

= Brown thrasher =

The brown thrasher (*Toxostoma rufum*) is a bird in the family Mimidae , which also includes the New World catbirds and mockingbirds . The dispersal of the brown thrasher is abundant throughout the eastern and central United States , southern and central Canada , and is the only thrasher to live primarily east of the Rockies and central Texas . It is the state bird of Georgia .

As a member of the genus *Toxostoma* , the bird is a large @-@ sized thrasher . It has brown upper parts with a white under part with dark streaks . Because of this , it is often confused with the smaller wood thrush (*Hylocichla mustelina*) , among other species . The brown thrasher is noted for having over 1000 song types , and the largest song repertoire of birds . However , each note is usually repeated in two or three phrases .

The brown thrasher is an omnivore , with its diet ranging from insects to fruits and nuts . The usual nesting areas are shrubs , small trees , or at times on ground level . Brown thrashers are generally inconspicuous but territorial birds , especially when defending their nests , and will attack species as large as humans .

= = Taxonomy and naming = =

The brown thrasher was originally described by Linnaeus in his 18th century work *Systema Naturae* as *Turdus rufus* . The species name is the Latin adjective *rufus* " red " .

Although not in the thrush family , this bird is sometimes erroneously called the brown thrush . The name misconception could be because the word thrasher is believed to derive from the word thrush . The naturalist Mark Catesby called it the fox @-@ coloured thrush .

Genetic studies have found that the brown thrasher is most closely related to the long @-@ billed and Cozumel thrashers (*T. longirostre* & *guttatum*) , within the genus *Toxostoma* .

= = Description = =

The brown thrasher is bright reddish @-@ brown above with thin , dark streaks on its buffy underparts . It has a whitish @-@ colored chest with distinguished teardrop @-@ shaped markings on its chest . Its long , rufous tail is rounded with paler corners , and eyes are a brilliant yellow . Its bill is brownish , long , and curves downward . Both male and females are similar in appearance . The juvenile appearance of the brown thrasher from the adult is not remarkably different , except for plumage texture , indiscreet upper part markings , and the irises having an olive color .

The brown thrasher is a fairly large passerine , although it is generally moderate in size for a thrasher , being distinctly larger than the sage thrasher (*Oreoscoptes montanus*) but similar or somewhat smaller in size than the more brownish *Toxostoma* species found further west . Adults measure around 23 @. @ 5 to 30 @. @ 5 cm (9 @. @ 3 to 12 @. @ 0 in) long with a wingspan of 29 to 33 cm (11 to 13 in) , and weigh 61 to 89 g (2 @. @ 2 to 3 @. @ 1 oz) , with an average of 68 g (2 @. @ 4 oz) . Among standard measurements , the wing chord is 9 @. @ 5 to 11 @. @ 5 cm (3 @. @ 7 to 4 @. @ 5 in) , the tail is 10 @. @ 9 to 14 @. @ 1 cm (4 @. @ 3 to 5 @. @ 6 in) , the culmen is 2 @. @ 2 to 2 @. @ 9 cm (0 @. @ 87 to 1 @. @ 14 in) and the tarsus is 3 @. @ 2 to 3 @. @ 6 cm (1 @. @ 3 to 1 @. @ 4 in) . There are two subspecies : the ' brown thrasher ' (*T. rufum rufum*) , which lies in the eastern half of Canada and the United States , and the ' western brown thrasher ' (*T. rufum longicauda* (Baird , 1858)) , which resides in the central United States east of the Rocky Mountains and southern central Canada . The western brown thrasher is distinguished by a more cinnamon upper part , whiter wing bars , and darker breast spots than *T. rufum rufum* .

The lifespan of the brown thrasher depends on a year @-@ to @-@ year basis , as the rate of survival the first year is 35 % , 50 % in between the second and third year , and 75 % between the third and fourth year . Disease and exposure to cold weather are among contributing factors for the limits of the lifespan . However , the longest lived thrasher in the wild is 12 years , and relatively the same for ones in captivity .

= = = Similar species = = =

The similar @-@ looking long @-@ billed thrasher has a significantly smaller range . It has a gray head and neck , and has a longer bill than the brown thrasher . The brown thrasher 's appearance is also strikingly similar to the wood thrush , the bird that it is usually mistaken for . However , the wood thrush has dark spots on its under parts rather than the brown thrashers ' streaks , has dark eyes , shorter tail , and is a smaller bird .

