

## **Pathological changes on vertebrae of a Humpback Whale (*Megaptera novaeangliae*) stranded in Brazil**

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The study of vertebral abnormalities in cetaceans is a challenge since multiple conditions may share similar features and diseases can occur concomitantly making diagnoses and nomenclature still a topic of discussion with no current consensus. Diagnosis of a disease found in cetacean skeletons should be accompanied by a comprehensive description of the abnormality(ies) to allow for better interpretation in comparative studies. The objective of this work is to describe pathological conditions found in the axial skeleton of a 13.7 meters long humpback whale (*Megaptera novaeangliae*) stranded in southern Bahia State (17°47'S, 39°07'W), Brazil. The specimen was found floating close to shore, then towed by a boat and buried in sand. After three years, the bones were recovered and had the remaining soft tissue removed. The skeleton was grossly examined for bone abnormalities. The specimen presented irregular and exuberant bony excrescences on the vertebral bodies of six caudal vertebrae (Ca6 to Ca11). These bone outgrowths were present on the whole circumference of the vertebral bodies, except on Ca11 where this abnormality was only found on the left side. Three of these vertebrae (Ca7 to Ca9) and two chevron bones were ankylosed. There was severe erosion with destruction of normal features of vertebral epiphysis of Ca10 and Ca11. In the cervical region, three vertebrae (C2 to C4) presented non-marginal syndesmophyte formation on the right side of the vertebral bodies leading to ankylosis of C3 and C4. The lesions found in the six consecutive caudal vertebrae indicate that a progressive chronic condition was present. Severe discopathy was evident in at least one intervertebral disk. Tentative diagnoses include infectious spondylitis and spondyloarthritis. The lesions found may have had deleterious implications on the general health of the animal, as well as compromising spinal mobility.