

WARBLING VIREO - VIREO GILVUS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Vireonidae Genus: Vireo
Species: V. gilvus

Habitat:

Biomes: During breeding season, Warbling Vireos occur in mature deciduous woodlands from sea level to an elevation of about 10,500 feet—especially along streams, ponds, marshes, and lakes, but sometimes in upland areas away from water. They also take up residence in young deciduous stands that emerge after clearcutting. They are rarely found in purely coniferous forests. Warbling Vireos often nest in around people, including in neighborhoods, urban parks, orchards, and campgrounds. Their winter range, which extends through western Mexico and northern Central America, is much smaller than their breeding range. It includes diverse habitats, from shade-coffee plantations to thorn forests to pine-oak woodland. During the winter in western Mexico, this bird almost always hangs out with mixed-species feeding flocks.

Distribution:

In US: Its breeding habitat is open deciduous and mixed woods from Alaska to Mexico and the Florida Panhandle. It often nests along streams. It migrates to Mexico and Central America. The **western warbling vireo, V. swainsoni, includes V. g. swainsoni**, which breeds from southeastern Alaska and southwestern Northwest Territories to the Sierra San Pedro Mártir, Baja California, and V. g. brewsteri, which breeds from southern Idaho, Wyoming, and Montana to south-central Oaxaca. These two subspecies winter in Mexico. The swainsoni group also includes V. g. victoriae, an isolated population breeding in the Sierra de la Laguna, Baja California Sur, and migrating to unknown wintering grounds. The eastern warbling vireo, **V. gilvus**, breeds from central Alberta and northern Montana east and south through most of the United States and parts of southern Canada, outside the range of the previous group. It winters south of the Isthmus of Tehuantepec from south-central Chiapas to Nicaragua. It completes its autumn molt on the breeding grounds, while the swainsonii group completes it after leaving.

In Other Countries: NONE

Holistic Description: The rich song of the Warbling Vireo is a common sound in many parts of central and northern North America during summer. It's a great bird to learn by ear, because its fast, rollicking song is its most distinctive feature. Otherwise, Warbling Vireos are fairly plain birds with gray-olive upperparts and white underparts washed with faint yellow. They have a mild face pattern with a whitish stripe over the eye. They stay high in deciduous treetops, where they move methodically among the leaves hunting for caterpillars.

Species Richness: 5 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: NONE

Systematics: Populations in western North America (se. Alaska, s. Yukon Territory, n. Alberta south through Rocky Mtns.) have slighter bill that is less swollen (smaller average depth and width) and more extensively dark upper mandible than eastern populations (central Alberta south and east).

Number of Species: 5 SUBSPECIES

Number of Genera: 5 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 4.7-5.1 in (12-13 cm) Weight: 0.3-0.6 oz (10-16 g)

Wingspan: 8.7 in (22 cm)

Coloration: Warbling Vireos are gray-olive above and whitish below, washed on the sides and vent with yellow. They have a dark line through the eye and a white line over the eye. The lores (the area between the eye and bill) are white in most individuals. Typically, the brightest plumage on Warbling Vireos is on vent or flanks. Worn midsummer birds can be nearly entirely gray above and whitish below.

General Body Features: Warbling Vireos are small, chunky songbirds with thick, straight, slightly hooked bills. They are medium-sized for vireos, with a fairly round head and medium-length bill and 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: Songbird feet characteristically have three toes pointed forward and one toe pointed to the rear. This toe arrangement is known as "Anisodactyl." Songbird feet also have very little feeling due to a limited supply of nerves and blood supply. This adaptation allows songbirds to land on cold wires and perches when it is cold outside.

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: Sexes alike and plumages similar throughout year (except as noted above), although some plumage characters and measurements vary slightly with age, sex, and subspecies. Males of both subspecies had significantly longer tails than females.

Differences Between Juvenile Stage and Adult: Juveniles duller than adults overall, averaging more brownish, with very pale cinnamon or buffy wing-bars.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Warbling Vireos spend most of their time in the treetops of deciduous woods. Males are highly territorial and spend much of their time during the breeding season singing. They usually arrive on their breeding grounds before females, immediately commencing a singing-and-patrolling campaign to establish and defend territory. During courtship, a male approaches his prospective mate head-on, rhythmically weaving his body from side to side. With quivering wings, he closes the gap between them to about an inch, whereupon the female strikes repeatedly at his open bill with her closed one. While their nest is under construction, a male Warbling Vireo spends about a third of his time guarding the female. During incubation, the female stays on the nest at night while her mate sleeps in a nearby tree. Both sexes help raise their young to fledging stage, but females do the lion's share. When parents are feeding young, one adult often waits at the nest until the returning partner signals with a call—ensuring that one parent is always with the nestlings. As hatchlings mature, feedings become more frequent. At one nest where young were close to fledging, an observer recorded 29 feeding visits within one hour. Both sexes ferociously mob jays, grackles, and other birds that approach their nests. Other probable nest predators include red and western gray squirrels.

