

THE FACIAL MUSCLES OF EXPRESSION.

These are arranged in the following groups:—The occipito-frontalis, the muscles of the ear, the muscles of the nose, the muscles of the eyelids, the muscles of the orbit, and the muscles of the mouth.

The *Occipito-frontalis* in *Phoca vitulina*.—The specimen from which the cervico-scapular panniculus is described had two V haped prolongations over the frontal region, which represented the occipito-frontal muscles. In another *Phoca* these fibres extended towards the middle line and touched each other, forming a complete occipito-frontalis. It is supplied by the facial nerve which ascends from the ear over the temporal muscle. In *Otaria* it is imperfectly formed.

The Muscles of the Ear.—There are three small muscles to the cartilaginous meatus in *Phoca vitulina*, two small pale fasciculi forming the protractors, and one a retractor.

The *Internal protractor* or *Attollens aurem* arises from the skin above the middle of the orbit and passes outwards and backwards, and is inserted into the inner and under surface of the cartilaginous meatus of the external ear at the junction of the skin with the cartilage. It is recognised by Humphry; in *Otaria* it is indistinct; in *Trichechus* the muscle is well developed, but arises posterior to the orifice of the meatus, and is therefore a retractor.

The *External protractor* or *Attrahens aurem* arises from the fibrous tissue over the articulation of the malar with the zygoma, and is inserted into the outer and under surface like the former. It is not noted by Humphry; in *Otaria* it is present but undescribed; in *Trichechus* it is distinct.

The *Retractor* or *Retrahens aurem* arises from the superior border of the zygoma extending from the osseous meatus, to midway between the articulation of the zygoma with the malar bone anteriorly and the osseous meatus posteriorly. It is inserted into the inner and under surface of the cartilaginous tube of the external ear. It is named the attrahens by Humphry; in *Otaria* it is feeble; in *Trichechus* it is a strong muscle.

The *Cartilaginous meatus* is 1 inch long and S-shaped, the attollens pulls the tube forward and opens it, the attrahens draws it forward and outwards, also opening it. The retrahens retracts the tube and flexes the anterior bend of the cartilage, thereby closing the meatus. They are supplied by the facial nerve.

The Muscles of the Nose.—The combined *Dilator et depressor nasi* in *Phoca vitulina* is rectangular. It arises from the fossa of the superior maxilla on the outer side of the infraorbital foramen, and from above the foramen, extending forwards to the third last molar tooth. The inferior division of the 5th nerve pierces it, and the fibres above the nerve form the dilator nasi, those below the depressor nasi. The former, after crossing the levator anguli oris and the constrictor nasi, is inserted into the side of the nose. The latter is inserted into the side of the nose inferior to the dilator, and into the upper lip, beneath the septum; some fibres join those of the opposite side, while a few are attached to the skin of the upper lip, coming off from the depressor portion in small slips. The nerve of supply is the facial.

In *Otaria* they are described separately.

The *Constrictor nasi* (named the compressor in *Otaria*) arises in *Phoca vitulina* superiorly from the whole length of the nasal cartilage, and is inserted into the premaxillary bone and muscle of the other side, partly under cover of the levator anguli oris. It is supplied by the facial nerve.