

GA 1415

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As many of you know, having helped patrol the beaches, we had an unusual mortality event (UME) several months ago. About 65 animals washed up between western Louisiana and Galveston Island, all in a state of moderate to advanced decomposition. In the middle of this appeared a very interesting and unusual case, clearly not one of the UME animals.

GA 1415 was a large (269 cm) male bottlenose dolphin, *Tursiops truncatus*. Not being in our own necropsy lab, we were not able to get a body weight. He was recovered dead, code 2, from Bolivar peninsula, Galveston County, on March 13. We did the necropsy the following day at Moody Gardens, which is kindly allowing us to use their facility for the time being.

External examination revealed an animal in normal body weight; there was no sign of weight loss; no 'neck', ribs not showing. There was no evidence of an injury. There were a few old rake marks on the tail stock, and a few of the small "target lesions" we attribute to healed dolphin pox. The margins of the fin, flukes and flippers were a bit ragged, but well healed, suggesting an old animal. The teeth were worn, many wedged by abnormal wear caused by malocclusion, and some teeth were missing. Teeth were collected for age study. At the time of necropsy, the animal was late code 2, or an early code 3. The mucosa of the mouth was violet, but there was no gas formation. The blubber was normal thickness, and free of parasitic cysts.

To our surprise, on opening the abdomen, we found about 6.5 liters (almost 7 quarts) of fresh blood with clots in the peritoneal space. Since we had already

inspected the animal for wounds and found none, it had to be from some spontaneous cause. If this had been a human, my first choice would have been a ruptured aneurysm of the aorta, but since dolphins don't get atherosclerosis, the cause of human aneurysms, we have to think of something else.

With a little more looking, we found a roughly spherical dense mass measuring 12 x 9 x 10 cm. tightly adherent to the region of the stomach, pancreas, and small intestine. At this point, we have to consider some sort of tumor. The heart, aorta, liver and all other organs were normal, except for a few lung worms.

The intestinal tract was empty from one end to the other. Dolphins are fast-digesting animals, so that finding nothing does not necessarily mean that he hadn't eaten for a while. Dolphins also lose weight quickly when not feeding, so the surmise is that his general state of well-being wasn't compromised until very late.

The spleen was not identified. The pancreas was stretched over, and partly incorporated into the mass. That part of the pancreas that could be identified seemed normal.

Slicing the mass revealed not a tumor, but a central partly organized or degenerated blood clot, and a thick somewhat laminated fibrous wall around it. On one side of the mass was a membrane about 2 mm thick, that could be peeled off; this contained older blood clot as well as fresh blood. This mass is evidently the site of the bleeding from the area underneath the peelable membrane. In the mass was a catfish spine, partly degenerated, with typical dimensions and barbs identifiable. It appeared to be from the dorsal fin of the catfish.

This dolphin died from exsanguinating peritoneal hemorrhage. Six and a half

liters is probably close to the total blood volume of a dolphin of this size.

The mass is a partly organized hematoma; that is, a mass of blood in the healing process. Apparently some time in the past the spine perforated the stomach and punctured a vessel, forming the hematoma; over time a fibrous capsule formed around the mass of blood. These spines are very sharp, and have two rows of barbs along the length of the shaft. The spine can migrate through the tissue, and in this case eventually punctured a mesenteric artery, producing the new massive hemorrhage. There was no demonstrable connection of the mass to any lumen of the stomach or intestine, but this is not surprising, since there would have been time for the hole to heal. We have seen catfish spines perforating the esophagus before, and interestingly, all those cases were in April of different years, when the catfish are running. Given the state of fibrosis around the old clot, I can believe that the first incident was a year ago, and that the spine was gradually working its way through the tissues until this past March when it hit the vessel.

As we have observed before, it is a risky business to be a dolphin, but you don't expect to be killed in such a strange way by something you have eaten. We will be reviewing our records, and probably publish a little paper on dolphin death by catfish. We would like to identify the species, if we can.