REPRODUCTION OF *Chrotopterus auritus* (PETERS) IN CAPTIVITY (CHIROPTERA, PHYLLOSTOMIDAE)

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Of more than 1,001 species of bats (Hutson *et al*., 2001), less than 5% have satisfactory data on the reproductive biology (Mccraken & Wilkinson, 2000) and less than 20 species have published records about the successful maintenance in captivity (Barnard, 1995). Several aspects of biology are more easily observed in captivity, such as gestation, postnatal development and interbirth interval (*e.g.* Taft & Handley Jr., 1991).

Chrotopterus auritus (Peters, 1856) is one of the largest species of neotropical bats, occurring from the south of Mexico to northern Argentina. This species prey large arthropods and small vertebrates (Peracchi & Albuquerque, 1976) that are captured on the ground or beneath vegetation. This bat is generally found isolated or in small groups (Medellín, 1989) and often associated to caves. The few available observations concerning the reproduction of this species in nature indicate a monoestral reproductive pattern that varies geographically, with births occurring in the rainy season in southeastern Brazil (Taddei, 1976). The maintenance in captivity of *C. auritus* is still unpublished and will complement the knowledge about these species poorly known. The captive observations were shown in a one off-exhibit room at the Fundação RIOZOO. Since 1999, *Chrotopterus auritus* have been maintained in wired cages with ½" mesh (90 x 60 x 80 cm) in couples or isolated males, using the methods described in Esbérard & Gomes (2001).

Five births were observed, two in November (days 7 and 24) and three in January (days 3, 4 and 7), involving three different females. The three intervals among consecutive births were 369, 770 and 784 days and the smallest one was observed in a female whose neonate died soon after the birth. Copulations were observed from 11.5 to 16 months after the birth and several times during the months of May, June, July and September, demonstrating poliestric strategy in this bat. The gestation in this species is equal or longer than seven months, since the females have births 207 to 217 days after the isolation of the males.

The sexual maturity was estimated in one female who accepted the male and copulated at 16 months of age. The neonate presented 32.5% of the mother's weight and 47% of the forearm length. At 43 days of age, the young have about 82% of the adult's weight and 99% of the length of the forearm. At the age of 95 days, solid food seems to be the only alimentary source, and first acceptance of this was observed previously at 65 days of age, when maternal milk and parts of the prey constituted the diet. Small parts of the prey were obtained while one of the parents handled the food.

Data in captivity can differ from the observed in nature. However, colonies in captivity under natural photoperiod and in the same latitude of occurrence of the species can result in similar periodicity (*e.g.* Delpietro & Russo, 2002).

Chrotopterus auritus has, among other species of bats of Phyllostomidae already studied, the largest parental investment (Table 1). The neonate weight of the seven species results in a positive and significant linear relationship with the female weight ($r = 0.85$, $p = 0.014$), as already described by Peters (1996) for the other species of mammals, with a neonate of *C. auritus* comprising 32.5% of the weight of the female, while in the other species of Phyllostomid bats varies from 18.6 to 29.4%.

Carnivorous species usually possess larger parental investment than herbivore species and larger species usually present smaller population densities (Peters, 1996).

TABLE 1
Reproductive data of Phyllostomidae bats.

Species	Neonate weight (g)	Forearm length (mm)	Gestation (days)	Weaning (days)	Interbirth interval (days)
Artibeus jamaicensis	13.9	33.5	-	66.3	122
Carollia perspicillata	5	24.2	105-115	23	150
Desmodus rotundus	8.5-9.6	29.1-30.9	165-180	278	365
Diphylla ecaudata	7.5	26.2-26.4	151	217	365
Phyllostomus discolor	7	34.4	-	-	-
Phyllostomus hastatus	16.4	-	-	-	-
Chrotopterus auritus	22.4	39.3	207-217	-	369-770

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