

differs from the above: on the right side it *arises* from the anterior and outer surface of the 1st rib, extending from its junction with the cartilage nearly to the inner third of the rib. It runs forwards and is *inserted* into the root of the outer side of the ventral division of the transverse process of the 6th cervical vertebra by muscular fibres, into the posterior end of the ventral division of the 5th cervical vertebra by a tendinous slip, and likewise into the corresponding part of the 3rd and 4th cervical vertebræ. It is supplied by the brachial plexus.

The *Scalenus posticus* in *Phoca vitulina* is much the largest of this group, and *arises* from the posterior border of the 4th rib at the junction of the cartilage with the rib; and similarly from the posterior border and outer surface of the 3rd rib. The digitation of the serratus coming from the 3rd rib lies between these two points of origin. It is *inserted* into the ventral hatchet-shaped division of the transverse processes of the 3rd and 4th cervical vertebræ by two strong tendons. In the large *Phoca vitulina* the origin is similar, but the *insertion* is by tendons into the posterior of the ventral divisions of the transverse processes of the 3rd and 4th cervical vertebræ, these tendons being common to the scalenus secundus. It is supplied by the brachial plexus.

In *Arctocephalus* it lies in the cervical region and is of the same shape as the anticus, but smaller. It *arises* from the ventral tip of the transverse process of the 7th cervical vertebra, and is *inserted* into the ventral border of the transverse process of the atlas, dorsal to the anterior oblique portion of the longus colli, into the dorsal tip of the transverse process of the 3rd cervical, and into the dorsal divisions of the same processes of the 4th, 5th, and 6th cervical vertebræ.

THE MUSCLES OF THE THORAX.

In *Phoca vitulina* we find the sterno-costalis anterior and posterior, internal intercostals, external intercostals, scalenus lumborum, levatores costarum, and triangularis sterni. In *Arctocephalus* the sterno-costalis posterior is wanting, otherwise the muscles are alike.

The *Sterno-costalis anterior* is Lucae's transversus costarum latus and Murie's supracostal. In *Phoca vitulina* it lies next the sternum, and is a flat slender layer of muscle which *arises* from the side of the presternum and mesosternum as far back as the 6th rib, and from the cartilages of the 1st to the 6th ribs at their junction with the sternum. It remains tendinous to 1 inch from the side of the sternum, then it becomes muscular, and ultimately divides into three digitations, the 1st being the longest. It is *inserted* into the outer surface and cartilage of the 1st rib, extending outwards to the digitation of the serratus, into the posterior border of the 2nd rib close to the digitation of the serratus, and into the same part of the 3rd rib.

In *Arctocephalus* it is a small triangular muscle, and *arises* from the sides of the 2nd, 3rd, and 4th sternibræ, from the cartilages of the 2nd, 3rd, 4th, and 5th ribs by a fine aponeurosis. The fibres run forwards and outwards, and are *inserted* into the posterior border of the cartilage of the 1st rib, and into the 2nd at the junction of the cartilage with the rib.

Lucae figures it attached to the sternum and the ribs, covering the tendon of the rectus (pl. vi. fig. 1), but describes it as going from the 4th rib to the 1st cartilage and rib, with its tendon united to that of the rectus.

In *Otaria* it lies to the sternal side of the scalenus anticus between the cartilages of the 3rd and the 1st ribs.

In *Trichechus* it extends from the 4th costal cartilage to the 2nd rib and 1st intercostal space.