

*dytes* it is visible in the upper part of its course. The posterior border of the palate bone in the genera *Eudyptes* and *Pygosceles* is almost straight, and articulates with the entire breadth of the anterior extremity of the pterygoid bone. In *Spheniscus* and *Aptenodytes* again, the posterior external angle of the palate bone presents an emarginate notch, and consequently in these genera the posterior border of the palate bone is oblique, and articulates only with the anterior internal angle of the pterygoid bone.

The inferior free margin of the vomer is grooved anteriorly in every species of Penguin except *Pygosceles* and *Aptenodytes*.

The maxillo-palatine processes present the configuration usually met with in the schizognathous cranium, being slender plates of bone which curve backwards and outwards without articulating either with one another or with the vomer.

The maxillary bones approach more closely to the outer border of the palate bone in *Eudyptes* than in *Spheniscus*, and hence when the skull is viewed from below, the base opposite the junctions of its cranial and facial portions appears narrower in the former than in the latter genus. In this respect the crania of *Aptenodytes* and of *Pygosceles* agree with that of *Eudyptes* rather than with that of *Spheniscus*.

The post-orbital process is well-developed in every species, but differs somewhat in form in different genera. In *Eudyptes* it projects vertically downwards behind the orbit, and is relatively smaller than in *Spheniscus*, in which, moreover, it is directed obliquely downwards and backwards. In *Aptenodytes* and in *Pygosceles* the post-orbital process resembles that of *Eudyptes* and differs correspondingly from that of *Spheniscus*.

The orbital process of the quadrate bone is short and stunted in every species of *Eudyptes*. In *Spheniscus* (with the exception of *Spheniscus minor*) and in *Pygosceles* it is elongated and pointed. In *Aptenodytes* and *Spheniscus minor* the orbital process presents a form intermediate between that of *Eudyptes* and that of the other species of *Spheniscus*. In every species of Penguin the upper extremity of the quadrate bone is single, rounded, and not bifurcated. A careful examination shows, however, that the articular surface is divided into two distinct facets—an outer and an inner—indicating as it were a tendency to that more complete bifurcation of the upper extremity of the bone which obtains in many birds.

The inter-orbital septum is incomplete in every species of Penguin in consequence of the presence of a large hiatus which is usually almost circular in form.

The lachrymal bone is T-shaped. It articulates above with the frontal and with the nasal bone, below with the jugal.

The lachrymo-nasal fossa is triangular in form and of large size. It is bounded above by the external process of the nasal, behind by the lachrymal, and below by the maxillary bone. In *Spheniscus* it is relatively larger than in *Eudyptes*.

The form of the zygomatic arch forms a distinctive generic feature in the skull of *Eudyptes* as compared with that of *Spheniscus*. In the former the zygomatic arch is