

EVENING GROSBEAK - COCCOTHAUSTES VESPERTINUS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Fringillidae Subfamily: Carduelinae Genus: Coccothraustes Species: C. vespertinus

Habitat:

Biomes: Evening Grosbeaks breed in mature and second-growth coniferous forests of northern North America and the Rocky Mountains, including spruce fir, pine oak, pinyon-juniper, and aspen forests. Less commonly, they nest in deciduous woodlands, parks, and orchards. They breed as far south as Mexico at 5,000–10,000 feet of elevation in pine and pine-oak woodlands. In winter Evening Grosbeaks live in coniferous forest and deciduous forest as well as in urban and suburban areas. When wintering in urban environments they are most abundant in small woodlots near bird feeders.

Distribution:

In US: The breeding habitat is coniferous and mixed forest across Canada and the western mountainous areas of the United States and Mexico. It is an extremely rare vagrant to the British Isles, with just two records so far. The nest is built on a horizontal branch or in a fork of a tree.

In Other Countries: ^^^^^^^^

Holistic Description: A heavyset finch of northern coniferous forests, the Evening Grosbeak adds a splash of color to winter bird feeders every few years, when large flocks depart their northern breeding grounds en masse to seek food to the south. The yellow-bodied, dusky-headed male has an imposing air thanks to his massive bill and fierce eyebrow stripe. The female is more subtly marked, with golden highlights on her soft gray plumage. This declining species is becoming uncommon, particularly in the eastern United States.

Species Richness: 3 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Recorded from Pleistocene of California.

Systematics: Differences between montane western populations and northern/eastern populations rather weak and clinal. Western birds have longer bill, darker female and immature plumages. Nature of intergradation between eastern and western populations poorly studied. In addition, vocalizations show distinct geographic differences, with 4 groups recognizable.

Number of Species: 3 SUBSPECIES

Number of Genera: 3 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 6.3-7.1 in (16-18 cm) Weight: 1.9-2.6 oz (53-74 g)

Wingspan: 11.8-14.2 in (30-36 cm)

Coloration: Adult male Evening Grosbeaks are yellow and black birds with a prominent white patch in the wings. They have dark heads with a bright-yellow stripe over the eye. Females and immatures are mostly gray, with white-and-black wings and a greenish-yellow tinge to the neck and flanks. The bill is pale ivory on adult males and greenish-yellow on females.

General Body Features: Evening Grosbeaks are large, heavyset finches with very thick, powerful, conical bills. They have a thick neck, full chest, and relatively short tail.

Special Features of the Body: NONE

Special Features of the Head and Sensory Organs: Adaptations for crushing seeds, common to finches, include broad, powerful skull and large jaw muscles.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: NONE

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: The adult male has a bright yellow forehead and body; its head is brown and there is a large white patch in the wing. The adult female is mainly olive-brown, greyer on the underparts and with white patches in the wings.

Differences Between Juvenile Stage and Adult: Juveniles resemble adult females.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Evening Grosbeaks are social birds that forage in flocks in winter and break off into small groups or pairs during the breeding season. Evening Grosbeaks show little aggression toward one another throughout the year. At winter feeders males may drive females and younger males away, but they do not defend feeding territories during the breeding season—probably because their food sources are often extremely abundant in local patches. During the nesting season they form monogamous

pairs, after courting quietly without any elaborate song or display. Breeding birds tolerate other birds nearby but occasionally chase away species such as phoebes, Hairy Woodpeckers, American Robins, and Brown-headed Cowbirds. At feeders, Evening Grosbeaks are often accompanied by redpolls and Pine Siskins that glean the food scraps they leave behind.

Locomotion: When feeding on the ground, moves by hopping. Undulating flight pattern. Capable of hovering briefly.

Communication and Perception: Although they are songbirds by lineage, Evening Grosbeaks do not have regular songs. They may rarely give short, uneven warbles. Evening Grosbeaks give sweet, piercing calls and burry chirps.

Home Range: Does not defend a feeding territory during the breeding season, probably due to dependence on patchily distributed food, which is sometimes superabundant locally. May nest somewhat colonially, and tolerates conspecifics in vicinity of nest tree.

Degree of Sociality: Changes seasonally, with gregarious flocking of nonbreeding season giving way to small groups, pairs, and individuals during breeding, possibly in response to increased food availability in spring, as birds no longer benefit from foraging in large flocks.

