

*Variations.*—The insertion of the combined cruro-coccygeus and adductor longus varies somewhat in different species. In *Spheniscus demersus* and *Spheniscus magellanicus* their insertion is confined to the middle third of the shaft of the femur; in *Eudyptes chrysolophus* they are attached to the lower third of that bone; whilst in *Aptenodytes* their insertion occupies the lower two-thirds of the shaft of the femur.

*Remarks.*—There is some difficulty with regard to the synonymy of this as well as of the preceding muscle. Both are described by Selenka under the name of adductor longus. According to this author, the muscle in some birds arises exclusively from the coccygeal vertebræ, while in others its origin is confined to the pelvis. In the former the muscle evidently corresponds to the cruro-coccygeus above described, while in the latter it represents my adductor longus. Selenka does not refer to the presence in any one bird of both the pelvic and coccygeal origins of his adductor longus, and yet this occurs in every species of Penguin which I have examined.

#### 5. *Adductor magnus.*

*Le deuxième abducteur de la cuisse*, Vicq d'Azyr, 1774, p. 508, No. 3.

*Der zweite Anzieher des Oberschenkels*, Wiedemann, p. 97.

*Der zweite Anzieher des Oberschenkelbeins*, Tiedemann, p. 329, No. 7.

*Adducteurs* (one of), Cuvier, vol. i. p. 359.

*Muscle No. 9*, Meckel, vol. vi. p. 86, No. 9.

*Triceps adductor femoris* (part of), Reid, p. 143.

*Adductor magnus*, Owen, p. 35.

*Adductor magnus*, Selenka, vol. vi. p. 141, No. 80.

*Adducteurs* (one of), Gervais and Alix, p. 31.

*Attachments.*—The adductor magnus is a very powerful muscle. It arises from the whole length of the outer surface of the pubic bone, posterior to the acetabulum, as well as from its posterior cartilaginous extremity, and to a corresponding extent from the outer surface of the obturator membrane. The fibres pass obliquely downwards and forwards, and are inserted into the lower half of the posterior border (linea aspera) of the shaft of the femur. A few of the posterior fibres are inserted by means of a special tendon into a depression on the posterior surface of the femur, immediately above the internal condyle of that bone. To this tendon are attached a few of the fibres of the inner head of the gastrocnemius.

*Action.*—This muscle is a powerful extensor of the femur at the hip joint. Through its connection with the gastrocnemius it flexes the knee and extends the ankle joint.

*Relations.*—At its origin the muscle corresponds to the lower border of the obturator externus. On the outer side it is in contact with the adductor longus and cruro-coccygeus. Its posterior border lies parallel to, and in contact with the pubic head of origin of the semi-membranosus.