What a Croc

by Kelvin Aitken

Sharks have long been the bad boys of the ocean, having the reputation of being fierce man eaters. On rare occasions this has even been true but they are not the most dangerous marine animal on this planet. Box Jellyfish can kill in a few minutes, inflicting pain so intense that the victim dies of heart failure. Or sea snakes have a venom as deadly as any land snake.

The simple solution to these apparent threats is to just stay out of the water. Take up bull running, rodeo riding or elephant racing because none of those animals will climb out of the sea and kill you.

But not so with a croc. The Salt Water or Estuarine Indo-Pacific Crocodile (Crocodylus porosus) is the largest predatory reptile on earth and will climb out of the water to drag you screaming to your watery grave. OK, that sounds a bit over the top but in essence it is true. Crocodiles are amphibious and have taken both swimmers and land lubbers in salt and fresh water environments, sometimes far inland.

However like sharks, crocodiles are far more complex than a simplistic title such as "man eater" can convey. Lets give one a poke and see what makes these majestic predators tick.

Being reptiles, crocodiles are considered to be "cold blooded". That means that they need the sun and surrounding environment to moderate their body temperature. That is why they are usually spotted above water resting on river banks or beaches as they use the sun's radiant energy to raise their core body temperature.

Living just above the salt water line this croc inhabited a river near a popular swimming hole north of Cairns, Queensland Australia. Nikonos V, 15 mm lens, Velvia, f5.6@1/15 manual exposure.

Like turtles their sex at birth is determined by the incubation temperature of the nest, particularly in the first half of the incubation. A variation of half a degree or more above the "ideal" temperature of 31 degrees produces mostly males while a nest with a temperature below 31 degrees Celsius produces mostly females.

Unlike turtles they do not dig a nest in sand but instead create a shallow nest on land in which a number of soft shelled ovoid eggs are laid. A large mound of plant matter is then raked over the eggs providing them with warmth from the resulting heat produced by the rotting vegetation. A female may add to or subtract debris depending on the nest temperature. Some croc species do dig pits but here we will just consider the natural history of the Salt Water (Crocodylus porosus) species.

This large adult appeared regularly on a beach at one of the many river mouths in Milne Bay, Papua New Guinea, only a short distance from a village. Their skittish nature makes such images much harder to obtain than some underwater images. Canon EOS3, 70-200 mm L lens, Provia, f16 @ 1/60, manual exposure.

A large adult around 2.5 m long lived for a short time between two river mouths. It was quite possibly evicted from river territory by stronger and/or larger crocs. Milne Bay, Papua New Guinea. Nikon 801S, Aquatica housing, 20 mm lens, Provia, f11 @ 1/60, manual exposure.

The eggs mature over 60-90 days and when ready to hatch the young break open the soft shells from inside using a small sharp protrusion on their snout. At this time they will emit a croaking call which summons the mother to the nest where she will help to free them from the nest mound and take them gently in her mouth and transport them to the nearest water. Unlike turtles, this species of crocodile will care for and protect their young.

Initially the newborn will feed on insects, frogs and small fish but if successful in the wars of life will graduate to large fish and mammals. And that's where we enter the food chain.

My first experience photographing crocodiles was in northern Australia where I photographed a 6' female in a freshwater river, just above the tidal mark of the nearby ocean. One thing that I had gleaned from researchers and rangers was that crocs are territorial where generally the largest animal wins. So, when photographing crocodiles only chose those that are smaller than yourself. Other divers have had experiences photographing small crocs successfully because they are "programmed" to survive by not attacking a larger "competitor", namely the diver.

The fact that I was only about 2 inches longer than my first subject may be why I felt nervous the entire time. Or maybe it was just the fact that someone had been attacked a week before nearby.

When diving with sharks or other marine predators an experienced diver can pick up on the body language to determine if remaining in the area is safe. Threat displays, particularly among Grey Reef Sharks (Carcharhinus amblyrhynchos), have been well documented and are obvious as an indicator to an individual shark's temperament. Great Whites, Tiger Sharks and Grey Nurse (Carcharias taurus) as well as many other species

