



Status: Threatened

Global and state rank: G5/S1

Family: Parulidae (wood warblers)

Range: The yellow-throated warbler breeds in Missouri, eastern Texas, and eastern Oklahoma eastward to the Atlantic coast (Johnsgard 1979, Robbins and Easterla 1992, Robertson and Woolfenden 1992, Hall 1996). The northernmost extent of this species' breeding range is southern Wisconsin and east to southeastern Pennsylvania, while it breeds as far south as the coast of the Gulf of Mexico coasts through the middle of the Florida Peninsula (Brauning 1992, Robertson and Woolfenden 1992, Hall 1996). The yellow-throated warbler is not found in the higher elevations of the Appalachian Mountains from Pennsylvania south to North Carolina (Brauning 1992, Hall 1996). The yellow-throated warbler's wintering range includes most of Florida, coastal Georgia, coastal South Carolina, Bermuda, the Caribbean Islands, as well as the coastal areas of southern Texas, and the coastal areas of Mexico south to Panama (Evans 1990, Amos 1991). During the winter, this species can also be found in the interior of Mexico, specifically the Chiapas, south to northwest Nicaragua, and also locally along the Pacific slope from Guerrerro, Mexico, to Guatemala (Howell and Webb 1995, Hall 1996).

State distribution: Currently, this species has only been detected in Allegan, Berrien, Muskegon, Ottawa, and St. Joseph counties of Michigan. However, it may be present but undetected in other areas due to the lack of survey effort (Michigan Natural Features Inventory 2007).

Recognition: The yellow-throated warbler is a **medium-sized wood warbler (13-14 cm)**. Although the females and first-year males are paler in color than the adult male their coloration pattern is very similar. The most prominent features of this species' plumage are the **yellow throat and upper chest** contrasting with a **black face** and **white belly**. The **white line above the eyes** compliments the **white patch on the side of the species' neck**. While the **back and top of the head are gray**, the **sides have black streaks** and **white wing bars** (Hall 1996, Sibley 2000). This unique coloration distinguishes of the yellow-throated warbler from other species in Michigan. The most similar species in appearance, the first-year blackburnian warbler (*Dendroica fusca*), can be distinguished from the yellow-throated warbler by stripes on the back and head, and the lack of a white neck patch.

Best survey time: Yellow-throated warblers are one of the earliest migrant warblers to return to the breeding grounds, arriving as early as the third week in April to



the first week in May. Like many warblers, this species is most easily surveyed via vocal detection. They begin singing almost immediately upon arrival to their breeding grounds and continue singing through late June; however, it is best to survey for this species before the first week of June. The yellow-throated warbler sings incessantly throughout the day with a mean of seven songs per minute in the morning and approximately five songs per minute in the afternoon (Hall 1996). Standard aural survey techniques (e.g., point counts, transects) are useful when surveying for this species. Broadcast callers or conspecific playbacks may be useful as well when attempting to detect this species. Given the association of the yellow-throated warbler with floodplain environments, the use of a kayak or canoe, may allow larger areas to be surveyed more efficiently.

Habitat: The yellow-throated warbler predominantly uses mature Southern floodplain forests, but occasionally can be found in more upland deciduous or mixed pine deciduous forests. In Michigan, this species tends to be associated with sycamore trees (*Platanus occidentalis*). The male sings from the tall tree tops after leaf-out but is less discriminatory in his singing height before leaf-out. This species forages on branches and tree tops usually 6 – 30 m above the ground (Ficken et al. 1968).

Biology: The yellow-throated warbler arrives back to its Michigan breeding sites in late April or early May, earlier than most migrant warblers. They begin singing immediately and pair bond formation quickly occurs with nest construction soon to follow. Nesting occurs between the second week in May and the fourth week in June. Nests are typically in the forest canopy, 25 – 30 m above the ground (Hall 1996), near the end of a branch usually concealed in a clump of leaves or pine needles (Harrison 1975). The female is responsible for most of the nest construction with occasional help from the male (Nicholson 1929). Nests are constructed of bark strips, grasses, and weed stems but are lined with down and feathers (Harrison 1975). The clutch size is usually four, but can range from three to five greenish or grayish eggs with purplish-brown speckles (Hall 1996). After approximately 12 – 13 days of incubation by the female the altricial young hatch and the female continues to brood the young for another ten days until fledging. The female and male both feed the young during the brooding and post-fledging periods. The

family remains together for approximately two or three weeks (Hall 1996). This species can have two broods per year in the southern part of its range but this would be less likely in the northern portion of its range due to its later arrival and the shorter summer season.

The yellow-throated warbler forages on horizontal branches in the canopy, typically 6 – 30 m above the ground (Ficken et al. 1968). They feed on arthropods, diptera, spiders, and scale insects by inserting their bills into cracks and crevices of tree bark, bundles of pine needles, pine cones, or moss (Bent 1953, Hall 1996). This style of foraging is similar to that of the black-and-white warbler (*Mniotilta varia*). As the daytime temperature warms they may also hawk for flying insects (Morse 1989).

The yellow-throated warbler becomes more quiet and difficult to detect in July (Hall 1996). Migration begins in the first week of August and continues through the third week in September (Hall 1996).

Conservation/management: Like many migrant songbirds, yellow-throated warbler populations are threatened by habitat loss and alteration. Draining of lowland forests and removal of timber directly impact the available habitat. Maintenance of a natural stream channel, allowing meandering, natural flooding regimes, will help regenerate sycamores for nesting. Preventing aquatic pollution may facilitate an increased abundance of prey items. Nest-parasitism by the brown-headed cowbird (*Molothrus ater*) potentially impacts the successful reproduction of this species. The yellow-throated warbler has also been documented to collide with communication towers (Stoddard and Norris 1967, Taylor and Anderson 1973). With increased construction of communication towers and wind turbines, these structures will likely cause additional mortality, as will tall, lit buildings. Any necessary construction activities or disturbance within one-half mile of known breeding locations should be conducted during the non-breeding season (August – March). Although this species occupies a very small portion of Michigan, populations throughout the rest of its range appear relatively stable (Hall 1996).

Research needs: We need additional research on the distribution and population status within Michigan for better protection of this rare species. Specifically,



research is needed on the habitat use as well as the threats to and limitations on populations of this rare species (Michigan Natural Features Inventory 2007). We have little information on this species' life history within the state or beyond (Hall 1996). Few studies have focused on the breeding biology of the yellow-throated warbler possibly because their canopy nests are so difficult to observe. Hall (1996) suggested an ongoing northward expansion of this species. Documentation of this trend would be interesting, as well as examining the possibility that a northward expansion may be linked to global climate change.

Related abstracts: Louisiana Waterthrush (*Seiurus motacilla*) and Prothonotary Warbler (*Protonotaria citrea*)

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Abstract citation

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