

membrane is attached, while the triangular surface between the ridges gives insertion to part of the Pronator quadratus. This crest separates the volar from the dorsal surface, and gives attachment to the interosseous membrane.

Surface.—The **volar surface** (*facies volaris; anterior surface*) is concave in its upper three-fourths, and gives origin to the Flexor pollicis longus; it is broad and flat in its lower fourth, and affords insertion to the Pronator quadratus. A prominent ridge limits the insertion of the Pronator quadratus below, and between this and the inferior border is a triangular rough surface for the attachment of the volar radiocarpal ligament. At the junction of the upper and middle thirds of the volar surface is the nutrient foramen, which is directed obliquely upward.

The **dorsal surface** (*facies dorsalis; posterior surface*) is convex, and smooth in the upper third of its extent, and covered by the Supinator. Its middle third is broad, slightly concave, and gives origin to the Abductor pollicis longus above, and the Extensor pollicis brevis below. Its lower third is broad, convex, and covered by the tendons of the muscles which subsequently run in the grooves on the lower end of the bone.

The **lateral surface** (*facies lateralis; external surface*) is convex throughout its entire extent. Its upper third gives insertion to the Supinator. About its center is a rough ridge, for the insertion of the Pronator teres. Its lower part is narrow, and covered by the tendons of the Abductor pollicis longus and Extensor pollicis brevis.

The Lower Extremity.—The lower extremity is large, of quadrilateral form, and provided with two articular surfaces—one below, for the carpus, and another at the medial side, for the ulna. The carpal articular surface is triangular, concave, smooth, and divided by a slight antero-posterior ridge into two parts. Of these, the lateral, triangular, articulates with the navicular bone; the medial, quadrilateral, with the lunate bone. The articular surface for the ulna is called the **ulnar notch** (*sigmoid cavity*) of the radius; it is narrow, concave, smooth, and articulates with the head of the ulna. These two articular surfaces are separated by a prominent ridge, to which the base of the triangular articular disk is attached; this disk separates the wrist-joint from the distal radioulnar articulation. This end of the bone has three non-articular surfaces—volar, dorsal, and lateral. The **volar surface**, rough and irregular, affords attachment to the volar radiocarpal ligament. The **dorsal surface** is convex, affords attachment to the dorsal radiocarpal ligament, and is marked by three grooves. Enumerated from the lateral side, the first groove is broad, but shallow, and subdivided into two by a slight ridge; the lateral of these two transmits the tendon of the Extensor carpi radialis longus, the medial the tendon of the Extensor carpi radialis brevis. The second is deep but narrow, and bounded laterally by a sharply defined ridge; it is directed obliquely from above downward and lateralward, and transmits the tendon of the Extensor pollicis longus. The third is broad, for the passage of the tendons of the Extensor indicis proprius and Extensor digitorum communis. The **lateral surface** is prolonged obliquely downward into a strong, conical projection, the **styloid process**, which gives attachment by its base to the tendon of the Brachioradialis, and by its apex to the radial collateral ligament of the wrist-joint. The lateral surface of this process is marked by a flat groove, for the tendons of the Abductor pollicis longus and Extensor pollicis brevis.

Structure.—The long narrow medullary cavity is enclosed in a strong wall of compact tissue which is thickest along the interosseous border and thinnest at the extremities except over the cup-shaped articular surface (fovea) of the head where it is thickened. The trabeculae of the spongy tissue are somewhat arched at the upper end and pass upward from the compact layer of the shaft to the fovea capituli; they are crossed by others parallel to the surface of the fovea. The arrangement at the lower end is somewhat similar.

Ossification (Figs. 217, 218).—The radius is ossified from *three* centers: one for the body, and one for either extremity. That for the body makes its appearance near the center of the bone, during the eighth week of fetal life. About the end of the second year, ossification commences