Hippocampal commissure

The hippocampal commissure is a large bundle of axons that connects the right and left Hippocampal Formations. The axons are processes of pyramidal cells in the hippocampal formation, most of them in the cornu ammonis (CA) or hippocampus proper, and they carry information, in the form of patterns of nerve impulses, from cells of the hippocampus of one side to cells in the contralateral hippocampus.

Connections between the right and left halves of the brain are called Commissural Connections. The hippocampal commissure is the second largest of the commissural connecting bundles. At the midline it is found directly underneath, and adjoins, the Corpus Callosum, which is the largest of the commissural bundles. At the midline, the hippocampal commissure is also known as the Body of the Fornix. Away from the midline, the fibers of the hippocampal commissure are often called the Fimbria.

The axons in the hippocampal commissure are coated with myelin, a fatty substance that covers large axons and speeds up the conduction of the impulses. This gives the hippocampal commissure a white appearance in unstained sections, and in the cell-stained sections in this atlas. It forms part of the “white matter” of the brain.

In the fiber-stained sections in this atlas, myelin is stained a blue-black color, so the hippocampal commissure appears black.

Anterior and hippocampal commissures may be totally or partially absent in Agenesis of the corpus callosum