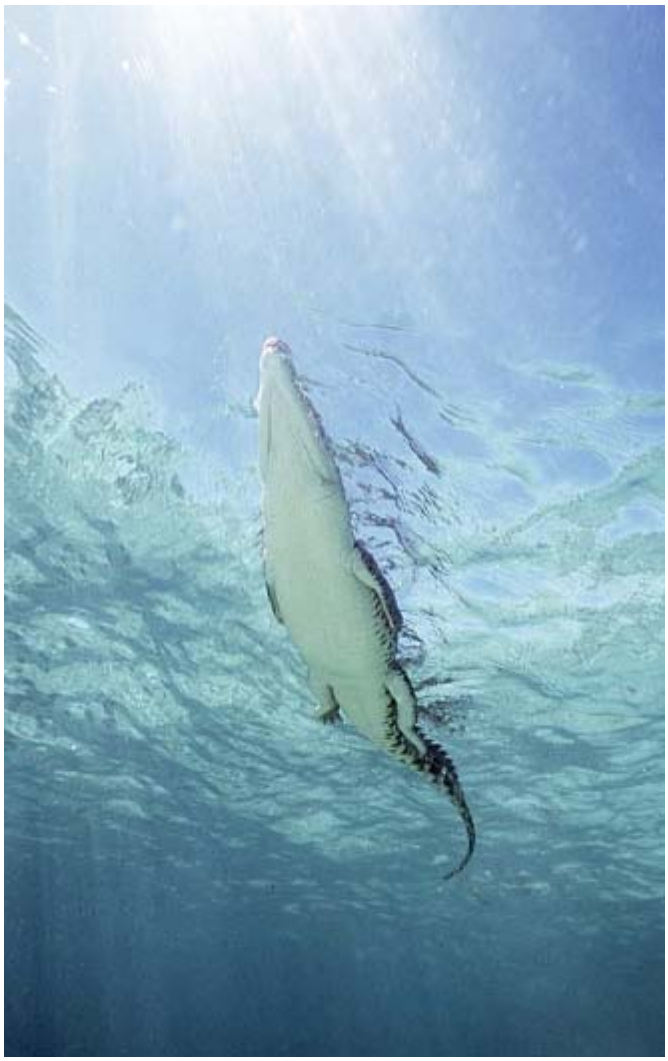
also may charge, twitch or "jaw chomp" to indicate their mood. Crocodiles on the other hand give absolutely no indication as to their mood. They may be asleep, afraid, nervous, or ready to launch an attack with the intention of either driving you off or eating you. There is no way of knowing what is going through their walnut-sized brain until they act with blinding speed. That is what makes photographing crocodiles underwater so fraught with danger.

My second attempt to photograph Salt Water Crocs was in Papua New Guinea where an ex-pat diver organized a very small juvenile croc from a croc farm to be released over a coral reef. It was productive but very unsatisfying. Not unlike taking photos of tigers in a zoo. So with the help of a friend in Port Moresby I set about photographing "real" crocs in a remote area in Milne Bay.

One thing that PNG has is lots of rivers due to the rugged mountain interior trapping rain clouds and sending their contents down to the sea. Huge inland swamps form and are ideal places for crocs to breed and feed. However when things get crowded, weaker crocs of all sizes are forced out into the rivers. When all of the space there is used up territorial disputes force the losers out of the river systems into the coastal areas where they seek out less crowed estuaries and rivers. My plan was to find these 'transient' crocs in relatively clear coastal water (the rivers usually have the viz of thin gravy) and get into the water with them.

A lot of time, energy, patience, anti-itch cream and malarial prophylactics were thrown at the problem of finding these subjects before Mike and I were able to find, with the help of local residents, some of these rather nervous transient crocs. When we first slipped over the side of our small boat and swam towards our first croc the three local guides we had hired rolled their eyes and tutted through their teeth as they voiced their opinion of those mad white guys swimming with crocs that attack and kill villagers on a relatively regular basis.

Swimming into the general area where the croc had been spotted we spread out to comb the area of flat reef flat covered in coral clumps and patches of tattered weed. Viz was a relatively massive 4-6 meters and depth varied from 20m and more on the seaward edge but averaged around 4 meters. Mike's imitation, through his snorkel, of a flatulent elephant alerted me to the discovery of our crocodile. Lying amongst the short weed the 2 meter croc looked like a water-logged tree trunk. Its slitted eyes were open and, though they never moved, we had the distinct impression that it was watching our every move.



Crocodiles swim with a flowing motion, using their hips to move their long sinuous tail. Nikonos V, 15 mm lens, Velvia, f5.6@1/125, strobe fill, manual exposure.

Taking a breath I dived down and approached from directly in front. Crocs attack their prey underwater by swinging their head to the side with a rapid slash so a front or rear approach are the safest zones to use. Using the rough reef surface I slowly and quietly pulled myself along until I was within a meter the croc. It did not move a muscle. It could have been made of concrete. Pushing a touch closer I began to shoot. I was down for about a minute then pushed back and up to take a breath and allow Mike to have a try.

Over the next 15 minutes not once did the croc move or adjust it's position. Then as we both watched from the surface it pushed up with its front clawed feet and swam, turning away from us, with a sinuous hippy sway towards the surface. When the nostrils cleared the surface it relaxed,

Crocs may "hang" at the surface for quite a long time. This may be to increase their body temperature using the sun and the much warmer surface layer and/or to check out any surface activity. Canon F1, Aquatica housing, 20 mm lens, Provia, f11 @ 1/60, manual exposure.

