



BATTERED TO DEATH: GREEN TURTLE FOUND FLOATING NEAR PUNTA GORDA!

Shortly after receiving a call of a dead turtle off the coast of Punta Gorda, TIDE's Research and Monitoring Team were in the TIDE truck and off to investigate matters further.

At around 3pm on **Thursday 9th August 2012**, TIDE's Science Director, James Foley, received notification from Oliver Garbutt, boat captain at Garbutt's Marine, that a sea turtle had been found about 1km off the coast of PG.

Captain Oliver was snorkeling at the time when he saw the large green turtle. Thinking it was at the surface to breathe, he approached the turtle and soon realised that the situation was more serious. The turtle was dead.



Figure 2



Figure 1



Figure 4



Figure 3

Clockwise from top left: Figure 1: Injuries to the skull. Fatal blow circled in yellow. Figure 2: Inspecting mouth for abnormalities. Figures 3 & 4: Length and width measurements.

He brought the animal back to land and contacted TIDE, who responded by collecting the animal, contacting the Belize Fisheries Department for permission to perform a necropsy, and contacted Linda

Searle from EcoMar for technical advice on performing the necropsy. Without the assistance of community members like Oliver, TIDE would not be able to conduct such important activities that help us improve our understanding of threats to turtles and life cycles.

An initial inspection of the outside of the body was carried out. Shell length was measured at 72cm, and width at 55.75cm. The turtle was male and total weight was approximately 125lbs, giving it an approximate age of 30-50 years old.



Figure 5



Figure 6



Figure 7



Figure 8

Clockwise for top left - Figure 5: Catfish spine protruding out of right eye socket. Figure 6. Green fat tissue under plastron. Figure 7. Blood clot behind brain. Figure 8. Opening of the skull to reveal shards of broken bone.

The necropsy (an autopsy carried out on non-humans) was performed to allow TIDE to determine potential health issues contributing to the death of the turtle. During the external inspection, two areas of damage were visible to the top of the head; both from an impact of some kind. Firstly, part of the scales in front of the left eye had been detached by the impact. The second injury was a bit further back on the top of the head, where a crack could be seen to be bleeding slightly.

Of interest, a spine from a catfish was protruding from the socket of the right eye, while another was found on the top of the left pectoral (front) flipper. Green turtles do not eat catfish, and they are

therefore unlikely to have direct contact with catfish unless the catfish is dead. A likely place to have brushed against fish bones would be in a net.

The necropsy followed a step by step process where each individual organ including the heart, liver, lungs and kidneys, was assessed for tumors, nodules, rough exteriors, shriveled surfaces, and discoloration. All were found to be normal and healthy. A tissue sample was collected for DNA analysis to determine which part of the world this turtle originated from.

The small and large intestines were examined for evidence of plastic consumption. No plastic or any other obstruction was found. The fat and connective tissue were found to be green, which is where the name "green turtle" originates, confirming this specimen to be a Green sea turtle (*Chelonia mydas*). The green color results from their herbivorous diet of sea grass.

The turtle appeared to have been in perfect health until the incident causing the head injuries. The head was examined internally, and a large blood clot, 3-4 days old, was found in the area behind the brain, along with shards of broken bone, while the brain itself was undamaged. Decomposition of the turtle was so minimal that the animal had probably been alive within 24 hours of being found. This leads to the conclusion that the turtle had been alive for at least a couple of days after becoming injured.

There are two plausible causes for this type of fatal injury. The first is a boat strike; however, in such instances, there is usually more damage to the carapace (shell), while this turtle was specifically injured on the head alone, leading to the suspicion that this was a targeted injury caused by a person with some sort of instrument. This would also seem more likely due to there being two head injuries and not one.

The turtle was found floating dead only 1 km from shore, and if it had been dead for 24 hours then it may have floated in from as far as the Sapodilla Cayes, some 50km offshore. This may have been an attempted battering with intent to kill and capture. However, due to the turtle's brain remaining undamaged, the turtle probably dove underwater to flee, surfacing elsewhere at a later time before slowly bleeding to death.

All species of sea turtle are endangered, and it is illegal in Belize and internationally to harm, kill, possess or trade in these animals or any part of these animals. If you see any stranded turtles, caught in nets, unable to dive, missing limbs, trailing fishing line, no matter their condition, alive, dead or dying, please contact TIDE and the Belize Fisheries Department and report as much information on their condition and whereabouts as possible. All information collected contributes to national efforts to conserve sea turtles, and we rely on your help to ensure the continued existence of these amazing creatures.

TIDE would like to thank the Belize Fisheries Department for granting permission to conduct the necropsy, and Linda Searle from EcoMar for providing technical expertise.

Thanks for reading!

TIDE Research & Monitoring Department.