

posing these muscles is so thin that this small fasciculus can be seen shining through the fibres. Emerging from under cover of the arched lower border of the combined muscles it is inserted into the inner sesamoid bone at the base of the proximal phalanx of the annularis.

The adductor hallucis is a delicate little muscle which springs from the base of the metatarsus, close to the inner side of the conjoined origin of the adductors of the index and minimus. It is inserted into the outer side of the head of the metatarsal bone of the rudimentary hallux.

In a recent paper by Ruge,¹ upon the comparative anatomy of the deep muscles of the sole of the foot, the author describes and figures in the *Dasyurus hallucatus*, a special adductor of the medius. This muscle does not exist in the foot of the *Dasyurus viverrinus*, and its presence in the specimen which Dr. Ruge dissected is somewhat difficult to understand, seeing that it is rare for the digit which constitutes the centre for the movements of adduction and abduction to be supplied with a special adductor. Ruge considers it to be a link which binds this animal with the *Ornithorhynchus paradoxus*, the pedal muscles of which have a very remarkable arrangement.

Intermediate layer (fig. 6, f^1 to f^5).—Very little need be said regarding the muscles which compose this layer. Each of the four outer toes is provided with a flexor brevis, which is quite distinct from the dorsal interossei, and shows no tendency to fuse with them, notwithstanding their close proximity, from the more or less complete obliteration of the inter-metatarsal spaces. Each muscle arises from the base of the metatarsal bone upon which it lies, and soon divides into two slips. These embrace the root of the corresponding toe, and are inserted one into each sesamoid bone. The flexores breves are very similar, therefore, to the same muscles in *Thylacinus*—differing only in the two heads of each muscles springing in all cases by a common origin.

In addition to the adductor hallucis, the rudimentary hallux is provided with a small fleshy slip (figs. 5 and 6, f^1t), which arises from the scaphoid, and is inserted into the inner side of the head of the metatarsal bone. The question naturally arises—What is this muscle? Is it a flexor brevis or an abductor? It is supplied by the internal plantar nerve, but this does not help us in our difficulty, seeing that both these muscles usually derive their nerve fibres from this source. Ruge apparently considers it to be the abductor hallucis, as he marks it in the figure of the foot of the *Dasyurus hallucatus* (*a.h.*), but I think it is more likely that it represents both muscles fused into one. My reason for this belief is, that in *Phascogale*, in which the hallux is slightly better developed, the two muscles are distinct from each other although in very close proximity.

The *dorsal layer* consists of—(1) the abductor ossis metatarsi minimi digiti (d^{6x}), (2) two abductors of the little toe (d^6 and $d^{6'}$), (3) four dorsal interossei (figs 5 and 6, d^2 to d^5).

The abductors of the little toe are three in number, and arranged in a manner very similar to those of the *Thylacine*. The muscle which is inserted into the sesamoid ($d^{6'}$)

¹ Dr. Georg Ruge, Zur vergleichenden Anatomie der tiefen Muskeln in der Fusssohle, Morph. Jahrbuch, 1870.