

A.2 YELLOW-BREASTED CHAT (*ICTERIA VIRENS*)

A.2.1 Legal and Other Status

The yellow-breasted chat is designated as a state Bird Species of Special Concern by the California Department of Fish and Game (DFG). Nest sites are protected in California under Fish and Game Code Section 3503.

The yellow-breasted chat has no federal regulatory status; however, the species is protected under the federal Migratory Bird Treaty Act.

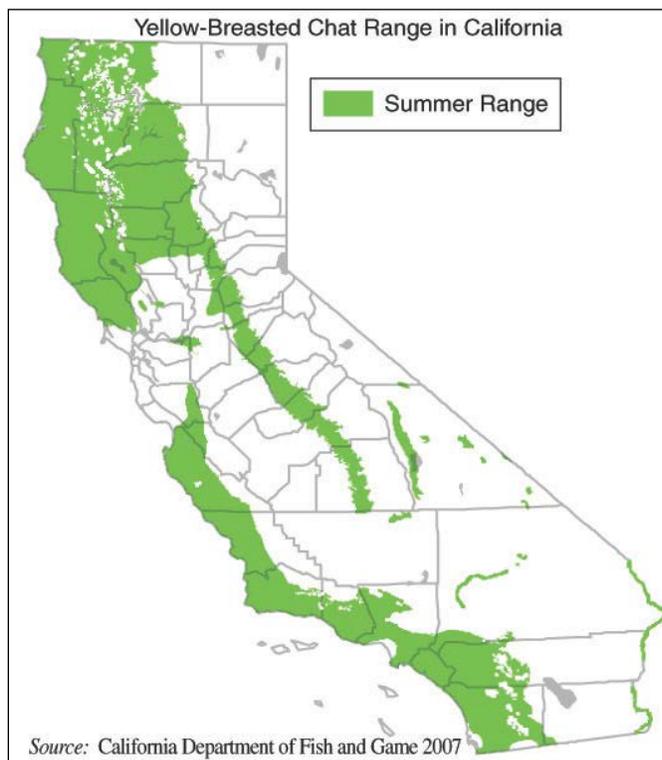


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A.2.2 Species Distribution and Status

A.2.2.1 Range and Status

The yellow-breasted chat is a neotropical migrant songbird. It breeds in North America and winters in Central America, primarily in Mexico and Guatemala; although a few birds have been observed wintering in southern California (Small 1994). Yellow-breasted chat range includes most of the continental United States and Mexico.



In 1944, Grinnell and Miller reported that chats bred over the entire length and breadth of California, exclusive of higher mountains and coastal islands, and were more numerous towards the interior of the state. Chats were similarly widespread during migration, with less restriction as to habitat (typically, dense riparian vegetation). The current range of the yellow-breasted chat in California is not completely known because of population declines (Small 1994); however, the species is thought to potentially occur in suitable habitats throughout most of the state with the exception of most of the Central Valley and southwest deserts.

Formerly a common summer resident in coastal southern and central California, along the Colorado River, and throughout

the Central Valley (Grinnell and Miller 1944), the yellow-breasted chat is currently reported as an uncommon resident in riparian habitats on the Modoc Plateau, along the north and south Coast Ranges, in the Sierra Nevada foothills, and in the Transverse and Peninsular ranges. In terms of altitude, they can occur up to 1,463 meters (4,800 feet) in valley foothill riparian habitats and up to 1,981 meters (6,499 feet) in desert riparian habitats east of the Sierra Nevada (DeSante and Ainley 1980, Garrett and Dunn 1981, Gaines 1992). The yellow-breasted chat appears to have been extirpated from the San Joaquin and Sacramento valleys, but still occurs along some foothill tributaries. It has been described as uncommon in the north coast mountains (Small 1994), even though population declines have not been as dramatic in that area as in other provinces (Remsen 1978).

Population status and trends are largely unknown in the state. Ricketts and Kus (2000) summarized Breeding Bird Surveys (BBS) data (Sauer et al. 1999) and reported that BBS data from 1966 to 1988 showed a nonsignificant increasing trend of 1.1 percent per year ($P = 0.27$), along with subinterval trends of +4.7 percent ($P = 0.18$) from 1966 to 1979 and +0.4 percent ($P = 0.61$) from 1980 to 1999. They noted, however, that these data exhibit several deficiencies, including low abundance (less than 1.0 birds/route), low sample size (less than 14 routes), imprecision (3 percent-year change would not be detected over the long term), and possible inconsistency in trend over time (subinterval trends were significantly different [$P < 0.05$] from each other). They concluded that the BBS data should, therefore, be interpreted with extreme caution. In general, western populations are considered to be generally stable, but some local declines have occurred recently in California (Dunn and Garrett 1997).

