

They are not met with, for instance, in most of the *seals*, in the *walrus*, *manati*, *duck-billed animal*, (*ornithorhynchus*) and *mole*. On the contrary, some have been said to want external ears, who really possess them, as the *marmota* or *mus citillus*. Another error has been committed, in representing the ears of a species of *bat* belonging to this country, (Germany) (*vespertilio auritus*) as double: whereas they are only of an immense size. Still more erroneous is an observation of Haller; that these ears are to be considered as an accidental monstrosity. The essential parts of the external ear agree on the whole with those of the human subject;* but their general form is subject to great variety. In very few, except the *quadrumana*, do they resemble those of man; but this is the case in the *porcupine*. The cartilage is stronger, and more elastic in its structure in the human ear than in that of any other animal, in proportion to its size. In some instances, as in the *opossum*, (*didelphis marsupialis*) the ears are merely membranous.

§ 256. The external auditory passage is furnished with a valve in such animals as go frequently into the water, by which they can close it when they dive. The water-shrew (*sorex fodiens*) affords an example of this structure. The length, breadth, and direction of the meatus vary considerably in the different genera. It is very long and singularly tortuous in the *duck-billed animal*.†

The cetacea are the only mammalia which have not a bony external meatus. The tube is cartilaginous in these animals, and so small that its external orifice will about admit a pin in the dolphin. It arrives at the tympanum after a winding course through the fat, which lies under the skin. It is probable that the sound gains admission to the ear in these animals, rather through the Eustachian tube than through this very narrow meatus externus. That tube opens at the blowing hole, and is furnished with a valve that prevents the admission of the water, which the animal expels through this opening.

§ 257. It is hardly necessary to state, that all mammalia

* The *lobulus* of the external ear however is found in no animal but man.

† Home, in the *Philos. Trans.* 1802, pt. 1, p. 70.