

of the fibers terminate in the superior olivary nucleus. The fibers of the *striae medullares* are not always visible on the floor of the rhomboid fossa. From the ventral portion of the cochlear nucleus axons pass into the trapezoid body, here some of them end in the superior olivary nucleus of the same side, others cross the midline and end in the superior olivary nucleus of the opposite side or pass by these nuclei, giving off collaterals to them, and join the lateral lemniscus. Other fibers either terminate in or give off collaterals to the nucleus of the trapezoid body of the same or the opposite side. Other fibers from the ventral portion of the cochlear nucleus pass dorsal to the inferior peduncle and then dip into the substance of the pons to join the trapezoid body or the superior olivary nucleus of the same side. From the superior olivary nucleus of the same and opposite sides axons join the lateral lemniscus. Collaterals and probably terminals also pass from the lateral lemniscus to other nuclei in its path and receive in turn axons from these nuclei. They are the accessory nucleus, the medial preolivary nucleus, the lateral preolivary or semilunar nucleus and the nucleus of the lateral lemniscus.

The **trapezoid body** consists of horizontal fibers in the ventral part of the *formatio reticularis* of the lower part of the pons behind its deep transverse fibers and the pyramid bundles. The axons come from the dorsal and ventral portions of the cochlear nucleus. After crossing the *raphé*, where they decussate with those from the opposite side, they turn upward to form the lateral lemniscus. Fibers from the *striae medullares* contribute to the trapezoid body, in addition it sends terminals or collaterals to and receives axons from the superior olivary nucleus, the nucleus of the trapezoid body, the lateral preolivary or semilunar nucleus and the mesial preolivary nucleus.

The **cochlear nucleus**, the terminal nucleus for the nerve of hearing, is usually described as consisting of a larger dorsal nucleus on the dorsal and lateral aspect of the inferior peduncle forming a prominent projection, the **acoustic tubercle**, and a ventral or accessory cochlear nucleus more ventral to the inferior peduncle. The two nuclei are continuous and are merely portions of one large nucleus. The axons from cells of the spiral ganglion of the cochlear nerve on reaching the nucleus divide into ascending and descending branches which enter the ventral and dorsal nuclei respectively. Axons from the large fusiform cells of the dorsal nucleus pass partly by way of the *striae medullares* to the trapezoid body and lateral lemniscus and the nuclei associated with the former, and partly transversely beneath the inferior peduncle and spinal tract of the trigeminal to the trapezoid body. Axons from the ventral cochlear nucleus pass partly by the *striae medullares* but for the most part horizontally to the trapezoid body.

The **superior olivary nucleus** is a small mass of gray matter situated on the dorsal surface of the lateral part of the trapezoid body. Some of its axons pass backward to the abducent nucleus, this bundle is known as the **peduncle of the superior olivary nucleus**. Other fibers from the nucleus join the posterior longitudinal bundle and terminate in the nuclei of the trochlear and oculomotor nerves. The majority of its axons, after giving off collaterals to the nucleus itself join the lateral lemniscus of the same side, other axons pass in the trapezoid body toward the ventral portion of the cochlear nucleus.

The **nucleus of the trapezoid body** lies between the root fibers of the abducent nerve and the superior olivary nucleus. Its cells lie among the fibers of the trapezoid body. In it terminate fibers and collaterals of the trapezoid body which come from the cochlear nucleus of the opposite and probably the same side and from the opposite trapezoid nucleus. They terminate in the nucleus of the trapezoid body in diffuse arborizations and peculiar end plaques or acoustic calyces of yellowish color which fuse with the cell bodies. Its cells are round and of medium size; their axons pass into the trapezoid body, cross the median line and probably join the lateral fillet.