= = Distribution and habitat = =

The brown thrasher resides in various habitats . It prefers to live in woodland edges , thickets and dense brush , often searching for food in dry leaves on the ground . It can also inhabit areas that are agricultural and near suburban areas , but is less likely to live near housing than other bird species . The brown thrasher often vies for habitat and potential nesting grounds with other birds , which is usually initiated by the males .

The brown thrasher is a strong , but partial migrant , as the bird is a year round resident in the southern portion of its range . The breeding range includes the United States and Canada east of the Rocky Mountains , but has been occasionally spotted West of the Rockies . The increase in trees throughout the Great Plains during the past century due to fire suppression and tree planting facilitated a westward range expansion of the brown thrasher as well as range expansions of many other species of birds . Studies indicate that thrashers that reside in the New England region of the United States during the breeding season fly toward the Carolinas and Georgia , birds located in the east of the Mississippi winter from Arkansas to Georgia , and birds located in the Dakotas and the central Canadian provinces head towards eastern Texas and Louisiana . When the species does migrate , it is typically for short distances and during the night . There are also records of the bird wintering in Mexico , as well as a British record of a transatlantic vagrant .

= = Behavior = =

The brown thrasher has been observed either solo or in pairs . The brown thrasher is usually an elusive bird , and maintains its evasiveness with low @-@ level flying . When it feels bothered , it usually hides into thickets and gives cackling calls . Thrashers spend most of their time on ground level or near it . When seen , it is commonly the males that are singing from unadorned branches . The brown thrasher has been noted for having an aggressive behavior , and is a staunch defender of its nest . However , the name does not come from attacking perceived threats , but is believed to have come from the thrashing sound the bird makes when digging through ground debris . It is also thought that the name comes from the thrashing sound that is made while it is smashing large insects to kill and eventually eat .

= = = Feeding = = =

This bird is omnivorous , which has a diet that includes insects , berries , nuts and seeds , as well as earthworms , snails , and sometimes lizards and frogs . Across seasons and its breeding range , it was found 63 % of stomach contents were made of animal matter , the remaining 37 % being plant material . During the breeding season , the diet consists primarily of beetles , grasshoppers , and other arthropods , and fruits , nuts and seeds . More than 80 % of the diet of brown thrasher from Illinois is made of animal matter , about 50 % being beetles . In Iowa , about 20 % of the summer diet was found to consist of grasshoppers . By the late summer , it begins to shift towards more of a herbivore diet , focusing on fruits , nuts , seeds , and grains , 60 % of the food in Illinois being fruits and seeds . By winter , the customary diet of the brown thrasher is fruit and acorns . Wintering birds in Texas were found to eat 58 % plant material (mainly sugar berry and poison ivy) and 42 % animal material in October ; by March , in the dry period when food supply is generally lower , 80 % of the food became animal and only 20 % plants . Vertebrates are only eaten

occasionally and are often comprised by small reptiles and amphibians , such as lizards , small or young snakes , tree frogs and salamanders .

The brown thrasher utilizes its vision while scouring for food . It usually forages for food under leaves , brushes , and soil debris on the ground using its bill . It then swipes the floor in side @-@ to @-@ side motions , and investigates the area it recently foraged in . The brown thrasher forages in a similar method to the Long @-@ billed thrasher and Bendire 's thrasher (*T. longirostre* & *bendirei*) , picking food off the ground and under leaf litter , whereas thrashers with sharply decurved bills are more likely to dig into the ground to obtain food . Foraging success is 25 % greater in dry leaf litter as compared to damp leaf letter . The brown thrasher can also hammer nuts such as acorns in order to remove the shell . It has also been noted for its flexibility in catching quick insects , as the amount of vertebrae in its neck exceeds giraffes and camels . In one case , a brown thrasher was observed to dig a hole about 1 @. @ 5 cm (0 @. @ 59 in) deep , place an acorn in it and hit the acorn until it cracked , considered to be a form of tool usage . In a laboratory experiment , a brown thrasher was found to be able to discern and reject the toxic eastern newt (*Notophthalmus viridescens*) and a palatable mimic of that species , the red salamander (*Pseudotriton ruber*) , but continued to eat palatable dusky salamanders (*Desmognathus* spp .) .

