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Acoustic Communication and Olfaction in the Pygmy Hippopotamus *Choeropsis liberiensis*

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While communication and senses are well documented issues in cetaceans, very little is known about these questions in hippopotamuses, their closest living relatives. The modern family Hippopotamidae includes only two extant species: the common hippopotamus (*Hippopotamus amphibius*) and the pygmy hippopotamus (*Choeropsis liberiensis*). Few studies document communication cues in *H. amphibius*; however, virtually nothing is known about acoustic repertoire or olfaction in *Choeropsis liberiensis*. The purpose of this ethological and morphological study is to explore olfactory and acoustic communication in Hippopotamidae. The ear region of *C. liberiensis* is here described in detailed including the auditory bulla structure, middle ear ossicles, and structures associated with the cochlear canal, innervation and irrigation of the cochlea. These detailed morphological observations are put into perspective with vocalization recordings and behavioral audiogram of captive *C. liberiensis*. The morphology of the cribriform plate of the ethmoid bone of *C. liberiensis* is also described for the first time (surface, shape, number, size and distribution of foramina) and provides a first picture of the peripheric olfactory innervation in this taxon. The impact of semi aquatic lifestyle on auditory and olfactory abilities of the pygmy hippopotamus is finally discussed.