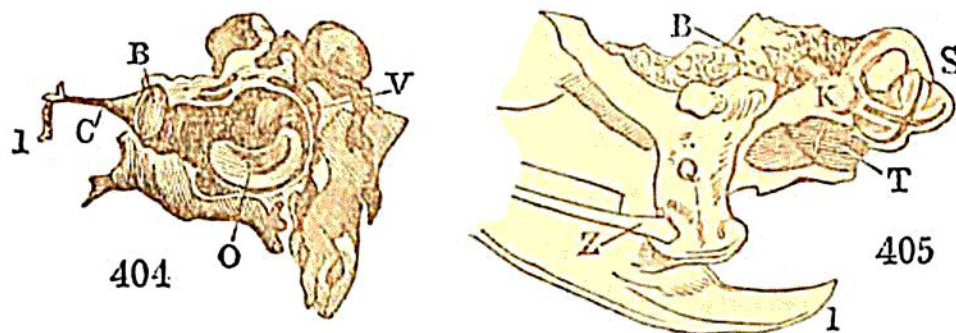


as the ray and shark tribes, it is surrounded by solid bone, and is not visible within the cranium. In these latter fishes, we first meet with a rudiment of the meatus, in a passage extending from the inner side of the vestibule, to the upper and back part of the skull, where it is closed by a membrane, which is covered by the skin.

Aquatic reptiles have ears constructed nearly on the same plan as those of fishes: thus, the Triton or Newt has a vestibule containing only one cretaceous body, and three semi-circular canals, unprotected by any surrounding bone. In the Frog, however, we first perceive the addition of a distinct cavity, closed by a membrane, which is on a level with the integuments, on each side of the head. From this cavity, which corresponds to that of the tympanum, there proceeds a Eustachian tube; and within it, extending from the external membrane, which must here be regarded as an ear-drum, to the membrane of the vestibule, or fenestra ovalis, is found a bone, shaped like a trumpet, and termed the *Columella*. This bone is seen at c in Fig. 404, attached



by its base (B) to the fenestra ovalis of the vestibule (V) which contains the cretaceous body (O.) There is also a small bone (I) attached in front to the columella. In the Chelonia, the structure of the ear is essentially the same as in the Frog, but the tympanum and columella are of greater length. In the saurian reptiles the cavity of the tympanum is still more capacious, and the ear-drum very distinctly marked, and these animals possess great delicacy of hearing. The labyrinth of the Crocodile is enclosed in bone, and contains three calcareous bodies: it presents also an appendage