Caiman crocodilus (Spectacled Caiman)

Family: Alligatoridae (Caiman and Alligators)
Order: Crocodylia (Crocodiles, Alligators and Caiman)
Class: Reptilia (Reptiles)

Fig. 1. Spectacled caiman, *Caiman crocodilus.*

[http://www.anywherecostarica.com/flora-fauna/reptile/caiman, downloaded 13th November 2011]

TRAITS. The spectacled caiman, which is also referred to as the common or white caiman, derived its name from the lighter coloured ridge bone which is noticed on their face, resembling that of an actual pair of spectacles (Wikipedia, 2011). They are often confused with American alligators (*Alligator mississippiensis*) and American crocodiles *(Crocodylus acutus)* but these magnificent olive green, lizard-like creatures can grow, measuring from the start of its snout to the tip of its tail between 2 and 2.5 meters long while in rear instances some can grow to an astonishing 3.5 meters, the males of the species are usually 2-2.5 meters and the usually smaller females are approximately 1.5 meters. Young are yellow in colour and black crossbars are seen on their bodies. On certain individual's back dark patches are noticed also there are the presence of dark coloured rings on some of their tails. Their bodies are heavily armored covered with scales and there ridged tail is one of the strongest limbs which are compressed laterally for swimming and it is approximately the length of their actual body length (Allsteadt & Vaughan, 1992). The hind legs of the spectacled caiman are larger (five digits) than their front (four partly webbed digits) and their extremely powerful jaws are packed with teeth which are not seen while

its mouth is closed which is another factor that distinguishes it from the American crocodiles. An amazing trait of this remarkable species is they are able to alter their colour in colder weather appearing darker. This is a result of the expanding of the black pigment cells found in their skin (Wikipedia, 2011).

ECOLOGY. The spectacled caiman prefer to live in lowland freshwater environments where it is muddy for example swamps, lakes, roadside ditches, streams, marshes and rivers while they are able to endure saline water (Busack & Pandya, 2001). This flexibility makes these individuals the most abundant of all the caiman species existing. These species of caiman seldom depart from their water source unless they are forced to either naturally (e.g. drought) or due anthropogenic sources, when they do this they are usually found buried in the cool damp mud. These species are usually found in Trinidad and Tobago, northern Argentina, southern Mexico and southern Florida. Recently the species population was recognized and introduced in Puerto Rico and Cuba (Rojano & Velasco, 2006). Caimans are also imported from these habitual islands worldwide where it is sold as an exotic pet.

ACTIVITY: Spectacled caimans are generally shy solitary creatures with the exception of mating season when they becomes aggressive and territorial. They are seen living in small scattered groups all belonging to the same territory (Busack & Pandya, 2001). They show very little movements especially during the daytime when temperatures is high and remain submerged in the water. Early in the morning and late in the evening they come on shore to bask (Rojano & Velasco, 2006). During this period they grasp the opportunity to catch their prey as they naturally hunt in the night. This particular species rank them on size. The larger hence more dominant of all are socially higher ranked hence they have more preferences to females during mating season.

FORAGING BEHAVIOUR. Spectacled caimans have a propensity to feed on other animals found in the water of their surroundings which includes various types of fish, reptiles, amphibians and even water birds. Young mostly consume land invertebrates while at the juvenile stage snails are a more preferred diet (Wikipedia, 2011). These reptiles are nocturnal meaning they mostly forage at night. It was recently discovered by scientists that caimans do not feed when their environment becomes dry, resulting from this is cannibalism where a caiman will devour another condition in order to survive. While foraging caimans are territorial, patrolling only water sources or close by forests familiar to them. They usually hunt by stalking which normally occurs in the water when the reptile swims slowly and cautiously to its prey of choice and then lunges its body forward and snaps its powerful jaws around the now defenseless creature. Another hunting method of this species is ambush, this is where they stay motionlessly and awaits a prey to arrive where they capture it in a similar manner to that of stalking.

COMMUNICATION. Spectacled caimans uses mostly sound to communicate as they are known to be the most vocal reptile. Approximately twenty different messages are transmitted using this technique (distress calls, courtship bellow, threat calls and hatchlings calls). Caimans do not posses any vocal cords hence bellowing is performed by inhaling air into its lungs and releasing it intermittently in deep toned roars (Wikipedia, 2011). This is usually done to attract mates and to warn any other intruding males. Another mechanism for communication is that of smell. In total the caiman has four sent glands (two are positioned on the lower jaw and the other

two are within the cloaca). Spectacled caimans have developed body movement which is another form of communication used. They vibrate their bodies while they are positioned below the water's surface which then produces ripples that travels over large distances. Other bodily movements observed are the slapping of their heads and slashing of their tails on the water surface.

SEXUAL BEHAVIOUR. The level of maturity of the spectacled caiman depends on the dominance of the individual and this usually occurs from 4- 7 years of age (Wikipedia, 2011). The female uses dense vegetation to produce a nest which can vary in size depending on the availability of resources for her eggs. Nesting is usually seen during the wet season but not in the winter since the extreme cold is too low for the eggs to survive. Temperature is an important factor to hatching eggs since it is what determines the sex of the hatchlings so the female constructs its nest with proper insulation. Both males and females are known to guard the nest, eggs, and younglings when hatched. In attracting females males use what is known as infrasound as part of their mating behavior. This activity involves bellowing in infrasound with their head and tail raised over the water surface while their midsection is partially submerged hence the water over their backs sprinkle from the vibrations produces. This is known as the water dance of the Caiman (Fig. 2). Male individuals breed many females and the actual courtship process involves mates rubbing backs, swimming together, touching snouts, bellowing, bubble-blowing and circling each other (Busack & Pandya, 2001). The females of this species displays high protective maternal behaviors as one individual female takes care of her hatchlings as well as other females offspring.

JUVENILE BEHAVIOUR. Juvenile spectacled caimans stay relatively close to their parents for maximum protection from predators for an average of 1.5 years. Some juveniles even stay close to the male parent's turf for additional protection. The young caimans however do not rely on their parents for food as they catch their own meal, but the parents do however leave some remaining scraps from their food for their young. Both parents take responsible roles of protecting all their hatchlings and even convey the parental instinct of leaving pieces of food for them.

ANTIPREDATOR BEHAVIOUR. The main predator of the adult spectacled caiman is humans since they are a top predator of the food chain for their habitat. They are hunted for their meat and skin. Their tough armored skin roofed with spikes aids in protection from other animals such as jaguars and larger carnivores. These reptiles are also extraordinary swimmers due to their webbed feet. An adult caiman is hardly prone to predation from other wild animals but the juveniles are not as lucky. From the egg stage until approximately 1 year of age they are threaten by larger mammals, large birds such as hawks and other species of crocodiles. This is minimized by the watchful eyes of the nearby parents.

REFERENCES

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Fig. 2. The "water dance" of the spectacled caiman.
[http://www.iucncsg.org/ph1/modules/Publications/ActionPlan3/ap2010_03.html, downloaded 13 November 2011]