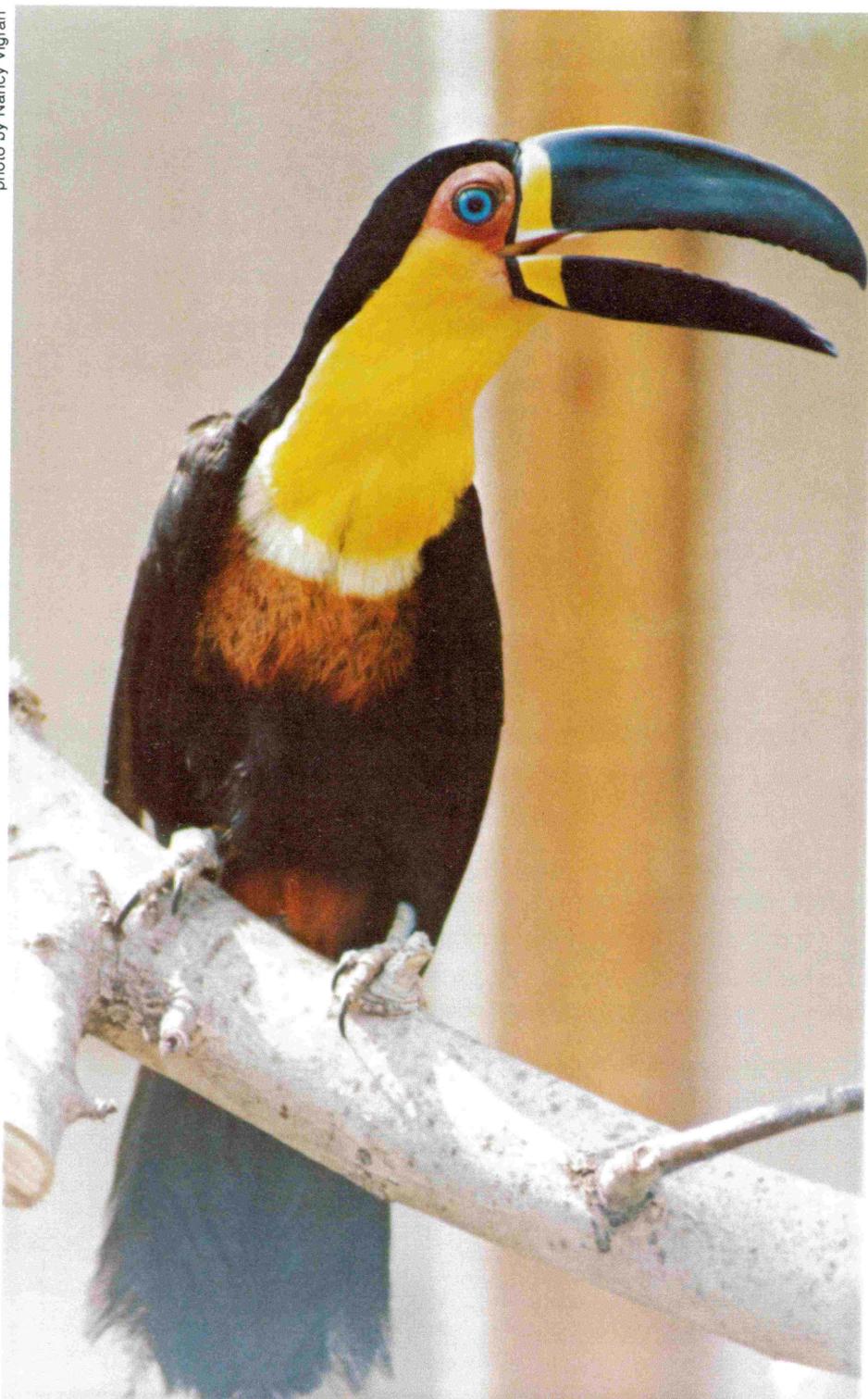


# First Captive Breeding of the Ariel Toucan

by Jerry Jennings

photo by Nancy Vigran



## Introduction

Toucans, those banana billed birds most commonly associated with the television commercials for Fruit Loops breakfast cereal, are unique to the western hemisphere ranging from central Mexico to southern South America. The family Ramphastidae consists of six genera — Aulacorhynchus, Pteroglossus, Selenidera, Bailloni, Andigena, Ramphastos — and forty-one species.

Toucans in general have adapted to a widely varying habitat from the coastal rain forests of equatorial Brazil to the high elevation cloud forests of the Andes, spending most of their time in the canopy where they feed, play and pass the day. Toucans are omnivorous feeders consuming a variety of soft fruits, insects, eggs of small birds and an occasional lizard or small rodent.

Characteristic of all Ramphastids are their large, flamboyant bills, which probably evolved as a display function during their courtship ritual. These extremely lightweight bills are sturdy enough to serve in the tearing of fruit or flesh, excavating nest cavities, and in jousting with other toucans.

