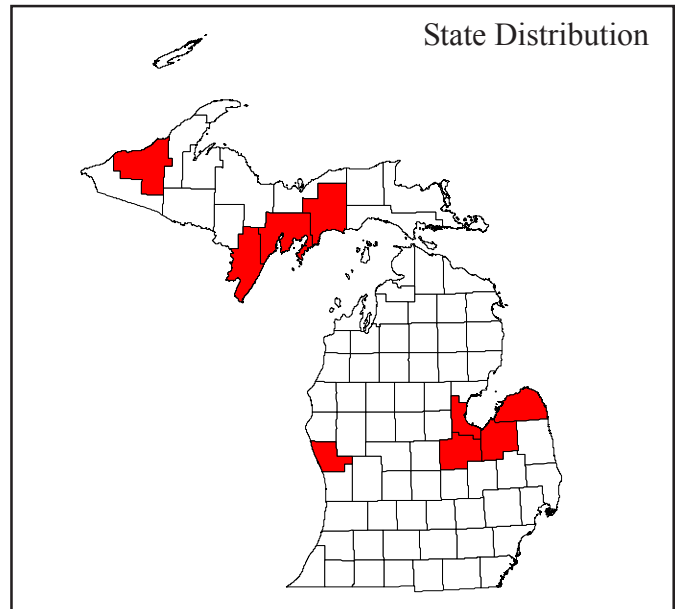
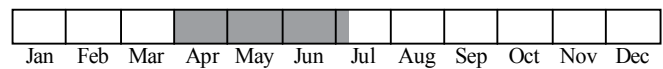




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Best Survey Period



Status: State special concern

Global and state rank: G5/S2

Family: Icteridae – Meadowlarks, Cowbirds, Blackbirds, Grackles, and Orioles

Total range: The breeding range of the yellow-headed blackbird occurs in the prairie and mountain meadow wetlands of the western and central U.S. and Canada (Twedt and Crawford 1995). The species breeds from central British Columbia, northern Alberta, central Saskatchewan, southern Manitoba, and extreme southwest Ontario south through Minnesota and Wisconsin to extreme northwest Indiana, northern Illinois, southern Iowa, extreme northwestern Missouri, central and western Kansas, western Oklahoma, northwestern Texas, northern New Mexico, and Arizona, west to southern California, and in Oregon and Washington largely east of the Cascade Mountains (Twedt and Crawford 1995). The yellow-headed blackbird has been extending its range eastward and breeds in small numbers in scattered locations in Michigan, northwestern Ohio, and southeastern Ontario (Granlund 1991). Wintering primarily occurs from western and southern Arizona, southern New Mexico, and western and extreme southern Texas south through Mexico to northern Veracruz on the Atlantic slope,

Oaxaca and Guerrero in the interior and adjacent slope, and Nayarit on the Pacific slope (Twedt and Crawford 1995).

State distribution: Granlund (1991) noted that the yellow-headed blackbird appears to be a relatively new breeding species for Michigan. Barrows (1912) and Wood (1951) listed the yellow-headed blackbird as a rare straggler and described records from Dickinson and Ontonagon Counties in the Upper Peninsula (UP) and Huron, Manistee, Missaukee, and Monroe Counties in the Lower Peninsula (LP). Zimmerman and Van Tyne (1959) listed the species as a rare visitor with a nesting occurrence for Gogebic County, records for the above counties, and additional observations for Menominee, Muskegon, Saginaw, and Washtenaw Counties. Additional nesting records were later confirmed for Cheboygan, Chippewa, Delta, Gratiot, Macomb, and Ottawa Counties and Saginaw Bay, and Payne (1983) considered yellow-headed blackbird an uncommon transient and local summer resident. During Michigan Breeding Bird Atlas (MBBA) surveys, yellow-headed blackbirds were confirmed breeding in Ontonagon, Menominee, Delta, and Schoolcraft Counties in the UP, and Muskegon, Bay, Saginaw, and Huron Counties in the LP (Granlund 1991). The figure above indicates counties with confirmed breeding during Atlas surveys or known occurrences from the Michigan



Natural Features Inventory database. Granlund (1991) noted that Muskegon County and the coastal marshes of Saginaw Bay and Delta County appear to historic breeding locations for Michigan.

