

digiti V. It is not present in *Otaria* and *Trichechus*. It arises from the inner surface of the ulna where the olecranon and the posterior border meet, and passes down the posterior border of the ulna on the flexor carpi ulnaris; at the wrist it divides into two tendons—one is inserted into the skin over the palmar surface of the 5th metacarpal bone, the other is bound to the sheath and the deep fascia along the ulnar side of the 5th metacarpal, and ends opposite the ulnar side of the head of the 1st phalanx into which it is inserted. It is both an abductor and flexor of the manus, the flexing action commencing after the abduction is complete. It is supplied by the ulnar nerve.

THE MANUS.—The inner or palmar region consists of three groups of muscles. The FIRST GROUP is composed of two adductors, found only in *Arctocephalus*:—

The *Adductor of the 2nd digit*, named superficial interosseous in *Otaria* and *Trichechus*, arises from the base of the 3rd metacarpal between the two heads of the flexor brevis of the same digit. It is inserted into the proximal extremity of the ulnar side of the 1st phalanx of the 2nd digit, and is superficial to the flexores breves which it crosses.

The *Adductor minimi digiti* is the adductor minimi digiti in *Otaria* and is absent in *Trichechus*. It arises from the middle of the ulnar side of the 4th metacarpal and from the deep fascia between the 4th and 5th metacarpals; after passing downwards and backwards it is inserted into the outer half of the shaft and head of the 5th metacarpal and base of the 1st phalanx.

The SECOND GROUP contains the *flexores breves*, which are the deep interossei in *Otaria* and *Trichechus*. In the Phocinæ the first arises from the ulnar side of the metacarpal of the pollex; and is inserted into the ulnar side of the 1st phalanx of the 1st digit. In *Arctocephalus* it is disposed as in the Phocinæ. The 2nd interosseus in the Phocinæ is double and arises from the radial and ulnar sides of the 2nd metacarpal. The radial head is inserted into the radial side of the base of the 1st phalanx of the 2nd digit; the ulnar head into the ulnar side of the same digit. It has the same relations in *Arctocephalus*. The 3rd and 4th muscles in the Phocinæ and *Arctocephalus* resemble the last named. The 5th in the Phocinæ is single and arises from the radial side of the 5th digit, and is inserted into the same side of the base of the 1st phalanx of the same digit. In *Arctocephalus* I did not observe any muscle for the 5th digit. In *Otaria* these muscles are in pairs for all the digits but the 1st, which has only one. In *Trichechus* the 1st and 5th digits have only one each, the other digits two.

The THIRD GROUP embraces the following:—

The *Abductor brevis pollicis* is the M. flexor pollicis of Lucae, and is wanting in *Otaria* and *Trichechus*. In the Phocinæ it arises from the lower side of the process on the outer side of the scapholunar bone, and from the lower border of this bone to the outer side of the tendon of the flexor carpi radialis; and is inserted into the front of the radial side of the base of the 1st phalanx of the thumb. There is a sesamoid bone beneath its tendon.

In *Arctocephalus* it arises from the trapezium, from the upper and internal half of the 1st metacarpal, from the radial side of the base of the 2nd metacarpal, and from the carpo-metacarpal ligament. The greater portion is inserted into the ulnar side of the distal end of the 1st metacarpal, and the remainder into the distal extremity of the radial side of the 2nd metacarpal. Humphry does not mention this muscle, but Lucae describes it.

The *Abductor minimi digiti* is the flexor brevis minimi digiti in *Otaria* and is absent in *Trichechus*; in the Phocinæ it arises from the pisiform bone, and from the tendon of the flexor carpi