

surface of the tibia, extending to the external border. It draws the leg inwards, and in *Arctocephalus* will turn the leg inwards when progressing on land. In *Otaria* a few fibres overlap the external oblique, but in *Trichechus* it has no fibres covering this muscle, and so is similar to *Arctocephalus*. In the Phocinæ it is supplied by the obturator nerve.

The *Semimembranosus* is named *Musc. pubo-tibialis* by Lucae; in *Phoca vitulina* it lies above the *gracilis* and is partially hidden by it. It is in two parts, the anterior and posterior. The anterior *arises* from the outer surface of the innominate bone posterior to the foramen, in front of the origin of the posterior part, and above the origin of the *gracilis*. It is *inserted* into the posterior two-thirds of the front of the tibia, its tendon combining with the *gracilis*. The posterior part *arises* from the outer edge of the innominate, between the tuber ischii, from which it also has fibres of origin, and the origin of the anterior part from the pubic bone. It is *inserted* into the tibia, anterior to the *semimembranosus* (anterior part), and extends forwards to one-fifth from the upper extremity of the tibia. In *Phoca hispida* the anterior part *arises* from the outer surface of the innominate bone, from the body of the pubis upwards to where the pubis and ischium fuse, and from the edge of the bone between the origin of the *gracilis* to the *semimembranosus* (posterior part). It is *inserted* into the posterior half of the ventral surface of the tibia, in conjunction with the *semitendinosus* and hinder three-fourths of the *gracilis*. The posterior part is placed above the *gracilis*. It *arises* from the outer dorsal half of the pubic bone, between the tuber ischii and the origin of the *semimembranosus* anterior part, slightly from the base of the tuber posteriorly, and from the edge of the bone between these two points. It goes outwards and forwards, and is *inserted* into the ventral surface of the tibia in its upper half, the fibres almost reaching the head of the shaft. In *Phoca barbata* both parts are similar to the last, except that the origin does not go up to the tuber ischii, and the insertion is smaller, not reaching so far forwards on the tibia, but falling short of the head by a quarter of the length of this bone.

In *Macrorhinus leoninus* it is almost the same as is the posterior part in Phocinæ. It *arises* from the outer surface of the innominate bone, posterior to the origin of the *adductor longus* and that part of the *obturator externus* which represents the *quadratus femoris*, extending backwards a little more than halfway between the symphysis and the ischial tuber. It is *inserted* into the anterior half of the ventral surface of the tibia, reaching almost to the head of the bone.

In *Arctocephalus gazella*, it is closely allied to the posterior part in *Phoca vitulina*, *Phoca hispida*, and *Phoca barbata*. It *arises* from the posterior third of the outer edge of the pubic bar, which is behind the rudimentary tuber ischii, from the third of the posterior border of the innominate bone, which is the continuation of the sitting bone downwards, and slightly from the surface of the innominate adjoining the marginal origin. It is *inserted* into the front of the tibia in front of the *semitendinosus*, the fibres terminating a quarter of the length of the tibia from the head of the shaft, *i.e.*, it is *inserted* into the second fourth of the tibia from the head. Lucae describes it as one part in *Phoca*. In *Otaria*, what Murie names *semitendinosus* I call *semimembranosus*; this also applies to *Trichechus*.

In all the specimens the posterior part is present; in *Macrorhinus* and *Arctocephalus* the anterior part is wanting. The insertion of the posterior part in all is nearer the tibial head, the insertion in *Macrorhinus* almost touching it. The portion of bone giving origin to the anterior part in the Phocinæ is utilised in *Arctocephalus* for the *adductor magnus*, and in the latter it has wandered up the limb and divides its attachment between the femur and tibia. This is a case of