Comparative anatomy study of the respiratory system between green turtle (*Chelonia mydas*) and leatherback turtle (*Dermochelys coriacea*)

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The sea turtle has a respiratory system made by lungs so they need to come to the surface to breathe. Because of this need hundreds of sea turtles die asphyxiated and arrested by fishing net around the world. Among the species of sea turtle there are the Green Turtle (Chelonia mydas) and the Leatherback Turtle (Dermochelys coriacea) that had their respiratory system anatomically compared in this research. Were used anatomical parts of one female Leatherback Turtle and 8 Green Turtle, males and females, found dead in Pernambuco coast in 2003. It was started the opening from the jaw ventral region and cervical full to the pleuroperitoneal cavity, drawing up the plastron, muscles and fat, to expose the larynx, trachea, bronchi and lungs. In the Green Turtles, it was observed the presence of a pair of cartilaginous rods on the ventral board of the hyoid bone. The larynx was composed by arytenoids cartilage, cricoid cartilage and pre cricoid cartilage. The thyroid cartilage was not found. The trachea was composed by 44 complete rings, average, measuring 21 cm in length, 5 cm in circumference in the proximal third, 6,2 cm in the middle third and 7 cm in the distal third. The principal bronchi, right and left, had 27 and 28 cartilaginous rings respectively, both measuring 12 cm in length and 5 cm (right bronchus) and 4,3 cm (left bronchus) in circumference. The bronchi penetrated inside the pulmonary parenchyma and follow up to the caudal board, emitting small segmentary bronchi. The lungs located on each side of the dorsal spine fixed dorsally very thin and flat dorsoventrally, at a distance of 18 cm (right lung) and 17 cm (left lung) cranially until the margin of shell and 26 caudally, in both lungs. The length of 22,5 cm was observed for the right lung and 23,5 cm to the left. In Leatherback Turtle, there was the presence of 3 pairs of shafts on the hyoid bone. The larynx was similar in both species. In trachea, differently of Green Turtle, there was the presence of a internal membrane in the middle third with 10 cm in length, which separated the main bronchi, absent characteristic externally, branching off itself in two bronchi only in distal third. The main bronchi measured 32 cm in length with 38 rings cartilaginous where the first 12 cm was merged with 13 rings and the 20 cm others with 25 free rings until its entry into the pulmonary parenchyma, which is divided into lumbar bronchi that is found in the left lung in pair. In the right lung there was 3 lumbar bronchi being the cranial shorter and the cranial longer which were divided in segmentary bronchi. External macroscopic divisions in the lungs of both species do not exist. In the left lung there was 40 cm in length and 21 cm in width, and in the right, 42 cm in length and 25 cm in width. It was observed lungs shorter and thicker than in green turtles. It follows therefore that there are some differences morphometric, but there are also some notable similarities as lack of thyroid in both species.