

In *Otaria* the fibres have two directions.

The *Pterygoideus internus* (Lucae's pterygoideus and Humphry's pterygoid) in *Phoca vitulina* and *Arctocephalus* is a strong muscle. It *arises* from the external surface of the pterygoid bone, and from the fossa on the outer side of the hamular process in *Arctocephalus* only, for this is absent in *Phoca*. It is *inserted* into the subcondyloid process of the lower jaw in *Arctocephalus* and in *Phoca*, beside the inner side of the ramus below the condyle, to midway between it and the angle of the jaw. The subcondyloid process is feeble in *Phoca*, but extensive in *Arctocephalus*. It is supplied by the inferior maxillary nerve.

In *Otaria* and *Trichechus* it has not been described.

The *Pterygoideus externus* in *Phoca vitulina* and *Arctocephalus* is a very small cylindrical bundle, and *arises* in the former from below the foramen rotundum, and in the latter from the bridge of bone connecting the alisphenoid with the external pterygoid plate over the foramen rotundum. In both it crosses transversely outwards and is *inserted* into the inner side of the condyle of the lower jaw. It is supplied by the inferior maxillary nerve.

This muscle has not been described by Vrolik, Humphry, Lucae, nor by Murie. I found it in all the specimens by dividing the symphysis and pulling the jaw gently outwards, when the bundle of fibres attached as above was seen.

#### THE MUSCLES OF THE NECK.

The only superficial muscle is the *Sterno-mastoid*; in *Phoca vitulina* it is a riband-shaped muscle, and *arises* from the under surface and side of the anterior third of the presternum. It is joined to its fellow for one inch and a half anterior to the presternum by a fine aponeurosis, ascends to the mastoid process and is *inserted* into it at the root of the zygoma behind the insertion of the trachelo-mastoid. It is supplied by external branches of the cervical plexus and a twig from the spinal accessory nerve.

In *Arctocephalus* it is triangular with the base resting on the fascial slip representing the clavicle. It *arises* from the dorsal surface of the presternum and cartilage of the 1st rib, from the deltoid ridge of the humerus between the insertions of the pectoralis major on the inner side and the deltoid on the outer, blending with the origin of the inner part of the brachialis anticus below; and from the fascial slip representing the clavicle. This last origin is thin, and midway between the sternal and humeral origins is almost devoid of fibres, the deficiency being filled in with fibrous tissue. The humeral part blends with the cephalo-humeral muscle along its outer edge and the pectoral along its inner. The muscle runs forwards, narrows, and is *inserted* into the occipital ridge near the external auditory meatus anterior to the splenius. It is supplied by twigs from the external branches of the cervical plexus.

In *Otaria* the sternal end of the muscle represented in Dr. Murie's Memoir (pl. lxxiii. fig. 33) is like what I have described in *Arctocephalus*, and, as it extends outwards to the shoulder, it must have other attachments than the manubrium, which is all that Murie gives in his description.

In *Trichechus* it is as in *Otaria*, but a division into two parts is not described.

The INFRA-HYOID REGION includes the sterno-thyro-hyoid and the thyro-hyoid.

The *Sterno-thyro-hyoid* in *Phoca vitulina* is called the costo-thyreohyoideus by Lucae, the sterno-