Yellow-breasted Chat

(Icteria virens)

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Legal Status
Federal: None.
State: Species of Special Concern.

Global and State Conservation Status: G5S3: Global Rank, G5 = Secure: Common; widespread and abundant; State Rank, S3 = Vulnerable: Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Recovery Plan: None.

Species Description and Life History

Yellow-breasted chats are very large, aberrant warblers with distinctive plumage. They have olive green to grayish upperparts with lemon-yellow chin, throat, and breast; the large bill has a strongly curved culmen. The face of the yellow-breasted chat is grayish with black lores, white supercilium, and white eye-crescent on lower eye-lid (Eckerle and Thompson 2001).

Seasonal Patterns

Yellow-breasted Chats are migratory and usually arrive to California breeding grounds in April from their wintering grounds in Mexico and Guatemala (Green 2005). In Santa Barbara County, breeding birds arrive in early to mid-April (Lehman 1994). Northern populations may arrive to breeding grounds from late April to early May (Ricketts and Kus 2000). In the Sierra Nevada, they may move upslope postbreeding (Gaines 1992). Departure for wintering grounds occurs from August to September (Ricketts and Kus 2000).

Little information is available on juvenile dispersal. Banding studies in Indiana showed that many juveniles moved away from the forests where they were born. Data on post-breeding dispersal are also scarce. Data from the eastern United States indicate an extremely low fidelity to breeding sites between years; however, in southern California the limited amount of available habitat may foster a higher level of breeding site fidelity (Eckerle and Thompson 2001).

Reproduction

Yellow-breasted chats breed from early May to early August, with peak breeding activity occurring in June (Green 2005). Males arrive to breeding sites before females (Eckerle and Thompson 2001). Low site fidelity was reported in abandoned agricultural fields in southern Indiana (Thompson and Nolan 1973). Pairs are monogamous, although pairs may nest near one another (Ehrlich et al. 1988). Three to six eggs (Green 2005) are laid from mid-May to late July (Thompson and Nolan 1973). Females incubated eggs for 11 to 15 days (Green 2005). Once eggs hatch, both sexes tend to the nestlings until they fledge (Harrison 1978). Approximately 8 to 11 days are required for fledging (Green 2005). They will occasionally produce a second brood in the season. Of 24 females nesting in southern Indiana for which all nesting attempts within a single year were known, only 2 (8%) had a second brood (Thompson and Nolan 1973). Survival rates of fledglings are unknown. The oldest recorded individual was 8 years 11 months (Klimkiewicz *et al.* 1983).

Home Range/Territory Size

Yellow-breasted chat home ranges are likely the same as summer and winter territories (Eckerle and Thompson 2001). Thompson and Nolan (1973) reported 28 territories averaging 1.3 ha (3.1 ac) in an abandoned field in Indiana. They also reported that territory sizes decreased as more males arrived (Thompson and Nolan 1973). Brewer (1955) reported territory averaging 0.12 ha (0.3 ac), and varying from 0.04 to 0.28 ha (0.1 to 0.7 ac), in an Illinois swamp thicket. Dennis (1958) reported territory varying from 0.5 to 1.0 ha (1.25 to 2.5 ac) in abandoned fields and fence rows in Virginia. Gaines (1974) reported 10 per 40 ha (100 ac) in riparian forests along the Sacramento River.

Male Yellow-breasted Chats maintain and defend individual territories during the breeding season (Dennis 1958, Thompson and Nolan 1973). Territorial defense appears to be less effective as population densities increase (Eckerle and Thompson 2001). Radio telemetry data suggested that females regularly left their mate's territory and visited neighboring males' territories (Dennis 1958).

Foraging Behavior and Diet

Yellow-breasted chats feed on a variety of arthropods, including beetles and weevils, true bugs, ants, bees, caterpillars, and spiders. They also eat fruit such as blackberry (*Rubus* spp.), elderberry (*Sambucus* spp.) and wild grape (*Vitis* spp.) (USFS 2008). They feed on insects and berries about equally (Ehrlich *et al.* 1988). They mostly glean from foliage of shrubs and low trees (Green 2005).

Habitat Requirements and Ecology

Nesting

In northern and central California, yellow-breasted chats require riparian woodland or riparian shrub thickets with dense vegetation typically comprised of Himalayan blackberry (*Rubus discolor*), wild grape (*Vitis* spp.), and/or willows (*Salix* spp.) (Grinnell et al. 1930; Grinnell and Miller 1944; Comrack 2008). Tall willows, cottonwood (*Populus* spp.), and sycamore (*Platanus* spp.) are often used for song perches (Grinnell and Miller 1944; Dunn and Garrett 1997).

