

= Curve @-@ billed thrasher =

The curve @-@ billed thrasher (*Toxostoma curvirostre*) is a medium @-@ sized mimid that is a member of the genus *Toxostoma* , native to the southwestern United States and much of Mexico . Referred to as the desert bird , it is a non @-@ migratory species . Several subspecies have been classified since 1827 , though there is no consensus on the number . Allopatric speciation is believed to have played a major role in the variations of the curve @-@ billed . It shares striking similarities in appearance with another *Toxostoma* member , Bendire 's thrasher . Nevertheless , it is recognized for its grey color and sickle @-@ shaped bill . It generally resides in desert regions of the United States and Mexico , but can inhabit areas predominately populated by humans .

The demeanor of the curve @-@ billed has been described as " shy and rather wild " , but it allows humans to view it closely . It is very aggressive in driving out potential threats , whether competitors for food or predators of its chicks . The curve @-@ billed thrasher sometimes mimicks several other species , though not to the extent of other mimids . It has a variety of distinctive songs , and this extensive repertoire of melodies has led it to be known as cuitiacoache (songbird) in Mexico .

= = Taxonomy = =

The species was first named *Toxostoma curvirostre* by William John Swainson in 1827 . Since then , six subspecies have been recognized , and have been divided into two branches . Genetic research has indicated that the curve @-@ billed thrasher is the sister species of a clade consisting of the ocellated thrasher , brown thrasher , long @-@ billed thrasher , and Cozumel thrasher . This contrasts with an earlier suggestion that curve @-@ billed and ocellated thrashers are closest relatives .

= = Subspecies = =

Eastern : *T. c. oberholseri* (Law , 1928) Brownsville thrasher . Generally ranges from SE Texas to NE Mexico (E Coahuila , Nuevo León and Tamaulipas)

T. c. curvirostre (Swainson , 1827) Ranges from Central to South @-@ Central Mexico (towards Pueblo , Oaxaca , and Veracruz) .

T.c. celsum (R. T. Moore , 1941) plateau thrasher . Range spans from SE Colorado , SW Kansas , extreme NW Oklahoma to S / SE Arizona , S New Mexico and W Texas to Northern Mexico (E Chihuahua to Guanajuato and Jalisco)

Western : *T. c. insularum* (van Rossem , 1930) San Esteban thrasher . Located in the Islands of San Esteban and Tiburón off the coast of Sonora in the Gulf of California .

T. c. maculatum (Nelson , 1900) spotted thrasher . Found in NW Mexico (S Sonora , N Sinaloa , SW Chihuahua)

T. c. occidentale (Ridgway , 1882) Mazatlan thrasher . Located in Western Mexico (from Sinaloa and Nayarit to Jalisco) .

T. c. palmeri (Coues , 1872) Palmer 's thrasher . Range is S Arizona , N Sonora and Chihuahua . This species is the representative of the western species , and was suggested to have enough variations to be considered a different species from *T.c. curvirostre* . *T.c. palmeri* was also used in a 2009 proposal by the American Ornithologists ' Union to be elevated to species status , along with the eastern *T.c. curvisrostre* representing the eastern curve @-@ billed thrashers .

= = Description = =

The curve @-@ billed thrasher generally measures 25 to 28 cm (10 to 11 in) long , and is immediately recognized as a thrasher by its long tail and short wings . It is also recognized for its sickle @-@ shaped bill , almost as long as its head width and brownish @-@ black in color . The body is compact with a large head , short wings and long tail . However , the tail is short relative to other thrasher species . The chest is grayish @-@ brown with circular brown @-@ gray spots . The

eyes are generally orange , shading to golden in adulthood . Juveniles are lacking in pale tips , retrices , abdominal feathers are unkempt and upper parts and chest are washed rufously .

Variations are markedly different with each subspecies . The eastern subspecies has more distinct spots on its chest , more white along the tips and retraces and obvious wing bars . T.c. palmeri has less spotting on chest and tips and less obvious wing bars . Other examples include T.c. curvirostre possessing longer wings and a tail than T.c. oberholseri ; T.c. insularum is paler with more grey than T.c. palmeri and has more visible spotting on its breast .

One study published in 2003 suggested that curve @-@ billed speciation was due to climate , which could be explained by molt and feather wear . The same study suggested that the Sierra Madre Occidental acts as a barrier to initiate differentiation within the species .

