

**Age at First Reproduction in Captive  
*Caiman latirostris* (Broad-snouted Caiman)**

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Age at sexual maturity is one of the most important aspects of population dynamics. The longer individuals take to start breeding the longer the generation length and the slower the population rate of increase (Caughley 1977). However, there is little information about age at sexual maturity in crocodylians. Age at sexual maturity ranges from 2.5 years for *Crocodylus palustris* in captivity to possibly 35 years for *Crocodylus niloticus* in the wild (Ferguson 1985). Magnusson and Sanaiotti (1995) report that *Caiman crocodilus crocodilus* attains sexual maturity at 5–6 years of age in the Brazilian Amazon, but they note that growth rates vary among habitats and individuals. Moulton et al. (in press) suggest an asymptotic snout-vent length (SVL) of 87–107 cm, with an estimated age range of 8.6–15 years for *Caiman latirostris* female first reproduction in a mangrove habitat of southeastern Brazil.

This report documents the first production of second generation (F<sub>2</sub>) broad-snouted caimans in captivity. Genealogy and other information about these animals is available in the Regional Studbook for the species (Verdade and Kassouf-Perina 1993). The broad-snouted caiman captive breeding program is maintained by the Department of Animal Sciences of the Escola Superior de Agricultura "Luiz de Queiroz," University of São Paulo, located in Piracicaba, São Paulo (22°42.557'S, 47°38.246'W). This re-

gion presents a tropical climate with wet summers and dry winters (Simielli 1993). Although temperatures can get below 10°C during the winter and above 30°C during the summer, monthly average temperatures range from 16.8°C in June to 24.7°C in February, with only four months (May–August) below 20°C (Ometto 1991).

The caimans were maintained under natural temperature conditions since they hatched. During the first six years of life they were maintained in walled pens of 64 m<sup>2</sup> (ca. 2.7–10.7 m<sup>2</sup> per individual) with a 60 cm deep cemented pool of ca. 24 m<sup>2</sup> (1.0–4.0 m<sup>2</sup> per individual). They were then transferred to and maintained in a fenced area of 120 m<sup>2</sup> (20–30 m<sup>2</sup> per individual) with a one-meter-deep cemented pool of ca. 30 m<sup>2</sup> (5–7.5 m<sup>2</sup> per individual). Nesting shelters, consisting of an approximately 4 m<sup>2</sup> partially walled area, adapted from Bustard (1975), were provided and successfully utilized by the females.

Age at first reproduction was approximately 10 years (Table 1). Clutch size ranged from 36 to 44 with an average of 40.25 eggs per clutch. Incubation period ranged from 85 to 89 days with an average of 86.5 days. Eggs were incubated as described by Verdade et al. (1992a) with hatching success of 40–86%, and averaging 67% (see Table 2 for a summary of reproduction). Hatchlings were raised as described by Verdade et al. (1992b), and presented a low mortality rate (0.75%) at seven days post-hatching.

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TABLE 1. Age at first reproduction of captive *Caiman latirostris*.

Animal	Sex	Date of birth	Date of reproduction*	Age at first reproduction	SVL (cm)**	M (kg)**
CL1	Male	28 February 1986	19 March 1996	10 years and 20 days	101.5	51.0
CL5	Female	01 April 1986	28 March 1996	9 years, 11 months, and 29 days	81.0	30.5
CL9	Female	01 April 1986	19 March 1996	9 years, 11 months, and 21 days	80.4	24.0
CL10	Female	01 April 1986	21 March 1996	10 years and 21 days	70.9	20.0
CL13	Female	01 April 1986	06 April 1996	10 years and 8 days	80.6	29.5

\* Date when first siblings hatched

\*\* October 1995

TABLE 2. Summary of reproduction of captive *Caiman latirostris*.

Female	Clutch size	No. of broken eggs	% broken eggs	No. of incubated eggs	No. of hatchlings	Incubation success	Incubation period (days)	Deaths (days 0–7)
CL5	44	15	34.09	29	19	65.52	86	1
CL9	44	5	11.36	39	28	71.79	85	
CL10	36	8	22.22	28	24	85.71	89	
CL13	37	12	32.43	25	10	40.00	86	2
average	40.25	10	24.69	30.25	20.25	66.94	86.5	0.75

Incubation temperature: 31 ± 1°C

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