Yellow-breasted chats occur up to 1,450 m (4,800 ft) in valley foothill riparian habitats and up to 2,050 m (6,500 ft) east of the Sierra Nevada in desert riparian habitats (Gaines 1992, DeSante and Ainley 1980, Garrett and Dunn 1981). At the Lower Clear Creek Floodway in Shasta County, Burnett and DeStaebler (2003) found that most chat nests were associated with Himalayan blackberry. Other species used for nesting include California blackberry, California wild rose, and pipevine (Ricketts and Kus 2000). Additionally, they have been found to use saltcedar preferentially to native habitat (Hunter *et al.* 1988). During migration, yellow-breasted chats use habitat similar to its breeding habitat (Dunn and Garrett 1997).

Foraging

The yellow-breasted chat has been classified as an open-canopy obligatory species (i.e., preferred open overstory and brushy understory), with population density directly related to shrub density to a height of 4.5 cm (Crawford *et al.* 1981). The species is most often forages in areas in early stages of succession, as opposed to young and mature forests (Melhop and Lynch 1986). Kroodsma (1982) reported that chats preferred brushy areas within powerline corridors to forest edge or interior. Kroodsma also found that they prefer patches with high densities of blackberry vines (*Rubus* spp.) and avoided areas with high percentage of grass cover.

Species Distribution and Population Trends

Distribution

Yellow-breasted chats are widespread summer residents of eastern North America, however they have a much more fragmented distribution in the western North America (USFS 2008). In western North America their range includes the Cascade Range, central Oregon valleys, southern Idaho and northern Nevada, and portions of California, Utah, western Colorado, and central Arizona (USFS 2008). In California, the species is most numerous in the northwest portion of the state from the Klamath Mountains region west to the inner Northern Coast Range and south to San Francisco Bay area (Eckerle and Thompson 2001). They are locally distributed throughout Southern Coast Range and Peninsular Range from Santa Clara County south to San Diego County (Eckerle and Thompson 2001, Comrack 2008).

Population Trends

There are few data available regarding population decreases or increases over large sections of the species' range (Eckerle and Thompson 2001). California Breeding Bird Survey data from 1966-1998 shows an increasing trend of 1.1% per year (Ricketts and Kus 2000, Sauer 2005). However, these data are not considered statistically significant and should be interpreted with caution (Ricketts and Kus 2000). The species has apparently declined dramatically in southern California (Garrett and Dunn 1981, Comrack 2008).

Distribution and Population Trends in the Plan Area

Yellow-breasted Chats are spring and fall visitors to Yolo County (Yolo Audubon Society Checklist Committee 2004). Singing males can be found reliably in dense riparian tangles along Putah Creek, just downstream from Monticello Dam. While nests have been found in this area (Beedy pers. obs.), all were on the Solano County side of the creek, and nesting has not been confirmed in Yolo County in recent decades. Singing males also have been observed along Cache Creek, approximately 1 km upstream from the County Road 89 bridge, but nesting there has not been confirmed. Spring and fall migrants have also been observed in riparian areas near Gray's Bend and along the Sacramento River at Elk Horn Slough (Beedy pers. obs.).

Threats to the Species and Other Conservation Issues

Habitat loss and alteration are major factors threatening yellow-breasted chat populations (Comrack 2008). Loss and degradation of riparian habitat have caused a marked decline in the breeding population in recent decades in California (Green 2005). Many factors contribute to the loss or alteration of habitat including levee development, reduced supply and delivery of water, urban and agriculture encroachment, and poor road and/or culvert design. Grazing can also have a negative impact yellow-breasted chat habitat. Yellow-breasted Chats, along with Common Yellowthroats (*Geothlypis trichas*), may serve as good indicator species of the effects of grazing on riparian birds (Sedgewick and Knopf 1987).

Brood parasitism from brown-headed cowbirds (*Molothrus ater*) may also significantly impact yellow-breasted chats (Gaines 1974, Remsen 1978). The chat is among the 17 hosts most parasitized by cowbirds (Ricketts and Kus 2000). In a three-year study in Missouri, 31% of nests were parasitized by cowbirds (Burhans and Thompson 1999). They also are subject to occasional predation by accipiters, small mammals, and snakes (Green 2005). Potential nest predators in California include western scrub-jays (*Aphelocoma californica*), dusky-footed woodrats (*Neotoma fuscipes*), raccoons (*Procyon lotor*), and several species of snakes (Ricketts and Kus 2000).

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