Recognition: Twedt and Crawford (1995) described the yellow-headed blackbird as a large bodied passerine with males weighing 100 g and measuring 26.5 cm in length, which is nearly twice the mass of females (<60 g) and about 0.5 cm longer. The species is sexually dimorphic, with the male being unmistakable with its **yellow head, neck, and breast, black body plumage, lore, and eye-stripe, and white wing patches** visible in flight (Twedt and Crawford 1995). Females and immature males have muted plumages with **dull black and brown bodies, pale yellow** primarily on the **breast and throat**, but also on the neck and eyestripe, and **white streaking merging the yellow breast with a brown abdomen** (Twedt and Crawford 1995). Other female or immature male icterids lack yellow on the head (Twedt and Crawford 1995). Twedt and Crawford (1995) described two songs exhibited by males: the musical accenting song directed toward birds at long distances, and the buzzing song usually directed toward birds very close to the singer. The **accenting song** consists of several fluid introductory notes that may or may not be followed by a highly variable trill (Twedt and Crawford 1995). Bent (1958) described the introductory notes phonetically as “*oka wee wee, oka wee wee, oka wee wee.*” The **buzzing song** has been represented as “*kuk – koh-kohkoh – – waaaaaaaaa*” (Twedt and Crawford 1995).

Best survey time: The best time to survey for yellow-headed blackbirds is during the breeding season when the males are territorial and conspicuous. Little information is available for typical arrival dates in Michigan, but the timing is likely similar to that of Wisconsin, which begins between 11 and 23 April for males and between 4 and 7 May for females (Twedt and Crawford 1995). Generally, breeding activity is greatest between late April and late June. Young (1996) conducted surveys for singing males between early April and late June, while nest searches covered the same period and continued until about mid July. Twedt and Crawford (1995) noted that during the breeding season males sing most often during morning and evening, with delivery rates in the early morning similar to those in the late afternoon. A variety of techniques

can be used to successfully survey yellow-headed blackbirds, including transects traversed by foot, boat, or canoe, and point counts conducted in suitable breeding habitat.

Habitat: In the core of its breeding range, the yellow-headed blackbird is primarily found in prairie wetlands, but is also common in wetlands associated with the prairie parklands, mountain meadows, and arid regions (Twedt and Crawford 1995). Typically the species nests in deeper-water palustrine wetlands dominated by cattail (*Typha* spp.), bulrush (*Schoenoplectus* spp.), or reed (*Phragmites* spp.) (Twedt and Crawford 1995). The need for deeper water appears to be a limiting factor as yellow-headed blackbirds are often not found in similar vegetation where water levels fluctuate (Granlund 1991). Young (1996) found nests distributed in the outer zones of cattail along Saginaw Bay; however, Whitt et al. (1999) found no nests in cattail zones located inland. Nests are only located over water and are fixed either to dead emergent vegetation from the previous season or robust growing vegetation (Twedt and Crawford 1995). Foraging occurs both within wetlands and in surrounding grasslands, croplands, or savanna (Twedt and Crawford 1995).

Biology: Yellow-headed blackbirds likely arrive on Michigan breeding grounds between early to mid April and early May. Adult males arrive about one to two weeks before adult females and begin forming territories shortly thereafter (Twedt and Crawford 1995). Twedt and Crawford (1995) describe breeding as being in grouped territories when the majority of food resources are obtained within the territory, or as loosely colonial when most food resources are obtained outside the territory. Males are polygynous and generally have 1 – 6 females in a harem, and females select breeding sites within the male’s defended territory (Twedt and Crawford 1995). The overwater nests are built entirely by the female, usually in water between 2 and 4 ft (0.6 and 1.2 m) deep, and rarely deeper (Bent 1958). Nests are constructed of water-soaked aquatic vegetation interwoven with standing dead or growing emergent vegetation (Granlund 1991). Baichich and Harrison (1997) characterize the nest as a deep cup built of long stems and blades of wet partly decayed grasses woven around supporting stems to form a tight cup, lined with dead leaves of plants, coarse grasses, roots, and decayed plant material, and firmly packed with an inner



