

the attachment of the anterior fibers of the deltoid ligament of the ankle-joint; its *posterior border* presents a broad groove, the **malleolar sulcus**, directed obliquely downward and medialward, and occasionally double; this sulcus lodges the tendons of the Tibialis posterior and Flexor digitorum longus. The *summit* of the medial malleolus is marked by a rough depression behind, for the attachment of the deltoid ligament.

**Structure.**—The structure of the tibia is like that of the other long bones. The compact wall of the body is thickest at the junction of the middle and lower thirds of the bone.

**Ossification.**—The tibia is ossified from *three* centers (Figs. 260, 261): one for the body and one for either extremity. Ossification begins in the center of the body, about the seventh week of fetal life, and gradually extends toward the extremities. The center for the upper epiphysis appears before or shortly after birth; it is flattened in form, and has a thin tongue-shaped process in front, which forms the tuberosity (Fig. 260); that for the lower epiphysis appears in the second year. The lower epiphysis joins the body at about the eighteenth, and the upper one joins about the twentieth year. Two additional centers occasionally exist, one for the tongue-shaped process of the upper epiphysis, which forms the tuberosity, and one for the medial malleolus.

### The Fibula (Calf Bone).

The **fibula** (Figs. 258, 259) is placed on the lateral side of the tibia, with which it is connected above and below. It is the smaller of the two bones, and, in proportion to its length, the most slender of all the long bones. Its upper extremity is small, placed toward the back of the head of the tibia, below the level of the knee-joint, and excluded from the formation of this joint. Its lower extremity inclines a little forward, so as to be on a plane anterior to that of the upper end; it projects below the tibia, and forms the lateral part of the ankle-joint. The bone has a **body** and **two extremities**.

**The Upper Extremity or Head** (*capitulum fibulae; proximal extremity*).—The upper extremity is of an irregular quadrate form, presenting above a flattened articular surface, directed upward, forward, and medialward, for articulation with a corresponding surface on the lateral condyle of the tibia. On the lateral side is a thick and rough prominence continued behind into a pointed eminence, the **apex** (*styloid process*), which projects upward from the posterior part of the head. The prominence, at its upper and lateral part, gives attachment to the tendon of the Biceps femoris and to the fibular collateral ligament of the knee-joint, the ligament dividing the tendon into two parts. The remaining part of the circumference of the head is rough, for the attachment of muscles and ligaments. It presents in front a tubercle for the origin of the upper and anterior fibers of the Peronæus longus, and a surface for the attachment of the anterior ligament of the head; and behind, another tubercle, for the attachment of the posterior ligament of the head and the origin of the upper fibers of the Soleus.

**The Body or Shaft** (*corpus fibulae*).—The body presents four borders—the antero-lateral, the antero-medial, the postero-lateral, and the postero-medial; and four surfaces—anterior, posterior, medial, and lateral.

**Borders.**—The **antero-lateral border** begins above in front of the head, runs vertically downward to a little below the middle of the bone, and then curving somewhat lateralward, bifurcates so as to embrace a triangular subcutaneous surface immediately above the lateral malleolus. This border gives attachment to an intermuscular septum, which separates the Extensor muscles on the anterior surface of the leg from the Peronæi longus and brevis on the lateral surface.

The **antero-medial border**, or **interosseous crest**, is situated close to the medial side of the preceding, and runs nearly parallel with it in the upper third of its extent, but diverges from it in the lower two-thirds. It begins above just beneath the head of the bone (sometimes it is quite indistinct for about 2.5 cm. below the head), and ends at the apex of a rough triangular surface immediately above the