

# Golden-winged warbler, *Vermivora chrysoptera*

**Status:** *State:* Endangered (Breeding only)

*Federal:* Migratory Nongame Bird of Conservation Concern

## Identification

The golden-winged warbler is a gray bird, about 13 cm long and weighing around 9 grams, with a white belly, yellow forehead, and yellow wing patches. The male has a broad black eye patch and throat outlined in white. The female has a broad gray eye patch and throat outlined in white and her yellow forehead and wing patches are duller than the male's.

The main song, or Type I song of the golden-winged warbler is a buzzy “*bee buzz buzz*”. Each “*buzz*” is at the same frequency, which is a slightly lower than the “*bee*”, and the number of buzzes following the “*bee*” commonly vary between 1 and 4 but can go up to 6 repetitions. The alternate song, or Type II song, is variable and generally consists of rapid stutters followed by a buzzy trill. Blue-winged warblers (*V. cyanoptera*) also sing a Type II song similar to golden-winged warblers, and often times golden-winged and blue-winged warblers will sing each other's Type I songs. The call notes of golden-winged and blue-winged warblers are also a similar “*tzip*”.

## Habitat

Golden-winged warblers breed in scrub-shrub habitat in northwestern New Jersey (north of Route 80 and west of Route 287). Unlike other shrub-dependent birds, however, you are unlikely to find golden-winged warblers breeding in shrubby habitat adjacent to active farms or residential communities. They are actually forest birds that rely on patches of regenerating forest with a moderate amount of shrubs and herbaceous vegetation and either interspersed trees or use only areas relatively close (<250 m) forest edge.



Male Golden-winged Warbler  
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More than half of the remaining golden-winged warblers breeding in NJ occur on high-tension powerlines, but they can also be found in forested and shrub wetlands, in upland forest and shrubby areas adjacent to herbaceous wetlands, and upland shrubby fields. Shrubby habitats that are used by golden-winged warblers tend to be between 3 and 18 years post-management, depending on land use history and the predominant tree and shrub species in the area. Structure is more important than species composition: They need to be in a forested landscape with openings that contain tall trees (for song perches, territory defense, and foraging), shrubs and saplings (for foraging), and herbaceous vegetation (for nesting). They also prefer to be in areas with a patchy, or clustered, distribution of trees and shrubs.

Golden-winged warblers have high site fidelity and will return to the same breeding site each year, even if the habitat is altered due to mowing a part of the territory. Upon complete devastation of the habitat, however, golden-winged warblers will tend to find a new breeding territory within ½ mile of the former one.

### **Status and Conservation**

Golden-winged warblers were first noted in the Northeast in the 1800s. Surveys done in the early 1900s in the Wanaque area noted golden-winged warblers to be the 15<sup>th</sup> most common bird, more than twice as common as the blue-winged warbler. By the 1980s blue-winged warblers were more common than golden-winged warblers, and the disparity grew over the next decade as golden-winged warblers continued to decline. The Breeding Bird Survey data show that golden-winged warbler population trends have been decreasing 8.3% per year (1966-2009) in the Appalachian Mountain Region and 10.3% per year (1966-2009) in the New England/Mid-Atlantic Coast Region. By 2008, the golden-winged population breeding in NJ had decreased to about 25 breeding pairs which is ¼ the population estimated in the early 2000s. Due to the severe population declines the golden-winged warbler breeding population status in New Jersey was changed from special concern to endangered in 2012. Partners in Flight (PIF) considers the golden-winged warbler a species of high continental concern, meaning that conservation in this region is critical to the overall health of the species. Golden-winged warblers are also considered as a bird of conservation concern (FWS 2008) and near threatened (IUCN 2009).

Golden-winged and blue-winged warblers commonly hybridize where they have range overlap, which includes all of northwestern New Jersey, and produce the fertile hybrids Brewster's warbler (*V. leucobronchialis*) and Lawrence's warbler (*V. lawrencii*). Golden-winged and blue-winged warblers diverged approximately 1.5 million years ago but the clearing of forests and subsequent abandonment of farmlands from European settlement allowed for secondary contact of the two species in the late 1800s. Since then, blue-winged warblers have increased in number in the Northeast, thus increasing the level of interspecific competition and hybridization with golden-winged warblers. Therefore, blue-winged warblers, and possibly climate change, may be "pushing" the golden-winged warbler population further north and west. Forest succession and lack of forest disturbance (fire, timber harvest) and urban sprawl have also decreased available breeding habitat in the Northeast and conversion of forest into pastureland attribute to habitat loss in the wintering grounds of Central and South America, which contributes to overall population declines of golden-winged warblers.