

# MAGNOLIA WARBLER - DENDROICA MAGNOLIA

**Taxonomy:** Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Parulidae Genus: Setophaga  
Species: S. magnolia

## **Habitat:**

**Biomes:** Magnolia Warblers breed in dense stands of young conifer trees, especially spruce in the north and hemlock in the south. During migration they forage in dense areas along forest edges, woodlots, and parks. On the wintering grounds, they occur from sea level to 5,000 feet in a variety of areas including cacao plantations, orchards, forests, and thickets.

## **Distribution:**

**In US:** The magnolia warbler is found in the northern parts of some Midwestern states and the very northeastern parts of the US, with states such as Minnesota and Wisconsin comprising its southernmost boundaries. However, it is mostly found across the northern parts of Canada, such as in Saskatchewan, Manitoba, Ontario, and Quebec. During the winter, the warbler migrates through the eastern half of the United States to southern Mexico and Central America.

**In Other Countries:** ^^^^^^

**Holistic Description:** Many male warblers are black and yellow, but Magnolia Warblers take it up a notch, sporting a bold black necklace complete with long tassels, a black mask, and a standout white wing patch. The female lacks the male's bold accoutrements, instead wearing an elegant white eyering on her gray head, 2 thin white wingbars, and yellow underparts with moderate streaking. These boreal warblers breed in dense stands of conifers and stop off in all types of forests during migration, where they forage at the tips of branches.

**Species Richness:** NO SUBSPECIES

**Population Dynamic:** CHECK THREATS

## **Evolution and Systematics:**

**Evolution:** NONE

**Systematics:** Phylogenetic analyses of sequences of mitochondrial and nuclear DNA indicate that all species formerly placed in Dendroica, one species formerly placed in Wilsonia, and two species formerly placed in Parula form a clade with the single species traditionally placed in Setophaga. The generic name Setophaga has priority for this clade. See the 52nd Supplement to the AOU Checklist of North American Birds for details.

**Number of Species:** NO SUBSPECIES

**Number of Genera:** NO SUBSPECIES

## **Physical Characteristics:**

**Size and Length:** Length: 4.3-5.1 in (11-13 cm) Weight: 0.2-0.5 oz (6-15 g)

**Wingspan:** 6.3-7.9 in (16-20 cm)

**Coloration:** Adult males have a black mask and distinctive black streaking that radiates from a black neck band creating a necklaced look. Males are gray and black above with a wide white wing patch, and a yellow throat and belly. Females and immature have a gray head, a white eyering, a faint gray band across the neck, and 2 narrow white wingbars. From below on both sexes note the unique tail pattern; white at the base and black at the tip.

**General Body Features:** A small songbird with a small bill and a long, narrow tail.

**Special Features of the Body:** NONE

**Special Features of the Head and Sensory Organs:** NONE

**Dentition:** BEAK/LAMELLAE/GIZZARD

**Special Features of the Limbs and Digits:** NONE

**Any Special Internal Anatomy:** NONE

**Sexual Dimorphisms:** Breeding male gray dorsally with yellow rump; yellow ventrally with heavy black stripes. Head gray with black mask extending over bill; heavy white wing-bars fused into broad white patch. Breeding female typically has less well-marked face mask and gray forehead; less conspicuous wing-bars; subdued breast striping. Adult males and immature in fall resemble breeding females but are duller overall; ventral striping much reduced.

**Differences Between Juvenile Stage and Adult:** Immature warblers also resemble the same dull coloration of the females. The yellow and black-striped stomachs help one to distinguish the males from other similar birds, like the prairie warbler and Kirtland's warbler.

## **Behavior:**

**Diurnal, Nocturnal, or Crepuscular:** Diurnal

**Activity:** Magnolia Warblers hop from branch to branch in dense stands of young conifer trees. They pick insects primarily from the undersides of conifer needles and foliage. Males sing most intensely at dawn and dusk and even sing while foraging.

Males court females with song and show off the white spots on their tail, similar to the behavior of an American Redstart. To warn a territory intruder, males also spread their tail, flashing their white tail spots. Males and females maintain a shared territory on the breeding grounds, but separate territories on the wintering grounds. During migration they frequently join foraging flocks of chickadees, and they join mixed-species flocks on the wintering grounds.

**Locomotion:** Hops on arboreal surfaces while feeding. Flight direct, short flights between foraging locations.

**Communication and Perception:** Male Magnolia Warblers sing a very short, 1-second song; a whistled weta, weta, WETA, with the last notes generally being the loudest and most emphatic. The first notes in the song are fast, alternating between higher and lower pitches, ending with an emphatic slide. They also sing a second type of song at dawn and dusk that lacks the louder final note.

**Home Range:** No specific information, but territorial both summer and winter. Join mixed species flocks during foraging and in migration. Occupies all-purpose territories.

