

YELLOW-BREASTED CHAT - ICTERIA VIRENS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Icteridae Genus: Icteria
Species: I. virens

Habitat:

Biomes: The Yellow-breasted Chat breeds in areas of dense shrubbery, including abandoned farm fields, clearcuts, powerline corridors, fencerows, forest edges and openings, swamps, and edges of streams and ponds. Its habitat often includes blackberry bushes. In arid regions of the West it is frequently found in shrubby habitats along rivers. During migration the Yellow-breasted Chat usually stays in low, dense vegetation but may sometimes use suburban habitats. Most of the population winters from Mexico (in lowlands along both coasts) to western Panama, in low vegetation similar to that in which it breeds. This wintering habitat includes shrubsteppe, savanna, pasture with scattered trees, riparian forest, mangroves, disturbed tropical forests, and tropical scrub.

Distribution:

In US: The yellow-breasted chat is found throughout North America. It breeds from the southern plains of Canada to central Mexico, and mainly migrates to Mexico and Central America for the winter, although some may overwinter in coastal areas farther north.

In Other Countries: ^^^^^

Holistic Description: The Yellow-breasted Chat offers a cascade of song in the spring, when males deliver streams of whistles, cackles, chuckles, and gurgles with the fluidity of improvisational jazz. It's seldom seen or heard during the rest of the year, when both males and females skulk silently in the shadows of dense thickets, glean insects and berries for food. The largest of our warblers, the chat is a widespread breeder in shrubby habitats across North America, venturing to Central America for the winter.

Species Richness: 2 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Specimen that appears “. . . to be most closely allied to the living Yellow-breasted Chat . . .” reported from Tertiary deposits in Florida.

Systematics: Moderate to slight differences in size (mainly tail length), plumage coloration, and song exist between eastern and western North American populations, with poorly defined boundary across the Great Plains and apparently clinal change at least across central Texas.

Number of Species: 2 SUBSPECIES

Number of Genera: 2 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 7.1 in (18 cm) Weight: 0.8-1.1 oz (23-31 g)

Wingspan: 9.8 in (25 cm)

Coloration: Chats are olive-green above with a bright yellow breast and bold face markings. The face is gray, with a white eyering that connects to the bill, forming “spectacles.” They also have a white malar or mustache stripe bordering the cheek. The lower belly is white.

General Body Features: Chats are small songbirds but are large and bulky compared to other warblers. They have a long tail, large head and a relatively thick, heavy bill.

Special Features of the Body: NONE, ALSO RANDOM

Special Features of the Head and Sensory Organs: The brush tongue may be an adaptation to aid in retrieving drinking water. It allows the birds access to dew and the capability to drink thin water films, such as water seepages on surfaces of plants.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Studies have shown that they are able to reduce their metabolic rate and evaporative water loss. The metabolic rate is mostly controlled by the concentration of thyroid hormone. Yellow chats have adapted to have lower levels of this hormone circulating in their body, resulting in a lower metabolism. This adaptation enables them to thrive in their harsh hot and dry environment.

Any Special Internal Anatomy: Furthermore, small body weights will also lead to a higher rate of evaporative water loss compared to larger birds. These predictions suggest that the small body size of the yellow chats combined with their hot, dry, arid environment will result in heat stress and a high loss of water. This could be detrimental in their habitat where water is scarce.

Sexual Dimorphisms: Sexes very similar, but during breeding season, female has grayish lores, gray lower mandible, and pink mouth-lining, in contrast to male's black.

