

PO 375

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PO 375 was a 262 cm long female manatee (*Tricheus manatus*) reported alive on the beach about 3 miles north of Wynn access road, Calhoun County 10:30 AM, December 18. It died within 1 ? hours, and was removed to Aransas Wildlife Refuge, from which it was brought to the Necropsy Laboratory at TAMUG. The gross examination was done by Dr. Worthy and Lance Clark, in my absence.

External examination

There were no signs of injury. Live barnacles covered most of the lateral aspects of the body, with a very few along the ventral and dorsal surfaces. There was a long fold or groove on the ventral side running from neck to anus. It appeared as if the animal was very emaciated, the folds resulting from severe weight loss and not normally present.

Internal examination

All organs appeared normal, except for the lungs, which contained several patchy whitish densities. The intestinal tract was empty, except for some feces in the large intestine. The fat on the heart and around other viscera was yellowish brown, semi-transparent, and gelatinous, a condition called serous atrophy (watery atrophy). The heart was flabby and dilated. The ovaries indicated that this was a mature female, with evidence of several ovulations.

Microscopic examination also revealed mainly normal tissues, except for the lungs, which had small areas of inflammation and an abscess. No evidence of lungworm was found. The heart had considerable myocardial injury in the presence of normal blood vessels. This injury took the form of over-stretched fibers, and degeneration of fibers, essentially the same findings as in stranded

dolphins. We attribute this to stress-induced release of large amounts of adrenalin, and constriction of the cardiac vessels reducing blood flow to the heart.

There were a number of anatomical peculiarities (peculiar from the perspective of a dolphin enthusiast!) perhaps the most interesting being the small and relatively simple brain. The brain of an adult manatee is very small compared to our familiar bottlenose dolphins, about a third of the size of that of a large *Tursiops*, with a smooth surface and large internal ventricles (cavities). This is no surprise when you consider the adaptations of the dolphin and the manatee. The dolphin is an active hunter, with a complex social existence, while the manatee which is something of a herd animal to be sure, is a sedentary grazer on plants in shallow, slow moving water. Which brings us to the question, what happened to this manatee? What is it doing so far off its range?

All of the findings indicate that this animal did not die of disease or trauma; it is wasted with findings of severe and abrupt weight loss. This includes the wrinkling and creasing of the skin, and the serous atrophy of fat. The fat cells are still there, but they have lost all their stored lipid, which is why they become semi-transparent. It is hard to imagine what this animal could have found to eat in the open Gulf. Dr. Worthy thinks that this is a Mexican manatee, and that seems very reasonable to me. The Gulf currents mentioned in an earlier report sweep up from Yucatan along the coast, and would easily brought her to the Port O'Connor region.

The manatee is a large volume eater of shallow water vegetation, and not a fish catcher. Its preferred diet simply does not exist off our barrier islands. In addition to starvation, this tropical animal is in the (relatively) cold December waters off our coast. That long term exposure to cold water/weather must have been exhausting and stressful. We have no idea what possessed her to leave home.

You may remember a few years ago a Florida manatee visited Galveston Bay and the Houston Ship Channel. Are there manatee explorers? Our interpretation of this case is that our manatee died of starvation and the stress of exposure to cold and an alien environment. There is no evidence of human interaction.