Level of Aggression: Aggression rate throughout the year is low; few attacks reciprocated. During winter, males dominant over females, possibly reinforced by plumage cues, especially characteristics of head and possibly wings. Immediate recognition of a conspecific's sex and social status could serve to reduce agonistic interactions, especially advantageous given large flock size and unstable flock membership, which precludes individual recognition. Advertising of lower social status confers advantage of helping to forestall aggression from dominant birds. Low rate of agonistic encounters advantageous to all individuals, allowing for more efficient foraging and predator avoidance.

Migration: Irregular migrant. When cone crops in northern coniferous forests are poor, Evening Grosbeaks “irrupt” in fall and spend the winter far south of their normal range. These irruptions formerly happened every 2–3 years in the eastern United States but have become less frequent, particularly in the East, since the 1980s. Western subspecies migrate to lower elevations for the winter.

Predators:

Predators: Sharp-shinned Hawk, Cooper’s Hawk, Northern Goshawk, Northern Pygmy-Owl, Spotted Owl, Northern Shrike, Common Raven.

Anti-Predator Defenses: During nonbreeding season, individuals in flocks spend a higher proportion of time scanning for predators than do other species of flocking birds, perhaps due to lack of familiarity with other individuals in flock, a result of high turnover of flock membership. Alarm call given in response to presence of raptor, shrike, or human at winter feeding stations. Females more likely to remain at feeder, motionless, than males, which are more likely to fly to cover; difference may be due to sexual differences in plumage, with males being more conspicuous.

Diet and Nutrition:

Adult Diet: In summer, Evening Grosbeaks eat mostly invertebrates such as spruce budworm larvae, caterpillars, and aphids. They also eat a wide variety of seeds—including those of maple, box elder, ash, cherry, apple, tulip poplar, elm, pine, dock, bindweed, and goosefoot—and small fruits, such as ash fruits, cherries, crabapples, snowberries, hawthorn fruits, Russian olive fruits, and juniper berries. They may manipulate fleshy fruits such as cherries in their bills to remove the skin and flesh before cracking and swallowing the seed. Evening Grosbeaks typically feed at the tops of trees and shrubs, but you may see them come to the ground for fallen fruits and seeds or capture aerial insects in flight. They also eat the buds of maple, elm, willow, oak, aspen, and cherry, and drink maple sap by breaking off small maple twigs.

Juvenile Diet: Young 1 wk old fed whole invertebrates and soft seeds. Adults captured for banding during brooding carry food items, such as fruits and sunflower seed meats, in backs of their mouths.

Special Adaptations for Getting Prey: Cherries and similar fleshy fruits are manipulated in the beak to remove skin and flesh; only seed is swallowed, after cracking it. May avoid fleshy-coated seeds, unless flesh is first removed by other birds such as Cedar Waxwings (*Bombus cedrorum*). Seeds are positioned on thick rhamphotheca pad on upper mandible for cracking.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Socially monogamous, although in Colorado during major spruce budworm outbreak coincident with minor aspen leaf roller (*Choristoneura conflictana*) outbreak, a banded male associated with 2 females at 2 separate nests, both of which produced young.

Mating Season: March to June

Courtship: Male displays by crouching, breast almost touching ground, wings spread downward and sometimes quivering, head back and beak nearly vertical. No accompanying vocalizations. Females beg for food from males in same manner as nestlings and fledglings do, with neck stretched upward, wings fluttering, tail spread, body swinging slightly, and calling. Females reportedly fed tree buds initially, later salt-impregnated earth, and seeds after pair formation has taken place.

Territoriality: HOME RANGE

Mating: Immediately preceding copulation, male flutters his wings while facing the female, who turns and flutters her wings, tail held high and breast thrust forward, while facing away from the male. Male mounts her, copulation lasts for 3–5 s, male dismounts while still fluttering wings.

Nest Placement: Evening Grosbeaks nest high in trees or large shrubs, such as red spruce, black spruce, Norway spruce, white spruce, Engelmann spruce, white pine, Jeffrey pine, ponderosa pine, jack pine, balsam fir, Douglas-fir, white cedar, paper birch, beech, sugar maple, and willow. It's unknown whether male or female Evening Grosbeaks choose the nest sites (although in the closely related Hawfinch of Eurasia, the male selects the site).

Nest Description: The female does most of the nest building, collecting materials from the ground and breaking twigs from trees. She builds a flimsy, saucer-shaped nest of small twigs and roots lined with grasses, fine rootlets, lichens, or pine needles. The nest measures about 5 inches across and 5 inches high, with the inner cup measuring about 3 inches across and 1 inch deep.

