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A STEREOSCOPIC ATLAS
of
HUMAN ANATOMY

DAVID L. BASSETT, M.D.

SECTION I
THE CENTRAL NERVOUS SYSTEM

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HUMAN ANATOMY

by

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THE CENTRAL NERVOUS
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REELS 19-28



Color Photographs

by

WM. B. GRUBER

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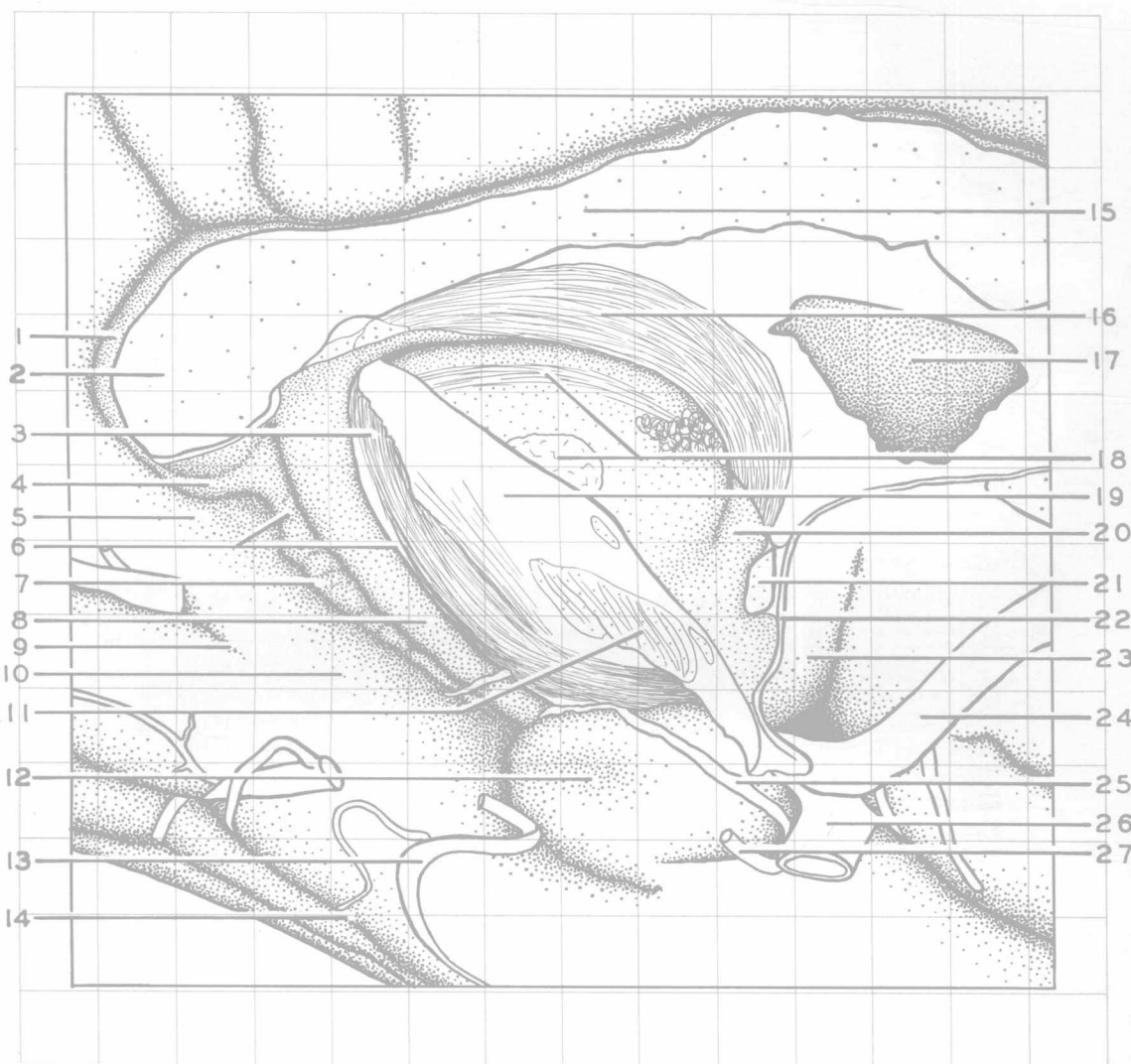
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EXPLORATION OF THE BRAIN FROM THE MEDIAL ASPECT