Differences Between Juvenile Stage and Adult: Upperparts dull grayish olive or olive-brown, with deep olive-brown wings and tail. Lores and suborbital region dull gray. Malar region, chin, and throat dull white, tinged with yellow. Breast, sides, and flanks deep olive-gray. Olive-gray wash or dusky spotting on throat and upper breast. Sexes alike.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: During the breeding season, males sometimes fight near territorial boundaries, fluttering and grappling with their feet. They give display flights in the presence of females, other males, or human intruders. This entails descending from a high perch while singing, often with exaggerated wingbeats and a drooping tail. At the end of the flight they make a thumping sound, presumably with their wings. Most males stay with one mate during the breeding season, but some have two mates. DNA studies show that nestlings are sometimes fathered by males outside of the breeding pair. The female builds the nest and broods the chicks, and both parents feed the young. Though males sing conspicuously during the breeding season, chats otherwise skulk quietly in the underbrush. Their flight is direct and low through dense vegetation or sometimes across open fields. During the winter chats are sedentary and solitary, and individuals may defend territories.

Locomotion: Flight usually direct and steady through dense vegetation. Occasionally crosses open fields, flying about 1 m high. Display flight starts from high perch, ending on a perch above or in low, dense vegetation.

Communication and Perception: Males have a large repertoire of songs made up of whistles, cackles, mews, catcalls, caw notes, chuckles, rattles, squawks, gurgles, and pops, which they repeat and string together with great variety. Songs of Western birds may be higher in pitch and more rapid than those of eastern birds. They sing in morning and evening (and even at night during the height of the breeding season), either concealed in thickets or exposed on prominent perches within their breeding territories.

Home Range: During breeding season, male maintains and defends individual territory; pairs tend to congregate, suggesting a degree of loose coloniality that may be independent of differences in availability of suitable habitat. During course of settlement on breeding area, territory or home-range size decreases as more males arrive. Effectiveness of territorial defense appears to decline with increasing population densities.

Degree of Sociality: Pairs and family groups are found on territories defended by males during breeding season.

Level of Aggression: Few fights seen despite many hours of observation on a s. Indiana study area, likely attributable in part to dense vegetation. Fights between males usually occur near territorial boundaries in presence of ≥ 1 females and sometimes involve "Flutter-ups," in which 2 males rise vertically while apparently grappling with their feet.

Migration: Long-distance migrant. Some migrate over land while others fly across the Gulf of Mexico, traveling nocturnally in small groups or singly. In the arid West, one migration corridor may be the cottonwood-willow habitat along the San Pedro River in Arizona.

Predators:

Predators: Major nest predators (either observed or suspected) in s. Indiana include black snakes (*Elaphe obsoleta*, *Coluber constrictor*), milk snakes (*Lampropeltis doliata*), Blue Jays (*Cyanocitta cristata*), and eastern chipmunks (*Tamias striatus*); snakes remove eggs and nestlings from nest and usually leave nest structure undisturbed. Larger mammalian predators (not identified) also prey on eggs and nestlings, often tearing nest apart and pulling it from its supports.

Anti-Predator Defenses: Lacks a distraction display. A female flushed from her nest returned, called, and perched nearby with drooping wings and spread and lowered tail. Incubating female presses herself into nest cup when Blue Jays pass nearby. Adult gives cuk and cheow calls when predators approach nest. Known to mob predators along with other species.

Diet and Nutrition:

Adult Diet: Yellow-breasted Chats forage mainly on spiders and insects, including beetles, bugs, ants, bees, mayflies, cicadas, moths, and caterpillars. They glean invertebrates from foliage in the dense thickets on their breeding grounds, using their feet to hold prey. Chats may also eat fruits and berries, including strawberries, blueberries, blackberries, raspberries, elderberries, and wild grapes. They feed their nestlings caterpillars, grasshoppers, and other soft-bodied insects. On wintering grounds, Yellow-breasted Chats rely on a combination of insects, spiders, and fruits for food.

Juvenile Diet: ^^^^^^^

Special Adaptations for Getting Prey: Holds food with foot. Apparently does not join interspecific flocks for foraging in winter. forages in low, dense shrubs and thickets. Individual prey gleaned from foliage. Also forages on ground.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Of 21 males studied over 4 yr in s. Indiana, 20 (95%) were socially monogamous and 1 (5%) was socially polygynous, with 2 mates.

