

of his dissections, and also with a plate (Pl. VII.) illustrating these. It is to be understood, therefore, that the following observations upon these two animals proceed from him.

Phascolarctos cinereus (Koala).

The foot of this animal in the undissected state is figured in Plate VII. fig. 1. It possesses five toes, of which the hallux is large, nailless, and placed at right angles to the long axis of the foot, so as to oppose the other digits. The index and medius are shorter and more slender than the other two, and are united by a common covering of skin. The four outer toes are provided with large, curved, very deep and compressed claws.

On the removal of the skin and superficial fascia from the sole of the foot, the deep or plantar fascia is seen to be well marked and arranged in the usual manner. The central portion, however, is prolonged backwards in the form of a cartilaginous tongue-like projection. This affords attachment, chiefly by its base, to most of the short muscles of the hallux and minimus and bridges over the long flexor tendons, as they enter the sole. This cartilaginous plate forms the functional heel. The backward projection of the os calcis is situated at a higher level, and from its under surface a small muscular bundle descends to the upper surface of the plantar cartilage, and acts as an elevator of the heel¹ (Pl. VII. fig. 2, *l*).

The intrinsic muscles of the foot are strongly developed, but whilst the trilaminar disposition is very evident, the dorsal or abducting layer is not complete as regards the typical number of distinct elements.

A study of the attachments and actions of the individual muscles makes it manifest that the middle line of the foot in this animal corresponds with the annularis or fourth toe, and it thus differs from the *Cuscus* and man, in both of which the index or second toe constitutes the centre for the movement of abduction and adduction, and also from the majority of mammals in which the middle line passes along the medius or third toe. It is interesting to note that the hand of the Koala agrees with the foot in this respect.²

Plantar layer (Pl. VII. fig. 2).—This group of muscles exhibits many evidences of muscular modifications, which can only be explained by a transference of the middle line of the foot from the medius to the annularis. It is composed of four muscles, viz. :—

1. Adductor hallucis (p^1).
2. Adductor minimi digiti (p^5).
3. Adductor of the medius and index (p^2 and p^3).
4. A slip for the annularis.

¹ This minute muscle is doubtless a differentiation of the subjacent flexor brevis digitorum.

² Dr. Young, Intrinsic Muscles of Marsupial Hand, Jour. Anat. and Phys., vol. xiv. p. 158.