= = = Similar species = = =

Because its coloration is similar to Bendire 's thrasher , the two birds are easily mistaken for one another . The bill of the curve @-@ billed is all black , while that of Bendire 's is paler down to the lower mandible , showing a dark grey with a basal area that does not feature a stark contrast . The upper and lower mandibles of the curve @-@ billed are curved , while the upper is curved and lower is essentially straight for the Bendires ' . Although geographic variances for the curve @-@ billed can make discerning breast patterns difficult , the curve @-@ billed has a tendency to display larger and rounder spots overall on its breast , in contrast to the Bendires ' smaller , more pronounced markings shaped like arrowheads . However , curve @-@ billed thrashers can also present this feature . Bendires ' typically have yellow eyes while curve @-@ billed eyes are typically orange , but Bendires ' can have variations that appear yellow @-@ orange while some curve @-@ billed eyes are red @-@ orange , yellow @-@ orange , or yellow . The curve @-@ billed is heavier and is more likely to inhabit suburban regions ; Bendires ' are likely to avoid dense vegetation such as mesquite and prefers open grassland with scattered yucca or around hedgegrows in agricultural areas . The song call of Bendire 's is said to be more melodic and continuous with a chuck , while the curve @-@ billed is known for its whit @-@ wheet calls .

Some of the aforementioned differences , such as streaks on the breast , bill shape and eye color are even more prominent in juveniles of the two species .

= = Habitat and range = =

The curve @-@ billed thrasher is commonly found throughout the southwestern United States from Arizona 's Sonoran Desert across New Mexico to west Texas , southeastern Colorado and southwestern Kansas as well as most of Mexico from the Sonoran @-@ Chihuahuan Deserts and south through the Mexican Plateau into Central Tamaulipas , inland to Oaxaca , and on the coast of Sonora to Nayarit . Vagrants have been found in bordering states of its range , as far north as North Dakota , Alberta and Manitoba and as far east as Florida . Palmeri types have been spotted in Florida , while curvirostre have been found in Iowa on several occasions . Other than previously noted exceptions , the curve @-@ billed is essentially non @-@ vagrant .

In comparison with other desert thrashers , the curve @-@ billed is not as particular with habitats and can be found from ground level up to 3 @, @ 000 m (9 @, @ 800 ft) . It generally resides where cholla and saguaro cacti , ocotillo , mesquites , palo verde , and creosote bushes are prevalent . It can also be located along woodland edges , piñon , dry desert bushland and areas within its region where cacti are present . If there is an adequate amount of desert vegetation near human habitation , along with feeders , the curve @-@ billed can adapt within these environments .

= = Behavior = =

The curve @-@ billed thrasher can generally be found running rapidly from cover to cover or flying near ground level from bush to bush . However , this bird is not shy about being in the open . It is generally a forager on ground level but can be very aggressive in routing out potential competitors

for food at feeders , such as the Inca dove and round @-@ tailed ground squirrel . It will usually destroy any nest of cactus wrens .

= = = Voice and song = = =

The most distinctive voice of the curve @-@ billed is an abrupt and brash whit @-@ wheet , which sounds akin to a person whistling to get one 's attention . It is usually uttered from high perches . The songs are similar to that of the northern mockingbird but notes do not end as abruptly ; its voice is regarded as more pleasant . The curve @-@ billed can utter songs consecutively two or three times , the length spanning from 2 to 15 seconds . Some phrases are nasal and buzzy ; its large vocabulary enables it to conjure successive songs that are usually different from one another .

As a mimid it is capable of mimicking several species , including scissor @-@ tailed flycatcher , northern cardinal , pyrrhuloxia and , in one instance , a black @-@ headed grosbeak .

= = = Mating = = =

One recorded case of courtship behavior involving curve @-@ billed thrashers describes two males attacking each other vigorously and resorting to purring and hissings sounds when neither bird appeared to relent . The two males then puffed up their chests and strutted up and down in front of the female . They continued to alternate between purr and hiss and fighting one another until one triumphed . The victor flew towards the female and both chirped melodically before copulation .

= = = Breeding = = =

The curve @-@ billed breeding season begins in February and reaches an apex between March and May ; however , new fledglings have been recorded as late as August . Dates vary within its range due to temperature and rainfall . Nests are generally built at conspicuous locations , the cholla being favored . Other potential nesting sites range from mesquite , prickly pear or yucca to the occasional oak and pine trees . The nest is generally a deep cup but can be flat with a depression for the eggs . The outer layer consists of thorny twigs while the inner layer includes smooth sticks , roots , coarse and fine grasses , rootlets or hair .

Both sexes build the nest ; the building periods can be as brief as three days to as long as four weeks . Egg count differs by location ; the number has been as low as two and as high as five . Egg color varies ; they can appear bluish @-@ green to pale yellowish @-@ blue , spotted abundantly in reddish @-@ brown . Both sexes incubate but the female is mainly responsible as well as being the sole provider of brooding . Curve @-@ billed parents defend their nests fervently against other species ; snakes are the most frequent predators of eggs and nestlings . Curved @-@ billed Thrashers are rarely victims of nest parasitism by cowbirds . In situations where food is scarce , parents feed older fledglings first . The fledging period ranges from 11 to 18 days .

= = = Diet = = =

The curve @-@ billed thrasher is an omnivore . Its diet includes invertebrates such as beetles , moths , butterflies , arachnids , and snails . It also eats vegetable matter , and fruits from cacti , prickly pear , hackberries , and anacua , among other plants . The curve @-@ billed has also been spotted eating dog food , and will feed it to their chicks .