

**Status of Captive Population of Broad-nosed Caiman (Caiman latirostris) in Brazil**

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The broad-nosed caiman is an endangered Brazilian crocodylian. Its skin is considered better for manufacturing goods than that of Caiman crocodilus because it has less osteoderms in the belly skin. This is causing an increase in the level of interest in its farming in southern and southeastern Brazil.

The remnant populations are possibly depleted and fragmented by habitat destruction. The State of São Paulo had only 8.6% of its original native ecosystems until 1973, and will possibly have around 3.0% until the year 2000 (VICTOR, 1975). There are some preliminary observations on the apparent colonization of broad-nosed caiman in environments such as small dams and decanting ponds of industrial or human drainage (VERDADE & LAVORENTI, 1990). There are also some reports about the appearance of animals in suburban areas, even in big cities like São Paulo and Rio de Janeiro.

The lack of information about the actual distribution and possible nesting sites of these remnant populations makes it difficult to start a program on populational self recovering based on the collection of eggs in the wild, or ranching, like is being carried out with success by Larriera (1990 and 1991) in Santa Fe, Argentina. On the other hand, broad-nosed caiman has been a very common native species in Brazilian zoos, although frequently not considered of great importance. Nevertheless, nowadays, any program of recovering, reintroducing and farming, should start with a captive propagation program based on the real existing captive colony in Zoos, research centers and other institutions.

## Materials & Methods

We based our study on the Reptile Censuses of Brazilian Society of Zoos from 1984 to 1991, the Regional Studbook of the broad-nosed caiman / 1991, and on direct consultation to the Brazilian Zoos staff.

## Results & Discussions

The Reptilian Census / 1991 by Brazilian Society of Zoos reported 331 broad-nosed caimans distributed in Zoos, research centers and other institutions. The captive colony has been increasing in the last years (Fig. 1). However, this expansion is basically due to wild-caught animals instead of captive-born ones.

The Regional Studbook of this species reported 183 animals spread in 19 institutions in 1991. Around 40% of these animals were captive born, although the colony of CIZBAS / ESALQ / University of São Paulo, the biggest in Brazil, presented a rate of 90%.

The sex ratio of the Studbook colony is approximately 6 males / 3 females / 2 indetermined. The real numbers are: 99 males, 47 females and 37 indetermined. Some sexing mistakes may happen, although the Zoos staffs do not consider sexing crocodylians a difficult task. Twenty-two (44.7%) of the females are apparently adults, but just three bred succesfully in the reproductive period of 1990 / 1991 and possibly just one in the last reproductive period, resulting in 36 hatchlings in 1991 and just 13 in 1992.

Seven institutions of nineteen included in the Studbook (36.8%) have reported nesting at least once in the last years, but just 57.1% of the reported nests were succesfull, with a low mean of 7 hatchlings per nest, ranging from 1 to 31 in a mean clutch size of 33 eggs per nest.

Only five institutions (26.3%) systematically mark their animals individually, and eight (42.1%) present some difficulty in identifying Brazilian crocodylians.

Age-pyramid of the Studbook colony is completely broken-up. There is a great demand of youngs to enlarge the age-pyramid base (Fig. 2).

Captive propagation of broad-nosed caiman in Brazil may be considered insipient, although it is a relatively common species in Brazilian Zoos. However a few zoos have already reported successful reproductions. Egg incubation seems to be the most urgent technique to be managed to avoid loss of embryos or even whole clutches during incubation period into the nest.

The institutions should mark animals individually and certify themselves about the species taxonomic identification to avoid loss of data about their colonies.

The maintenance of Brazilian populations of broad-nosed caiman in Annex I of CITES is utmost important because of the following reasons: poor captive propagation, destruction of habitats, illegal hunting pressure, and the lack of information on wild populations.

IBAMA - Brazilian Wildlife Agency is starting to liberate broad-nosed caiman farms for commercial purposes. It might have beneficial consequences for the species conservation. Nevertheless, the increasing interest of potential farmers and the present impossibility of ranching success may result in an immediate depletion of the remnant populations through the capture of wild animals to assembly captive breeding groups in the farms. To avoid such pressure on wild populations, captive-born animals should be used instead of wild-born ones. The latter could only be captured and transferred to farms when they are in problematic situation which may represent risks to the survival of the animals, to humans or livestock (VERDADE & SANTIAGO, 1990).

