



The author with the surviving chick at 53 days.



The breeding pair of red bills at the nest log.

## a possible first breeding of the red billed toucan

by Jerry Jennings  
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The adult male red billed toucan.

The red billed toucan (*Ramphastos tucanus*), known as the white-throated toucan to taxonomists, is comprised of two subspecies, *Ramphastos tucanus tucanus* and *Ramphastos tucanus cuvieri*. The two species are virtually identical in feather pattern and coloration, varying only in the color of the sides of their large bills. Further, *R. t. cuvieri* also varies in size within its own range.

The red bill is one of the larger members of its genus. It is black on the crown, nape, back, wings, tail and abdomen. Its throat and upper breast are white, the latter bordered at the bottom with a narrow red band. The rump is yellow, the vent red. The beak is light yellow on the culmen; the basal band of the bill is yellow above, blue below. The sides of the bill are red in *tucanus* and black in *cuvieri*. Both subspecies share a

similar, three note yelping call. Sexes are identical, except for the male's substantially longer beak and slightly larger body size.

The red bill is distributed throughout lower Amazonia (eastern Brazil) and north into Guyana and eastern Venezuela. The *R. t. cuvieri* replaces the red bill in upper Amazonia (western Brazil) and extends into southern Venezuela, and the eastern lowlands of Columbia, Ecuador, Peru and Bolivia. Where these populations intergrade, there is a high degree of hybridization and a correspondingly wide variation in bill color.

Red bills are conspicuous members of the neotropical forest avifauna, frequently perching in the treetops where they utter their loud calls, which may carry up to a quarter mile. Their diets consist of a variety of locally and seasonally available fruits and berries, as

well as some animal matter including insects, small rodents, birds and the young thereof. Red bills, as well as all other toucans, nest in the abandoned tree cavities of woodpeckers, which these toucans occasionally have to enlarge to suit their needs. Although little is known of the life history of the red bill, other species have been observed evicting woodpecker occupants from their nests in order to take over the cavity.

In captivity, red bills have only recently become readily available. The first birds began appearing on importer lists in 1982. In 1983 a number of dealers offered them for sale, with a subsequent decline in availability in 1984, though some are certainly still around.

In the Fall of 1982, I was fortunate in being able to acquire a true pair and an extra hen. The pair was introduced into a large, planted enclosure measuring 16'x36'x9'. The plantings consisted of black walnut, oleander (toucans do not chew and thus can't eat this poisonous plant), and various assorted weeds. A log, taken from a dead palm tree, measures three feet in length and seventeen inches in outside diameter. The interior was hollowed out with a chainsaw to a depth of twenty inches, then capped with plywood. An entrance was made in the side, three inches from the top and measuring 3"x4".

The red bills examined the nest log off and on, but made no efforts to nest until early May 1984. The birds were first noted in the log on a continuous basis on May 14th. Both parents took part in the incubation on a rotating basis with the hen usually sitting at night. On May 31, 1984 the first audible sounds of nestlings could be heard. The nest, however, was not examined until three weeks later out of concern the parents might expel the youngsters, as toucans will often do. Even then the nest itself was not moved. Using a small mirror and flashlight, the nest was briefly checked, wherein two chicks were observed. This procedure was repeated every other day thereafter, until July 2nd, when only one chick was found in the nest. This bird was immediately removed for handrearing and was eating on its own by July 31st.

During the period the young were under the care of their parents, the adults were fed a diet consisting of diced papaya, banana, apple, whole grapes, cut corn, peas, diced carrots, Purina Hi-Pro Dog Kibble, Mynah Pellets, Turkey Lay Pellets (high protein) and mealworms. Crickets were

also fed during the last few days the young were still in the nest.

After the single chick was removed for handfeeding, it was fed a more limited diet of diced papaya, grapes, banana, and soaked Purina Kitten Chow or Meow Mix (both 35% protein). Daily weight measurements were taken both to monitor the bird's development as well as to warn of any impending medical complications. (Although handfeeding toucans is quite simple mechanically, the younger the chicks are when taken from the nest, the greater is their susceptibility to yeast and/or bacteria infections, which are easily eliminated if caught in time.) All weights are taken in the morning prior to the day's first feeding. On the morning following the chick's removal from the nest it weighed 328 grams (33 days) and 406 grams on July 23rd (53 days). (The latter weight is the expected fledgling weight, since the members of the genus *Ramphastos* generally leave the nest at 49-55 days, and are weaned shortly thereafter.)

At 60 days of age, the young red bill was similar in appearance to an adult, except the beak was straw to faint red in color, the eyeskin was pale blue, and the bird was only about 2/3 adult size. It is an apparent female.

During the breeding cycle, the red bills had the company of a pair of Horsefield's kalij pheasants, with whom they appeared fairly compatible. However, the pheasants were removed from the flight approximately two weeks after the young hatched, because the male pheasant had the nasty habit of attacking the feet of anyone entering the flight. (Generally, though, pheasants tend to inhibit toucan reproduction due to the former's nocturnal perching near or on top of the nest log.)

Contrary to expectations, the red bills did not recycle once the chick had been removed from the nest. They did, however, frequent the nest for several weeks thereafter on exploratory visits, and the hen slept in the nest the first night after the surviving chick had been pulled.

One of the largest and most colorful of the toucans, the red bill will need a lot of work before it becomes established in captivity. Acquiring true pairs is not as easy with red bills as with some others, i.e. Tocos, since there appears to be a severe shortage of males. As mentioned above, I originally acquired a pair and a hen in 1982. It took nearly a year and a half to locate a second male, after having seen a large number of birds. ●

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