



**STATUS: HIGH  
CONSERVATION  
PRIORITY IN IOWA**

## **Worm-eating Warbler** *Helmitheros vermivorum*

### **Introduction**

The Worm-eating Warbler is a shy, difficult to observe, Neotropical migrant that breeds primarily in the southeastern United States. Its breeding range extends northward into the southern and eastern counties of Iowa, and it is one of our state's rarest breeding birds.

Less colorful and more sluggish than most of its relatives in the warbler family, the Worm-eating Warbler is an inconspicuous bird with an inconspicuous song. Even with the dry trill it sings, this species is not easy to observe among the deeply wooded hillsides it inhabits. Despite the name, this warbler does not feed on earthworms.

Based upon knowledge of its habitat, this warbler may have been more common and more widespread in Iowa prior to the clearing of so much woodland habitat.

This is one of a suite of woodland songbirds of Iowa and the eastern United States that nest on or near the ground is a species of high conservation priority in Iowa. In addition to Worm-eating Warbler, this suite of species, all of which need conservation help sooner rather than later, includes Veery, Wood Thrush, Kentucky Warbler, and Hooded Warbler. Thoughtful protection and management of woodlands can benefit each of these species at the same time when they are found together.



## Habitat Preferences

Nesting habitat is mainly where large tracts of dense deciduous and mixed woodlands overlap with moderate to steep slopes, and where patches of dense understory shrubs are found.

Worm-eating Warblers prefer cool, shaded hillsides, gullies and banks, which are found near steep, wooded slopes covered with medium-sized trees and undergrowth of saplings and shrubs. Plant composition of the wooded community appears less important to this species than forest age and size, presence of hillsides, and occurrence of dense patches of shrub cover.

No detailed information is available on habitat preferences during migration stopover and re-fueling. But these are probably restricted to deciduous and mixed deciduous-coniferous forests.

## Feeding Habits

The diet of Worm-eating Warblers is mostly insects, smooth caterpillars (once known as “worms” – hence this warbler’s name), grasshoppers, bugs, bees, walkingsticks, beetles, and spiders. Nestlings are also fed moths and grubs.

This warbler is perhaps best known for its habit of hopping through the understory and probing into suspended dead leaves for food, especially before leaves come out in spring. Foraging is also in trees and shrubs, and on the bark of tree trunks and limbs.

## Breeding Biology

Worm-eating Warblers probably arrive in Iowa in late April or early May. Territories are quickly established by the male and defended by his singing, which often takes place from high in a still leafless tree, as well as from the ground and at tree mid-level.

Males sing a varied song during flight as part of courtship. Nests are constructed by

the female, and placed on the ground, and normally on hillsides beneath or against a deciduous shrub or sapling. The nests are well concealed by dead leaves.

From 4 to 5 (but sometimes 3 to 6) eggs are laid. Incubation is by the female only, and takes 13 days. Nest parasitism by Brown-headed Cowbirds is rare in most areas, possibly because this warbler chooses to nest mainly in dense woods far from the edges of woodlands.

The young are fed by both parents, and leave the nest at only 10 days of age. There is probably only one brood per nesting season, but the female may produce up to 2 replacement clutches if earlier attempts fail.

## Concerns and Limiting Factors

As with other Neotropical migrants that migrate almost entirely at night, radio and TV transmission towers and tall buildings that remain well lighted all night, may cause significant mortality during migration. At the Kennedy Space Center in Florida, 148 Worm-eating Warblers were killed over 11 years; and at one TV tower in Leon Co., Florida, 182 were killed during 25-year period. There are thousands of similar obstructions dotting the U.S. and Western Hemisphere.

However, the key factor in the decline of Neotropical migrant songbirds lies elsewhere.

As with other species of high conservation priority in Iowa, such as Broad-winged Hawk, Black-billed Cuckoo, Chuck-will’s-widow, Pileated Woodpecker, Veery, Wood Thrush, Cerulean Warbler, Kentucky Warbler, and Hooded Warbler, the Worm-eating Warbler is seriously impacted by the loss, fragmentation and degradation of the woodlands where breeding takes place.

Alteration of essential habitats should always be the first and primary concern and limiting factor that is considered by owners

and managers of IBAs as well as non-IBA woodlands that these important species depend upon.

### **Habitat Management Recommendations**

Perpetuation of Worm-eating Warblers in Iowa will require maintenance of a system of large woodlands where this species is found, which will serve as source populations for new breeders. Large contiguous woodland areas with a minimum of non-forested edge will produce the highest densities of breeding individuals, and will increase reproductive success by decreasing cowbird parasitism and nest predation by other species. New breeders dispersing from source populations to less suitable smaller sites will help maintain regional populations.

The same general prescription holds true for Broad-winged Hawk, Black-billed Cuckoo, Chuck-will's-widow, Pileated Woodpecker, Veery, Wood Thrush, Cerulean Warbler, Kentucky Warbler, and Hooded Warbler. Each of these is a species of high conservation priority for the IBA Program in Iowa, and the number one need of each is habitat for nesting and feeding.

Members of this list of fairly resilient species appear to respond favorably wherever Iowans protect and maintain large blocks of woodland, and those essential habitats receive appropriate woodland management.

For general information about habitat management for Worm-eating Warbler, as well as for the other declining species listed above, see the sections on Woodland Management for Birds and Recommended Woodland Management Practices - both found in Part 3.