## Description

The Ariel Toucan (*Ramphastos ariel*) is predominantly black as are all the species of the genus *Ramphastos*. The bill is black with a yellow base line approximately one half inch thick extending from the top of the upper mandible to the bottom of the lower mandible. The ridge of the upper mandible is blue-gray. The crown, nape, back, wings, tail, and abdomen are black. The area around the eye is orange and the eye itself is blue. A large bib patch extending from the base of the bill to the abdomen and to the sides of the breast is an orange-yellow bordered in white. At the base of the bib is a one to two inch band of red extending side to side. The rump is red; the legs and feet are blue-black. The bird measures approximately 16 inches in length from crown to tail.

## Range

The Ariel Toucan has one of the broadest ranges of all Toucans. It extends from the Tapajoz River in northern Brazil to Minas Gerais in the south and from the coastal areas of Bahia to the foothills of the Andes. It is a tropical species living in the rainforests of the lowlands.

## Captive Environment

A large aviary measuring 24' × 16' × 9' was established as a breeding flight. In each corner of the shelter was placed a five foot long log cut from a fan palm tree.

Each log had been hollowed out to a depth of approximately twenty inches using a chain saw. This was accomplished after a section eight to ten inches had been sliced off the upper end to be used as a lid for the nest. A square notch was cut in the side for use as a nest entrance.

A large branch from an English Walnut tree was hung in the opposite corner of the flight using bailing wire covered with garden hose. The hose provides visibility to the support wires in order to avoid collision between it and fast flying Toucans. In the shelter a perch of one inch diameter dowel was hung approximately six feet from the ground. There are no other perches in the flight. The flight is not planted except for bermuda grass and occasional weeds.

Initially, three birds were placed in the flight by themselves, where they remained nearly two years. During this period no interest was displayed in the nesting logs. This may have been the result of the unsatisfactory condition of the logs, which were wet at the time of acquisition and required more than twelve months to completely dry out. During this "drying out" period the logs emitted an odor of ammonia, which may have been repugnant to the birds.

During the course of the first two years a hierarchy developed among the birds. Mild aggression was displayed resulting in the eventual bedraggled appearance of one bird, which was eventually removed. At the same time, two more birds were added.



*Baby Ariel Toucans about four weeks old.*

### Breeding

After the odd bird was removed, as mentioned above, it became apparent from behavior and bill size variation, that the two remaining birds were male and female. The two new birds were also male and female and were placed in the flight in November 1977.

The four birds appeared to be very compatible until late April to early May 1978. On May 10th one bird was found hiding behind one of the nest logs. When it was removed to the center of the flight, it was immediately pursued by another bird, whereupon it retreated to the safety of its hiding place. At this point it was removed from the flight.

It was now apparent that two birds were pairing off in preparation to nest. Unfortunately, it was not possible to determine which two of the remaining three birds. On May 14th the problem was gruesomely resolved with the death due to injury of the odd bird. At that time the nest log in use was examined and found to have been hollowed out to the ground — a distance of three feet. In the bottom of the nest were clustered three solid white eggs. Subsequent attempts to examine the nest were fruitless, since the hen refused to leave.

Finally, on May 26th the hen was coaxed from the nest after the lid was removed and the cavity examined with a flashlight. On her way out the hen managed to soundly jab me with her beak severely enough to draw blood. All three eggs were fertile and hatched May 28th. From the behavior of the birds in early May, it is assumed the eggs were laid between the 10th and 14th of the month.

Five days after the eggs hatched, one baby disappeared and was never found. It was possibly eaten by the parents, or at least carried from the nest and dropped in the high grass. A close watch was maintained on the remaining two nestlings to insure they were cared for properly; if it

