

posterior to the 4th lumbar vertebra and anterior to the anterior ventral spine it has two fascial origins, from the dorsal surface of the erector spinæ, and from the tips of the transverse processes of the 5th and 6th lumbar vertebræ. The dorsal border has an oblique direction, sloping gradually from the 1st lumbar vertebra to the anterior ventral spine. The fibres springing opposite the 1st lumbar vertebra pass transversely beneath the digitations of the external oblique from the 13th rib, and are *inserted* into the posterior border of the 13th rib beneath that muscle; the fibres from the 2nd lumbar spine are similarly *inserted* into the 14th rib, and those from the 3rd lumbar spine like the last into the 15th rib. The greater portion of the last digitation of the external oblique is blended with the transversalis between the fibres from the 3rd and 4th lumbar spines. Posterior to the 3rd lumbar vertebra the fibres ascend and are *inserted* into the posterior border of the cartilages of the 13th to the 15th ribs and into the 11th and 12th cartilages by fascia. From the xiphisternum to midway between it and the pubes the fibres end upon the under surface of the rectus; posterior to this they turn over its ventral surface to end upon it; and the fibres from the pubes arch over the round ligament and also end upon the rectus.

The *Transversalis abdominis* in *Phoca vitulina arises* from the transversalis fascia between the front of the outer pillar and the anterior ventral spine of the ilium, from the lumbar fascia to the last rib, and from the inner surface of the cartilages of the 10th to the 15th ribs. The fibres are strongest anteriorly and thinnest posteriorly. It is *inserted* by muscular fibres into the side of the anterior surface of the ensiform cartilage, and blends over its posterior half with its fellow. Behind the ensiform cartilage it forms a tendon which unites with its fellow to the posterior third of the rectus, behind this it ends on the outer side of the rectus. Near the symphysis it terminates upon the transversalis fascia, and near the outer side of the same fascia it crosses over the cord near the internal ring.

In *Arctocephalus* it *arises* from the inner surface of the cartilage of the 11th rib in front of the tip of the 12th rib, from the same part of the 12th to the 15th ribs, from the lumbar fascia coming from the tips of the transverse processes of the lumbar vertebræ; and between the anterior ventral spine and the pectineal eminence it lies on the transversalis fascia. The fibres are far apart, especially near the pubes, and are *inserted* into the xiphisternum and the linea alba; midway between the xiphisternum and the pubes the fibres gradually shorten, and at the posterior fourth of the linea alba they just cross the infundibulum.

The *Rectus abdominis* in *Phoca vitulina arises* from the symphysis and slightly from the brim of the pelvis a little anterior to this. It runs anteriorly over the 11th rib and then along the side of the manubrium. Over the 5th rib it forms a broad thin tendon, which is *inserted* into the junction of the cartilages with the manubrium from the 1st to the 5th ribs. On the right side the tendon of the rectus was prolonged outwards from the junction of the 1st cartilage with the sternum to the humerus.

In *Arctocephalus* it is narrow anteriorly, and *arises* from the symphysis and the adjacent pubic bar. At the posterior fourth of the muscle it passes between the transversalis and the internal oblique, and midway between the xiphisternum and the pubes between the internal and external oblique. It is *inserted* by tendinous slips into the outer surfaces of the cartilages of the 5th to the 10th ribs. In *Phoca* and *Arctocephalus* the inscriptions tendineæ are wanting.

This set of muscles is supplied by the ilio-inguinal, ilio-hypogastric, dorsal, and 1st lumbar nerves.