

= Red warbler =

The red warbler ( *Cardellina ruber* ) is a small passerine bird endemic to the highlands of Mexico , north of the Isthmus of Tehuantepec . It is closely related to , and forms a superspecies with , the pink @-@ headed warbler of southern Mexico and Guatemala . There are three subspecies , found in disjunct populations , which differ primarily in the color of their ear patch and in the brightness and tone of their body plumage . The adult is bright red , with a white or gray ear patch , depending on the subspecies ; young birds are pinkish @-@ brown , with a whitish ear patch and two pale wingbars .

Like all New World warblers , the red warbler is an insectivore . It gleans primarily in understory shrubs . Breeding typically occurs between February and May . The female lays three or four eggs in a domed nest , which she builds on the ground . Though she alone incubates the eggs , both sexes feed the young and remove fecal sacs from the nest . The young fledge within 10 ? 11 days of hatching .

= = Taxonomy = =

When he first described the red warbler in 1827 , naturalist William John Swainson assigned it to the genus *Setophaga* . Over the next half century , other naturalists moved it to *Cardellina* , with the red @-@ faced warbler , and to the widespread tropical warbler genus *Basileuterus* , as well as to the Old World warbler genus *Sylvia* and the Old World tit genus *Parus* . In 1873 , naturalists Philip Lutley Sclater and Osbert Salvin moved the species to the genus *Ergaticus* , where it remained for more than a century .

There are three subspecies , which differ slightly in appearance :

*C. r. ruber* , described by Swainson in 1827 , has white ear patches and is found from southern Jalisco and southern Hidalgo to Oaxaca .

*C. r. melanauris* , which was described by Robert Thomas Moore in 1937 , has dark gray ear patches and somewhat more scarlet upperparts than *C. r. ruber* . It is found from southwestern Chihuahua to northern Nayarit .

*C. r. rowleyi* was described by R. T. Orr and J. D. Webster in 1968 . It has white ear patches and ruby @-@ red upperparts ( brightest of the three subspecies ) , and is found in the Sierra Madre del Sur , from Guerrero to southern Oaxaca .

The red warbler forms a superspecies with the pink @-@ headed warbler of Chiapas and Guatemala , to which it is closely related . Despite their disjunct ranges and considerably different plumages , the two have sometimes been considered conspecific . Conversely , it has also been suggested that the red warbler should be split into a northern gray @-@ eared species ( *C. melanauris* ) and a southern white @-@ eared species ( *C. ruber* ) .

The red warbler 's common name is a straightforward reference to its color . The genus name *Cardellina* is the diminutive of the Italian *cardella* , a regional name for the European goldfinch , while its specific name , *ruber* , is Latin for " red " .

= = Description = =

The red warbler is a small passerine , measuring 12 @.@ 5 ? 13 @.@ 5 cm ( 4 @.@ 9 ? 5 @.@ 3 in ) in length , and weighing from 7 @.@ 6 to 8 @.@ 7 g ( 0 @.@ 27 to 0 @.@ 31 oz ) . As an adult , it is red overall , with either a white or dark gray ( depending on the subspecies ) auricular patch on each side of its head . Its slightly darker wings and tail are edged in pinkish @-@ red . Its legs are flesh @-@ colored , and its flesh @-@ colored bill shows a dark tip . The feathers of this species contain alkaloids , which render the bird unpalatable ; humans find it inedible .

As a juvenile , the red warbler is pinkish @-@ brown with a whitish auricular patch . Its darker wings and tail show pinkish @-@ cinnamon edges , with two paler wingbars on the former .

= = = Voice = = =

The red warbler has several common calls , including a high , thin tsii and a stronger pseet . Its song is a mix of short trills and richer warbles , interspersed with high @-@ pitched chips . Unlike other species in the same habitat zone , it tends to sing only during bright morning hours during the breeding season ; regardless of season , it does not sing ? and even its calling frequency decreases ? in cloudy weather .

= = Habitat and range = =

Endemic to the highlands of Mexico north of the Isthmus of Tehuantepec , the red warbler has three disjunct populations : from southwestern Chihuahua to northern Nayarit , from southern Jalisco and southern Hidalgo to Oaxaca , and from Guerrero into southern Oaxaca in the Sierra Madre del Sur . It is fairly common to common in the interior and on adjacent slopes , where it occurs at elevations ranging from 1 @, @ 800 to 3 @, @ 900 metres ( 5 @, @ 900 to 12 @, @ 800 ft ) above sea level . It is an altitudinal migrant , moving from higher humid or semi @-@ humid pine , pine @-@ oak and fir forests in the breeding season to lower elevations , often in oak forests , in the winter . It is among the most common of the small birds in its woodland habitat , second only to the golden @-@ crowned kinglet in fir forests in one study and the third most common warbler in oak @-@ conifer woodlands in another .