A.2.2.2 Distribution and Status in the Plan Area

There is little historical or current information regarding the distribution of yellow-breasted chats in Butte County. While none are reported in the California Natural Diversity Database, recent detections have been made along Big Chico Creek, east of Chico (Kemper 1999) and in other foothill canyons within the Plan Area (see Figure A.2-1, *Yellow-Breasted Chat Modeled Habitat and Known Use Areas*). In addition to detections in the Upper Park area of Big Chico Creek, the species has been detected in Lower Butte Creek Canyon and Little Chico Creek (Phil Johnson and Scott Huber, Altacal Audubon pers. comm.). Dawn Garcia of California State University, Chico has detected several yellow-breasted chats during banding and point count surveys conducted at the Butte Creek Ecological Preserve. Yellow-breasted chat has been seen in valley floor riparian habitat along the Sacramento River. There is also potential for occurrence along portions of the Feather River.

A.2.3 Habitat Requirements and Special Considerations

Yellow-breasted chats nest and forage in dense riparian thickets of willows, vines, and brush associated with streams and other wetland habitats (Small 1994). Some taller trees are also required for song perches (Dunn and Garrett 1997).

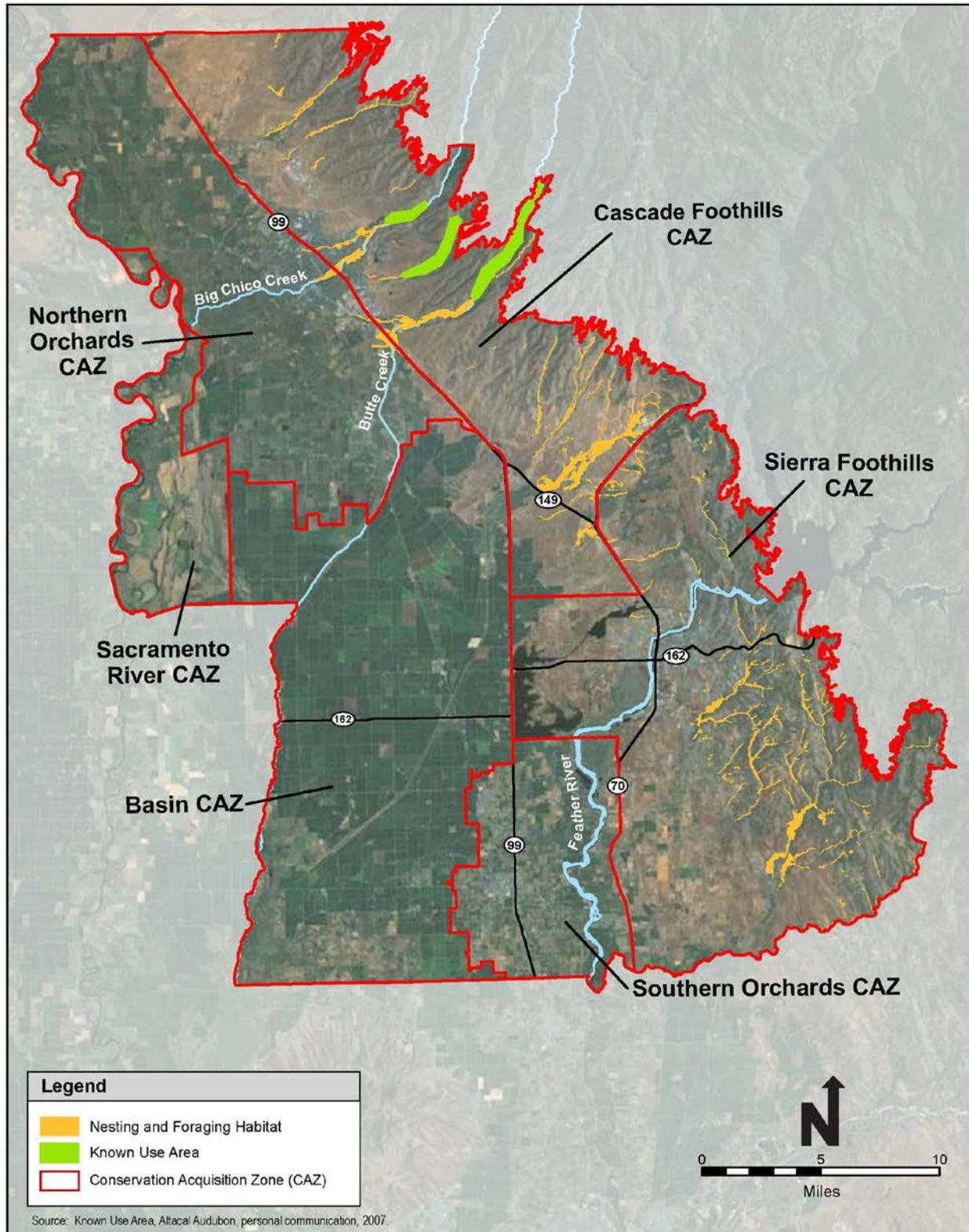


Figure A.2-1. Yellow-Breasted Chat Modeled Habitat and Known Use Areas

Several studies indicate a strong association with early successional vegetation, including clearcut areas and powerline corridors with dense shrubby vegetation with sapling-sized trees as opposed to mature riparian forest (Kroodsma 1982, Melhop and Lynch 1986, Annand and Thompson 1997). Kroodsma (1982) also reported a preference for blackberry (*Rubus* spp.) thickets.

Yellow-breasted chats typically nest in loose colonies, although males usually defend distinct territories (Ehrlich et al. 1988). Territory size ranges from 0.30 to 3.21 acres (0.12 to 1.3 hectares [ha]) (Zeiner et al. 1990). Gaines (1974) reported a breeding density from the Sacramento Valley of one chat per 10 acres (4 ha). Although some known breeding sites are consistently active each year, there is some data that suggests low site fidelity (Thompson and Nolan 1973).

