

COMMON GRACKLE - QUISCALUS QUISCULA

Though the exact mechanism is poorly understood, several studies have examined the ability of the common grackle to interpret the Earth's magnetic field—or in this case, the variability of it. The common grackle, (like most of its Quiscalus relatives) has been found to exhibit a scientifically significant attenuation with a dynamic magnetic field.

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Icteridae Genus: Quiscalus Species: Q. quiscula

Habitat:

Biomes: Common Grackles do well in human landscapes, using scattered trees for nesting and open ground for foraging. Typical natural habitats include open woodland, forest edge, grassland, meadows, swamps, marshes, and palmetto hammocks. They are also very common near agricultural fields and feedlots, suburbs, city parks, cemeteries, pine plantations, and hedgerows. Unbroken tracts of forest are the only places where you are unlikely to find Common Grackles.

Distribution:

In US: The breeding habitat is open and semiopen areas across North America east of the Rocky Mountains. This bird is a permanent resident in much of its range. Northern birds migrate in flocks to the Southeastern United States.

In Other Countries: ^^^^^

Holistic Description: Common Grackles are blackbirds that look like they've been slightly stretched. They're taller and longer tailed than a typical blackbird, with a longer, more tapered bill and glossy-iridescent bodies. Grackles walk around lawns and fields on their long legs or gather in noisy groups high in trees, typically evergreens. They eat many crops (notably corn) and nearly anything else as well, including garbage. In flight their long tails trail behind them, sometimes folded down the middle into a shallow V shape.

Species Richness: 3 SUBSPECIES

Population Dynamic: The range of this bird expanded west as forests were cleared. In some areas, it is now considered a pest by farmers because of its large numbers and fondness for grain. Despite a currently robust population, a recent study by the National Audubon Society of data from the Christmas Bird Count indicated that populations had declined by 61% to a population of 73 million from historic highs of over 190 million birds.

Evolution and Systematics:

Evolution: Records from Pleistocene in Florida, Ontario, Pennsylvania, and from Holocene in Arkansas, Illinois, Iowa, and Ohio.

Systematics: Plumage coloration varies regionally. Breeders west of Appalachians and north of s. New England have brassy bronze body and purple glossed tail, whereas birds east and south of there have purplish body with green to steely blue glossed tail. Birds of extreme southeast (Florida) have green backs. Wide zone of intergradation stretching from s. New England to Louisiana where intermediates occur. Wing length and body mass decrease north to south, whereas bill length and width increase along that cline.

Number of Species: 3 SUBSPECIES

Number of Genera: 3 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 11.0-13.4 in (28-34 cm) Weight: 2.6-5.0 oz (74-142 g)

Wingspan: 14.2-18.1 in (36-46 cm)

Coloration: Common Grackles appear black from a distance, but up close their glossy purple heads contrast with bronzy-iridescent bodies. A bright golden eye gives grackles an intent expression. Females are slightly less glossy than males. Young birds are dark brown with a dark eye.

General Body Features: Common Grackles are large, lanky blackbirds with long legs and long tails. The head is flat and the bill is longer than in most blackbirds, with the hint of a downward curve. In flight, the wings appear short in comparison to the tail. Males are slightly larger than females.

Special Features of the Body: In the fall, great flocks of blackbirds frequently sweep south across the Great Plains with Common Grackles, Red-winged Blackbirds, Yellow-headed Blackbirds, and Brewer's Blackbirds included in the same flock.

Special Features of the Head and Sensory Organs: Bill has hard, internal keel projecting downward from horny palate, which is sharper and more abrupt anteriorly. This keel extends below level of tomia and is used as sawing adaptation to open acorns, which are often completely scored around shorter diameter and then cracked by adduction.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: NONE

Any Special Internal Anatomy: Though the exact mechanism is poorly understood, several studies have examined the ability of the common grackle to interpret the Earth's magnetic field—or in this case, the variability of it. The common grackle, (like most of its *Quiscalus* relatives) has been found to exhibit a scientifically significant attenuation with a dynamic magnetic field.