lining of narrow leaves, leaf strips, or fine grasses. Little information is available for egg laying dates in Michigan, but it is likely similar to those of Minnesota, which occurs from about mid May through mid June (Bent 1958). Young (1996) found similar laying dates in her study of yellow-headed blackbirds in coastal wetlands on Saginaw Bay. Clutch size is typically 3 – 5, but most often 4 eggs and rarely 5 (Twedt and Crawford 1995). Baicich and Harrison (1997) describe the eggs as long subelliptical to long oval, smooth and glossy, very pale bluish-white, and finely speckled and mottled with brown, purplish-brown, or reddish-brown, usually with denser markings at the lower end. Incubation is by the female alone and usually lasts 10 – 13 days (Baicich and Harrison 1997). The young are altricial and brooded by the female exclusively (Twedt and Crawford 1995). Females feed young at the nest, while males will assist in feeding after the young are about four days old (Twedt and Crawford 1995). The young are fed invertebrates, primarily emergent aquatic insects (Twedt and Crawford 1995). Young leave the nest unable to fly at 9 – 12 days and remain among the emergent vegetation until flight is attained by about 20 days (Twedt and Crawford 1995, Baicich and Harrison 1997). Adults specialize in aquatic invertebrate food during the breeding season, but consume primarily cultivated grains and weed seeds during the postbreeding period (Twedt and Crawford 1995). Little information is available on fall departure dates for Michigan; however, Robbins (1991) lists early August to mid October for Wisconsin and Roberts (1936) has fall dates from mid September through October for Minnesota.

Conservation/Management: Twedt and Crawford (1995) stated that continental populations of yellow-headed blackbird appear to be secure provided wetlands remain intact. Because this species typically nests in deeper water marshes, it is more immune to habitat destruction caused by human drainage or filling. Michigan's location at the eastern edge of the yellow-headed blackbird's range explains the species rareness in the state (Granlund 1991). During MBBA surveys, yellow-headed blackbirds showed increases in some locations and withdrew from others (Granlund 1991); Young (1996) noted the ephemeral nature of breeding colonies. Granlund (1991) noted that expansion of yellow-headed blackbirds in Michigan has been slow despite apparently ample habitat. Short and long-term

water level fluctuations are likely an important factor limiting the expansion of the species in Great Lakes coastal marshes. In Young's (1996) study of yellow-headed blackbirds in the Saginaw Bay, seiches or storm surges increased marsh water levels and destroyed most nests in 1994. Twedt and Crawford (1995) noted that yellow-headed blackbirds have likely benefited from human conversion of grasslands to small grain, corn, and sunflower fields, which provide a substantial postbreeding food supply that may result in increased fledging. Lethal control of crop depredation is common in the heart of the yellow-headed blackbird's breeding range and is not expected to cause long-term detrimental impacts to regional populations if applied at the depredation site (Twedt and Crawford 1995). However, if lethal methods are directed at breeding or roosting populations, local populations could be devastated due to the colonial breeding habits of this species (Twedt and Crawford 1995). Twedt and Crawford (1995) also stated that isolated populations at the periphery of the breeding range are at particular risk of extirpation.

Previous research has indicated that marshes with a 50:50 ratio of open water and emergent vegetation, often termed hemi-marshes, attract the highest densities and diversities of wetland birds, including yellow-headed blackbirds (Weller and Spatcher 1965). Orians (1980) found that the value of emergent vegetation patches to breeding yellow-headed blackbirds decreased with increased stem densities. Increased stem density may reduce aquatic insect production and yellow-headed blackbird encounter rates with prey (Orians 1980). Wildlife biologists should manage wetlands, especially those with water level control, for the hemi-marsh state. Best management practices, such as filter strips, no-till farming, and conservation tillage, should be encouraged in watersheds containing suitable wetlands to help protect valuable habitats from pollution.

Research needs: Twedt and Crawford (1995) listed several topics as priorities for yellow-headed blackbird research: examining the different metabolic rates of this and other Icterids, in order to provide insight into differential timing of migration; studying habitat use, range, and behavior during winter; exploring the underlying mechanism that allows yellow-headed blackbirds to avoid nest parasitism, which could be useful in managing parasitism in other species; and



investigating breeding site fidelity of females and fidelity to the natal site. Since yellow-headed blackbirds are typically found in large coastal marshes in Michigan, further investigation into the potential factors that limit these populations in what appears to be suitable habitat would be prudent. Potential factors could include available food resources and water level fluctuations (long- and short-term) and the associated changes to vegetation composition and structure and vegetation to open water ratios (Young 1996).

Related abstracts: least bittern, Forster's tern, Great Lakes marsh.

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