Locomotion: NONE

Communication and Perception: Male Warbling Vireos sing a rapid, undulating, highly variable song with a rich, burbling quality lasting about 3 seconds. The song usually concludes with an accented note pitched higher than the preceding melody. Males sometimes sing from the nest.

Home Range: Territory sizes as follows: 2 pairs in Arizona both 1.2 ha. Few intense territorial interactions. Male usually arrives on breeding grounds before female and begins singing immediately. Territories established and defended by male song, chasing of intruders and patrolling of territory boundaries. Primary territorial defense is exchange of song.

Degree of Sociality: During nest-building period, females (and sometimes males) may forage outside of territory and enter nearby territories to steal nesting material from other nests. Sometimes intruder(s) attacked by territory owners.

Level of Aggression: Aggressive (chasing) toward non-vireo intruders, but not toward Red-eyed or Yellow-throated (Vireo flavifrons) vireos singing in Warbling Vireo territories. Majority of interspecific encounters occur within 10 m of nest, primarily during nest-building period.

Migration: Medium- to long-distance, nocturnal migrant. Some birds in Mexico may be nonmigratory.

Predators:

Predators: Steller's Jays, Western Scrub Jays Common Grackles, Red and Gray Squirrels.

Anti-Predator Defenses: Both sexes approach predator and "mob" it, near nest, and give frequent harsh Eeah and Shush calls. When in physical contact with predator, snaps bill and gives Shush Calls. Other species, such as Western Wood-Pewee, observed joining "mob" in response to calls of vireos. Usually exits nest in order to "mob" as soon as predator discovered in area.

Diet and Nutrition:

Adult Diet: Warbling Vireos eat mainly caterpillars, pupae, and adult moths and butterflies. They also eat ladybugs, beetles, bugs, bees, ants, wasps, and spiders. In fall and winter they add elderberries, poison oak berries, and other fruit to their diet. They forage mainly in treetops, gleaning insects from leaves and sometimes twigs; they also hunt by hovering, stalking, hawking, and flycatching. To subdue caterpillars and other larger prey, a Warbling Vireo whacks victims forcefully against its perch. Breeding pairs forage alone during the breeding season; at other times individual Warbling Vireos forage in mixed-species flocks.

Juvenile Diet: ^^^^^^^^

Special Adaptations for Getting Prey: Forage alone and with mate during breeding season; member of mixed-species flocks in nonbreeding season. Foraging behavior highly plastic or opportunistic, responding to changes in vegetation structure and annual variation in resource availability and distribution. Upon securing a large prey item, whacks it forcefully against perch until subdued.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Monogamous; no reports of polygamy or polyandry. No information on sex ratio.

Mating Season: SUMMER

Courtship: Male spreads tail fully and moves body from side to side, weaving it in a rhythmic fashion while oriented with head toward female, sometimes giving Courtship Call. Male continues to approach female with short hops, maintaining above attitude. With female in close proximity, male keeps tail closed and contour feathers of vent fluffed, wings slightly quivering, and bill opened, exposing inner lining. Continuing his “weaving” advance, head still oriented toward female's head, male approaches to within 3 cm, whereby she strikes repeatedly with her closed bill at his open one. Various graded display features, with flexibility of components probably occur and contribute to pair bond and courtship.

Territoriality: HOME RANGE AND LEVEL OF AGGRESSION

Mating: Copulation almost always occurs within 10 m of nest. Female gives Courtship Call just prior to or just after a copulatory event. Female solicits copulation by giving Courtship Calls and Wing-Quivers.

Nest Placement: Warbling Vireos nest in the outer portions of deciduous trees and tall shrubs from 3 to 140 feet above the ground. The female selects the site, sometimes placing nesting material in several locations before making a final choice.

Nest Description: Warbling Vireos weave a rough, slightly rounded hanging cup, usually suspending the nest from a horizontally forked twig. The nest may consist of plant matter, cobwebs, lichen, animal hair, and rarely feathers. Nests may contain willow down, dry grass, leaves, rootlets, horsehair, cow hair, spider silk, cocoons, cotton, birch bark, paper, thread, and string. Females do most of the building, sometimes stealing material from the nests of neighbors. The nest is about 3 inches across and 2 to 3 inches deep, with an inner cup about 2 inches across and 1.5 inches deep.

