

Short Note

Nest-sharing behavior of captive Broad-snouted caimans (*Caiman latirostris*): Cooperation or exploitation?

Sofía Evelyn Pierini^{1,2}, Alba Imhof^{2,3}, Alejandro Larriera^{2,3}, Melina Soledad

Simoncini^{1,2,4,*}, Guillermo Príncipe^{2,5}, Carlos Ignacio Piña^{1,2,4}

1 - Laboratorio de Ecología Animal, Centro de Investigación Científica y de Transferencia Tecnológica a la Producción – CONICET/Prov. ER/UADER, España

149, E3105BWA Diamante, Entre Ríos, Argentina

2 - Proyecto Yacaré, Laboratorio de Zoología Aplicada: Anexo Vertebrados, FHUC/UNL, Aristóbulo del Valle 8700, Santa Fe 3000, Santa Fe, Argentina

3 - Facultad de Humanidades y Ciencias, UNL, Ciudad Universitaria, Paraje El Pozo, 3000, Santa Fe, Argentina

4 - Facultad de Ciencia y Tecnología, UADER, Sede Diamante, Tratado del Pilar 314, E3105BWA Diamante, Entre Ríos, Argentina

5 - Dirección General Manejo Sustentable de Fauna, Ministerio de Ambiente y Cambio Climático, P. Cullen 6161, 3000, Santa Fe, Argentina

*Corresponding author; e-mail: melinasimoncini22@yahoo.com.ar

ORCID iD: Pierini: 0000-0002-3492-8216

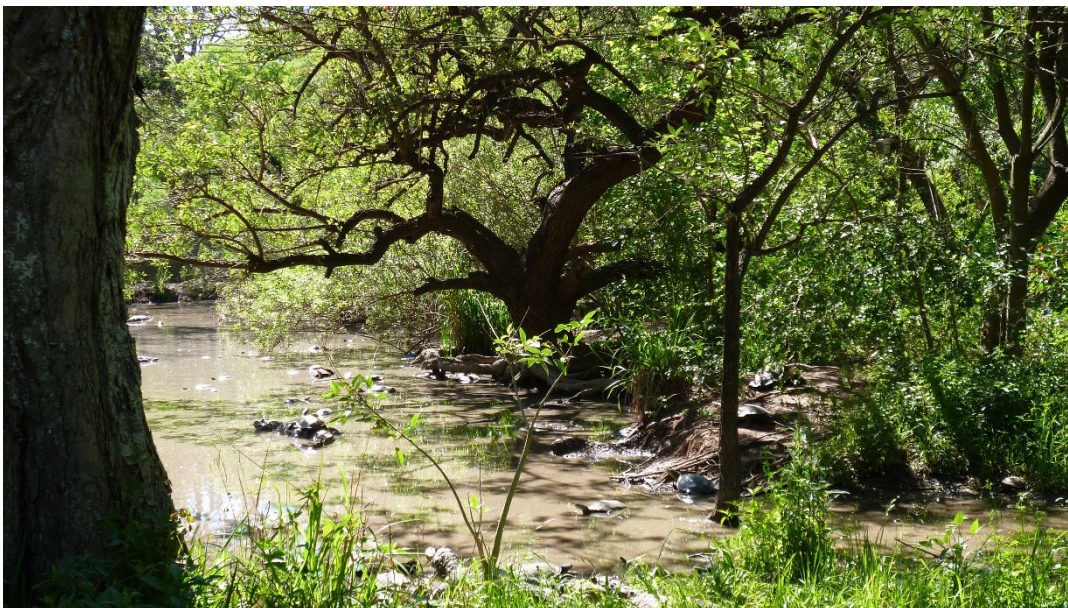
Supplementary material

Video S1. Nest-sharing behavior of the Broad-snouted caiman (*Caiman latirostris*).

Video S2. Broad-snouted caiman (*Caiman latirostris*) attending two nests.



a)



b)



c)

Figure S1. Enclosure where the study was conducted, in Granja La Esmeralda Experimental Breeding Station. (a) and (b) Lagoon, (c) *Caiman latirostris* nest.

Table S1. Ethogram: Nesting behavior of the Broad-snouted caiman (*Caiman latirostris*).

Behavior	Description
Nest maintenance behaviors	
Excavating nest	Female lays on or across the nest and performs excavation movements with her hind limbs. The movements are alternate, from two to four per extremity before alternating. Unlike laying, in this case the female removes the surface material from nest (soil and vegetation), and does not perform deep excavations to form a cavity.
Adding material to the nest	Female lays near the nest and performs movements identical to those of excavation, but this time towards to the nest. The removal of soil and surrounding vegetation allows such materials to be close to the nest. This activity occurs before laying, such as preparing the space where the female will construct the nest, and after laying, to make periodic changes to the surface material of the nest.
Compaction of material	The female lay on the nest and turns. The activity is brief, and once finished, the female makes the behavior "adding material to the nest" or "excavating nest."
Nest vigilance behaviors	
Vigilance around the nest	Female makes short walks near the nest and settles in a fixed place for a while, often in a vegetated and inconspicuous place. Then, the female begins the "vigilance over the nest."
Vigilance over the nest	Female remains on the nest without significant movement. She often makes turns on the nest that allow her to change the direction of

observation. Then, the female generally returns to the behavior "vigilance around the nest."

Aggressive behaviors

Confrontation	Two females are facing each other. This can occur when one of them is on the nest and another female arrives, or it can also occur when a female is near the nest, watching in a barely visible place behind vegetation, and is confronted by a female who appears at the nest. One of them or in some cases both, make meandering movements with the tip of the tail. The length of the activity varies and might have brief periods (1–10 minutes) or may last longer (up to 20 minutes). This activity is followed by "aggression" or "persecution."
Persecution	A female pursues another female that is near the nest. This event lasts only seconds and usually occurs after the "confrontation" behavior. This activity also includes events in which, after a confrontation, one of the females decides to leave the area, even though there is no persecution.
Aggression	Intraspecific fights. Bite reactions to another female. This activity is followed by the "persecution" behavior. In this study, no interspecific interactions were recorded.
