

by the **lingula**. This groove lodges the cavernous sinus and the internal carotid artery, the latter being surrounded by a plexus of sympathetic nerves.

The lateral parts of the middle fossa are of considerable depth, and support the temporal lobes of the brain. They are marked by depressions for the brain convolutions and traversed by furrows for the anterior and posterior branches of the middle meningeal vessels. These furrows begin near the foramen spinosum, and the anterior runs forward and upward to the sphenoidal angle of the parietal, where it is sometimes converted into a bony canal; the posterior runs lateralward and backward across the temporal squama and passes on to the parietal near the middle of its lower border. The following apertures are also to be seen. In front is the **superior orbital fissure**, bounded above by the small wing, below, by the great wing, and medially, by the body of the sphenoid; it is usually completed laterally by the orbital plate of the frontal bone. It transmits to the orbital cavity the oculomotor, the trochlear, the ophthalmic division of the trigeminal, and the abducent nerves, some filaments from the cavernous plexus of the sympathetic, and the orbital branch of the middle meningeal artery; and from the orbital cavity a recurrent branch from the lacrimal artery to the dura mater, and the ophthalmic veins. Behind the medial end of the superior orbital fissure is the **foramen rotundum**, for the passage of the maxillary nerve. Behind and lateral to the foramen rotundum is the **foramen ovale**, which transmits the mandibular nerve, the accessory meningeal artery, and the lesser superficial petrosal nerve.<sup>1</sup> Medial to the foramen ovale is the **foramen Vesalii**, which varies in size in different individuals, and is often absent; when present, it opens below at the lateral side of the scaphoid fossa, and transmits a small vein. Lateral to the foramen ovale is the **foramen spinosum**, for the passage of the middle meningeal vessels, and a recurrent branch from the mandibular nerve. Medial to the foramen ovale is the **foramen lacerum**; in the fresh state the lower part of this aperture is filled up by a layer of fibrocartilage, while its upper and inner parts transmit the internal carotid artery surrounded by a plexus of sympathetic nerves. The nerve of the pterygoid canal and a meningeal branch from the ascending pharyngeal artery pierce the layer of fibrocartilage. On the anterior surface of the petrous portion of the temporal bone are seen the eminence caused by the projection of the superior semicircular canal; in front of and a little lateral to this a depression corresponding to the roof of the tympanic cavity; the groove leading to the **hiatus of the facial canal**, for the transmission of the greater superficial petrosal nerve and the petrosal branch of the middle meningeal artery; beneath it, the smaller groove, for the passage of the lesser superficial petrosal nerve; and, near the apex of the bone, the depression for the semilunar ganglion and the orifice of the carotid canal.

**The Posterior Fossa** (*fossa cranii posterior*).—The posterior fossa is the largest and deepest of the three. It is formed by the dorsum sellæ and clivus of the sphenoid, the occipital, the petrous and mastoid portions of the temporals, and the mastoid angles of the parietal bones; it is crossed by the **occipitomastoid** and the **parietomastoid sutures**, and lodges the cerebellum, pons, and medulla oblongata. It is separated from the middle fossa in and near the median line by the dorsum sellæ of the sphenoid and on either side by the superior angle of the petrous portion of the temporal bone. This angle gives attachment to the tentorium cerebelli, is grooved for the superior petrosal sinus, and presents at its medial end a notch upon which the trigeminal nerve rests. The fossa is limited behind by the grooves for the transverse sinuses. In its center is the **foramen magnum**, on either side of which is a rough tubercle for the attachment of the alar ligaments; a little above this tubercle is the canal, which transmits the hypoglossal nerve and a meningeal branch from the ascending pharyngeal artery. In front of the foramen magnum

<sup>1</sup> See footnote, page 150.