

abductor and short flexor proper to the little toe, and a ligament which arises from the calcaneum." Chauveaux¹ states that it corresponds to the two muscles, which in man, lie along side the interosseous metacarpal muscles. I am at a loss to understand the two muscles to which he refers. Gamgee and Law² are also somewhat vague. They remark that the interosseous muscle of the medius is "transformed into the suspensory ligament." Meckel in his "Traite Général d'Anatomie Comparée" (p. 443), asserts that this ligament is not only the representative of the interossei, but also of the lumbrical muscles. Two minute lumbricals, however, are present as independent muscles in the foot of the horse.³ Professor W. H. Flower, in his recent article upon the "Zoology and Anatomy of the Horse," in the ninth edition of the Encyclopædia Britannica, vol. xii. p. 178, says:—"Its attachments and relations, as well as the occasional presence of muscular fibres in its substance, show that it is the homologue of the interosseous muscles of other mammals, curiously modified, both in structure and function to suit the requirements of the horse's foot."

The second (Pl. IX. fig. 7, *d*³) and third dorsal interossei (Pl. IX. 7, *d*⁴) are very rudimentary, and are placed one upon each side of the flexor brevis or suspensory ligament. Each muscle consists of a small fleshy belly, about two inches in length, succeeded by a long narrow delicate tendon. The second dorsal interosseus arises from the outer side of the base of the small second metatarsal bone, whilst the third springs from the inner side of the base of the rudimentary fourth metatarsal and each is inserted upon its own side of the fetlock joint, where it joins the band sent by the suspensory ligament to the extensor tendon on the dorsum of the first phalanx.

The dorsal interossei of the Horse, from their minute size, can exercise no abducting action upon the medius. They are merely vestiges, and point to retrograde development. Rigot considers that they have "the power of raising the synovial membranes of the pastern joint and sesamoid sheath during flexion" (*vide* Gamgee and Law, p. 413). A close study of their connections renders such an action very improbable.

The chief interest of these rudimentary interossei muscles centres in the fact that they constitute a link in the soft parts between the Horse of the present day, and its three-toed ancestor. They are undoubtedly vestiges of well developed interosseous muscles which lay in the second and third intermetatarsal spaces, and exercised the usual abducting action upon the middle digit. Occasionally they are found greatly enlarged. Thus in a Horse, which was dissected last winter session (1880-81) in Dick's Royal Veterinary College, Edinburgh, Mr. M'Fadyean, the Professor of Anatomy, informs me that the fleshy bellies of these muscles were several inches long and proportionately thick; indeed, each exceeded in size a strongly-marked plantaris muscle in man.

¹ Comparative Anatomy, Fleming's Translation, p. 154.

² *Loc. cit.*, p. 413.

³ *Vide* Gamgee and Law, *loc. cit.*, p. 413; Chauveaux's Comparative Anatomie, p. 311.