

## CROCODYLIA

**CAIMAN LATIROSTRIS** (Broad-snouted Caiman). **BEHAVIOR.** Tail display is relatively common in vertebrates, but is expressed most dramatically and variably in reptiles. Tail display has been described as an aggressive social behavior in adult males of *Caiman crocodilus crocodilus* during the reproductive period, occurring prior to frontal attack (Azarzagüena 1983, Doñana Acta Vert. 10[3]:1–136). During this display the animal keeps its head and distal portion of the tail arched above the surface of the water. Some head movement may be associated, but this is infrequent.

The same aggressive tail display was directed at me on many occasions by adult (SVL  $\geq 75$  cm), captive broad-snouted caimans (*C. latirostris*) of both sexes. The display differed in that, after arching their tails above the water, the caimans slowly moved their bodies approximately 45° in relation to the observer, then rotated back to the original frontal position, prior to attack. Frontal attacks would be expected to be faster and more efficient than lateral ones, during which animals would be more vulnerable to counterattack on their flanks. Why, then, does *C. latirostris* apparently compromise its efficiency by turning prior to attack?

One hypothesis is that this position may allow utilization of the tail during attack, but this has never been observed, other than in tail splashing prior to approaching an opponent. Oblique or lateral attacks have never been described. Another possibility may be that the tail acts to distract the opponent from the animal's main weapon, its mouth. If this is true, however, it does not explain why the animal does not rotate a full 90°, which would theoretically maximize the efficiency of the distractive behavior by placing the head and mouth as close to the opponent as the tail.

Perhaps two opposing selective pressures are acting on the same behavior. A frontal position relative to the opponent would favor the attack itself, but would minimize the effect of distractive tail movements. A perpendicular position would maximize distractive effects, but would reduce attack efficiency, as the animal would have to rotate 90° back to the frontal position before attacking. The observed behavior in *C. latirostris* could be the geometric resolution of these two apparently equal selective pressures.

Considering caiman head and tail morphology, tail distractive behavior may be visually efficient only when an opponent's eyes are at water level. It is doubtful that this behavior is part of an elaborate feeding strategy, as caimans are known to be opportunistic predators, and it is unlikely that they developed such complex behavior that would only be of benefit in pursuit of specific prey. Adult crocodylians have almost no natural predators besides humans, and, because tail display in caimans is exhibited only by adults, this behavior is apparently not related to predator defense. By exclusion, the most likely use of tail distractive behavior in caimans is in intraspecific social interactions. Tail displays described by Azarzagüena (in lit.) for *C. crocodilus crocodilus* dur-

ing reproductive season seem to corroborate this hypothesis.

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