

Structure.—The long, narrow medullary cavity is enclosed in a strong wall of compact tissue which is thickest along the interosseous border and dorsal surface. At the extremities the compact layer thins. The compact layer is continued onto the back of the olecranon as a plate of close spongy bone with lamellæ parallel. From the inner surface of this plate and the compact layer below it trabeculæ arch forward toward the olecranon and coronoid and cross other trabeculæ, passing backward over the medullary cavity from the upper part of the shaft below the coronoid. Below the coronoid process there is a small area of compact bone from which trabeculæ curve upward to end obliquely to the surface of the semilunar notch which is coated with a thin layer of compact bone. The trabeculæ at the lower end have a more longitudinal direction.

Ossification (Figs. 215, 216).—The ulna is ossified from *three* centers: one each for the body, the inferior extremity, and the top of the olecranon. Ossification begins near the middle of the body, about the eighth week of fetal life, and soon extends through the greater part of the bone. At birth the ends are cartilaginous. About the fourth year, a center appears in the middle of the head, and soon extends into the styloid process. About the tenth year, a center appears in the olecranon near its extremity, the chief part of this process being formed by an upward extension of the body. The upper epiphysis joins the body about the sixteenth, the lower about the twentieth year.

Articulations.—The ulna articulates with the humerus and radius.

The Radius.

The radius (Figs. 213, 214) is situated on the lateral side of the ulna, which exceeds it in length and size. Its upper end is small, and forms only a small part of the elbow-joint; but its lower end is large, and forms the chief part of the wrist-joint. It is a long bone, prismatic in form and slightly curved longitudinally. It has a body and two extremities.

The Upper Extremity (*proximal extremity*).—The upper extremity presents a head, neck, and tuberosity. The head is of a cylindrical form, and on its upper surface is a shallow cup or fovea for articulation with the capitulum of the humerus. The circumference of the head is smooth; it is broad medially where it articulates with the radial notch of the ulna, narrow in the rest of its extent, which is embraced by the annular ligament. The head is supported on a round, smooth, and constricted portion called the neck, on the back of which is a slight ridge for the insertion of part of the Supinator. Beneath the neck, on the medial side, is an eminence, the radial tuberosity; its surface is divided into a posterior, rough portion, for the insertion of the tendon of the Biceps brachii, and an anterior, smooth portion, on which a bursa is interposed between the tendon and the bone.

The Body or Shaft (*corpus radii*).—The body is prismoid in form, narrower above than below, and slightly curved, so as to be convex lateralward. It presents three borders and three surfaces.

Borders.—The volar border (*margo volaris; anterior border*) extends from the lower part of the tuberosity above to the anterior part of the base of the styloid process below, and separates the volar from the lateral surface. Its upper third is prominent, and from its oblique direction has received the name of the oblique line of the radius; it gives origin to the Flexor digitorum sublimis and Flexor pollicis longus; the surface above the line gives insertion to part of the Supinator. The middle third of the volar border is indistinct and rounded. The lower fourth is prominent, and gives insertion to the Pronator quadratus, and attachment to the dorsal carpal ligament; it ends in a small tubercle, into which the tendon of the Brachioradialis is inserted.

The dorsal border (*margo dorsalis; posterior border*) begins above at the back of the neck, and ends below at the posterior part of the base of the styloid process; it separates the posterior from the lateral surface. It is indistinct above and below, but well-marked in the middle third of the bone.

The interosseous crest (*crista interossea; internal or interosseous border*) begins above, at the back part of the tuberosity, and its upper part is rounded and indistinct; it becomes sharp and prominent as it descends, and at its lower part divides into two ridges which are continued to the anterior and posterior margins of the ulnar notch. To the posterior of the two ridges the lower part of the interosseous