

of the scythe are the spinal origins. The stock of the gun is placed at the vertebral border of the scapula, and the butt rests upon the dorsi-epitrochlear muscle posteriorly, which is midway between the spine and posterior angle; the outer angle of the butt is between the infraspinatus and dorsi-epitrochlear muscles, and the infraspinatus only fills the upper half of the infraspinous fossa. In *Arctocephalus* the blade of the scythe goes along the vertebral border to the posterior angle, and is not much longer than the vertebral portion in the Phocinæ, because the spine is low down on the scapula. In *Otaria*, two layers are described on the left side, one on the right. In *Trichechus*, the first part is the same as in *Otaria*, but wants the slip to the supinator longus. In the Phocinæ it is supplied by the circumflex nerve, and by a twig from the suprascapular. In *Arctocephalus* by the circumflex.

As there are no clavicular and extremely few acromial fibres, there is no covering from the deltoid for the shoulder-joint anteriorly, and its action as an elevator of the fore-limb is *nil*. This want in the deltoid is atoned for by the fixation of some of the fibres of the anterior part of the trapezius to the deltoid and the humerus in the Phocinæ only. Lucae and Murie regard it as an external rotator, Murie adding also that it draws the humerus backwards. There must, however, be some slight elevating power through the anterior part of the trapezius.

The *Subscapularis* is a triangular muscle, and *arises* from the ventral surface of the scapula, with the exception of a small part near the neck, from the vertebral border to 1 inch posterior to the anterior angle; between which and that part of the vertebral border opposite the vertebral end of the spine, it lies to the outer side of the insertion of the serratus magnus; from here it follows the junction of the cartilaginous plate with the bone, taking origin from both along their line of junction to the posterior angle; and from the posterior angle for 1 inch along the axillary border. Anterior to the neck its fibres are united with those of the supraspinatus, and the origin from the posterior angle is tendinous. It converges and the under surface becomes fibrous ventral to the glenoid cavity, and the fibres from the posterior angle go almost transversely to the humerus. As the axillary border of the scapula is arched, the posterior half of the muscle does not lie upon the venter of the bone, but is next the teres major. It is *inserted* into the capsule of the shoulder-joint and into the lesser tuberosity of the humerus.

In *Arctocephalus* it *arises* from the concave surface of the venter of the scapula; from the cartilaginous rim close to its junction with the bone; from the posterior costa, with the exception of half an inch at the posterior angle, which gives origin to the teres major. On the surface next the bone there are three grooves corresponding to three ridges; from these latter there are no tendinous slips going into the substance of the muscle. The ventral surface has three deep furrows planted upon it; the first lies between the first and second ridges, the second between the second and third, and the third a little above the axillary border, whilst in its substance there are several tendinous slips. At the posterior angle the origin is tendinous, and this also gives origin to the teres major. The fibres converge towards the shoulder-joint; the anterior are in a line with the anterior border, and blend with the episcapularis; the posterior, coming from the angle, are blended with the teres major; after leaving the angle they run parallel with its anterior border. Between the teres major and the scapula it lies upon the long head of the triceps. It is *inserted* into the venter of the capsule of the shoulder-joint, into the inner side of the lesser tuberosity, and into the humerus below the tuber for one-fourth of an inch, where it is behind the anterior insertion of the episcapularis. In the Phocinæ it is supplied by three scapular nerves, along its upper