strongly curved downwards behind the lachrymo-nasal fossa, while in the latter this curve is much less strongly pronounced in consequence of the jugal and quadrato-jugal elements being prolonged backwards almost in a straight line with the maxillo-jugal element, and without the intervention of a well-defined angle such as exists in *Eudyptes*. In consequence of this arrangement, when viewed from the side, the skull of *Eudyptes* seems to diminish in depth to the base of the upper jaw much more rapidly than does that of *Spheniscus*. In respect of the form and curvature of the zygomatic arch the skulls of *Pygosceles* and of *Aptenodytes* agree with that of *Eudyptes*, and differ from that of *Spheniscus*.

The lower jaw of every species of Penguin is composed of the same number of elements as is that of other birds. In the adult they unite to form a single mass, in which, however, traces remain of the sutures which originally separate the component elements.

In *Eudyptes* each ramus of the lower jaw is rhomboidal in form, the broadest part of the bone, which corresponds to the shorter diagonal of the figure, being placed opposite the middle in length of the ramus, whence the bone tapers to a point anteriorly and posteriorly. Immediately below the middle of the upper border of the ramus is a depression, which in *Eudyptes chrysocome* from the Falklands is perforated to form an open foramen. In the other species of *Eudyptes* it is blind. From this, which may be named the anterior foramen, an indication of the suture which originally separated the dentary from the posterior elements of the ramus, extends with a slight obliquity downwards and backwards. This suture is also clearly indicated on the inner surface of the ramus. Immediately in front of the articular surface of the lower jaw-bone there is a second or posterior foramen which completely perforates the ramus in every species of *Eudyptes*. It is small in size, and of an oval form.

The articular surface of the lower jaw-bone is irregular in form and adapted to the lower end of the quadrate bone. It is bounded internally and posteriorly by a well-developed "angular" process. Of these the internal is shorter and broader than the posterior. A coronoid process does not exist. The lower surface of the internal process is deeply grooved by the pterygoid muscle, and is separated from a second groove on the outer side of the bone by a ridge which forms part of the lower border of the jaw. The latter groove affords insertion to the digastric muscle.

The lower borders of the rami of opposite sides in every species of *Eudyptes* closely approach one another in the middle line inferiorly. This is due to the gradual widening of the bones in front of their articular extremities, and serves at once to distinguish the skull of any species of *Eudyptes* from that of any other genus. In the skulls of other genera the inferior inter-ramal space narrows gradually from the articular to the free extremity of the lower jaw-bone, whereas in *Eudyptes* that space is suddenly contracted opposite the middle in length of the ramus.

In *Spheniscus* the rami of the lower jaw are relatively longer and more slender than in *Eudyptes*, and do not present the rhomboidal form which is characteristic of those