Though the species was reported to have been collected in Texas in the late 19th century , the record 's location was not widely believed , and there is no strong evidence that it ever occurred there .

= = Behavior = =

Though it sometimes joins mixed @-@ species flocks , the red warbler is more typically found alone or in pairs . Youngsters probably choose mates in the autumn of their first year , and pairs remain together year @-@ round , except during severe weather and during post @-@ breeding molt .

= = = Food and feeding = = =

The red warbler is an insectivore . It gleans primarily in understory shrubs at low to middle levels , moving slowly and deliberately through more open areas of the vegetation , and feeding with quick jabs into cracks in bark and pine needle clusters . It sometimes hover gleans to feed at pine needle clusters . Though it lacks any obvious adaptations for climbing , it regularly does so in its search for prey items on bark and epiphytes on branches , often hanging head @-@ down as it probes . In areas of deciduous growth , it typically flycatches , making brief aerial sorties from a perch in pursuit of flying insects . While it seldom associates with mixed @-@ species flocks , it feeds alongside other birds with no signs of conflict , displaying no hostility towards other species with which it competes . Its foraging area is quite small , often amounting to only a few dozen square meters ( several hundred square feet ) per day . Late in the afternoon , its rate of foraging declines , and it rests , often taking brief naps , in the forest understory . Though it does not generally feed after sunset , it may do so to take advantage of transient food sources , such as hatching Neuroptera .

= = = Breeding = = =

The red warbler breeds primarily in early spring , from February until May , though at least one nest containing young has been found as late as the end of June . The female alone builds the nest , a task which typically takes 4 ? 6 days . She chooses a sunlit area , such as an area of windfall , the brushy edge of a trail or water course , or a small clearing , for its location . Tightly woven of plant material , the nest is hidden in ground vegetation and anchored to the stalks of surrounding vegetation . Bulky and untidy on the outside , it is typically constructed primarily of dead pine needles and dead grass , though gray lichens , green moss , dead leaves , shreds of bark and tips

of fern fronds are also used ; most of these materials are gathered from the ground close to the nest , though some is picked from low branches or further away . The nest , which is usually oven @-@ shaped with a side or upward @-@ facing entrance , measures roughly 6 in ( 15 cm ) wide by 7 in ( 18 cm ) long by 4 @.@ 5 in ( 11 cm ) high . A small number of nests are only cups , lacking the roof of the more typical structures . Inside , the nest is tidy and compact , lined with fine grasses and plant fluff , which is generally gathered some distance from the nest .

Early in the breeding season , as many as 11 days may transpire between the completion of the nest and the laying of the first egg . Later in the season , this time decreases so that the first egg is laid as soon as the nest is ready . The female normally lays three eggs , though clutches of up to four have been recorded . The eggs , which are variously described as pale pink with evenly distributed brown spots or white with cinnamon and rust spots densely ringing the larger end of the egg , measure 16 ? 17 mm ( 0 @.@ 63 ? 0 @.@ 67 in ) by 13 mm ( 0 @.@ 51 in ) and weigh 1 ? 1 @.@ 4 g ( 0 @.@ 035 ? 0 @.@ 049 oz ) . The female alone incubates the eggs for 16 days ; the male does not even approach the nest until several days after the eggs hatch . She sits facing the back wall of the nest , with her head and body sheltered by its roof and her tail sticking out the opening . She sits tight at the approach of danger , typically not flying until a potential predator actually makes contact with the nest .

Both adults feed the nestlings and remove fecal sacs , though the female removes far more than the male does . The pair move deceptively when approaching the nest , foraging ? or pretending to forage ? in nearby vegetation . They stay only a few seconds in any one spot , including at the nest , making it more difficult for a predator to locate the young . The nestlings , which make a rapid , high @-@ pitched peeping call as an adult approaches carrying food , fledge within 10 ? 11 days of hatching .

= = Conservation and threats = =

The red warbler is currently rated as a species of least concern by the International Union for the Conservation of Nature . Though there is evidence that its numbers are decreasing , the decline has not been precipitous , and the population remains quite large , with estimates ranging from 50 @,@ 000 to 499 @,@ 999 birds . The forested areas in which it occurs , however , include some of the most threatened habitats in Mexico , with logging , agricultural expansion , firewood gathering , road building , tourist development , overgrazing and intensive urbanization among the many things contributing to the destruction of the forests . There is some evidence that selective logging in pine forests may actually favor this species , which prefers more open , sunlit areas in which to breed .

= = Note = =