

fossa and presents a bluish-gray area, the *locus cæruleus*, which owes its color to an underlying patch of deeply pigmented nerve cells, termed the *substantia ferruginea*. At the level of the colliculus facialis the sulcus limitans widens into a flattened depression, the *superior fovea*, and in the inferior part of the fossa appears as a distinct dimple, the *inferior fovea*. Lateral to the foveæ is a rounded elevation named the *area acustica*, which extends into the lateral recess and there forms a feebly marked swelling, the *tuberculum acusticum*. Winding around the inferior peduncle and crossing the area acustica and the medial eminence are a number of white strands, the *striæ medullares*, which form a portion of the cochlear division of the acoustic nerve and disappear into the median sulcus. Below the inferior fovea, and between the trigonum hypoglossi and the lower part of the area acustica is a triangular dark field, the *ala cinerea*, which corresponds to the sensory nucleus of the vagus and glossopharyngeal nerves. The lower end of the ala cinerea is crossed by a narrow translucent ridge, the *funiculus separans*, and between this funiculus and the clava, is a small tongue-shaped area, the *area postrema*. On section it is seen that the funiculus separans is formed by a strip of thickened ependyma, and the area postrema by loose, highly vascular, neuroglial tissue containing nerve cells of moderate size.

#### THE MID-BRAIN OR MESENCEPHALON.

The *mid-brain* or *mesencephalon* (Fig. 681) is the short, constricted portion which connects the pons and cerebellum with the thalamencephalon and cerebral hemispheres. It is directed upward and forward, and consists of (1) a ventrolateral portion, composed of a pair of cylindrical bodies, named the *cerebral peduncles*; (2) a dorsal portion, consisting of four rounded eminences, named the *corpora quadrigemina*; and (3) an intervening passage or tunnel, the *cerebral aqueduct*, which represents the original cavity of the mid-brain and connects the third with the fourth ventricle (Fig. 710).

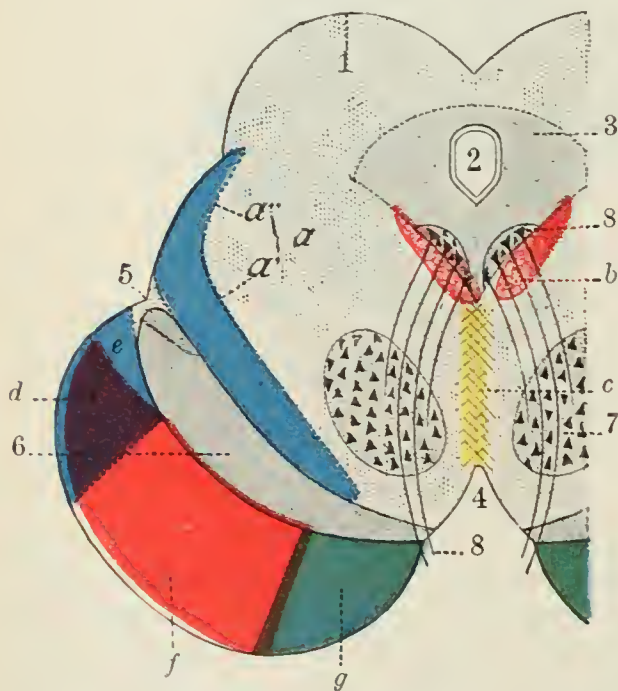


FIG. 710.—Coronal section through mid-brain. (Schematic.) (Testut.) 1. Corpora quadrigemina. 2. Cerebral aqueduct. 3. Central gray stratum. 4. Interpeduncular space. 5. Sulcus lateralis. 6. Substantia nigra. 7. Red nucleus of tegmentum. 8. Oculomotor nerve, with 8', its nucleus of origin. *a*, Lemniscus (in blue) with *a'* the medial lemniscus and *a''* the lateral lemniscus. *b*, Medial longitudinal fasciculus. *c*, Raphé. *d*, Temporo-pontine fibers. *e*, Portion of medial lemniscus, which runs to the lentiform nucleus and insula. *f*, Cerebrospinal fibers. *g*, Frontopontine fibers.

The *cerebral peduncles* (*pedunculus cerebri*; *crus cerebri*) are two cylindrical masses situated at the base of the brain, and largely hidden by the temporal lobes of the cerebrum, which must be drawn aside or removed in order to expose them. They emerge from the upper surface of the pons, one on either side of the middle line, and, diverging as they pass upward and forward, disappear into the substance of the cerebral hemispheres. The depressed area between the crura is termed the *interpeduncular fossa*, and consists of a layer of grayish substance, the *posterior*

*perforated substance*, which is pierced by small apertures for the transmission of bloodvessels; its lower part lies on the ventral aspect of the medial portions of the tegmenta, and contains a nucleus named the *interpeduncular ganglion* (page 802); its upper part assists in forming the floor of the third ventricle. The ventral sur-