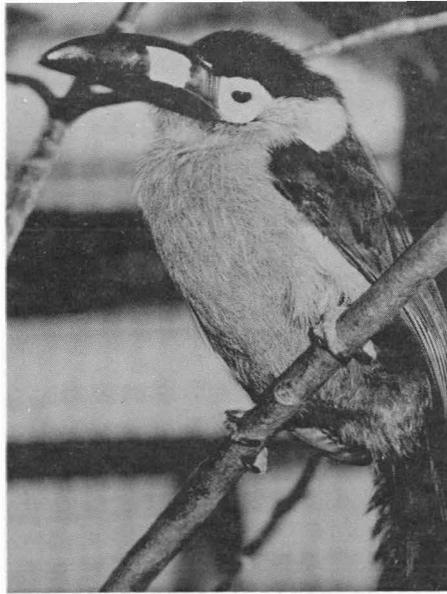


Toucans are a family of birds distinguished by their lengthy and often brightly colored bills. Although commonly displayed in captivity, they have only recently been bred on two occasions. In 1967 at the Waldsrode Bird Park in West Germany, the Red-breasted Toucan (*Ramphastos dicolorus*) successfully reared young in the corner of an exhibit on a sandy floor. In addition, on numerous occasions at the Los Angeles Zoo, the Crimson-rumped Toucanet (*Aulacorynchus haematopygus*) bred successfully in our flight cage using dead palm logs as a nesting sight for tunneling. This behavioral phenomenon was discussed in a previous issue of the Watchbird (April, 1975).

We have had, during the past year, notable success with other species of which this article will discuss the chronology of one, the Plate-billed Mountain Toucan (*Andigena laminirostris*).

Although the breeding took place at the Los Angeles Zoo between December, 1974 and February, 1975, the real story begins in June of 1967, when the first mountain toucans were acquired. As was typical at this time, all mountain toucans were housed in a single aviary along with a few small psittacines. The toucans numbered approximately eight to ten birds and included representatives of all four species of mountain toucans — hooded, gray-breasted, black-billed, and plate-billed. Although the numbers varied, the birds lived relatively compatibly until in 1974 when typical parrot nest boxes were added. Behavioral changes quickly became apparent in the toucans. Although no serious nesting attempts were made, the birds went in and out of the nest boxes commonly and pairs were observed being formed and aggression was noted towards the smaller parrots. This necessitated the parrots removal and soon required the toucans to be separated one pair per aviary. Although sexual dimorphic differences were noted involving bill length and a few color differences, a natural pair could easily be seen by observing behavioral interaction. No birds were lost during this pairing. Three pairs were set up in breeding situations. This



WORLD'S FIRST CAPTIVE BREEDING OF THE PLATE-BILLED MOUNTAIN TOUCAN AND A FEW INSIGHTS

by John Tobin, Animal Keeper and
Richard S. Rundel, Curator of Birds

involved the placement of a palm log two feet in diameter and eight feet tall in each aviary. All of the pairs immediately tunneled out nests, although only one of the pairs of Plate-billed Mountain Toucans proceeded to lay eggs.

In July of 1974, one egg was observed which disappeared after one week. Two weeks later, an additional egg was observed in the nest which again disappeared after one week. In September of 1974, one egg was laid which hatched after 16 days and survived for 21 days before succumbing to unknown causes. Signs that the bird had digested palm fibers was one theory as to its loss. Two eggs laid December 19 and 21 were found hatched January 4, 1975, substantiating the datum given for the incubation period of 16 days.

The parents fed the young bits of fruit and pinkies the first two weeks. Their consumption increased to 15 pinkies, six cut up mice and a small amount of fruit each day. The peak of their consumption,

prorated over three feedings a day, was 18 pinkies, nine mice and an unknown quantity of fruit. Because of the hole depth and the parents sitting tight, our observations for the first three weeks were limited. Throughout the incubation and rearing period, the parents did continue to tunnel to increase the depth of the nesting cavity. It is presently about six feet deep.