Relations of fornix, dentate fascia and hippocampal gyrus to corpus callosum

The specimen is the left half of a brain sectioned in the midsagittal plane. The brain stem has been removed by a cut through the thalamus and internal capsule. The trunk of the posterior cerebral artery together with its choroidal and hippocampal branches is likewise cut away. The meninges have been stripped off. The arched course of the fornix (16) around the cerebral peduncle and thalamus can be traced. The continuation of the dentate fascia (gyrus) via the fasciola cinerea into the supracallosal gyrus (induseum griseum) is apparent. Note that the hippocampal fissure also continues around the splenium to the upper side of the corpus callosum. Here it is known as the sulcus corporis callosi. The hippocampal gyrus (10) narrows posteriorly as the isthmus gyri fornicati and this in turn is continuous with the gyrus cinguli. The hippocampus is obscured by the fornix in this view.

- | | |
|--|---|
| 1. Supracallosal gyrus (induseum griseum) | 15. Truncus corporis callosi |
| 2. Splenium corporis callosi | 16. Corpus fornicis |
| 3. Stria terminalis | 17. Caput nuclei caudati (view through an opening in septum pellucidum) |
| 4. Fasciola cinerea | 18. Stria medullaris thalami et massa intermedia |
| 5. Isthmus gyri fornicati | 19. Cut surface of thalamus |
| 6. Fascia dentata and choroidal fissure | 20. Pars libera columnae fornicis |
| 7. Fissura hippocampi | 21. Commissura anterior |
| 8. Crus fornicis | 22. Lamina terminalis |
| 9. Fissura calcarina | 23. Gyrus subcallosus |
| 10. Gyrus hippocampi | 24. A. cerebri anterior |
| 11. Pedunculus cerebri (cut across) | 25. A. chorioidea (anterior) |
| 12. Uncus [gyri hippocampi] | 26. A. carotis interna |
| 13. Anterior temporal branch of a. cerebri posterior | 27. A. communicans posterior |
| 14. Fissura collateralis | |



Scale—1 division=4.5 mm.

EXPLORATION OF THOSE PARTS OF THE BRAIN SUPPLIED BY THE POSTERIOR CEREBRAL ARTERY

General cortical distribution of posterior cerebral artery

This view demonstrates the distribution of the posterior cerebral artery. On the right nearly the entire course of the artery is visible. On the left most of the cortical branches are cut off. The lentiform nucleus has been removed on the left to demonstrate the internal capsule. A portion of the tip of the left temporal lobe is visible showing the relation of the hippocampus to the inferior horn of the lateral ventricle. The brain stem is sectioned through the mesencephalon at the level of the inferior colliculi. The corpus callosum has been cut in the midline and most of the left portion removed. Note: an anomaly in the course of the calcarine fissure results in an ill-defined cuneus (above) and lingual gyrus (below).

- | | |
|--|-----------------------------------|
| 1. Sulcus cinguli | 12. N. oculomotorius dexter (III) |
| 2. Gyrus cinguli | 13. Uncus sinister et dexter |
| 3. Corpus callosum (divided) | 14. Fissura parieto-occipitalis |
| 4. Capsula interna (cut across) | 15. Fissura calcarina |
| 5. Crus fornicis | 16. Ventriculus tertius |
| 6. Site of lentiform nucleus | 17. V. cerebri magna [Galen] |
| 7. Pulvinar | 18. Colliculus superior |
| 8. Plexus chorioideus ventriculi lateralis | 19. Mesencephalon (cut across) |
| 9. A. cerebri posterior sinistra | 20. A. cerebri posterior dextra |
| 10. Hippocampus (cut across) | 21. Gyrus fusiformis dexter |
| 11. A. cerebri media (cut off) | 22. Sulcus temporalis inferior |



