

longation. This bone has two surfaces and three borders; the external or dorsum surface is divided into two unequal portions by a ridge, called the spine of Scapula; the anterior division is the smallest, and is called the "*Fossa antea spinatus*,"—the other receives the name of the "*Fossa-Postea-spinatus*." These cavities are filled by two large muscles, viz.: the *Antea Spinatus* and *Postea Spinatus*. These muscles are very liable to injury, especially in young horses when first put to work, and as a consequence the muscular fibre is wasted in some cases to a great extent, giving rise to a distinct hollow extending to the lower part of the scapula—the name applied to such an occurrence in this country is *Sweeney*.

The internal surface is slightly concave, and is roughened for the attachment of muscles, &c. The anterior border inferiorly terminates in a rough and somewhat hook-shaped process called the *coracoid* process.

The Apex of the Scapula presents upon the articular surface an oval shaped depression called the Glenoid cavity, into which fits the head of the Humerus or bone of the shoulder. K, the Humerus or long bone, is situated betwixt the Scapula and the bones of the arm, placed in an oblique direction from above downwards and backwards. Long bones are divided anatomically into a body or shaft and two extremities, the shaft is cylindrical and has the appearance of being twisted upon itself. On the superior part of the shaft, is a large prominence called the external tuberosity, to which is attached several muscles; the internal surface is round, having near its middle a roughened eminence called the internal tuberosity. The superior or upper extremity of this bone is divided into two portions. One a large hemispherical portion called the head, which with the depression on the apex of the scapula forms the shoulder joint.

The second part of the superior extremity is formed by two eminences called the external and internal trochanter between, which are two cavities receiving the name of Bicipital grooves. Through these grooves passes a strong muscle called the *Flexor Brecchi* muscle, and it is injury to this muscle at that part situated within the groove, which generally gives rise to lameness in the shoulder. The external trochanter presents two prominences, the summit and convexity. The convexity is situated posteriorly, and serves to prevent dislocation of the joint. The inferior or lower extremity is divided into two by a channel or groove. The two divisions are called the external and internal condyles. Between the condyles posteriorly is a deep oval pit or fossa called the condyloid fossa, into which is received the beak of the Olecranon or point of the elbow; the inferi-

or extremity of the humerus, with head of the radius and ulna forms the elbow joint.

The bones of the arm are two, and are named respectively (L) the radius, and (M) ulna. These bones correspond to the bones of the human arm betwixt the elbow and the wrist. The radius is situated in a vertical direction between the humerus and upper row of bones of the knee, the posterior surface of the body of the radius is concave and roughened, and to the upper part of this portion is attached the ulna (E) which is more distinctly represented in cut 2. The superior or upper part of the radius is divided into two by a prominence, the divisions are called Glenoid cavities, and on them rest the condyles of the humerus.

E, the *Ulna*, or cubital, consists of a body and projecting part and articular surface. The body is triangular, the base being placed against the posterior part of the radius, extending about two thirds down, and is firmly attached by fibro cartilage in the young animal, which in the adult becomes ossified. The projecting portions terminate in an apex, called the beak of the Olecranon, or the point of the elbow. In the Ox the ulna is much longer, and extends down the whole length of radius.

(C) the carpus or knee, corresponds to the human wrist, and is composed of eight small bones arranged in two rows, four in the upper, the same in the lower. This joint in the horse

is formed not only to allow of great freedom of action, but also to prevent concussion in galloping, as the union of the various bones overlap each other, and the whole are embedded in cartilage. The upper row perform the greatest amount of motion, and the bones forming it are named respectively [commenting at the inside] the *Scaphoid*, *Lunar*, *Ulniform*, and *Trapezium*. The scaphoid is the largest bone of the upper row.

The bones of the lower row are the *Trapezoid* situated to the inner side, the *Os Magnus*, the largest bone of the knee, the *Unciform*, and *Pisiform*, which is an exceedingly small bone, and often overlooked in dissection. The whole of these bones are firmly held in the places by ligaments.

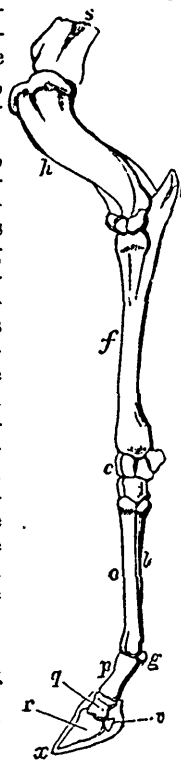


Figure 2.