Egg-Laying: Number of Broods: 1-2 broods Egg Length: 0.7-0.8 in (1.8-2 cm) Egg Width: 0.5-0.6 in (1.3-1.5 cm) Incubation Period: 12-14 days Nestling Period: 13-14 days Egg Description: White with a few scattered dots of reddish or dark brown.

Hatching and Incubation/Gestation: Helpless, naked, with dark-yellow skin except for tufts of light-brown down, eyes closed.

Development: Altricial, naked, except for tufts of down; eyes closed; skin dark yellow; down light brown; mouth orange; gape flanges yellow.

Parental Care: Both sexes brood young until fledging, although brooding by both sexes decreases during nestling period. Females brood a significantly greater portion of time than males. Both sexes feed chicks on nest. When feeding, 1 adult often stays at nest waiting for approaching adult to vocalize before leaving.

Lifespan: Usually around 8 years, up to 13 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Warbling Vireos are numerous and their numbers experienced a slight overall increase between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates the global breeding population at 51 million, with 44% breeding in Canada, 53% spending part of the year in the U.S., and 87% of the population spending part of the year in Mexico. Warbling Vireos rate an 8 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Population gains may result from this species' increasing adaptation to suburban environments. Warbling Vireos may also benefit from new habitat created when coniferous forests are cleared, leaving large deciduous trees near open spaces. Population declines recorded in the mid-twentieth century have been attributed to the spraying of shade trees with chemical pesticides. One study found severe declines in herbicide-thinned deciduous forests, while numbers increased in plots thinned by hand and in control plots. Degradation of streamside habitat causes populations to decline. Warbling Vireos also die from collisions with communications towers and other tall structures during nighttime migration. Because Warbling Vireos crowd into a winter range disproportionately smaller than their breeding range, habitat conservation in their wintering areas is important.

Conservation Efforts: ^^^^^

Extra Facts:

1. Warbling Vireos have a good name—the males sing a fast, up-and-down, rollicking song that suits the word “warbling.” The early twentieth century ornithologist William Dawson described the song this way: “fresh as apples and as sweet as apple blossoms comes that dear, homely song from the willows.” The highly variable song usually ends on a high note, leading the birder Pete Dunne to describe it as sounding “like a happy drunk making a conversational point at a party.”
2. Across their wide range, Warbling Vireos differ from one population to another in several characteristics, including overall size, bill shape, plumage coloring, molt patterns, wintering areas, and vocalizations. The differences are

significant enough to lead ornithologists to recognize six separate subspecies of Warbling Vireo, and at one time divided them into two species.

3. Brown-headed Cowbirds frequently deposit their own eggs in the nests of Warbling Vireos. In some instances, the vireo pair incubates the alien egg and raises the young cowbird until it fledges. Female vireos in some eastern populations, however, tend to puncture and eject interlopers' eggs.
4. Researchers speculate that Warbling Vireo song is at least partially learned rather than hard-wired. They base this supposition in part on observations of one individual whose song more closely resembled that of a Red-eyed Vireo than that of its parents. The garbled song, they concluded, probably resulted from a flawed learning process during the bird's development.
5. The longest-lived Warbling Vireo on record—a male that was originally banded in July 1966—was at least 13 years, 1 month old when it was recaptured and rereleased during banding operations in California.

Notable Species:

1. Western Warbling-Vireo (Swainsoni Group).

- a. V. g. Swainsoni - Breeds in western and northwestern portion of species' range from se. Alaska and sw. Northwest Territories south through n. Montana and s.-central Oregon, then along Pacific coastal slope south to n.-central Baja California Norte.
- b. V. g. Brewsteri - Breeds Rocky Mtns. region from sw. Montana, s. Idaho, s. Wyoming, and w. South Dakota south through sw. Texas and w. Mexico to s.-central Oaxaca.
- c. V. g. Victoriae - Breeds Sierra de la Laguna (formerly Victoria Mtns.) in Cape Region of s. Baja California Sur.
- d. V. g. Sympatrica - Said to be resident in mountains of e.-central and n. Puebla. Browner on crown and more contrasted to back than other races.

2. Eastern Warbling-Vireo (Gilvus Group).

- a. V. g. Gilvus - Breeds across e. North American part of range from parkland regions of central Alberta and n. Montana eastward.