GA 1000

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GA 1000 was a 120 cm long, 56.4 Kg female bottlenose dolphin, Tursiops truncatus, recovered alive from 0.2 miles west of Bolivar Flats Road, Bolivar Peninsula, Galveston County, September 15, 1999. She was placed in the collecting truck to be brought to the rehabilitation tank, but she died within about 2 hours.

External examination at necropsy revealed a young female, covered with a very large number of shallow and deep typical dolphin tooth rake marks, some of which began as rakes and then abruptly changed direction, producing slashes. There were also a few small shark bites which produced characteristic linear incisions, but in this case did not result in tissue loss. There were very few square inches of skin unmarked. This is probably the most raked animal we have seen in nine years.

The blubber seemed to be normally thick, suggesting that her general health had been good until relatively recently. A striking finding was the very large size of the cervical (neck) lymph nodes. Internally, the pelvic nodes were similarly greatly enlarged and tended to be matted together, and the chain along the aorta was becoming prominent, when normally it is inconspicuous. The lung associated hilar node was very prominent, when normally it is small and inconspicuous as well. Microscopic examination showed that these nodes were reactive, and a few tiny abscesses were forming in some nodes, suggesting infection. There were no signs of bone fractures or of deep internal injuries.

The striking feature of the heart was diffuse mottling or blotchiness of the

myocardium. This was associated with changes in the heart muscle fibers that we have come to associate with massive adrenalin release. The lungs were pale, and the pleura was mildly thickened. The airway mucosa was congested but otherwise normal. Very few lungworms were identified. A few ill-defined whitish patches about 2 cm across were present, mainly in the right lung. These proved to be small areas of inflammation of the pattern associated with lungworm.

The stomach and intestinal tract was empty, as was the intestine, indicating that she had not eaten for a couple of days. All of the other viscera were normal. Examination of the ovaries indicated that she was sexually immature, consistent with her small body size. All joints were examined, and all were normal.

Apart from the myocardial changes and the skin wounds, there was remarkably little disease in this animal. We interpreted her death as due to beaching and stress, with typical stress-induced myocardial injury. All this appears to be the result of intra-specific aggression; that is, beaten up by other dolphins. The state of the lymph nodes indicates that there was likely a blood infection (bacteremia) as well. There was no evidence of human interaction or involvement with nets or other fishing gear.

Comment: Over the years we have seen several animals that fell into the same pattern as this one; young, mainly immature females, who have been injured by adult members of the same species. This is difficult to understand. Indeed, despite the growing number of solid observations, including video tapes, many people will still deny that dolphins are capable of aggression. This is an increasingly indefensible position. Even so, why does this happen with dolphins? We know that in some species, for example, lions, a newly-dominant male will kill the cubs of the male that has been deposed, especially the male cubs. This assures that his genes will soon dominate in the young of the group. It makes little adaptive sense (from our perspective) to kill young females, in whom the

future of the species is vested. However, even our own species does inexplicably wicked and cruel things to our young.

Lets turn the proposition around, and assume that it is adaptive (good for the species) for young dolphins to be attacked by their elders, and speculate reasons why. We will leave wickedness or insanity out of the discussion. First, the young animal may appear sick, and the attempt is to drive it away so that the remainder of the group is not affected. We have some evidence that GA 1000 might have become sick around the time of or a little before the attack. Hard on the individual, good for the group. (Observations suggest however, that dolphins may be protective of impaired members of their group). The individual's behavior may be such that it comes across as strange or threatening, and therefore must be driven away. As it approaches sexual maturity, perhaps it behaves in a threatening, annoying or just "different" way, (sound familiar?) and is driven out. Perhaps the young animal is out adventuring, and falls in with a new group of adults who do not recognize it as one of their own, and drive it away. Maybe it is not adults who initiate the attack, but larger adolescents, who are not yet adequately socialized as adults, and others "pile on" for no other reason than there is an attack in progress, or an injured and distressed young one present. Maybe the larger group is disturbed in some way, (internal group dynamic, conflict with another group, natural events, whatever) and their normal behavior is disrupted and confused, and they lash out at each other, and the little ones take the beating. All speculation. Maybe we shouldn't leave wickedness or insanity out of the discussion. Lots to think about.