



**STATUS: HIGH
CONSERVATION
PRIORITY IN IOWA**

Yellow-breasted Chat

Icteria virens

Introduction

The Yellow-breasted Chat is a Neotropical migrant, and the largest wood-warbler. Their presence in Iowa during the breeding season is often announced by a bizarre series of hoots, whistles, and clucks coming from a tangle of briars and thick vegetation. Often difficult to see, during courtship this species may sometimes launch into the air to sing its odd song in an equally odd flight above the habitat it prefers.

The chat population appears to have undergone a major decline since settlement of the state and the near continuous detrimental changes to native vegetation and natural landscapes. Although Yellow-breasted Chats have a broad geographical range across nearly all of the lower 48-states, there are few detailed studies of its biology.

Although its geographic range is broad, this bird is frequently overlooked and seldom seen. Contributing to this elusiveness is the structure of its brushy habitat. The most important factor, however, is its skulking, secretive nature. Nonetheless, the chat's extensive vocal repertoire – makes the male's presence easy to document early in the breeding season. Late in the breeding season, during migration, and on the wintering grounds, the non-singing birds are difficult to detect.

Breeding populations in the eastern U.S. probably increased following extensive logging and fragmentation of forests during the late nineteenth and early twentieth centuries and abandonment of marginal cropland in the middle third of the twentieth century. But at this time the Yellow-breasted Chat is a species of high conservation priority in the Iowa IBA Program, and unless corrective conservation actions are taken there is a possibility that it could at some point slide into a category of being threatened or an endangered.



Habitat Preferences

Over its extensive range, the Yellow-breasted Chat is found in low, dense vegetation without a closed tree canopy, including shrubby habitat along streams, swamps, and pond margins; forest edges, regenerated logged over areas; and fencerows and upland thickets of recently abandoned farmland.

It prefers brushy tangles, briars, thickets and other habitats that are often described as being impenetrable and unattractive.

Feeding Habits

The Yellow-breasted Chat forages by searching among foliage in the dense low tangled habitats that it prefers, or by perching to eat berries. Unlike any other warbler, this species will hold its food with one foot while it feeds. It forages alone during migration and winter, rather than joining feeding flocks.

Foods taken include a wide variety of insects such as moths, beetles, ants, bees, wasps, mayflies, grasshoppers, katydids, caterpillars, praying mantises, and spiders. Berries make up more than half of the diet, especially during fall; and the berries are from wild fruit such as blackberries, elderberries, wild grapes and others.

Breeding Biology

The male Yellow-breasted Chat usually arrives in Iowa in early to mid-May and immediately establishes a territory and begins to sing. The female arrives approximately one week later.

During courtship the male displays to the female by pointing its bill upward and swaying from side to side. Flight song displays find the male flying upward singing, hovering, and dropping slowly with wings flapping over its back and legs dangling loosely before it returns to a perch.

Well-concealed nests are constructed in dense vegetation by the female, located

anywhere from 1 to 8 feet above the ground. This species occasionally will nest in loose colonies.

From 3 to 4 eggs are usually laid, but up to 6 eggs are possible. Incubation is by the female only, and lasts 11 days. Nests are commonly parasitized by Brown-headed Cowbirds, which reduce annual productivity considerably. The young are fed by both parents, and leave the nest about 8 days after hatching. Two broods are normally raised each breeding season.

Concerns and Limiting Factors

Several studies have indicated that some Yellow-breasted Chats are killed during both spring and autumn nocturnal migrations as a result of collisions with man-made objects such as communication towers, tall buildings where lights are left on all night, and the abundant windows which dominate many urban areas.

Although this species tolerates open grassy areas, any activity such as grazing that leads to disappearance of dense shrubby areas, will be detrimental. Some researchers suggest that heavy grazing will lead to a decline in chat populations.

Local breeding populations decline if secondary succession is not controlled before the canopy closes in regenerating wooded areas. In addition, this species is prone to desert eggs and nestlings after even slight disturbances around its nest.

For management purposes, further data on the relationship between breeding habitat-patch size and population density, and on the effect of patch size on nest depredation rates and rates of Brown-headed Cowbird brood parasitism, would be useful. Data on the overall effect of cowbirds on reproductive success would also aid habitat management.

Habitat Management Recommendations

Yellow-breasted Chats are adapted to exploiting patchy, short-lived shrubby and tangled habitats. In Iowa, agricultural set-aside programs that allow succession to occur over several years will create habitat for this species. The characteristics of high turnover of breeding individuals in natural populations, and rapid replacement of experimentally removed birds tell wildlife managers that creatively developing and maintaining suitable habitat can pay significant dividends.

Wherever marginal cropland is abandoned, the species will benefit from early woody stem growth until canopy closure takes place. If trees are regularly removed from power-line corridors, suitable habitat can be maintained indefinitely. The species' ability to colonize new habitat allows managers to create favorable habitat conditions following commercial harvesting of timber in Iowa and across the Midwest.

In an experiment comparing numbers in relation to 4 timber-harvesting techniques (clear-cut, shelterwood, group selection, and single-tree selection) in Missouri, numbers of chats were highest in clear-cuts. In other states higher breeding densities occurred 4 to 5 years after clear-cutting.

Despite these insights, there is little evidence of intentional management specifically to benefit this species. But this chat continues to benefit from certain unintentional land use changes such as clear-cuts and power-line clearing.

As more attention is given to IBA Criteria Species, and more and better management practices are planned and implemented across our state, the Yellow-breasted Chat will hopefully be able to sustain its population, and perhaps expand into areas where it has not been able to exist in the past.

Managing habitat for Yellow-breasted Chat is also likely to also benefit Loggerhead Shrikes, White-eyed Vireo, and Bell's Vireo – each with the same species of high conservation priority status – in Iowa. Consequently, special attention ought to be given to protecting and maintaining habitat for this entire suite of savanna/shrub species.

For general information about habitat management for the chat, see the sections on Woodland Management for Birds and Grassland Management for Birds. For more specific information, see Recommended Woodland Management Practices and Recommended Grassland Management Practices. Each of these sections is found in Part 3.