

CC 159

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CC 159 was a juvenile male melon-headed whale *Peponocephala electra*, (179 cm long) who stranded alive in Kenedy county in the Corpus Christi region on November 11, 1998. He was taken to the Texas State Aquarium in CC for rehabilitation. (Click [here](#) to read about his rehabilitation.) At first he seemed to be doing well, but soon developed a skin problem which we believe to be dolphin pox, a virus infection. These lesions tend to make small holes in the epidermis, and apparently these became secondarily infected with a variety of bacteria, and also a fungus. This is not a great surprise, as it is not possible to make the tank water sterile.

During the first week of rehabilitation the melon-headed whale was unable to swim and volunteers were in the water 24 hrs a day to hold him upright and to walk him around the pool. Approximately 10 days after stranding the animal started swimming and eating on his own. Once these skin lesions started to develop, his swimming and his food intake decreased. During the first week of December volunteers were again needed in the pool to assist his swimming. He soon became very lethargic and unable to keep his equilibrium.

He died on December 10th, and was brought to the Galveston laboratory for examination. He had a large number of skin lesions, some of which were large and deep, going almost entirely through the blubber. The lymph nodes were enlarged (I think, as this is the first melon-headed we have done!) especially in the neck area. This makes sense, as they would have been draining infected areas. It was something of a surprise to find that all the internal organs looked

remarkably normal. In this circumstance, in which all the organs look more or less normal or a little congested, and the nodes are large, we suspect infection in the blood (sepsis). This turned out to be the case. Fluid from the body cavity and the blood were cultured, and both grew out *Erysipelothrix rhusiopathiae*, a rather potent pathogen, which causes disease in a variety of species of land mammals.

We were unable to prove that there was dolphin pox involved, as we were not able to find typical virus particles using electron microscopy. However, this does not rule it out, since there is at least a 30% fail rate in finding the virus by EM in known cases. The pale skin lesions are typical of pox. The deep erosive and ulcerative skin lesions are typical of those caused by *erysipelo**thrix*, and there were easily demonstrated bacteria of the same type in the brain abscesses. It appears that there were two primary skin infections, pox and *erysipelo**thrix*, with a secondary infection. There were several foci of necrosis and hemorrhage in the brain, one with bacterial colonies, that appear to be developing brain abscesses. One has features that suggest that it was about 10 -14 days old. This is easily enough to account for his death.

We attribute death to *erysipelo**thrix* infection, with an added (but superficial) infection with the fungus *Fusarium sp.*

This certainly is an unfortunate end for this handsome creature. The species is rare in our waters, and this animal, and the other melon-headed, which may be his mother, are the first we have seen in eight years. Why did he meet this particular end? He seemed healthy otherwise, and had been eating and otherwise adapting to his surroundings. We must keep in mind that dolphins are wild animals, and it must be an extremely stressful event to an off-shore animal to arrive on the beach, which is sure death if he stays there, to be picked up and handled by very strange creatures, and put into a tank indoors. Young *Tursiops* seem to manage well, but these are usually in-shore animals, with a busy, even

cluttered and noisy environment, and so the change is not so great. Also, it may simply be a matter of adaptability. Stormy is doing very well indeed, despite his desperate condition when he started rehabilitation. Many wild animals, and even some domestic animals, are subject to a stress condition known as shipping fever, in which they become very fragile and subject to infection and sudden death when and after being transported. Some species, when stressed, lose the ability to control body temperature, and may become extremely hypothermic. This makes them very susceptible to infection.

I suspect something like that happened to our young melon-headed. It is likely that the stress of stranding, capture and life in a tank, even with good care and antibiotics, impaired his resistance to infection. The dolphin pox was yet another stressor, as was the bacterial skin infection. While the fungus infection made very nasty looking lesions, it was all superficial, and probably not nearly as bad as it looked.