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Volume II • Number 2 • APRIL 1975

WATCHBIRD

DEDICATED TO CONSERVATION OF BIRD WILDLIFE THROUGH ENCOURAGEMENT OF CAPTIVE BREEDING PROGRAMS, SCIENTIFIC RESEARCH, AND EDUCATION OF THE GENERAL PUBLIC

TOUCANS, TUNNELING & REPRODUCTIVE SUCCESS

presented by Richard Rundel researched by Richard Rundel, Dale Thompson, James Jennings
Los Angeles Zoo

Introduction

The following is a preliminary report on a breeding program concerning the family *Ramphastidae* or Toucans as they are commonly known. It is based upon five years of successful rearing of first and second generation Crimson-rumped Toucanets, *Aulacorhynchus haematopygus*, and the application of observed factors to other represented species of the family. To date we have had 17 successful nestings of Crimson-rumped Toucanets including the rearing of full second generation birds. Over the past six months these techniques have been applied to other species of Toucans with the following results: Pale-mandibled Aracaris, *Pteroglossus erythropygius* — 3 nestings, 9 eggs, 6 hatched; Curl-crested Aracaris, *P. beauharnaesii* — 3 nestings, 6 eggs, infertile; Plate-billed Mountain Toucan, *Andigena laminirostris*, 2 pairs — 3 nestings, 1 hatching, 23 days; Swainson's Toucans, *Ramphastos swainsonii*, actively nesting; Toco Toucans, *R. toco* — 1 fertile egg. Once properly set up, every pair of Toucans we have worked with have readily shown an interest in breeding and all but one pair have laid eggs.



Discussion

The history of breeding the Crimson-rumped Toucanets began in 1966 in a large flight cage. Decorative Tiki statues carved from palm logs were placed in the aviary. Golden-fronted Woodpeckers started small holes in the backside which were later enlarged by linedated barbets. Next, the Toucanets demonstrated a definite interest in these holes although they did not successfully nest due to disruptive influences caused

by Aracaris. Once the Aracaris were removed, one or two pairs of Toucanets proceeded to nest on a regular basis. Each nesting site was started in a palm log approximately ten feet off the ground. The logs were all a minimum of one foot in diameter. The hole was enlarged to approximately 2 inches in diameter, just



Crimson-Rumped Toucanette (*Aulacorhynchus haematopygus*) feeding youngsters in the nest.

barely large enough for the male to squeeze in. The chamber inside was 6-1/2 inches in diameter. Each year it was excavated further. One active nest is presently 28 inches deep. Palm logs are ideal as the outer 2 inches is considerably harder than the core. Eventually the birds will drill through the bottom if adequate depth is not provided. The Toucanets nested ten months out of the year, from February through November. Following an incubation period of 17 days, the young will remain in the nest for six weeks. Both parents care for the young. Mynah Bird pellets were a staple food item for the young. The young have a very definite heel patch-scalelike in appearance which is sluffed off shortly after leaving the nest. Once out of the nest, the juvenile birds are very tame and may

continued on next page



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TOUCANS *continued from page 1*

be removed and hand fed although once removed they may not be reintroduced. Our aviary has approximately 5,000 square feet of well divided hillside terrain. It will accommodate two breeding pairs and some unpaired birds. When the population goes beyond approximately ten birds, problems occur primarily in the early spring when nesting commences. Until then, the young birds are tolerated. Classically defined territories are not set up except during nesting periods.

Our breeding pairs of Aracaris are isolated one pair per aviary. The Curl-crested Aracaris shared an aviary with a pair of Francolins. These Aracaris are peaceful with other birds at all times. They laid three clutches of eggs in a natural log. The top of the log was only four feet off the floor of the exhibit with a 6-inch wide chamber drilled down through the top. To date all of the eggs have been infertile.

The Pale-mandibled Aracaris shared an exhibit with a pair of Impeyan Pheasants. The Aracaris nested in a small stump hung in a high corner of the exhibit. In 1974 they nested 3 times laying a total of 9 eggs and hatched 6 young.