photos by Jerry Jennings



*A nest log, part of the trunk of a fan palm tree.*

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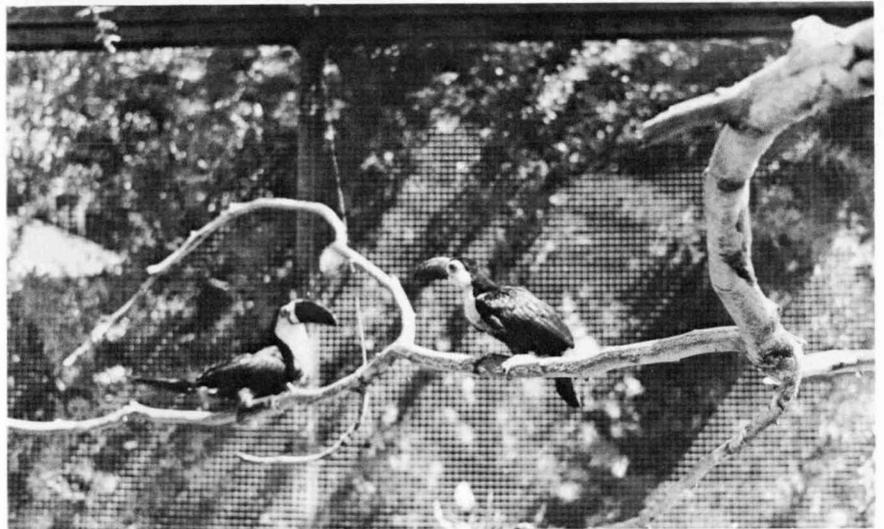
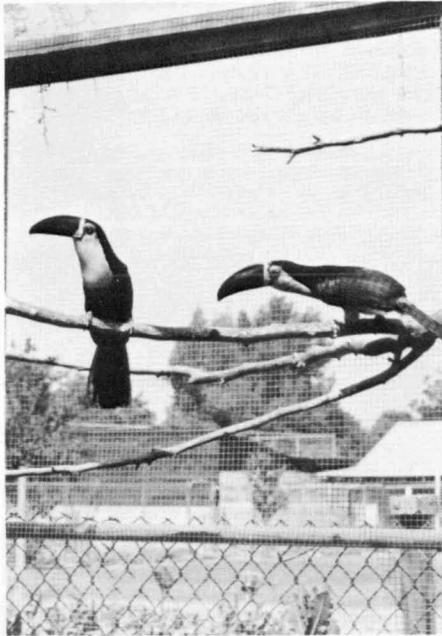
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had appeared the contrary, they would have been removed for handfeeding. Fortunately, the two youngsters progressed nicely without incident and fledged the nest July 14 and 19, 1978, respectively.

*The breeding pair of Ariel Toucans with the hen on the left and the male on the right. A slight difference in the size of the beaks can be seen.*



*The Ariel Toucan hen is on the left with the young on the right.*

photos by Jerry Jennings

### Diet

Toucans are relatively easy to maintain nutritionally in captivity, although more costly and time consuming than seed eating birds. The basic maintenance diet consists of assorted fruits, such as banana, apple, pear, grapes, papaya, etc. These should be diced or shredded and served fresh daily. A small kibble dog food should be provided as a source of protein,

vitamins, and minerals. Gaines Dog Meal is ideal as each piece is the size of a pea with no sharp edges. Gaines is a well balanced kibble, providing all the necessary nutrients lacking in the fresh fruit. Naturally, fresh water should be provided on a daily basis and may be supplemented with a water soluble vitamin such as Headstart.

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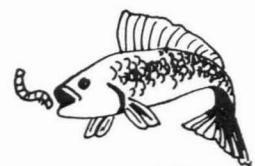
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maintenance diet plus the addition of live food. It is virtually impossible to raise Toucans without live food, as has been demonstrated in the reports of known captive breedings.

The most common source of live food, and perhaps the best, is the use of "pinkies", i.e. newborn mice and/or rats. The Ariel Toucans were fed an average of four 1-3 day old rats on a daily basis from the time the eggs hatched until the two young fledged the nest.

The adults spent considerable time chasing butterflies and grasshoppers, during the course of the nesting period. Although their aerobatics were interesting to watch, this behavior suggested the viability of insects as a live food source. Rainbow Giant Mealworms, measuring approximately 1½" long and ¼" in diameter were offered at the rate of 50 per day during the last three weeks of the nesting period. These were consumed readily in addition to the pinkies.

### Conclusion

Toucans appear to adapt well to captivity. That they may be successfully bred has been demonstrated. At least eight species have been bred in the U.S. during the past ten years, while a number of additional species have been attempted.

All of the successful breedings of Toucans have occurred where: 1) the pair has been provided a nest log, which they could excavate (this behavior both strengthens the pair bond, and stimulates gonadal development), and 2) the birds have been offered live food. The opportunity to select mates, while important, is not an absolute necessity, since Emerald Toucanets have been bred from a random pair.

It should be noted that pinkies may be frozen and stored for up to a year or more. Toucans will readily accept them, after they have thawed out, so long as they smell and appear fresh. Furthermore, the acceptability of mealworms, crickets, or other insects as a live food will vary with the species and/or individual. The Toco Toucans, which bred at the Riverbank Zoological Park readily consumed crickets, whereas the Emerald Toucanets at Walnut Acres completely ignored them. The Ariel Toucans eagerly consumed mealworms, whereas the Emerald Toucanets demonstrated only moderate enthusiasm.

Whether Toucans will become firmly established in captivity depends on the interest of zoos and private aviculturists. They certainly are colorful, intelligent birds and deserve attention, for they will soon disappear from the list of imported birds •

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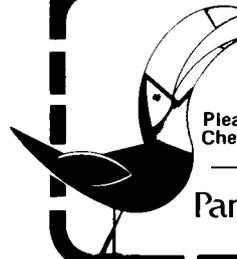
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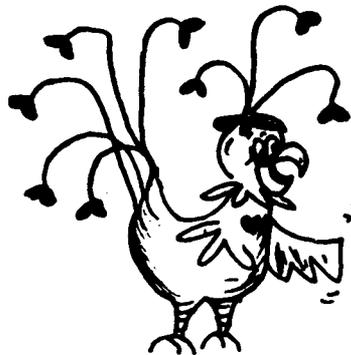
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