

and is fixed to a tubercle at the outer edge. What is found in the Seals is a complete division of the muscular sheet resembling the human trapezius into three muscular masses—(1) the cephalo-humeral, which represents the clavicular fibres of human anatomy; (2) the trapezius anterior part, the fibres fixed to the spine; and (3) the trapezius posterior part, the fibres forming the tendon attached to the tubercle.

The *Cephalo-humeral* as in the Carnivora generally forms a bulky mass. It is triangular, the base rests upon the ligamentum nuchæ, and the apex upon the shoulder, and is under cover of the cervico-scapular part of the panniculus. It arises from the occipital ridge, from the fascial slip anterior to the ligamentum nuchæ, and from the anterior half of the ligamentum nuchæ. The fibres trend obliquely backwards and outwards, and cover the side of the neck; at the shoulder they converge and are inserted by a short tendon into the upper end and anterior edge of the great humeral tuber above the pectoral insertion, with which the tendon blends; and into the transverse ligament, stretching between the two tubera over the biceps. The fibres are a little coarser than those of the trapezius; there is a cellular interval between the cephalo-humeral and the anterior part of the trapezius, which is not distinct, but continuous. Above the shoulder the atlanto-humeral muscle appears between the anterior part of the trapezius and this muscle, before it reaches the humerus. From the shreds of this muscle traced in *Phoca barbata* and in *Phoca hispida* it appears to be disposed as in *Phoca vitulina*.

In *Arctocephalus gazella* the lacerated condition of the muscle in both specimens compels me to pass over the origin. The muscle is larger and better developed than in the other specimens; it extends from the head to about 1 inch posterior to the anterior angle of the scapula, and partially overlaps the anterior part of the trapezius; above and behind the shoulder it forms a broad muscular band of which the anterior two-thirds blends with the sterno-mastoid, whereas in the Phocinæ it only touches the trapezius, and is a small bundle of muscle near its insertion. It is inserted into the humerus between the insertion of the deltoid posteriorly, and the insertion of the sterno-mastoid anteriorly.

Professor Humphry in his description does not use the names cephalo-humeral and trapezius, anterior and posterior parts, but includes the whole mass under the name trapezius.

In the Phocinæ and *Arctocephalus* the cephalo-humeral pulls the humerus forwards and rotates it inwards; this action is much greater in the latter, for the insertion is lower down upon the shaft, and it also abducts. In the Phocinæ it is supplied by the spinal accessory nerve. In *Arctocephalus* the nerve was destroyed; both receive branches from the cervical nerves.

The *Trapezius* (proper) is in two parts, an *anterior* and a *posterior*.

The anterior part with its fellow of the opposite side forms a trapezium. It is opposite the vertebral border of the scapula, and arises from the posterior half of the ligamentum nuchæ, from the spines of the first six dorsal vertebrae, and from the supra-spinous ligaments. The fibres of this muscle are distributed in a threefold manner. The most anterior fibres pass anterior to the scapular spine at its axillary termination, and are partially concealed by the atlanto-humeral muscle before being inserted into the anterior surface of the great humeral tuber, to the inner side of this muscle; a few fibres do not reach the bone but blend with the atlanto-humeral. The posterior fibres attach themselves to the vertebral end of the spine. The ones intervening between the most anterior fibres and the posterior must be studied in two layers, a superficial, and a deep. The superficial layer passes over the scapular spine and terminates upon the surface of the deltoid.