

breeding tarictic hornbills

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Tarictic Hornbills (*Penelopides panini*) are small (2 feet long) hornbills indigenous to the Philippines. The Los Angeles Zoo acquired a small group of these birds in 1965. In 1974 an isolated pair presented us with a first captive breeding. From this success we came away with a small amount of knowledge and a set of assumptions, some right and some wrong. Subsequent unsuccessful and then successful nestings have added to our knowledge and reduced the number of wrong assumptions.

From our first success we realized that a small aviary, a man-made nest log and a general diet are adequate for breeding hornbills. The cage is hexagonally shaped with a floor space of 210 square feet and a height of 17 feet. It is on the lower level of our two level outdoor aviary and is shaded most of the day. The nest log is a hollowed out section of a palm log 2-1/2 feet high and 20 inches in diameter with a square hole 4-1/2 inches on each side cut into it about 6 inches from the top. It is hung on the back of the cage about 7 feet above the ground. The diet, prior to the hatching of the young, consisted of grapes, mixed chopped fruit, ground horse meat, egg yolk, mynah pellets and any insects or mice caught in the cage. (Jennings, Rundel)

From the unsuccessful and then successful nestings in 1975, several things became clear. The materials used to seal up the entrance hole are saliva, feces, feathers, and palm fibers stripped from inside the log. Mud or clay was not used at all as cited in the literature for other species of hornbills. The eggs are laid three days apart, the clutch size is generally three or four and the incubation period is 30 days. With one chick the female will remain in the log until the young is ready to emerge (approximately 100 days). With more than one chick the female will leave the log early. During the unsuccessful nesting attempt in 1975, it was observed that the build up of feces in the bottom of the nest may have been a major factor in the death of the chicks. It was decided that the cavity in the log was



Hen in nest with youngsters

too deep, preventing the female and chicks from defecating out of the slit in the wall, sealing the entrance hole and causing the build up in the bottom of the log. The depth of the hole, which had been 1-1/2 feet below the entrance hole, was raised to within 4 inches of the entrance hole by the addition of pine shavings. This worked perfectly during the second nesting attempt. The female hornbill and her single chick were able to defecate out of the nest preventing a build up inside it. It was also observed that chicks start out with adult plumage.

One question that still remains is the diet for the hornbills during the nesting period, specifically the animal material. About the time the chicks are due to hatch we begin to add small pinkies (newborn mice) to the hornbills' diet. One thing that we still do not know is how many pinkies are necessary to feed and for how long. Because of the difficulty of obtaining the large number of pinkies that seem to be necessary, we have had to feed a small number per day while the chicks are very young. The problem arises because we do not know how many pinkies the adults are eating and how many are getting to the chicks. Another question is what to use in place of the pinkies. During the first nest in 1975, we tried skinning and cutting up baby chickens. This nest was unsuccessful. Was feeding the cut up chicks a causative factor? During the second nest in 1975 the replacement was quartered half grown mice. This nest was successful. Was replacing chicks with mice the reason? These are questions that may never be answered, but hopefully with what we have learned from the Tarric Hornbills there will be many more successful breedings, nests and more opportunities to learn.

Jennings, James and Richard Rundel.

First Captive Breeding of the Tarric Hornbill, *Penelopides panini*. To be published in the *International Zoo Yearbook*, Volume 16, London. The Zoological Society of London, 1976. Copies available upon request ■



Male Tarric Hornbill