= = = Breeding = = =

Brown thrashers are typically monogamous birds , but mate @-@ switching does occur , at times during the same season . Their breeding season varies by region . In the southeastern United States , the breeding months begin in February and March , while May and June see the commencement of breeding in the northern portion of their breeding range . When males enter the breeding grounds , their territory can range from 2 to 10 acres (0 @. @ 81 to 4 @. @ 05 ha) . Around this time of the year the males are usually at their most active , singing blaringly to attract potential mates , and are found on top of perches . The courting ritual involves the exchanging of probable nesting material . Males will sing gentler as they sight a female , and this enacts the female to grab a twig or leaf and present it to the male , with flapping wings and chirping sounds . The males might also present a gift in response and approach the female . Both sexes will take part in nest building once mates find each other , and will mate after the nest is completed .

The female lays 3 to 5 eggs , that usually appears with a blueish or greenish tint along with reddish @-@ brown spots . There are rare occurrences of no spots on the eggs . The nest is built twiggy , lined with grass , leaves , and other forms of dead vegetation . The nests are typically built in a dense shrub or low in a tree , usually up to 2 @. @ 1 m (6 @. @ 9 ft) high , but have built nests as high as 6 m (20 ft) . They also on occasion build nests on the ground . Between eleven days to two weeks , the eggs hatch . Both parents incubate and feed the young , with the female doing most of the incubating . Nine to thirteen days after hatching , the nestlings begin to fledge . These birds raise two , sometimes even three , broods in a year . The male sings a series of short repeated melodious phrases from an open perch to declare his territory , and is also very aggressive in defending the nest , known to strike people and animals .

= = = Vocal development = = =

The male brown thrasher may have the largest song repertoire of any North American bird , which has been documented at least over 1 @, @ 100 . Some sources state that each individual has up to 3 @, @ 000 song phrases , while others stated beyond 3 @, @ 000 . The males ' singing voice usually contains more of a melodic tone than that of the related grey catbird . Its song are coherent phrases that are iterated no more than three times , but has been done for minutes at a time . By the fall , the male sings with smoother sub @-@ songs . During the winter , the males may also sing in short spurts during altercations with neighboring males .

In the birds ' youth , alarm noises are the sounds made . As an adult , the brown thrasher has an array of sounds it will make in various situations . Both male and females make smack and teeooo @-@ like alarm calls when provoked , and hijjj sounds at dusk and dawn . Others calls may consist

of an acute , sudden chakk , rrrrr , a Tchek sound in the beginning that ends with an eeeur , kakaka , and sounds reminiscent of a stick scraping a concrete sidewalk . Brown thrashers are noted for their mimicry (as a member of the family Mimidae) , but they are not as diverse in this category as their relative the northern mockingbird . However , during the breeding season , the mimicking ability of the male is at its best display , impersonating sounds from tufted titmice (*Baeolophus bicolor*) , northern cardinals (*Cardinalis cardinalis*) , wood thrushes , northern flickers (*Colaptes auratus*) , among other species .

= = Predation and threats = =

Although this bird is widespread and still common , it has declined in numbers in some areas due to loss of suitable habitat . Despite the decrease , the rate does not warrant a status towards vulnerable . One of the natural nuisances is the parasitic brown @-@ headed cowbird (*Molothrus ater*) , but these incidents are rare . Whenever these situations occur , the brown thrashers usually discard of the cowbirds ' eggs . Occasionally , the thrasher has thrown out their own eggs instead of the cowbird eggs due to similar egg size , and at least one recorded event raised a fledgling . Northern cardinals and grey catbirds are also major competitors for thrashers in terms of territorial gain . Because of the apparent lack of opportunistic behavior around species like these , thrashers are prone to be driven out of zones for territory competition . Brown thrashers have tendencies to double @-@ brood or have failures on their first nesting attempts due to predation . Grey catbirds have been seen invading brown thrashers ' nests and breaking their eggs . Other than the catbird , snakes , birds of prey , and cats are among the top predators of the thrasher . In Kansas , at least eight species of snake were identified as potentially serious sources of nest failure . Among the identified avian predators of adults are Cooper 's hawks (*Accipiter cooperii*) , northern goshawk (*Accipiter gentilis*) , broad @-@ winged hawks (*Buteo platypterus*) , merlins (*Falco columbarius*) , peregrine falcons (*Falco peregrinus*) , eastern screech @-@ owls (*Megascops asio*) , great horned owls (*Bubo virginianus*) barred owls (*Strix varia*) and long @-@ eared owls (*Asio otus*) .

The brown thrasher methods of defending itself include using its bill , which can inflict significant damage to species smaller than it , along with wing @-@ flapping and vocal expressions .

= = State bird = =

The brown thrasher is the state bird of Georgia . The brown thrasher also was the inspiration for the name of Atlanta 's former National Hockey League team , the Atlanta Thrashers .