

St. Louis Zoo Husbandry and Reproduction of the Brown-breasted Barbet

(*Lybius melanopterus*)

by Bruce W. Bohmke, Curator of Birds and Michael Macek, Bird Zoologist, St. Louis, Missouri

Photos by Chuck Dresner



The Brown-breasted Barbet *Lybius melanopterus* is not well represented in zoos and private aviculture. This beautiful softbill originated from Africa.



The St. Louis Zoo reared six chicks in 1991 and 1992. All clutches resulted in single chicks. Other institutions and private breeders known to have reproduced the Brown-breasted Barbet include the Washington Park Zoo in Portland, Oregon and Jim Gunderson.

A pair of Brown-breasted Barbets was acquired from a dealer in October of 1988. The birds appeared to be adult birds and were in good plumage. The pair was housed with a pair of White-headed Buffalo Weavers, *Dinemellia dinemelli*, in a planted aviary. Although given a nest log, no reproductive behavior was observed. While the two species were compatible, it was felt that perhaps the aviary was not large enough to allow both pairs of birds to settle in. The pair of barbets were removed from the aviary in the fall of 1989. Their new enclosure was a wood and wire aviary off-display in the basement of the bird house.

The aviary measures 2.5 m x 1.2 m x 2.4 m (8'4" x 4' x 8') and the barbets were the sole occupants. The floor of the enclosure is concrete which is covered by a thin layer of shavings. Branches and vines are provided as perches and two wooden logs with cavities were provided for nests and roosts. The lighting is all artificial and was set for a constant 12 hour cycle. Food and water is provided on an elevated platform 1.5 meters (5') off the ground. Other species of small birds are housed in adjacent cages but no other barbets are within visual or vocal range.

The diet is a mixture of fruit (apple, orange, banana and grapes), vegeta-

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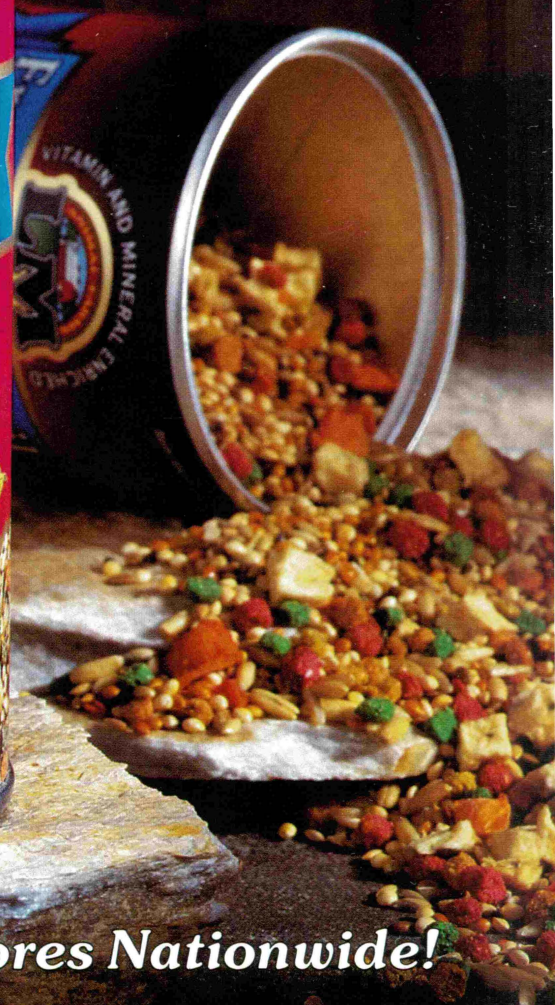
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bles (corn, black-eyed peas, carrots, and beets), soft billed bird-fare (Reliable Protein Products), and insects (mealworms, waxworms, and crickets). The fruit is chopped small and the vegetables are diced, cooked, and canned. Fresh food and water are provided once a day in the morning.

In early 1991, over a year after being put in the off-display breeding area, the birds began to show an interest in the nesting logs. One log, 50 cm long and 25 cm (20" x 10") in diameter was hung vertically near the top of the enclosure. The other nest was a palm log 1.8 m (6') high and 15 cm (6") in diameter which was set on the floor in a rear corner. Both nest logs already had cavities and the birds showed interest in both. Additional wood was removed from both logs for several months. The birds seemed to gradually focus more attention on the palm log and when the female stayed in a nest all day this was the nest she chose. Unfortunately, we were unable to see the bottom of the cavity in the palm log. On April 15, 1991 the female began spending most of the day in the log. For the next 50 days the female was mostly in the nest log although there were sporadic days when she seemed to be out of the log most of the day. On June 5th a chick was found fledged on the floor of the cage. The interval from the first day of incubation to fledge was 51 days. The same interval for a pair of Double-toothed Barbets *Lybius bidentatus* was 50 days (Faust, 1968).

The chick began to perch within several days of fledging and would regularly roost in the nest log. The appearance of the chick was similar to that of the adults but the brown areas tended to be darker, the red less extensive and a variable white patch was present on the side of the face. The white patch is only present three to four months.

The Brown-breasted Barbet is known to breed in groups in the wild (Fry, 1992), and the most likely explanation for nest helpers is offspring from the previous nesting. Faust (1968) describes offspring feeding and removing fecal sacs from subsequent nestlings. With this in mind, the chick was left with the parents during the next nesting attempt. The adults began to stay in the nest log in late June and on August 29th a new fledgling was seen. The chick from the first

nest was often in the nest during incubation and rearing of the next chick although no feeding was observed directly.

A total of six chicks were reared by this pair of birds in 1991 and 1992. All clutches resulted in single chicks. It is unknown how many eggs were laid in each clutch. The genus *Lybius* generally fledges one to three chicks with the average being two (Fry 1992, Faust 1968). It is possible the narrow size of the nest log (six inches) contributes to the consistently small clutch size. In 1993 a second pair of barbets began to breed. The first clutch produced two chicks. While the size of the enclosure was similar, the nest log is ten inches in diameter, which is significantly larger than the first pair's log. Fledge weights for four offspring were 56, 44, 42, and 44 grams.

The second pair of breeding birds was composed of a male purchased from a private breeder (Jim Gunderson) and a female hatched at the St. Louis Zoo in March of 1992. This breeding confirms that the Brown-breasted Barbet reaches sexual maturity at one year. The enclosure, diet and aviary set up are the same as that for the original pair.

From available records, it appears the Brown-breasted Barbet was first bred in North America at the Washington Park Zoo in Portland, Oregon. A pair was acquired in 1988 and first bred in August 1989. A total of 11 chicks were produced between August 1989 and May 1990. Although a number of chicks were sent to other locations, all the chicks as well as the adults are now dead. As mentioned earlier, Gunderson produced a number of young in 1992, several of which were acquired by the St. Louis Zoo. No other institutions appear to have bred this species and only a small number are in other zoos. The genus *Lybius* as a whole is poorly represented in captivity even though they breed well and make excellent display specimens. Hopefully other zoos and private breeders will take an interest in the Brown-breasted and other barbet species.

References

- Faust, I. Breeding the Double-toothed Barbet, *Lybius bidentatus*, at Frankfort Zoo. International Zoo Yearbook 8:157-158, 1968.
Fry CH, Keith S. Urban EK. Birds of Africa. Volume 3. Academic Press. San Diego, California. 1988. ●

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