

Flipper lack in *Chelonia mydas* (Cheloniidae)

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Five sea turtle species are found either breeding and/or feeding off the Brazilian coast, the green sea turtle (*Chelonia mydas*) being the most common of them. During swimming the fore flippers are responsible for propulsion while the hind flippers give direction (Hendrickson, 1980). Predator bites, boat strikes and fishing nets are the major causes to orthopedic diseases in sea turtles (Marcovaldi, Santos and Sales, Eds., 2011). Boat propellers may cut off flippers or break the carapace, while net entanglement may lead to strangulation of members, causing necrosis and member loss. Cases of sea turtle species lacking flippers have been reported (Heithaus, Frid and Dill, 2002; Orós et al., 2005; Chaloupka et al., 2008) but generally associated with evident signs of amputation such as scars. Here we report on a green sea turtle carcass stranded in August 2011 at Dependência beach, Una municipality, southern Bahia state, Brazil. The animal was a female with 56.2 cm curved carapace length (CCL) and 52.0 cm curved carapace width (CCW), and the carcass was in good condition. External observations revealed emaciation, several papilloma-like lesions, presence of epibionts attached to the carapace, and absence of the left hind flipper with no scars or other mutilation signs at the corresponding body region and skin (Fig. 1). Exams were performed to clarify initial suspicious of amputation or malformation. Main necropsy findings

revealed the absence of gastric and intestinal contents. A small fragment of the left femur containing the proximal epiphysis was collected for histopathology. Microscopic examination showed normal bone tissue in the distal edge of the fragment and no signs of malformation, which is compatible to an old amputation. The carcass aspect, the evidence of amputation with no external scars and the other findings, suggests that the hind flipper was amputated in an early life stage. The presence of papilloma lesions may be related to immunodeficiency (Herbst, 1994), which is expected for an animal that was probably not eating. Although it's not possible to infer the relation of the flipper lack to the death, general findings suggest that this green sea turtle survived without this member during a considerable time. This highlights that hind flipper lack is not critical for sea turtles and reinforces that animals presenting this condition under rehabilitation may have success of survival in the wild.



Figure 1. External aspect of hind flippers region of the stranded *Chelonia mydas* (Picture: Instituto Mamíferos Aquáticos).

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