Initially naked, by the fourth week the young toucans' eyes were open, their short bills were turning from a light color to brown, they had feathered out the black on the crown and nape area and they were blue-gray on the undersides.

By the fifth week the parents spent less time sitting, and the consumption of pinkies and mice diminished. The female spent time removing bill fulls of palm core. The size of the young were two-thirds that of the parents, and they had developed a yellow fleshy area between the eye and bill which ran completely around the eye by the sixth week.

Exactly seven weeks from the day of their hatching, one of the young left the nest. Two days later, the second bird left. Neither returned to the nest. Both parents continued feeding pieces of fruit, pinkies and mice. By the eighth week, both birds were eating from the fruit pan along with Gaines Dog Pellets. The parents continued feeding until the tenth week when the young birds were feeding entirely on their own.

Sharing the aviary were two small barbets and two ground dwelling pheasants. The mountain toucans did not show aggression to these birds until the young left the nest at which time they became very protective of their young requiring the removal of all other birds. After a period of three weeks, the adults showed interest in nesting once again and commenced showing aggression towards their young, and the young were then removed.

Although successful reproduction has occurred with one pair, the species is not established in captivity. The second pair of Plate-billed Mountain Toucans showed strong continual interest in nesting and went so far as to lay eggs on two

INJURIOUS WILDLIFE PROPOSAL DIES

occasions, but unfortunately in June of 1975, following the removal of the female for a recovery period due to poor health, the male died.

Of the young birds, one proceeded to have a bad foot and was not suitable for breeding and the other one proved to be a female. One additional bird was acquired from Busch Gardens to provide some stability and hopefully set up a third breeding pair. Unfortunately due to the loss of the male and a little bad luck, we presently have one breeding pair and three extra females.

The purpose of this recounting is to demonstrate that even though the breeding behavior is understood and proper breeding environments are provided, a species is not established in captivity until this is done with a minimum of twenty pairs. The fact that every pair attempted to nest leads one to believe our technique was proper. Several zoos and private aviculturists have since followed this technique with encouraging results. It is important that rather than lamenting the unavailability of exotic birds, aviculturists concentrate on a few unique species and establish them. The Bronx Zoo and the Los Angeles Zoo presently have successfully cooperated in breeding programs involving Tawny Frogmouths, Green Wood Hoopoes, Kookaburras, Eclectus Parrots and hopes for the future regarding the Monkey-eating Eagle. Although we do not rob our collection for their needs, we do cooperate in every way possible with the aforementioned birds. We do not pass judgment on techniques although we do discuss and visit whenever possible.

Our toucan breeding program has not shifted into a new direction. We know our technique will work with any species. Rather than add new species to our collection, we are now attempting to stabilize the Plate-billed Mountain Toucan into a regular breeding program similar to the success of our Crimson-rumped Toucanet. If this can be accomplished and other zoos and private aviculturists follow suit, then birds will be available in the future regardless of import regulations ■

Lynn Greenwalt, Director of the Fish and Wildlife Service, has officially withdrawn the Injurious Wildlife Proposal despite last minute assertions the proposal would go through. Although his action spells victory for aviculturists, zoos, and the pet industry, it is expected new and similar proposals will be drafted in the future

PIJAC (Pet Industry Joint Advisory Council) spear-headed the drive to overturn the proposal with a well-organized campaign that objected to the "low-risk" list approach to determining which animals would be allowed into the country. Under that concept, a bird would have to be proven harmless to be imported, whereas existing law requires that an animal be proven injurious to be kept out. In short, Interior attempted to reverse the principle of "innocent until proven guilty"

Fortunately, for aviculturists, new breeding stock of heretofore uncommonly kept birds will remain available for some time. With the threat of future restrictions, aviculturists must make every effort to establish the lesser known species in captivity before it is too late.

Many organizations participated in the movement to thwart import restrictions. In addition to PIJAC, the AAZPA, ZOO-ACT, A.F.A. and others made contributions, as did many individual aviculturists, whose letters to Interior achieved an impact. Many ornithologists and biologists contributed their knowledge on behalf of the above groups in an atmosphere of unity never before demonstrated by these diverse animal interests ■

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