**Degree of Sociality:** Does not associate with conspecifics except in breeding season. In post-breeding period, often joins mixed-species flocks, particularly those centered on Black-capped Chickadees, and commonly joins mixed-species flocks during migration and on wintering grounds.

**Level of Aggression:** Males chase other males, and occasional bill-feather contact made. Males display before territorial intruders by showing white markings with spread tail and wings in circling flight. Higher-intensity interactions involve chases and fights, accompanied by rapid volley of chip notes and bill snaps.

**Migration:** Long-distance migrant. Migrates at night with other songbirds. In the fall birds tend to fly following a more easterly route, but take a more central route in the spring.

#### **Predators:**

**Predators:** Gray Jay (*Perisoreus canadensis*) reported capturing a Magnolia Warbler in flight (Barnard 1997). Sharp-shinned Hawks (*Accipiter striatus*) suspected as predators on adults and nestlings, and Red Squirrels (*Tamiasciurus hudsonicus*) as possible predators on nestlings. Blue Jays (*Cyanocitta cristata*) and Common Crows (*Corvus brachyrhynchos*) mentioned as possible nest predators. Respond to playbacks both of Eastern Screech-owl (*Megascops asio*) and Ferruginous Pygmy-owl (*Glaucidium brasilianum*), potential predators found in the warbler's breeding and wintering areas, respectively.

**Anti-Predator Defenses:** Male observed to follow Blue Jays while giving sharp, high-pitched chip note.

#### **Diet and Nutrition:**

**Adult Diet:** Magnolia Warblers primarily eat caterpillars, especially spruce budworm when it is abundant. They also eat insects and spiders and occasionally take fruit in the fall. They tend to forage on the outer edges of branches, searching the undersides of needles and leaves for prey.

**Juvenile Diet:** ^^^^^^^^^

**Special Adaptations for Getting Prey:** Feeds alone. Gleans insects, primarily on underside of conifer and broad-leaved vegetation. Hovering (including some flycatching) can sometimes be as common as gleaning.

#### **Reproduction:**

**Mode of Reproduction:** Monogamous

**Mating System:** Monogamous. No data on population sex ratio.

**Mating Season:** April to June

**Courtship:** When female enters territory, male stops singing and follows her from branch to branch with spread tail and wings. Female may also display by spreading tail. Precopulatory displays and copulation not described.

**Territoriality:** HOME RANGE

**Mating:** NONE

**Nest Placement:** Magnolia Warblers nest in dense conifers such as spruce, balsam fir, and hemlock. The nest is typically on a horizontal branch close to the trunk of the tree and is less than 10 feet above the ground.

**Nest Description:** Males and females weave together a sloppy and flimsy-looking nest of grasses and weed stalks built on a foundation of twigs. They line the nest with horsehair fungus.

**Egg-Laying:** Clutch Size: 3-5 eggs Number of Broods: 1-2 broods Egg Length: 0.6-0.7 in (1.5-1.8 cm) Egg Width: 0.4-0.5 in (1.1-1.3 cm) Incubation Period: 11-13 days Nestling Period: 8-10 days Egg Description: White, with variable speckles or spots.

**Hatching and Incubation/Gestation:** Helpless with tufts of black down.

**Development:** Naked except for a few tufts of black down. Eyes closed. Bare parts orange-red. Young altricial, depend on adults for care. No information on mass or linear measurements.

Parental Care: Precise time of first feeding not described. Both parents feed. In 26.5 h of observation, males fed 118 times and females 91. Young fed by regurgitation for first 3 d. Food mostly larvae with some spiders and grasshoppers in late stages, but no quantitative studies available.

Lifespan: Up to 9 years old.

**Conservation:**

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Magnolia Warblers are common and their populations increased by almost 1% per year from 1966 to 2015, according to the North American Breeding Bird Survey. Partners in Flight estimates the estimated global breeding population at 39 million. The species rates a 7 out of 20 on the Continental Concern Score, which means it is not on the Partners in Flight Watch List and is a species of low conservation concern.

Conservation Efforts: ^^^^^^

**Extra Facts:**

1. Though it has very specific habitat preferences in the breeding season, the Magnolia Warbler occupies a very broad range of habitats in winter: from sea level to 5,000 feet in cacao plantations, orchards, forests, and thickets.
2. In 1810, Alexander Wilson collected a warbler from a magnolia tree in Mississippi, giving it the English name "Black-and-yellow Warbler" and "magnolia" for the scientific species name, which became the common name over time.
3. The male Magnolia Warbler has two songs. The first song, issued in courtship and around the nest, consists of three short phrases with an accented ending. The second song, possibly issued in territory defense against other males, is similar to the first but is sweeter and less accented.
4. The oldest recorded Magnolia Warbler was a male and at least 8 years, 11 months old when he was recaptured and rereleased during banding operations in Ontario. He had been banded in the same area.

**Notable Species**: NONE