Sexual Dimorphisms: Common grackles are less sexually dimorphic than larger grackle species, but the differences between the sexes can still be noticeable. The male, which averages 122 g (4.3 oz), is larger than the female, at an average of 94 g (3.3 oz). **Adult females, beyond being smaller, are usually less iridescent; their tails in particular are shorter, and unlike the males, do not keel (display a longitudinal ridge) in flight and are brown with no purple or blue gloss.**

Differences Between Juvenile Stage and Adult: Juveniles are brown with dark brown eyes.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Common Grackles are large, noisy, and gregarious birds that often flock with other blackbirds, cowbirds, and starlings, especially in winter. At feeders they tower over other birds and push them aside to get at food. Grackles typically forage on the ground and roost high in trees or on power lines. Common Grackles sometimes nest in loose colonies of up to 200 pairs, showing little territoriality except in the immediate area of the nest. In spring when birds are pairing, you may see three kinds of playful chases: first, a group of males will fly after a slow-flying female; second, a single male will chase a female at high speed; and third, a male and female will fly slowly and conspicuously alongside each other. In normal flight, grackles fly in a direct path on stiff wingbeats.

Locomotion: Generally walks along ground; occasionally hops in pursuit of insects. Flight Level, without undulations. Mean flight speed ranges from 47.8 to 62.8 km/h. Tail-keeling functions as a male flight display and appears to provide aerodynamic advantage in flight. Does not swim, but will wade into water to capture prey. Occasionally hovers above water and dives in to capture prey.

Communication and Perception: Common Grackles make a variety of squeaks, whistles, and croaks. The typical song, made by both males and females, is a guttural readle-eak accompanied by high-pitched, clear whistles. It lasts just less than a second and is often described as sounding like a rusty gate.

Home Range: Female selects nest site. Pair defends limited area around nest against other pairs. However, conspecifics visit other nest sites with no observed response from nest owners. Territory defense by male peaks during nest-building.

Degree of Sociality: Gregarious; semicolonial, with up to 200 pairs in single "colony," but also nests singly. Gregarious during nonbreeding season, joining mixed-species foraging flocks.

Level of Aggression: Two categories: attack and escape. Attacks include biting, pecking, scratching, and flying at other birds. Pecks are given with bill open or closed and almost never harm the recipient. In running attack, holds body in horizontal position while running at antagonist; may also gape and/or spread wings and tail in this context. Flying at another bird usually results in supplantation of recipient. Fighting involves biting and scratching, often with loss of feathers. Escape involves any movement to avoid contact.

Migration: Resident or short-distance migrant. Grackles from the far-northern U.S., Canada, and the Great Plains winter in the central and southern U.S.

Predators:

Predators: Fox Squirrels, Gray Squirrels, Raccoons, Chipmunks, Bullsnares, Rat Snakes, Cooper's Hawks, Red-Tailed Hawks, Short-Eared Owls, Great Horned Owl.

Anti-Predator Defenses: Mobs, chases, or dives at predators, including humans. Responded to a Red-shouldered Hawk by flying into tree and remaining silent.

Diet and Nutrition:

Adult Diet: Common Grackles eat mostly seeds, particularly agricultural grains such as corn and rice. Other seeds include sunflower seeds, acorns, tree seeds such as sweetgum, wild and cultivated fruits, and garbage. In summer, one-quarter or more of a grackle's diet may be animals, including beetles, grasshoppers, caterpillars, spiders, crustaceans, mollusks, fish, frogs, salamanders, mice, and other birds.

Juvenile Diet: Adult beetles and corn fed only to older nestlings.

Special Adaptations for Getting Prey: Usually forages in flocks with other icterines and starlings, especially in nonbreeding season. Bill has hard, internal keel projecting downward from horny palate, which is sharper and more abrupt anteriorly. This keel extends below level of tomia and is used as sawing adaptation to open acorns, which are often completely scored around shorter diameter and then cracked by adduction. Uses bill to uncover food on ground. Follows farmers plowing fields to consume exposed insect larvae.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Typically monogamous, occasionally polygynous.

Mating Season: February to April

Courtship: Pairs begin to form as soon as females arrive on breeding grounds. Pair formation involves flights and mutual displays between single female and multiple males. Pair formation flights can be characterized as one of 3 types: Leader Flight, in which group of males follows closely behind female at slow to moderate speed; Chase, in which speed is fast and female is evasive; and Together Flight, in which speed is slow to moderate and males may be ahead of, to the side of, behind, or below female. Mutual displays begin after flights have ended, and usually involve Ruff-Out Squeak by the males, and Ruff-out Chuga and less frequently Ruff-out squeak, Waa, Ruff-out Chuga Peeps, and solicitations by female. Male may also direct Head-Held-Up Display toward other nearby males.