Egg-Laying: Clutch Size: 2-5 eggs Number of Broods: 1-2 broods Egg Length: 0.8-1.0 in (2-2.6 cm) Egg Width: 0.6-0.7 in (1.4-1.8 cm) Incubation Period: 12-14 days Nestling Period: 13-14 days Egg Description: Light blue to blue-green with brown or purplish blotches.

Hatching and Incubation/Gestation: Helpless, with eyes closed and dark skin partly covered with white down.

Development: Altricial; skin dark; white down on head, wings, back, thighs; bill yellow; mouth and pharynx violet and red; gape white.

Parental Care: Nestlings fed more frequently by female than by male, fledglings fed by both adults equally. Newly hatched young fed masticated insect larvae by regurgitation, the general pattern among fringillids; Hawfinch regurgitates seeds, but carries insects in bill.

Lifespan: Up to 16 years.

Conservation:

Official Federal Status: Vulnerable

Special Statuses in Individual States: NONE

Threats: Evening Grosbeaks are numerous and widespread, but populations dropped steeply between 1966 and 2015, according to the North American Breeding Bird Survey—particularly in the East where numbers declined by 97% during that time. Partners in Flight estimates a global breeding population of 4.1 million, with 71% spending some part of the year in the U.S., 57% in Canada, and 5% living in Mexico. Evening Grosbeak rates a 13 out of 20 on the Continental Concern Score and is on the 2016 State of North America's Birds' Watch List, which includes bird species that are most at risk of extinction without significant conservation actions to reverse declines and reduce threats. Because of their irruptive nature, it can be difficult for large-scale surveys to make precise estimates, but a 2008 study of Project FeederWatch data found that the grosbeak's winter range had contracted and numbers had declined. Evening Grosbeaks were reported at only half the number of sites, and flock sizes were down by 27%, in the early 2000s compared with the late 1980s. Evening Grosbeaks were rare in eastern North America until the mid-nineteenth century, when they began expanding eastward, possibly aided by the spread of box elders (which were increasingly being planted in cities), or possibly to outbreaks of forest insects such as spruce budworm. By the 1920s they were regular winter visitors in New England, and their range expansion peaked in the 1970s and 1980s. Recent declines may be due to logging and other development in the boreal forests of northern North America; to disease outbreaks such as salmonella, West Nile virus, and House Finch eye disease; or to reduced numbers of spruce budworm and other forest insects, in part due to aerial spraying by the U.S. and Canada. As climate change alters the landscape over the next century, balsam fir is expected to recede from New England, and Evening Grosbeaks may disappear from this region.

Conservation Efforts: ^^^^^

Extra Facts:

1. The Evening Grosbeak is a songbird without a song—that is, it does not seem to use any complex sounds to attract a mate or defend its territory. It does have a small repertoire of simple calls, including sweet, piercing notes and burry chirps.
2. With their enormous bills, Evening Grosbeaks can crush seeds that are too large for Common Redpolls and Pine Siskins to open. These smaller birds often seek out the grosbeaks and glean the food scraps they leave behind.
3. Though they're ferocious seed-crackers in the wintertime, in summer Evening Grosbeaks eat insects such as spruce budworm, a serious forest pest. The grosbeaks are so adept at finding these tiny caterpillars that the birds often provide a first warning that a budworm outbreak has begun.

4. In the mid-1800s, Evening Grosbeaks were uncommon to rare east of the Rockies, but then they began moving eastward with each winter migration, reaching Rhode Island in the winter of 1910–1911. By the 1920s they were considered a regular winter visitor in New England. This eastward expansion may be related to the growing number of ornamental box elders, which provide a steady food supply for the grosbeaks.
5. Evening Grosbeaks are irregular (or “irruptive”) winter migrants. Some years these spectacular finches show up at feeders far south of their normal winter range—providing a treat for backyard bird watchers. By joining Project FeederWatch you can keep track of visits by these and other winter birds—and the data you record will help scientists keep track of bird populations.
6. The oldest recorded Evening Grosbeak was a male, and at least 16 years, 3 months old when he was found in New Brunswick in 1974. He had been banded in Connecticut in 1959.

Notable Species:

1. C. v. vespertinus
2. C. v. brooksi
3. C. v. montanus

This was the final page that was completed this summer. All in all this took about 276+ hours. Some quick calculations tell you that I worked extremely hard on this, more than the hours that there are in 11 days. This is the fruition of my immense labors. If you find this book, please return it to:

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Thanks so much!
