

over the ventral surface of the 15th rib the outer third of the muscle terminates, over the 14th rib the half of the remaining fibres, and over the 13th the rest.

Lucae makes no distinction between the true subcostals and the scalenus lumborum, but describes both under the name *subcostalis vertebralis*. The drawing by Meyer shows the scalenus lumborum terminating at the last rib, but in *Phoca* and *Arctocephalus* it is prolonged forwards to the under surface of the third last rib. In *Otaria* and *Trichechus* it has not been figured or described.

The *Subcostales* in *Phoca vitulina* usually commence at the 7th or 8th intercostal space; there are six or seven of them, and they lie next the vertebral column. Each *arises* from the ventral surface of the rib joint, from the posterior part of the vertebra in front of the one with which the rib articulates, and from the rib close to the joint. The fibres pass over the rib in front of their origin, and are *inserted* into the posterior border of the next. The last two muscles have the scalenus lumborum along their outer borders.

In *Arctocephalus* there are twelve of these; all *arise* from the posterior part of the body of a dorsal vertebra, and are *inserted* as in *Phoca vitulina*, having a rib intervening between the origin and insertion. The muscles are much narrower than in *Phoca*, and commence in the 3rd intercostal space.

In *Otaria* and *Trichechus* they are not mentioned.

The *Levatores costarum* both in *Phoca vitulina* and in *Arctocephalus* are a series of small triangular muscles, with their bases directed away from the spinal column. There are fifteen on each side of the back; they *arise* from the dorsal tips of the dorsal divisions of the transverse processes of the 7th cervical and the anterior ten dorsal vertebræ, and from the under surfaces of the anapophyses of the 11th, 12th, 13th, and 14th dorsal vertebræ. The anterior muscles are small and narrow, the posterior short and broad, and the intermediate much the longest. They are *inserted* into the dorsal surface of the rib below the originating point, then into the anterior border of the same rib for a little distance beyond this. In the large *Phoca vitulina* I found only fourteen.

The *Triangularis sterni* is Lucae's *subcostalis sternalis*; in *Phoca vitulina* it lies upon the inner side of the sternum and covers the internal mammary artery. It *arises* from the side of the manubrium reaching as far forwards as the anterior border of the 4th rib, from the junction of the cartilages with the sternum from the 4th to the 10th ribs, and from the anterior half of the side of the ensiform cartilage. The muscle is divided into a number of serrations; in this dissection there were nine on each side, six arising from the manubrium and three from the ensiform cartilage; those from the manubrium were much larger than those from the ensiform. Each serration from the manubrium extended from the posterior border of one rib to the back of the next behind. The posterior fibres are not so obliquely directed forwards and outwards as the rest; the anterior fibres are most oblique. The last serration from the ensiform cartilage crosses the cartilage of the 11th rib, and is *inserted* into the lower border of the cartilage of the 10th rib; the penultimate crosses the cartilages of the 10th and 11th ribs, and is *inserted* into the lower and inner surface of the cartilage of the 9th rib; the last but two crosses the cartilages of the 11th, 10th, and 9th ribs, and is *inserted* into the lower border and inner surface of the 8th cartilage. The other serrations are *inserted* into the under and inner surfaces of the cartilages of the 2nd to the 7th ribs, each serration crossing two ribs before reaching its attachment.

In *Arctocephalus* it *arises* from the anterior half of the sternum by fibres, and from the ventral