

## ACKNOWLEDGMENTS

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## DANGEROUS TO MAN? A RECORD OF AN ATTACK BY A BLACK CAIMAN (*Melanosuchus niger*) IN GUYANA

The black caiman (*Melanosuchus niger*) is a large crocodylian and the largest of the Neotropical caimans. Verifiable records indicate that this species attains a total length (TL) of at least 4 m, and possibly 5-6 m (MacCreagh 1961; Medem 1981; Thorbjarnarson and McIntosh 1987). Black caiman are distributed throughout the Amazonian drainage, although populations also occur in coastal French Guiana and Guyana, and are classified as endangered throughout all range states (Groombridge 1982). The principal causes of the decline of this species have been unrestricted large-scale hide hunting and the incompatibility with domestic livestock and humans (Plotkin et al. 1983). It is this last aspect, the relative danger to humans posed by the presence of black caiman, that I discuss in this paper.

Although any crocodylian longer than 2 m TL is capable of inflicting serious or fatal wounds to humans, only two of 23 species of Crocodylia are regularly reported as being predators of humans. These are the Nile (*Crocodylus niloticus*) (Graham and Beard 1973) and saltwater

crocodyles (*C. porosus*) (Webb et al. 1978). Two additional species, the mugger crocodile (*C. palustris*) (Deraniyagala 1939) and the American alligator (*Alligator mississippiensis*) (Pooley et al. 1989) have also been implicated in attacks on humans. While it is important to recognize the potential for dangerous encounters between most crocodylians and humans, management decisions must be tempered by the probability of such occurrences.

The large size and formidable appearance of adult black caiman have inspired fear and earned them the reputation of being possible predators of humans (Reese 1923; Guggisberg 1972; Caras 1975; Medem 1981; Pooley et al. 1989), although few records of authenticated attacks by this species are available. Thurn (1883:130), commenting on the crocodylians of Guyana, wrote "They are rarely harmful to man, though one occasionally hears stories of how an arm or leg has been snapped off by one of these reptiles.... Generally when lying, basking, on the surface of the water the cayman is a sluggish animal, and it is not dangerous to bathe, in shallow water, close by them, if the bather only keeps his eye upon them and is prepared to run as soon as the cayman seems about to move." Bates (1863:294-295) earlier observed black caiman populations at a time of pristine abundance during 11 years of field investigation in the Amazon basin. He remarked on "...the timidity or cowardice of the alligator," stating that "He never attacks man when his intended victim is on his guard; but he is cunning enough to know when this may be done with impunity...." Bates went on to describe how a besotted native, ignoring warnings of the presence of a large black caiman, went to bathe at Caiçara, Brazil, and was promptly seized and drowned by the animal. A second, unsuccessful attack on a young boy that occurred in the 1890s is described by MacCreagh (1961:188-189), who also recounted bathing harmlessly in the presence of black caiman. These are the sole authenticated literature records of attacks by a black caiman of which I am aware aside from the questionable, colorful account of Norwood (1958:192-195, 1960:iv). In a highly adventurous tale reminiscent of Indiana Jones, Norwood describes how his Amerindian guide and solesurviving prospecting companion succumbed to attacks by 'alligators' while thrashing through the swamps delirious and near death from snake bite near the headwaters of the Essequibo River in southcentral Guyana. The stated size of one of the killed 'alligators' was 15', sug-

gesting *M. niger*. While surveying Guyanese caiman populations, I learned of an actual witnessed attack on a human by a black caiman.

In June 1989, I visited Apoteri (4°00'N, 58°36'W), a small (est. pop. about 300) Macusi Amerindian village on the middle Essequibo River, Guyana. While there, I interviewed 18 year old Augustine Alfred who was attacked and badly mauled by a black caiman in the Essequibo River during December 1982 and subsequently lost most of his left arm. Augustine was 11 when the attack occurred; he was bathing and swimming with a friend near shore at dusk. While playing and splashing, his friend dove and grabbed him. Augustine then dove and made a similar gesture toward his friend and surfaced. His friend resubmerged and the next Augustine knew, he was seized on the upper left arm by the caiman and shaken vigorously back and forth. The suddenness of the attack at first led him to think that his friend was again teasing him. Augustine apparently went into an immediate state of shock and didn't remember feeling any pain from the attack, nor were he or other observers able to estimate the size of the caiman. Luckily, his uncle was nearby in a canoe and witnessed what was occurring. His uncle promptly paddled and rammed his canoe into another stationary canoe tethered near the two boys. That action appeared to startle the caiman and it released its hold on Augustine. Augustine was taken to safety and was found to have his upper humerus broken and protruding at both ends and hanging by badly torn flesh. The village radioed for help and Augustine was airlifted the next morning

to the public hospital in the capital city Georgetown. Surgeons were unable to repair the damage and amputated the lower 3/4 of Augustine's left arm, after which he spent two months in the hospital recuperating.

Following the attack on Augustine, Apoteri villagers set baited shark hooks and caught and killed about 20 *M. niger* up to 3.7 m TL. Although black caiman had previously taken village dogs at Apoteri and downriver at Kurupukari village, this was the only attack on a human within living memory of village elders. The fact that this instance occurred at twilight and was preceded by raucous splashing undoubtedly contributed to the attack. It is impossible to determine whether the reaction by the caiman was a foraging or territorial defense response. Certainly the size of a young boy is comparable to the sizes of larger prey items such as fish [e.g., arapaima (*Arapaima gigas*) or river turtles (*Podocnemis expansa*)]. However, the incident occurred during the courtship season, and the possibility that the attack was territorial in nature cannot be rejected.