Mating Season: March to May

Courtship: Male often gives display flight in presence of female, in presence of other males, and when disturbed by humans. Display flights usually begin from a high perch from which male descends, often in jerky bounces, with exaggerated wing beats; drooping, often spread, tail; and, sometimes, dangling legs. In 15 display flights, legs dangled only once. During descent, axis of body is often 45° above horizontal. Often at the end of the flight, a thumping sound, presumably made by the wings, can be heard. Wings appear almost to touch above the back during the flight. Occasionally, stereotyped display flight is given without song.

Territoriality: HOME RANGE

Mating: NONE

Nest Placement: Yellow-breasted Chats nest in low, dense vegetation—such as raspberry, blackberry, grapevine, dogwood, hawthorn, cedar, multiflora rose, honeysuckle, and sumac. They build their nests 1–8 feet above the ground, supported by branches and often by masses of vegetation. They may use nest sites previously used by different individuals, although they rebuild the nest each time.

Nest Description: The female builds a bulky cup of grasses, leaves, bark strips, and weed stems lined with fine grasses, wiry plant stems, pine needles, and sometimes roots and hair. It measures 5–6 inches across on the outside. The inner cup measures 2.5–3.5 inches across and 2–2.5 inches high.

Egg-Laying: Clutch Size: 3-6 eggs Number of Broods: 1-2 broods Egg Length: 0.7-1.0 in (1.8-2.5 cm) Egg Width: 0.6-0.8 in (1.5-1.9 cm) Incubation Period: 10-12 days Nestling Period: 7-10 days Egg Description: White or off-white with speckles of red, brown, gray, or purple.

Hatching and Incubation/Gestation: Helpless and naked, with closed eyes.

Development: Altricial; naked. Mass <5 g; eyes closed; feather tracts visible through skin; red gape with yellowish areas. Has difficulty raising head; wing and leg movements occur simultaneously; can open and close toes.

Parental Care: Young brooded exclusively by female, and frequency of brooding declines as both brood size. Both sexes feed young directly. Of 19 nests in central Kentucky, 14 were attended by both parents and 5 by only 1 parent.

Lifespan: Up to 9 years.

Conservation:

Official Federal Status: Least Concern

Special Statutes in Individual States: NONE

Threats: Yellow-breasted Chats are fairly common, although their numbers declined by an estimated 37% between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates their global population at 13 million individuals, with 90% spending some part of the year in the U.S., and 50% in Mexico. They rate a 9 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Eastern breeding populations probably increased and expanded their range in the late nineteenth to mid-twentieth century thanks to shrubby habitat created by logging, forest fragmentation, and abandoned farms. However, from 1966 to 2014 eastern populations declined by an average of over 1% per year (corresponding to a cumulative decline of 41%) as forests grew up again and reduced suitable habitat. Western breeding populations, on the other hand, have increased by nearly the same amount, despite losses of riparian habitat.

Conservation Efforts: ^^^^^^

Extra Facts:

1. The Yellow-breasted Chat has traditionally been placed in the New World warbler family, although it is an unusual one: it's larger than other warblers, has a more varied repertoire of songs and calls, and also differs in certain aspects of behavior and anatomy.
2. Though a small percentage of males have two mates at once, most appear to be monogamous during the breeding season. Female aggression may help enforce this monogamy. However, some infidelity happens behind the scenes: in a Kentucky study, one-third of nests contained at least one chick sired by another male.
3. Brown-headed Cowbirds often lay their eggs in nests of Yellow-breasted Chats. Some breeding pairs will desert a parasitized nest, while others accept the cowbird egg and raise the chick as their own.
4. The oldest Yellow-breasted Chat on record, a female, was at least 11 years old when recaptured and released at an Arizona banding station in 2015.

Notable Species: USE NOMINATE