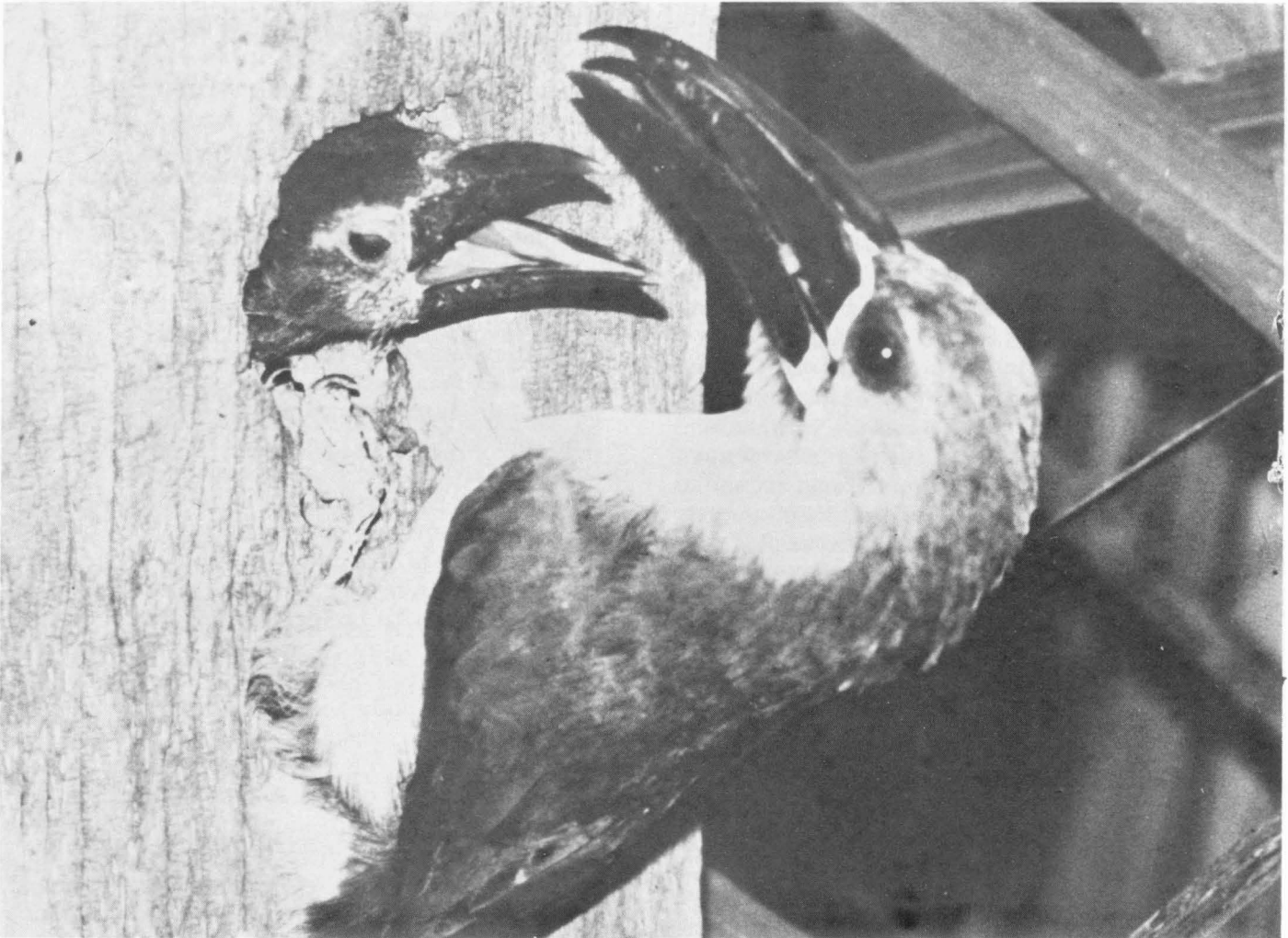
In each case, for a few days, the young were cared for and then thrown out of the nest in an apparent healthy condition. The adults did not feed Mynah pellets as did the Toucanets. When found, the young were placed in an incubator and hand fed using moistened Gaines Dog meal and fed with a 10 cc syringe. In one instance, a baby thrived to the age of 26 days before succumbing. Young Aracaris are very susceptible to drafts, changes in temperature and particularly to any change in feeding procedures.

Toco Toucans become exceptionally aggressive during nesting and should not be kept with any other birds of similar size, especially other Toucans. Our pair of young birds shared an exhibit compatibly with Yellow-headed Amazon Parrots prior to nesting. Once removed to an exhibit shared only with a pair of Chachalacas, they settled down and laid one fertile egg in a barrel. The egg was incubated for one week prior to being found broken on the floor.

Plate-billed Mountain Toucans proved to be the most cooperative initially. In early August two pairs were placed in individual aviaries with palm logs shared with other varieties of birds. In one exhibit shared with Barbets and Peacock Pheasants, they immediately tunneled out a nest. Within two weeks after nest construction, they were on an egg. The egg disappeared after 10 days although young were hatched and reared 23 days. The second pair spent six weeks tunneling and showed definite signs of nesting although no eggs were laid. They have not shown any aggression to other birds in the exhibit.

Conclusion

Based upon the above outlined experiences, certain conclusions were drawn and models were formed for



Crimson-Rumped Toucanette (Aulacorhynchus haematopygus) feeding youngsters in the nest.

future breeding projects. For large communal aviaries, only the Toucanet may be exhibited and bred together. One pair of Mountain Toucans would tolerate other birds but not additional Toucans during nesting. Our experience showed that even if Aracaris and Mountain Toucans would tolerate other birds, they readily become nest-robbers and therefore were unsuitable in a mixed display. The larger Toucans are by nature aggressive and if nesting occurs they should be isolated.

The critical factors for nesting activity are: 1) isolation of breeding pairs (except in the case of Toucanets), and 2) presence of large logs suitable for tunneling. The addition of artificial foods, although not deemed essential, in our case proved beneficial. Sex determination was based upon behavioral activity although certain morphological and color distinctions were apparent (i.e. bill length).

Notes of Additional Interest

The use of natural log cavities were experimented with concerning members of the family *Bucerotidae* or Hornbills. Tarric Hornbills, *Penelopides panini*, previously unsuccessful using a parrot-type breeding box, successfully reared one chick in classic style. Papuan Hornbills also nested, blocked up the entrance hole and laid eggs although none were found to be fertile.

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