

## REPORT

### NATURAL DEATHS OF GIANT OTTERS (*Pteronura brasiliensis*) IN BALBINA HYDROELECTRIC LAKE, AMAZONAS, BRAZIL

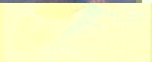
Fernando César WEBER ROSAS, Gália Ely DE MATTOS

*Instituto Nacional de Pesquisas da Amazônia (INPA), Laboratório de Mamíferos Aquáticos, Caixa Postal 478, Manaus - AM, 69011-970, Brazil. E-mail: frosas@inpa.gov.br*

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In 1987 the Brazilian Northern Electric Company (ELETRONORTE) finished damming the Uatumã River that formed the 3,246 km<sup>2</sup> lake (containing 3,299 islands) of the Balbina hydroelectric power station. In 2001, through a project entitled "Social organization, behavior and diet of the giant otter (*Pteronura brasiliensis*) in the influenced area of Balbina hydroelectric power station, Amazonas, Brazil", the authors started to study giant otters in the reservoir (de MATTOS et al., 2002; ZUANON et al., 2002). Despite being an enormous area, we managed to record two dead otters in the lake. One of them was found in February 2002 at the entrance of one of the giant otters' dens (01°35'21.3"S; 59°40'15.6"W). Judging from the general condition of the carcass, the animal, a 150 cm long female weighing 11 kg, had died about 2 days before it was found. This individual didn't have any visible injury on its body and the fur, which was intact, fell off when handled. The internal organs were emaciated and most of them in an advanced stage of decomposition due to the high temperature, characteristic of this tropical region. Based on the total length, it seemed to be a young adult female, which probably died a natural death. The low weight of this otter (only 11 kg) seems to corroborate this hypothesis. According to our data of captive giant otters in Amazonia, a 150 cm animal should weigh on average  $19.0 \pm 2.9$  kg (n = 4) (F. Rosas, pers. obs.).

The second dead giant otter was recorded in July 2003. This animal was found and reported to us by the rangers of the Uatumã Biological Reserve (ReBio Uatumã/IBAMA). According to the rangers, a moribund otter was found in the water at 9:50 a.m., surrounded by a group of 6-8 other giant otters. The animal was still breathing when it was found. The rangers removed it from the water and pulled it to the margin. At that moment, they could observe that it had been seriously wounded (Fig. 1).



**Figure 1.** Meribund giant otter in the water (top), and the wounds of the animal observed after its death (bottom) at Ballbina Lake, Amazonas, Brazil. Photos: H. M. de Macedo-Vieira.

The otter died at 10:25 a.m., and the rangers threw the body back into the water. Three weeks later, during our next field trip to Ballbina Lake, we tried to recover the carcass but it wasn't found. It is interesting to note that this otter had been severely bitten on its snout.

all the evidence points in this direction. Antagonistic behavior among giant otters has already been documented in the literature. According to SCHWEIZER (1992) an encounter of two different groups resulted in serious injuries to one adult otter and the death of a giant otter calf. MOURÃO and CARVALHO (2001) recorded an adult male giant otter killing and eating (cannibalism) a young cub from a different group in the Brazilian Pantanal.

The apparently "natural deaths" of giant otters reported here may have a significant role in the dynamics of the species. Even though Balbina is an artificial lake, it doesn't seem to have any spatial or feeding limitation (F. Rosas, pers. obs.), factors that usually lead to a high rate of natural mortality in a species. Despite the lake's huge size, which makes it harder to find carcasses, we have recorded in a two-year period two dead animals that seemed to have died natural deaths. These data suggest that natural mortality may have an important role in the biology of giant otters in Balbina Lake and should be taken into account in future management plans for the species.

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