

The name supracostal given to this muscle by Dr. Murie is confusing, for thus we should understand that the muscle is the musculus rectus thoracis of Professor Sir Wm. Turner, and the supracostal of Mr. Wood and others.<sup>1</sup> In *Phoca* the rectus tendon is unbroken and reaches the cartilage of the 1st rib beneath the sterno-costalis; in *Arctocephalus* the rectus ends posterior to the origin of this muscle, but the fibres of the sterno-costalis anterior, as in *Phoca*, are obliquely directed outwards and not antero-posteriorly. In Murie's dissections it does not touch the sternum, but the situation and direction of the fibres in his plates are the same as in *Phoca* and *Arctocephalus*; so I do not regard Murie's supracostal as a part of the rectus which the name he uses indicates.

The *Sterno-costalis posterior* is the transversus tenuis of Lucae. It is only found in *Phoca vitulina*, and arises from the mesosternum at its junction with the cartilages between the 3rd and 7th ribs, and from the tendon of the rectus which passes forwards beneath it. On the right side it receives a muscular slip from the xiphisternum and then divides into three slips, which are inserted into the outer surfaces of the 1st, 2nd, and 3rd ribs. The first digitation is fixed outside the origin of the sterno-thyro-hyoid; the second and third beside the origins of the serratus, these two being crossed by the origin of the scalenus posticus. This part may not be quite separate from the anterior.

The *External intercostals* in *Phoca vitulina* commence close to the side of the vertebral column, and leave only a hollow for the levatores. They arise from the posterior part of the rib joints by a few fibres, at the outer side of the levatores they thicken, and then pass from the ribs in front backwards and outwards to the ribs behind. They extend from end to end of each rib.

In *Arctocephalus* they extend from the heads of the ribs to the middle of the costal cartilages.

The *Internal intercostals* in *Phoca vitulina* are quite close to the vertebræ, where the subcostals are wanting. They arise from the anterior part of the rib joints, and from the anterior borders of the ribs, and are inserted into the posterior borders of the ribs sternad to their origins, the fibres of the muscles almost meeting over the ribs. There is an aponeurosis between the two muscles, strongest near the column and almost disappearing about the middle of the bony ribs. In the last space the muscle lies only on the outer half of the rib, and begins at the outer edge of the scalenus lumborum.

In *Arctocephalus* they arise from the whole anterior borders of the ribs to their necks, and from the same borders of the cartilages. The fibres are inserted into the posterior borders of the ribs sternad to their origins, and end at the sternobræ.

The *Scalenus lumborum* is so named by G. H. Meyer in the human body.<sup>2</sup> In *Phoca vitulina* it arises from the transverse processes of all the lumbar vertebræ by an aponeurosis, and forms a triangular muscle with the apex posterior. It is inserted in its outer half into the posterior border of the outer half of the last rib; the inner half crosses over this rib and is strengthened by a few fibres from it; whilst the outer half of this portion goes into the 14th rib, the inner crosses over to the 13th rib, and ends on its posterior border.

In *Arctocephalus* it arises from the transverse processes of the 1st, 2nd, and 3rd lumbar vertebræ, forming a thin triangular sheet with the base forwards. It is inserted into the last three ribs. A portion of its fibres from the outer side is attached to each of the last two ribs, the remainder to the 13th rib, but the proportion in which the fibres are distributed differs from that in *Phoca*—

<sup>1</sup> Sir Wm. Turner, *Proc. Roy. Soc. Edin.*, vol. vi. pp. 268, 270, 1869.

<sup>2</sup> *Lehrbuch der Anatomie*, 1855.