metatarsal bones, crosses the 4th metatarsal, and is *inserted* by a fine tendon into the tibial side of the base of the 1st phalanx of the 5th metatarsal.

In *Arctocephalus* the *Adductor hallucis* and the *Adductor minimi digiti arise* by a common origin from the plantar surfaces of the proximal ends of the 2nd, 3rd, and 4th metatarsal bones, and from the sheath of the peroneus longus by a tendinous sheet which is semi-circular. Along the posterior border of this tendon muscular fibres spring and take the form of a horse-shoe, the two limbs forming these two muscles. The tibial limb is the adductor hallucis and is *inserted* into the fibular distal end of the 1st metatarsal. The fibular limb is the adductor minimi digiti and is *inserted* into the distal tibial side of the 5th metatarsal.

In *Otaria* these muscles are regarded as superficial interossei, and their origins are more extensive than in *Arctocephalus*. In *Trichechus* (Murie) they are similar to *Otaria*. In *Trichecus* Cunningham says they form the plantar layer, and he figures the adductor hallucis as consisting of two parts—an adductor obliquus and an adductor transversus, but I did not find the transverse head of the adductor hallucis, and the adductor minimi digiti was not a separate fasciculus, as he figures it. The general plan of origin in the two specimens of *Arctocephali* was like Murie's drawings, the adductors being combined at their origins.

The *Adductor ossis metatarsi primi* in *Arctocephalus arises* from the anterior third of the tibial side of the plantar surface of the 2nd metatarsal, crosses to the 1st digit, and is *inserted* into the 1st phalanx on its fibular proximal side.

The Flexores breves.—These are named the deep interossei by Dr. Murie, and form the intermediate layer of Professor Cunningham. In *Phoca vitulina* and in *Arctocephalus* the muscles of the 2nd, 3rd, and 4th digits are double, of the 5th single, and the 1st digit is peculiar.

In *Phoca vitulina* they are feeble and *arise* from both sides of the plantar surfaces of the 2nd, 3rd, and 4th metatarsals, and from the tibial side only of the 5th. The muscle from the tibial side of the 2nd digit also has origin from the fibular proximal end of the 1st metatarsal. They are *inserted* into the proximal ends of the first phalanges of the digits, on the same sides from which they spring.

In *Arctocephalus* they are well developed. The origins and insertion are as in *Phoca vitulina*, with one exception—the muscle from the tibial plantar surface of the 2nd metatarsal is only from the posterior two-thirds of the shaft.

The *Flexor brevis primi metatarsi* or *flexor brevis hallucis*. In *Phoca vitulina* the outer muscle or outer head *arises* from the fibular side of the 1st metatarsal, and is *inserted* into the proximal fibular side of the 1st phalanx of the 1st digit. The inner flexor or inner head in *Otaria* is named the adductor hallucis, in *Trichechus* (Murie) the flexor brevis hallucis, and in *Trichechus* (Cunningham) this slip was not found. In *Phoca* it *arises* beneath the adductor hallucis from the outer posterior third of the scaphoid bone, upon the tendon of insertion of the tibialis posticus, and from the anterior outer third of the entocuneiform. It is a glistening tendinous band, with a reddish tinge at the anterior end, which passes backwards and inwards and is *inserted* into the inner side of the base of the 1st metatarsal.

In *Macrorhinus* the inner head *arises* from the outer posterior half of the scaphoid bone in common with the outer head of the abductor hallucis, over the middle of the entocuneiform bone the tendon splits into two equal portions—the inner is the abductor hallucis, the outer forms the flexor brevis hallucis. It is *inserted* into the proximal tibial plantar surface of the 1st metatarsal to the outer side of the abductor hallucis.