

The **medial surface** of the labyrinth (Fig. 153) forms part of the lateral wall of the corresponding nasal cavity. It consists of a thin lamella, which descends from the under surface of the cribriform plate, and ends below in a free, convoluted margin, the **middle nasal concha**. It is rough, and marked above by numerous grooves, directed nearly vertically downward from the cribriform plate; they lodge branches of the olfactory nerves, which are distributed to the mucous membrane covering the superior nasal concha. The back part of the surface is subdivided by a narrow oblique fissure, the **superior meatus** of the nose, bounded above by a thin, curved plate, the **superior nasal concha**; the posterior ethmoidal cells open into this meatus. Below, and in front of the superior meatus, is the convex surface of the middle nasal concha; it extends along the whole length of the medial surface of the labyrinth, and its lower margin is free and thick. The lateral surface of the middle concha is concave, and assists in forming the **middle meatus** of the nose. The middle ethmoidal cells open into the central part of this meatus, and a sinuous passage, termed the **infundibulum**, extends upward and forward through the labyrinth and communicates with the anterior ethmoidal cells, and in about 50 per cent. of skulls is continued upward as the frontonasal duct into the frontal sinus.

Ossification.—The ethmoid is ossified in the cartilage of the nasal capsule by *three* centers: one for the perpendicular plate, and one for each labyrinth.

The labyrinths are first developed, ossific granules making their appearance in the region of the lamina papyracea between the fourth and fifth months of fetal life, and extending into the conchæ. At birth, the bone consists of the two labyrinths, which are small and ill-developed. During the first year after birth, the perpendicular plate and crista galli begin to ossify from a single center, and are joined to the labyrinths about the beginning of the second year. The cribriform plate is ossified partly from the perpendicular plate and partly from the labyrinths. The development of the ethmoidal cells begins during fetal life.

Articulations.—The ethmoid articulates with *fifteen* bones: four of the cranium—the frontal, the sphenoid, and the two sphenoidal conchæ; and eleven of the face—the two nasals, two maxillæ, two lacrimals, two palatines, two inferior nasal conchæ, and the vomer.

Sutural or Wormian¹ Bones.—In addition to the usual centers of ossification of the cranium, others may occur in the course of the sutures, giving rise to irregular, isolated bones, termed *sutural* or *Wormian bones*. They occur most frequently in the course of the lambdoidal suture, but are occasionally seen at the fontanelles, especially the posterior. One, the *pterion ossicle*, sometimes exists between the sphenoidal angle of the parietal and the great wing of the sphenoid. They have a tendency to be more or less symmetrical on the two sides of the skull, and vary much in size. Their number is generally limited to two or three; but more than a hundred have been found in the skull of an adult hydrocephalic subject.

THE FACIAL BONES (OSSA FACIEI).

The Nasal Bones (Ossa Nasalia).

The **nasal bones** are two small oblong bones, varying in size and form in different individuals; they are placed side by side at the middle and upper part of the face, and form, by their junction, “the bridge” of the nose (Fig. 190). Each has two surfaces and four borders.

Surfaces.—The **outer surface** (Fig. 155) is concavoconvex from above downward, convex from side to side; it is covered by the Procerus and Compressor naris, and perforated about its center by a foramen, for the transmission of a small vein. The **inner surface** (Fig. 156) is concave from side to side, and is traversed from above downward, by a groove for the passage of a branch of the nasociliary nerve.

Borders.—The **superior border** is narrow, thick, and serrated for articulation with the nasal notch of the frontal bone. The **inferior border** is thin, and gives attach-

¹ Ole Worm, Professor of Anatomy at Copenhagen, 1624–1639, was erroneously supposed to have given the first detailed description of these bones.