

Red-Billed Toucan

Ramphastos tucanus

Class: Aves **Order:** Piciformes (woodpeckers & relatives)

Family: Ramphastidae (barbets and toucans)

Other names: some taxonomic classifications list the red-billed toucan as a subspecies of the white-throated toucan.

Other subspecies: It was formerly considered to be two species, with the southern and western nominate subspecies, *R. t. tucanus*, named the red-billed toucan, and the northern and eastern subspecies, *R. t. cuvieri*, Cuvier's toucan (when considered a species; *R. cuvieri*, Wagler, 1827). However, the two subspecies, which differ principally in the bill color, interbreed freely wherever they meet and therefore merit only subspecies status [1].

Other Relatives: The genus *Ramphastos*, the 'true toucans,' consists of 8 species.



Zoo Toucan 1.0.0

'Curly' 1.0 – male

DOH: unknown, approximately 2000-2002 AQ: June 2013

About Curly

Originally from Dallas Zoo, later transferred to Scovill Zoo (IL) before coming to Brandywine. He weighs around 1.5lbs.

Status

Vulnerable [2]

Geographic Region

This bird is found throughout the Amazon rainforest in countries such as Colombia, Ecuador, Peru, Bolivia, Venezuela, Brazil, Guyana, Suriname and French Guiana, east of the Rio Negro in northeast Brazil and also south of the Amazon in northern Pará and Maranhão states [3]

Habitat

Lowland tropical forest, especially old riverbeds, late stage successional forest, and mature forest near water. Also forages in secondary forest, edges, clearings, forest patches, pasture trees, plantations, gardens, mangroves etc; to 1,440 m [2]

Characteristics

Size: 50–61 cm (20–24 in) *Weight:* 425 to 830 g (0.937 to 1.830 lb)

Longevity: Wild fairly long lived-20 years [4] **Captivity**

Physical Description

- The white-throated toucan is brightly marked and has a huge bill.
- The bill is typically 14–18 cm (5½–7 in) long. The bill has a yellow tip, upper ridge, and base of the upper mandible, and the base of the lower mandible is blue.
- It has black plumage with a white throat and its breast is bordered below with a narrow red line. The rump is bright yellow and the crissum is red. The bare skin around the eye is blue [3].
- The only species of toucan that surpasses the white-throated in size is the toco toucan [3].
- Juveniles are noticeably shorter-billed, more sooty-black, and have duller plumage [3].
- The large bill has serrated, or toothed, edges that help the bird catch, grasp, and even skin whatever it might be having for lunch [5].
- The bill is of light, but stout, construction and is hollow except for a network of bony fibers that run crisscross through the top for strength and support. It is made of keratin, the same thing our hair and fingernails are made of. [5]

Dimorphism

Males: Males are larger and longer-billed than females, but otherwise the sexes are alike [4].

Females: Females generally have a higher voice than the males. [5]

Diet: Omnivore

Diet in the Wild: While primarily frugivores, feeding on a diverse variety of fruits, they also consume flowers and nectar, beetles, caterpillars, cicadas, termites, lizards, bird eggs and birds [2]

Diet in the Zoo: pelleted bird food, mixed fruit

Behavior

- *Diurnal*, day active
- The toucan is a poor flyer, moving from tree to tree mostly by hopping.

- Moves with a heavy, rather weak, undulating flight, rarely flying more than 100m (330 ft) at a time. [3]

Social Structure & Communication

- Small flocks or more commonly pairs of birds move through the forest
- Forages in the canopy singly, in pairs or small groups [2]
- Many toucan species make barking, croaking, and growling sounds. Toucans combine their extensive vocal calls with tapping and clattering sounds from their bill. Many toucan species make barking, croaking, and growling sounds [5]

Home Life

- Home for the toucan is a nest in a hollowed-out tree cavity. It might seem odd that a bird with such a large bill would choose a small, enclosed space in which to nest, but the toucan has an interesting approach to getting comfortable. Once settled in its cozy nook, the toucan turns its head backward and settles its bill down upon its back, tucked under a wing. It then flips its tail straight up and over its head. *Violà!* A nice, tidy ball of feathers! [5]

Reproduction

- The toucan lays two to four white eggs in an unlined cavity high in a decayed section of a living tree, or in an old woodpecker nest in a dead tree.
- Both sexes incubate the eggs for 14–15 days, and the toucan chicks remain in the nest after hatching.
- They are **altricial** at birth (blind and naked), with short bills, and have specialized pads on their heels to protect them from the rough floor of the nest.
- Chicks are fed by both parents, and fledge after about six weeks. The parents continue feeding the juveniles for several weeks after they have left the nest.

Conservation

- **Use & Trade:**
- **Threats:** The primary threat to this species is accelerating deforestation in the Amazon basin as land is cleared for cattle ranching and soy production, facilitated by expansion of the road network [3]
- **Predators:** forest eagles, hawks, and owls; boas, jaguars, and margays often invade toucan nests. Their enormous bill is useless in defending against predators and, in fact, attracts humans to catch them for the pet trade. To protect themselves, they depend on their loud voices to scare off enemies and alert other toucans to the danger. They may also strike their bill against a branch in a defensive display. [5]

Did You Know?/Fun Facts

- Toucans can't sweat, so instead it is thought that they use their large bills to thermoregulate. The toucan bill is giant, meaning it has a large surface area over which to radiate heat; it's not insulated with feathers or other heat-trapping material; and it is equipped with a network of blood vessels for dumping or absorbing heat. In fact, toco toucans (the largest species) can get rid of a maximum of four times the amount of heat the bird produces at rest [6].
- The word "toucan" comes from the sound the bird makes. Their songs often resemble croaking frogs. [5]

Glossary: List of definitions of the most important recurrent technical terms used in the text.

Altricial -hatched or born in an undeveloped state and requiring care and feeding by the parents.

Thermoregulate - the ability of an organism to keep its body temperature within certain boundaries, even when the surrounding temperature is very different.

References

- [1] Wikipedia, "White-Throated Toucan," Wikipedia, 2015. [Online]. Available: http://en.wikipedia.org/wiki/White-throated_toucan. [Accessed February 2015].
- [2] IUCN Red List, "Ramphastos tucanus (Red-billed Toucan, White-throated Toucan)," The IUCN Red List of Threatened Species, 2014. [Online]. Available: <http://www.iucnredlist.org/details/22682153/0>. [Accessed February 2015].
- [3] Encyclopedia of Life, "Ramphastos tucanus," Encyclopedia of Life, 2015. [Online]. Available: <http://eol.org/pages/1177787/overview>. [Accessed February 2015].
- [4] Beauty of Birds, "White-throated Toucan aka Red-billed Toucan (Ramphastos tucanus)," Beauty of Birds, 2015. [Online]. Available: <http://beautyofbirds.com/whitethroatedtoucans.html>. [Accessed February 2015].
- [5] San Diego Zoo, "Toucan," San Diego Zoo, 2015. [Online]. Available: <http://animals.sandiegozoo.org/animals/toucan#sthash.AFddkAUo.dpuf>. [Accessed February 2015].
- [6] J. Bryner, "Toucan's Bill Acts as Giant Radiator," Live Science, 23 July 2009. [Online]. Available: <http://www.livescience.com/7811-toucan-bill-acts-giant-radiator.html>. [Accessed February 2015].