Nests are usually constructed low to the ground (usually within 3 feet [1 meter (m)]) in dense shrubs (Barber and Martin 1997, Ricketts 1999). A variety of trees and shrubs are used as nesting substrate, including willow (*Salix* spp.), alder (*Alnus* spp.), and several shrub species, including blackberry. At the Lower Clear Creek Floodway in Shasta County, Burnett and DeStaebler (2003) report that most chat nests are found in Himalayan blackberry (*Rubus discolor*). Other plant species used for nesting include California blackberry (*Rubus ursinus*), California wild rose (*Rosa californica*), and pipevine (*Aristolochia macrophylla*).

A.2.4 Life History

A.2.4.1 Seasonal Patterns

Yellow-breasted chats breed from April to August. In northern California, breeding birds may begin arriving on territories in April and May; and departure from breeding grounds occurs during August–September (Ricketts and Kus 2000). Fall migration extends to approximately October. Birds are on their wintering grounds until February–March; and spring migration occurs from March to May (Dunn and Garrett 1997).

A.2.4.2 Reproduction

Following arrival onto the breeding territory, nests are constructed and eggs are laid from mid-May to mid-July (Thompson and Nolan 1973). Clutch size is usually three to four and sometimes five eggs. The female incubates the eggs exclusively. The incubation period is 11 to 15 days (Green 2005), and young begin to fledge eight days following hatching (Petrides 1938). Both the male and female tend to and provision the young.

A.2.4.3 Foraging Behavior and Diet

Chats forage by foliage gleaning, consuming insects and berries about equally (Ehrlich et al. 1988). Nestlings are typically fed a diet of soft-bodied orthopterans (e.g., grasshoppers) and larval lepidopterans (moths and butterflies) (Petrides 1938). In late summer and fall, chats feed to a large extent on small fruits, such as the fruits of honeysuckle, wild strawberry, blackberry, mulberry, chokecherry, sumac, and nightshade (Dunn and Garrett 1997).

A.2.5 Threats

A.2.5.1 Habitat Loss and Alteration

One major factor leading to declines of yellow-breasted chat populations is the loss and degradation of riparian woodland habitat throughout its range (Remsen 1978, Rosenberg et al. 1991). Habitat loss and degradation can occur through the clearing of vegetation for purposes of agriculture, timber harvest, land development, or flood control.

Flood control and river channelization eliminate the early successional riparian habitat of willow and alder shrub habitats with a dense understory, which chats and many other riparian species use for breeding.