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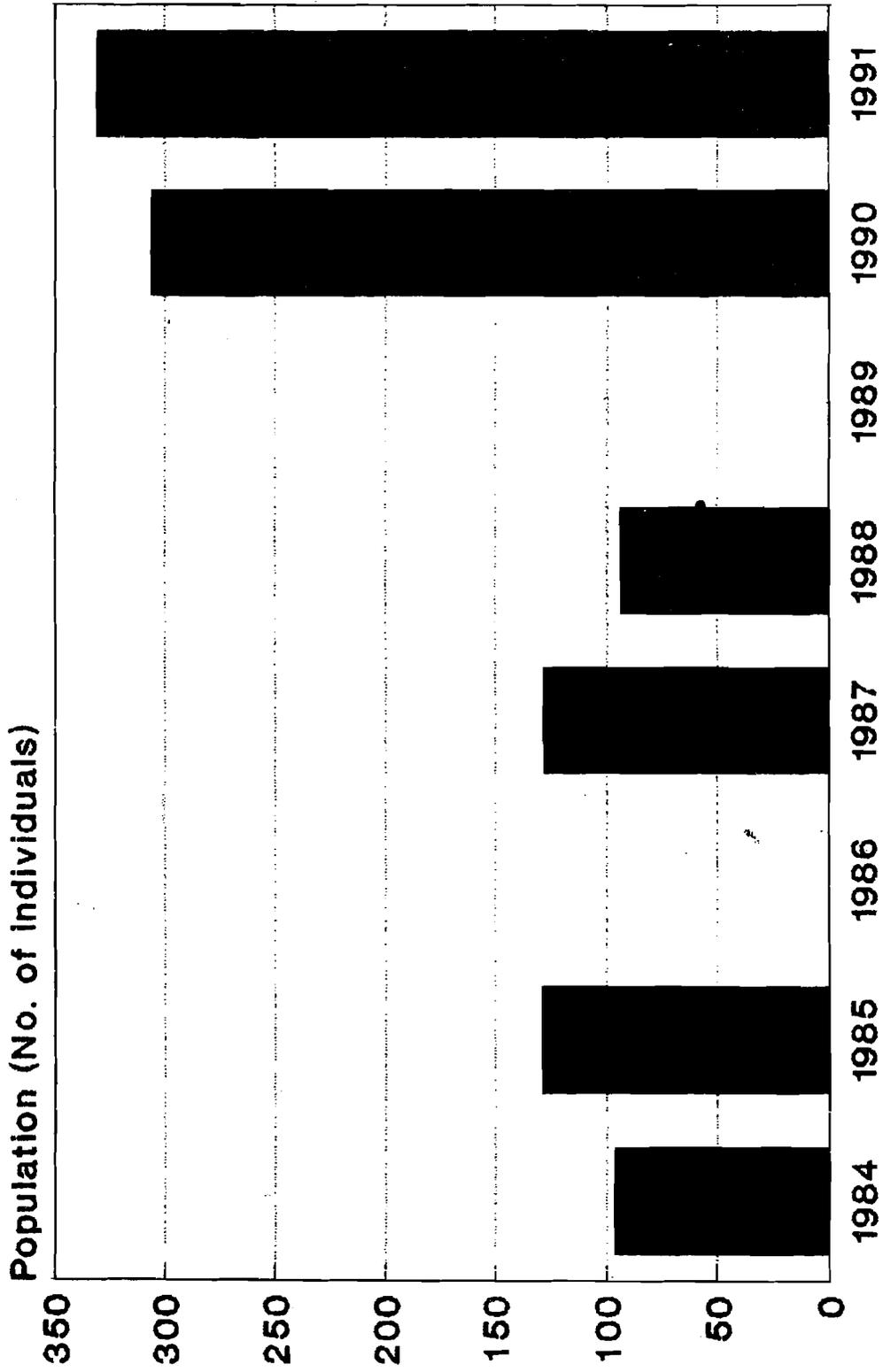
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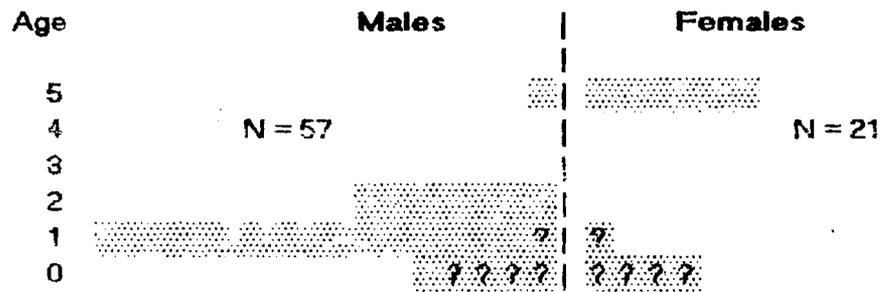
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**Figure 1: Census of broad-nosed caiman captive colony in Brazil  
(data from Brazilian Society of Zoos Censuses from 1985 to 1991)**



(\*): There is no information about 1986 and 1989

Figure 2: Age-pyramid of broad-nosed caiman captive colony in Brazil  
(known aged animals)



PS: Extracted from the broad-nosed caiman Regional Studbook / 1991