My own experience with wild black caiman indicates that they are most unaggressive compared to other crocodilians and can be readily approached. I was able to census large adult animals (>3m TL) routinely at a distance of 1-2 m in a rubber dinghy, where I was very vulnerable to attack, with no response other than seeming curiosity by the spotlighted caiman. It is this behavior that has historically made black caiman particularly vulnerable to human exploitation (Magnusson 1982).

Is, then, the black caiman dangerous to humans?

Potentially, yes; in reality, no. Even granting imprudent human behavior, the odds of an attack by this species are infinitesimally small. The bad reputation and fear inspired by this species have been unjust and only served to promulgate its demise and counter conservation efforts. The presence, per se, of large adult black caiman in areas inhabited by humans does not warrant the removal of those animals. In localities where *Melanosuchus* populations are recovering the occurrence of a potential nuisance animal near human settlements should be evaluated on an individual basis by pertinent management authorities. Appropriate recommendations include live capture and removal for captive breeding, translocation for restocking, or lastly, selective culling - in that order. The purported incompatibility of black caiman with humans is more perceived than real and should not be accepted as a ruse by hide industry proponents to allow renewed harvesting of this still endangered species. Optional controlled harvest management should be instituted only after well documented population parameters have been studied and the species is accepted by international bodies as no longer endangered.

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### A GECKO NEW TO THE UNITED STATES HERPETOFAUNA, WITH NOTES ON GECKOS OF THE FLORIDA KEYS

Human impact on the environment of the Florida Keys has been severe, with extensive destruction or alteration of natural habitats. In spite of this, or perhaps because of it, these islands have proved fertile ground for the establishment of introduced species of lizards of the family Gekkonidae.

Wilson and Porras (1983) listed five species of introduced gekkonids, *Sphaerodactylus argus*, *S. elegans*, *Gonatodes albogularis*, *Hemidactylus turcicus* and *H. garnotii*. These species have established populations on one or more of the islands comprising the Florida Keys. The Mediterranean gecko, *Hemidactylus turcicus*, confined to edificarian habitat, and the parthenogenetic Indo-Pacific gecko, *H. garnotii*, are probably widespread among those keys linked by the interisland highway. Based on collections made in April of 1989 and 1990, we review the status of populations of *Gonatodes albogularis*, the two introduced and one native species of *Sphaerodactylus*, and report the establishment of a sixth exotic species of gecko on one of the Upper Keys.

The nominate subspecies of the reef gecko, *Sphaerodactylus n. notatus* is native to the south east coastal ridge of mainland Florida and the Florida Keys (Conant 1975; Lazell 1989). Our collections indicate that this species remains common throughout the larger Upper and

Lower Keys. In 1989 Key Largo (CAS 17207; CAS 172080-82), and (172079-102). In 1990 v it on Key West (CAS 174 on No Name Key (CAS and sighted it on Duck Populations of the *Sphaerodactylus argus* cline. Since first report (Savage 1954) there have been reports on individual Wilson and Porras (1983) specimen collected on 1977, and Love (1978) specimen in Key West. collect specimens of the Lower Keys.

The ashy gecko, *elegans*, though less *notatus* in the western fairly abundant. We collected in both 1989 (CAS 17207 (CAS172330-31) along Key West, on a large Hwy. 1. In addition to been reported from Big Wilson and Porras (1983), (Duellman and Schwartz (1989) lists Summerland land, Middle Torch Key Key for which museum and reports sightings on and Spotswood Keys. collected this species (CAS 174334-36) between Boca Chicka Key.

The introduced yellow *Gonatodes albogularis* reported from Key West, entirely at one time abundant Wilson and Porras (1983) 1971 it has become rare collections since that date specimens and observed individuals in 1989 (CAS1 and again in 1990. I were made on the same in the paragraph above.

Crawl Key is located Key and connected to it way 1 causeway. Most south of the highway is covered, a small area scrubland dominated by (*Schinus terebinthifolius*) pine (*Casuarina equisetifolia*) Two of us (RL and PGF) area on 20 April 1990, loose bark from the dead by turning fallen dead tree trunks and wood trash. medium sized geckos from objects and an approximat

U. S. Forest Service, Department of Agriculture

#### Publication Announcement

### THE REPTILES AND AMPHIBIANS OF THE CIMARRON NATIONAL GRASSLANDS, MORTON COUNTY, KANSAS

Joseph T. Collins & Suzanne L. Collins

with Photographs by the Authors

This booklet defines the reptile and amphibian diversity of the Cimarron National Grasslands, and includes accounts of the 31 species known to reside there. The text accounts contain standard common names, characteristics, size and size maxima, habits and habitats, when the species was first discovered in the Grasslands, current abundance, and reproduction and food preferences. The introduction contains a summary of herpetological explorations in Morton County, a checklist of the herpetofauna, and remarks on their threatened status. A complete bibliography is included. There are 32 color photographs of amphibians and reptiles, and eight color photographs which display the rugged beauty of this wilderness area in extreme southwestern Kansas. viii + 60 pages, 40 color photographs, 3 figures. January 1991.

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