

In *Otaria* "it takes origin from the outer surface of the olecranon, and from the ulna to as far as about the middle of the latter, and is *inserted* into the prominent and anterior or outer corner of the metacarpal of the pollex."

In *Trichechus* it is combined with the extensores primi and secundi internodii pollicis. This muscle in the Phocinæ covers that part of the ulna which, in *Arctocephalus*, gives origin to the extensor ossis metacarpi pollicis and the extensor primi internodii pollicis, in *Otaria* gives origin to the same muscles, and in *Trichechus* to the extensor ossis metacarpi, extensor primi internodii, and extensor secundi internodii pollicis. It is supplied by the posterior interosseous nerve.

The *Extensor primi internodii pollicis* arises from the posterior third of the outer surface of the olecranon; from the posterior border of the ulna in its upper half; and very slightly from the shaft where the extensor ossis metacarpi begins to cross the radius. One inch above the wrist it forms a tendon, which passes beneath those of the extensor communis digitorum secundus, and enters the third division of the annular ligament with and below the extensor communis primus. It is *inserted* into the base of the 1st phalanx of the thumb on the anterior or radial side; and into the head of the metacarpal.

In *Arctocephalus* the extensor digitorum and the extensor carpi ulnaris must be turned up before the origin of this muscle is seen. It *arises* from the external surface of the olecranon between the anterior and middle tubercles; from the edge of the quadrilateral surface in front of the anterior tubercle; from the sigmoid cavity of the ulna; from the concave outer surface of the ulna, as far as the origin of the extensor ossis metacarpi pollicis; from the external surface of the ligament of the capsule of the elbow-joint; from the interosseous ligament; and from the upper half of the posterior quarter of the breadth of the shaft of the radius. Its tendon crosses the radius, and goes through the same division as the extensor ossis metacarpi pollicis. Opposite the head of the 1st metacarpal it is bound to the palmar fascia, and is *inserted* into the radial side of the base of the 1st phalanx of the pollex, being joined to the extensor proprius pollicis.

Lucae gives the insertion into the base of the 1st metacarpal, but Humphry gives a different insertion into the back of the 1st phalanx of the pollex, which is the phalanx for the insertion of the extensor primi internodii pollicis.

In *Otaria* this muscle is wanting. In *Trichechus* it is inseparably united with the extensor ossis metacarpi pollicis. That part of the ulna upon which this muscle is implanted in the Phocinæ gives origin in *Arctocephalus*, *Otaria*, and *Trichechus* to the extensor proprius pollicis. It is supplied by the ulnar nerve.

According to those works on the Pinnipedia that I have had an opportunity of reading, the outer surface of the ulna in the Phocinæ and *Arctocephalus* gives origin only to muscles for the pollex. The surface to which the fibres are attached, generally speaking, is the upper two-thirds of the shaft. In *Arctocephalus* the outer surface of the ulna is divided into two by a ridge commencing from the middle tubercle on the outer side of the olecranon, and becoming indistinct at the junction of the upper two-thirds and the lower third of the shaft (Pl. VII. fig. 4). In the Phocinæ there is a slight ridge dividing the external surface of the olecranon into two, which comes close to the posterior border of the ulna $\frac{1}{4}$ of an inch below the junction of the posterior border with the olecranon, runs down the shaft close to it, and ends at the middle of the shaft. These ridges separate the muscle fibres, which clothe the external surface of the shaft, into two groups of the same functional importance