## Thylacine (Pl. I. figs. 1-3).

Although the intrinsic muscles of the manus of this animal are arranged upon the same general plan as in the *Phascogale*, there are, nevertheless, certain important points of difference.

Dorsal group.—The abductor minimi digiti (figs. 1 and 3, d) and abductor pollicis (figs 1 and 3, e) are both present. The former is a very powerful muscle, and is attached, on the one hand, to the pisiform bone, and on the other to the ulnar face of the base of the first phalanx of the little finger. The abductor of the thumb is poorly developed, and with difficulty separated from the radial part of the flexor brevis pollicis. Its connections are similar to those of the corresponding muscle in the *Phascogale*.

The dorsal interossei are four in number when we view the dorsal aspect of the manus, but they are not all abductors in their action (fig. 2,  $d^1$ ,  $d^2$ ,  $d^3$ ,  $d^4$ ). The first and fourth alone have this action. The first is inserted by a single tendon upon the radial face of the first phalanx of the index, partly into bone and partly into the extensor tendon. The fourth is inserted similarly into the ulnar side of the ring finger. These muscles, therefore, abduct the index and ring fingers from the middle line of the hand. Very different is the action of the second and third dorsal interossei ( $d^2$  and  $d^3$ ). The former ends in a strong tendon which splits into two slips, and these are inserted one upon the radial face of the first phalanx of the middle finger, and the other upon the ulnar face of the first phalanx of the index. The third dorsal interosseous is inserted in precisely the same manner into the middle and ring fingers. The first and fourth dorsal interossei muscles abduct the ring and index from the middle line of the hand; the second and third approximate the three middle digits in the first instance, and then extend them.

Such are the connections of the dorsal interossei when viewed upon the dorsal aspect of the hand, but if we examine them upon their palmar surfaces after the removal of the palmar and intermediate muscles, we find an accessory slip in connection with each of the three ulnar muscles. These slips are apt to be confounded with the intermediate muscles, but careful dissection shows that they belong to the dorsal interossei. Two arise from the base of the middle metacarpal bone,—one from each side of it,—and they are inserted one into each side of the base of the first phalanx of the same finger. These are the abductors of the middle finger. The third slip arises from the base of the metacarpal bone of the ring finger (fig. 3, h), and is inserted into the ulnar side of the base of the corresponding phalanx. It is an accessory abductor of the ring finger.

Palmar group.—This group consists of three well-marked muscles lying upon the intermediate paired muscles, viz., (1) a large adductor of the little finger (fig. 1, c, and fig. 3, c, and  $c^1$ ); (2) an abductor of the ring finger (figs. 1 and 3, b); (3) an adductor of the index (figs. 1 and 3, a).