Territoriality: HOME RANGE

Mating: During copulation, female begins Wing-Quivering Display with bill pointed upward and cloaca everted. Male places his feet on her back, points bill downward and lowers tail to make cloacal contact. Wing movement by male helps to maintain balance. Copulation begins in earnest after female has finished building nest cup.

Nest Placement: The female chooses the nest site, with the male sometimes following along as she surveys. After beginning to build, females often seem to change their minds and select another site. Typically the nest is high in a coniferous tree between two vertical limbs or on a horizontal branch (although they've been recorded as low as 8 inches off the ground and in deciduous vegetation, cattails and other sites). Nests are often built near water. Rarely, Common Grackles nest in unusual places such as birdhouses, woodpecker holes, cliff crevices, barns, and still-occupied nests of Osprey and Great Blue Herons.

Nest Description: Females typically build the nest, with males sometimes helping or making repairs. The nest can take as little as a week to as long as six weeks to finish. It's a bulky cup made of twig, leaves, and grasses along with bits of paper, string, cloth, corn husks and other incidental materials. The female reinforces the nest cup with mud and then lines it with fine grasses and horse hair. The finished nest is 6-9 inches across, with an inside diameter of 3-5 inches and a depth of 3-9 inches.

Egg-Laying: Clutch Size: 1-7 eggs Number of Broods: 1-2 broods Egg Length: 1.0-1.3 in (2.5-3.3 cm) Egg Width: 0.8-0.9 in (1.9-2.3 cm) Incubation Period: 11-15 days Nestling Period: 10-17 days Egg Description: Light blue, pearl gray, white, or dark brown, usually spotted with brown.

Hatching and Incubation/Gestation: Blind and naked except for sparse brownish down; poorly coordinated, weighing just under a quarter-ounce.

Development: Altricial and nidicolous, eyes closed. Sparse natal down, "pale sepia-brown in color". Bill and feet also "sepia-brown". Mass: 5.57 g \pm 0.86 SD (n = 42); gape: 11.33 mm \pm 1.0 SD; culmen: 6.38 mm \pm 0.73 SD.

Parental Care: Feeding begins on first day of hatching, typically before all eggs hatch. Continues through fledgling stage. Both sexes participate. Adults force food into mouth or esophagus of nestlings. Aggressive nestlings monopolize food supply.

Lifespan: Up to 23 years old.

Conservation:

Official Federal Status: Near Threatened

Special Statutes in Individual States: NONE

Threats: Common Grackles are abundant and widespread, though populations declined by almost 2% per year between 1966 and 2014, resulting in a cumulative decline of 58%, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 61 million, with 100% spending part of the year in the U.S., and 10% breeding in Canada. They rate an 8 out of 20 on the Continental Concern Score and the 2014 State of the Birds Report lists them as a Common Bird in Steep Decline.

Conservation Efforts: ^^^^^^

Extra Facts:

1. Those raggedy figures out in cornfields may be called scare-crows, but grackles are the #1 threat to corn. They eat ripening corn as well as corn sprouts, and their habit of foraging in big flocks means they have a multimillion dollar impact. Some people have tried to reduce their effects by spraying a foul-tasting chemical on corn sprouts or by culling grackles at their roosts.
2. Common Grackles are resourceful foragers. They sometimes follow plows to catch invertebrates and mice, wade into water to catch small fish, pick leeches off the legs of turtles, steal worms from American Robins, raid nests, and kill and eat adult birds.

3. Grackles have a hard keel on the inside of the upper mandible that they use for sawing open acorns. Typically they score the outside of the narrow end, then bite the acorn open.
4. You might see a Common Grackle hunched over on the ground, wings spread, letting ants crawl over its body and feathers. This is called anting, and grackles are frequent practitioners among the many bird species that do it. The ants secrete formic acid, the chemical in their stings, and this may rid the bird of parasites. In addition to ants, grackles have been seen using walnut juice, lemons and limes, marigold blossoms, chokecherries, and mothballs in a similar fashion.
5. In winter, Common Grackles forage and roost in large communal flocks with several different species of blackbird. Sometimes these flocks can number in the millions of individuals.
6. Rarely, Common Grackles nest in places other than their usual treetops, including birdhouses, old woodpecker holes, barns, and in still-occupied nests of Osprey and Great Blue Heron.
7. The oldest recorded Common Grackle was a male, and at least 23 years old when he was killed by a raptor in Minnesota.

Notable Species:

1. Q. q. quiscula (Linnaeus 1758), the nominate subspecies
2. Q. q. stonei (Chapman, 1935)
3. Q. q. versicolor (Vieillot, 1816)