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K O N I N K L I J K E N E D E R L A N D S E
A K A D E M I E V A N W E T E N S C H A P P E N

SEXUAL DISPLAY AND ROSTRAL VARIATION IN EXTINCT BEAKED WHALE, *GLOBICETUS HIBERUS*

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Iberian extinct ziphiid, *Globicetus hiberus*, bears a peculiar large bony sphere in the rostrum, the Mesorostral Process of the Premaxillae or MPP. The MPP varies in size and shape of growth in the six specimens studied and seems to have an allometrically growth in one subgroup, but not in the other, suggesting subgroups correspond to males and females (sexual dimorphism). Even more, some rostral structures, such as the medial pad of the premaxillae seem to be associated with the specimens with lower and leaner MPP's and ossification of the mesorostral canal by the vomer can also be of value in differentiating sex. Beaked whales are deep-diving, echolocation-user odontocetes and able to perceive bones as distinctive echoic images with their sonar; therefore the MPP may work as a secondary sexual organ ("antlers inside" hypothesis by Gol'din, 2014), a mute display structure acting as an "acoustic flag" to be perceived through echolocation by other individuals, giving information about the shape and size of the MPP.