

the dorsal sacro-iliac ligament, and from the transverse processes of all the sacral vertebræ, and is *inserted* into the transverse processes of all the caudal vertebræ, partly by tendon and partly by muscular fibres.

#### SOME OF THE PERINEAL MUSCLES.

The *Sphincter ani* in the female Phocinæ and the female *Arctocephalus* is a broad, strong band. It *arises* from the ventral mesial caudal region, and encircles the posterior end of the rectum and vagina, but in the male it only winds round the rectum.

The *Levator ani* in *Phoca vitulina* is a triangular muscle. It *arises* from the anterior inner wall of the pubes, ending half an inch anterior to the posterior margin of the obturator foramen; from one inch of the pubic bar at the anterior margin of the obturator foramen; between these two points of origin from the obturator fascia close to the ventral margin of the obturator foramen; from the internal surface of the innominate bone dorsal to the obturator nerve, and posterior to the sacro-iliac articulation; and from the lateral and ventral surfaces of the 2nd, 3rd, and 4th sacral, and 1st and 2nd caudal vertebræ. It forms several tendons and these proceed backwards; the innermost is *inserted* into the ventral mesial surface of the 5th caudal vertebra, the outermost into the ventral surface of the transverse process of the same vertebra, and the other three tendons into the ventral surfaces of the last caudal vertebra by passing backwards between the other two insertions. From the middle of the 2nd caudal vertebra to the back of the 4th sacral, many fibres pass down around the rectum and vagina, and proceed backwards beneath the sphincter for the vagina and rectum. The combined levators form a funnel-shaped tube which passes through the pelvic outlet surrounding the rectum and vagina.

In *Arctocephalus* it *arises* from the inner surface of the pubic bar above the pelvic brim, between the pectineal eminence anteriorly and the side of the symphysis posteriorly; from the inner surface of the ilium anterior to the obturator foramen; and from the ventral sides of the sacral and caudal vertebræ. The levators form a muscular tube as in *Phoca*, the posterior pubic fibres proceed backwards and encircle the vagina and rectum, but principally the former. Then they turn inwards upon the ventral side of the vagina, and end posteriorly among the fibres of the sphincter for the vagina and rectum outside the pelvis. The rest of the fibres run backwards along the caudal region, and are *inserted* into the ventral surfaces of the transverse processes of the caudal vertebræ.

The *Protractor of the prepuce*, in the Phocinæ between the symphysis pubes and the umbilicus, is a muscular band *arising* from the outer border of the rectus by three slips. These soon unite, proceed backwards, and are *inserted* into the side of the prepuce around the orifice, the fibres of both muscles meeting on its ventral surface.

The *Retractor vaginæ* in *Phoca* is a quadrilateral muscle. It *arises* half an inch ventral to the ischial spine from the posterior borders of the ischium and pubes, and descends upon the side of the vagina, being dorsally blended with the levator ani.