, or hopping to position of another bird. Chasing—one bird actively following another with other aggressive behaviors before or during. Retreating—avoidance by submissive bird.

Migration: Short distance migrant. Brown-headed Cowbirds move as far as 530 miles between breeding and wintering grounds.

Predators:

Predators: American Robins, Gray Catbirds, Yellow Warbler, Blue Jay, Western Kingbird, Cedar Waxwing, Snakes, Racers, and Owls.

Anti-Predator Defenses: Cowbirds joined in mobbing Great Horned Owl (*Bubo virginianus*) mount, approaching and calling for a few minutes.

Diet and Nutrition:

Adult Diet: Brown-headed Cowbirds feed mostly on seeds from grasses and weeds, with some crop grains. Insects such as grasshoppers and beetles, often caught as cows and horses stir them into movement, make up about a quarter of a cowbird's diet. As you might imagine, female cowbirds have a large calcium requirement from laying so many eggs. To satisfy it, they eat snail shells and sometimes eggs taken from nests they've visited.

Juvenile Diet: ^^^^^

Special Adaptations for Getting Prey: Forages on ground, rarely in vegetation; frequently in association with ungulates which disturb insect prey. No information comparing foraging success near and away from ungulates. At pack horse stations, cowbirds commonly hawk for slow flying insects.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Observed copulations in e. California show monogamy but Kansas population data suggest promiscuity. Observation of consortships suggests mating system may be promiscuous, polygynous, polyandrous, or monogamous.

Mating Season: February to May

Courtship: Female solicitation display: females tip body forward, bill pointed up and wings held away from body, tail elevated. Guarding: male guard female by following closely, positioning himself between female and other males; females may intervene between males and other females. "Courtship flights" may fall in this same category as aerial guarding.

Territoriality: HOME RANGE

Mating: NONE

Nest Placement: Cowbirds lay eggs in a great variety of nests, including Red-winged Blackbird nests in marshes, dome-shaped Ovenbird nests on the forest floor, cup nests in shrubs and treetops, and even occasionally in nests in tree cavities. Over 140 host species of the Brown-headed Cowbird have been described, from birds as small as kinglets to as large as meadowlarks. Common hosts include the Yellow Warbler, Song and Chipping sparrows, Red-eyed Vireo, Eastern and Spotted towhees, and Red-winged Blackbird.

Nest Description: Doesn't build its own nest. Experiments done with artificial nests in an aviary suggest that Brown-headed Cowbirds tend to choose nests containing eggs of smaller volume than their own.

Egg-Laying: Clutch Size: 1-7 eggs Egg Length: 0.7-1.0 in (1.8-2.5 cm) Egg Width: 0.6-0.7 in (1.5-1.8 cm) Incubation Period: 10-12 days Nestling Period: 8-13 days Egg Description: White to grayish-white with brown or gray spots.

Hatching and Incubation/Gestation: Naked except for sparse tufts of down, eyes closed, clumsy. Cowbird chicks tend to grow faster than their nestmates, allowing them to get more attention and food from their foster parents.

Development: Altricial (naked, blind, move little, dependent on parents for food), and nidicolous (remain in the nest). Skin color Tilleul Buff; moderately flared, pale rictal flanges, red mouth, bill slightly prognathous; down light buffy yellow becoming white posteriorly.

Parental Care: Provided by host species. Feeding rates to cowbird fledglings vary, depending on host species, but always higher than feeding rate for hosts' own young.

Lifespan: Up to 17 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Brown-headed Cowbird are common across most of North America, although populations slightly declined by about 31% between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 120 million, with 77% spending some part of the year in the U.S., 14% in Canada, and 31% in Mexico. They rate an 7 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Originally a bison-following bird of the Great Plains, the Brown-headed Cowbird spread eastward in the 1800s as forests were cleared. The Brown-headed Cowbird's habit of nest parasitism can threaten species with small populations, such as the endangered Kirtland's Warbler and Black-capped Vireo.

Conservation Efforts: ^^^^

Extra Facts:

1. The Brown-headed Cowbird is North America's most common "brood parasite." A female cowbird makes no nest of her own, but instead lays her eggs in the nests of other bird species, who then raise the young cowbirds.
2. Social relationships are difficult to figure out in birds that do not build nests, but male and female Brown-headed Cowbirds are not monogamous. Genetic analyses show that males and females have several different mates within a single season.
3. Brown-headed Cowbird lay eggs in the nests of more than 220 species of birds. Recent genetic analyses have shown that most individual females specialize on one particular host species.
4. Some birds, such as the Yellow Warbler, can recognize cowbird eggs but are too small to get the eggs out of their nests. Instead, they build a new nest over the top of the old one and hope cowbirds don't come back. Some larger species puncture or grab cowbird eggs and throw them out of the nest. But the majority of hosts don't recognize cowbird eggs at all.
5. Cowbird eggs hatch faster than other species eggs, giving cowbird nestlings a head start in getting food from the parents. Young cowbirds also develop at a faster pace than their nest mates, and they sometimes toss out eggs and young nestlings or smother them in the bottom of the nest.
6. In winter, Brown-headed Cowbirds may join huge roosts with several blackbird species. One such mixed roost in Kentucky contained more than five million birds.
7. The oldest recorded Brown-headed Cowbird was a male, and at least 16 years 11 months old when it was recaptured and rereleased during banding operations in Wisconsin.

Notable Species: CHECK SYSTEMATICS.