Timber harvest impacts are not quite as clear. Timber harvest may have initial negative impacts on chats currently nesting in the impacted area; however, Annand and Thompson (1997) noted that chats preferred clearcut areas. This suggests that timber harvest impacts on the yellow-breasted chat may be temporary, and timber harvest could ultimately have a beneficial impact for this species in some situations.

Grazing can also have a significant effect on riparian vegetation (Sedgwick and Knopf 1987). Cattle and other livestock can trample vegetation and eat seedlings, saplings, shrubs, and herbaceous plants. This could lead to a reduction in cover and nesting sites, and negatively affect insect populations that the yellow-breasted chat utilizes as a food source.

A.2.5.2 Cowbird Parasitism

While the destruction of riparian woodland has likely played a significant role, the absence of chats from some areas that still retain intact riparian woodland habitat indicates that some other factor may be involved in the decline of yellow-breasted chat populations, such as cowbird parasitism. While data are limited on the extent of cowbird parasitism on yellow-breasted chats, it could have a significant impact on the local reproductive performance of chats.

A.2.5.3 Predation

Yellow-breasted chats are also subject to occasional predation by accipiters (e.g., goshawks), small mammals, and snakes (Green 2005). Potential nest predators in California include western

scrub-jays (*Aphelocoma californica*), American crows (*Corvus brachyrhynchos*), common ravens (*Corvus corax*), black rats (*Rattus rattus*), dusky-footed woodrats (*Neotoma fuscipes*), raccoons (*Procyon lotor*), and several species of snakes (Ricketts and Kus 2000). Predation of nests may intensify where insufficient riparian scrub cover or insufficient riparian width occurs, potentially reducing reproduction and recruitment.

A.2.6 Relevant Conservation Efforts

Few conservation efforts have been directed towards the yellow-breasted chat in California. Protection and restoration of riparian systems can potentially preserve or create habitat for this species. Regional habitat conservation planning efforts may also protect the species, primarily through the preservation of existing occupied habitat. Several regional conservation plans in the Central Valley region of California already include or have proposed to include the yellow-breasted chat as a covered species: Placer County Conservation Plan, Yolo County Natural Heritage Program Plan, Solano County Multispecies Habitat Conservation Plan, San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, the Bay-Delta Conservation Plan, and the South Sacramento County Habitat Conservation Plan.

A.2.7 Species Habitat Suitability Model

A.2.7.1 Nesting and Foraging Habitat

Yellow-breasted chat nesting and foraging habitat includes willow scrub, cottonwood willow riparian forest, valley oak riparian forest and dredger tailings with riparian above the 200-foot elevational contour.

A.2.7.1.1 Assumptions

Yellow-breasted chat meets all of its life requirements for breeding, food, and cover within riparian habitat (Ricketts and Kus 2000). While the species is generally associated with a relatively dense riparian shrub layer (Small 1994), this microhabitat is not differentiated by the mapped land cover types. Thus, it is acknowledged that willow scrub, cottonwood-willow riparian forest, and valley oak riparian forest include but likely overestimate the extent of available habitat for chats. Though yellow-breasted chat has been seen in valley floor riparian habitat (e.g., along the Sacramento River), these areas are assumed to be used primarily as migratory corridors. The majority of occurrences of chats in the Plan Area occur along foothill streams and because the specific habitat requirements for breeding are less likely to be met in riparian habitats on the valley floor—including the Sacramento and Feather Rivers—the 200-foot elevational contour was used to establish the lower elevational extent of chat nesting and foraging habitat within the Plan Area.

A.2.7.2 Nesting and Foraging Habitat (Known Use Area)

This habitat sub-type consists of suitable riparian habitat (discussed above) within which yellow-breasted chat has been observed. As noted above, portions of Big Chico Creek, Little Chico Creek, and Butte Creek have been used by yellow-breasted chat (Kemper 1999, Phil Johnson and Scott Huber, Altacal Audubon, pers. comm.), and are thus considered nesting and foraging habitat known to be used by the species.

A.2.7.2.1 Assumptions

As supported by previous observations discussed above, yellow-breasted chat have used and continue to use the areas of nesting and foraging riparian habitat designated as known use areas for the species.

A.2.8 Recovery Plan Goals

Currently, there is no recovery plan for the yellow-breasted chat.

A.2.9 References

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Personal Communications

Phil Johnson and Scott Huber, Altacal Audubon members, meeting with Altacal Audubon on known use areas, May 10, 2007.