This large adult was found resting on the seabed on a reef which extended out to sea from a shoreline riddled by rivers. Canon EOS3, custom housing, 20 mm lens, Velvia, f5.6 @ 1/60, manual exposure.

This small juvenile was photographed resting on cabbage coral on a shallow island reef situated about 1 kilometre from a river mouth in Papua New Guinea. The open mouth is a threat posture in response to my close approach. Nikonos V, 15 mm lens, Velvia, f5.6@1/15 manual exposure, strobe fill.

allowing its legs and tail to hang down as it took a series of breaths. Raising my head above the surface I could see it watching me with it's yellow slitted eyes. Swimming in towards it I received the first reaction from our croc as it dropped open it's jaws, showing an array of impressive teeth, and hissed at me like a snake. Not blessed with a total disregard for my appendages I backed off. The croc did not swim away but continued to hang at the surface, watching our every move and

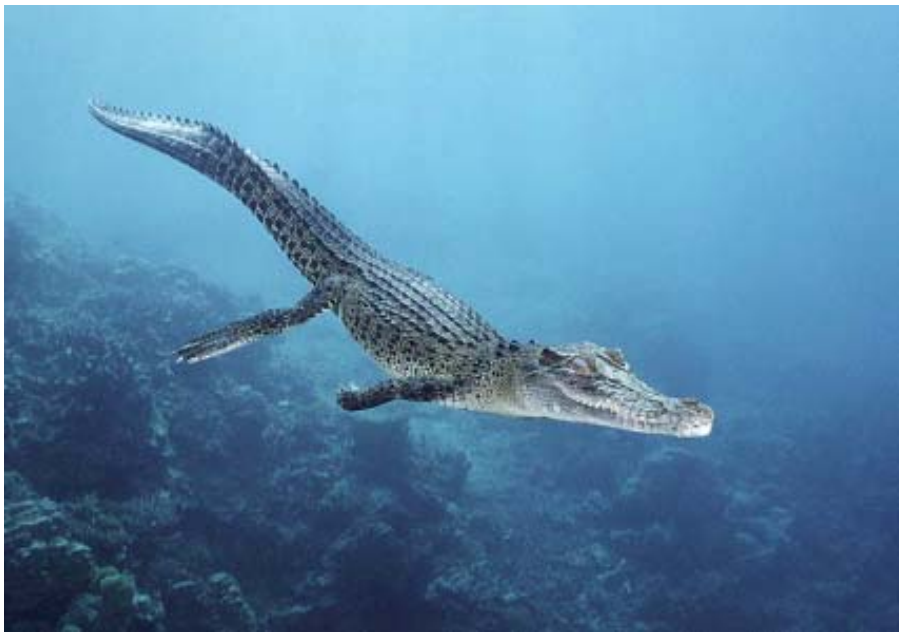
taking the occasional breath through its nostrils.

With a minimum amount of fuss it slid its protective "goggles" across its eyes and dropped back down below the surface, diving towards the seabed with that classic hippy swimming motion. As it reached the bottom it dropped its hind legs and began to run across the seabed looking for all the world like a dinosaur out of a Hollywood movie. Finding a spot to it's liking the croc glided to a halt, using it's smaller front legs to break and prop.

I call the croc an "it" because the only way to find out the sex of a crocodile is to put your finger up its vent and feel for a penis. I had not gone through that process with this particular crocodile partly because I felt uncomfortable fumbling for a penis up someone else's bum and also I assumed that the croc, male or female, may not fully appreciate my curiosity.

Over about 2 hours Mike and I followed the croc, shooting when we could. At no time did we feel in danger though there was a few moments of anxious back peddling when it propped on a porites coral mound at the surface and the current pushed me a little too close. We were careful not to harass our subject as even though these animals can be ferocious predators they are also sensitive to stress. Professional farmers and handlers know that even a large croc can die very quickly if subject to excessive stress.

Crocodiles seem to be the flavour of the month with TV programs and movies depicting crocs attacking animals and humans with apparent blind ferocity. As is always the case the truth about these magnificent predators is far more complex and compelling than such a simplistic view. That said I would never suggest that the average diver seek out crocodiles but to treat them with the caution and respect that they deserve.



A large adult around 2.5 m long lived for a short time between two river mouths. It was quite possibly evicted from river territory by stronger and/or larger crocs. Milne Bay, Papua New Guinea. Nikon 801S, Aquatica housing, 20 mm lens, Provia, f11 @ 1/60, manual exposure.

Baby crocs use a sharp hook on the tip of their snout to open their leathery shell. This hatchling was shot in an inland swamp. It was ready to bite even before exiting it's shell. Canon EOS3, 100 macro, f32 @ 1/8 sec

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