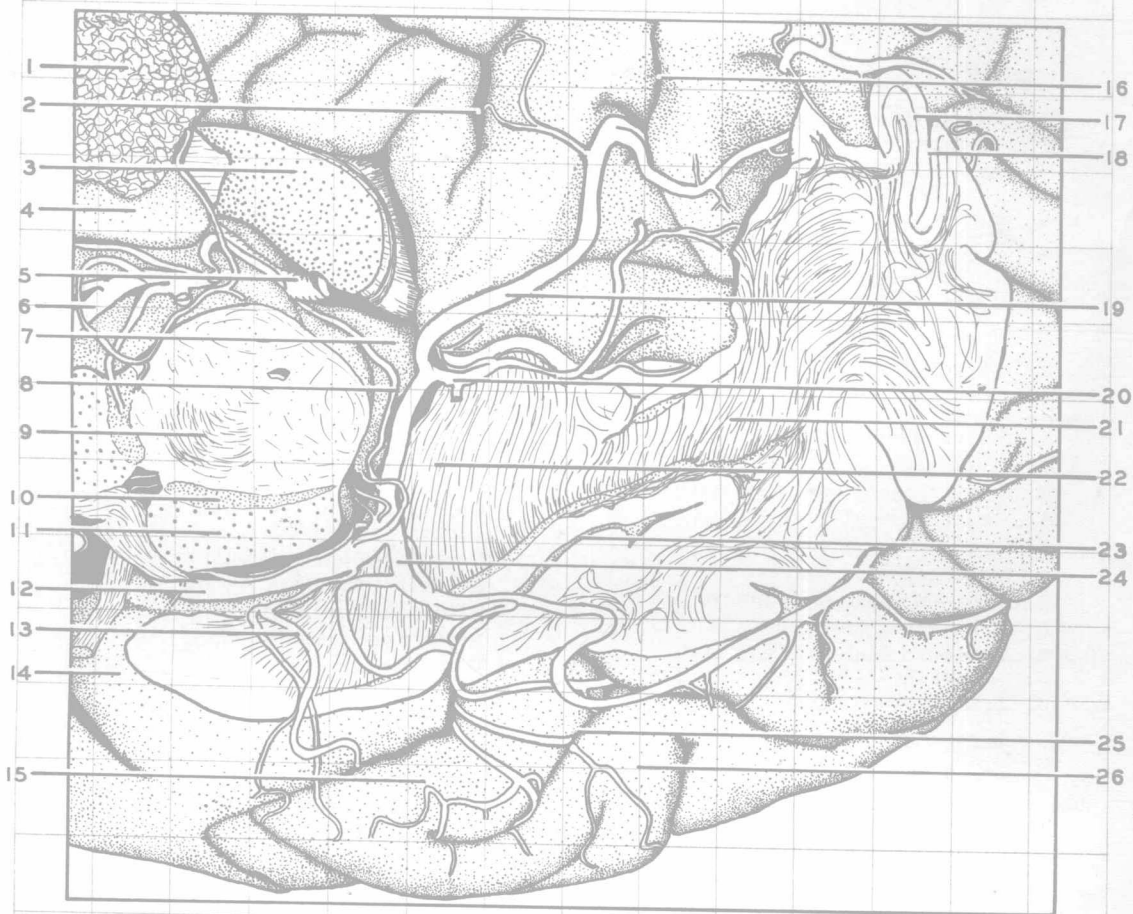
Scale—1 division=12 mm.

EXPLORATION OF THOSE PARTS OF THE BRAIN SUPPLIED BY THE POSTERIOR CEREBRAL ARTERY

Cingulum and inferior longitudinal fasciculus

In the first stage of the dissection the cortex and immediately subjacent fibers have been scraped away from an area of the inferior aspect of the temporal lobe and medial side of the occipital lobe. Association fiber systems thus exposed are the cingulum (22), leading toward the uncus, and the inferior longitudinal fasciculus (21), seen more posteriorly extending between the occipital and temporal areas. The line of Gennari, characteristic of the visual (striate) cortex, is clearly visible in the sectioned cortex at (17).

- | | |
|---|---|
| 1. Plexus chorioideus ventriculi
lateralis | 14. Uncus [gyri hippocampi] |
| 2. Sulcus cinguli | 15. Gyrus fusiformis |
| 3. Corpus callosum (cut across) | 16. Fissura parieto-occipitalis |
| 4. Pulvinar | 17. Line of Gennari in visual cortex |
| 5. V. cerebri magna [Galen] | 18. Fissura calcarina |
| 6. A. cerebri posterior sinistra | 19. Parieto-occipital branch of
posterior cerebral artery |
| 7. Pulvinar | 20. Calcarine branch of posterior
cerebral artery |
| 8. Branch of posterior cerebral artery
to choroid plexus of third
ventricle | 21. Fasciculus longitudinalis inferior |
| 9. Decussatio brachiorum
conjunctivorum | 22. Cingulum |
| 10. Substantia nigra | 23. Fissura collateralis |
| 11. Pedunculus cerebri | 24. Posterior temporal branch of
posterior cerebral artery |
| 12. A. cerebri posterior | 25. Sulcus temporalis inferior |
| 13. Anterior temporal branch of
posterior cerebral artery | 26. Gyrus temporalis inferior |



Scale—1 division=7 mm.

EXPLORATION OF THOSE PARTS OF THE BRAIN SUPPLIED BY THE POSTERIOR CEREBRAL ARTERY

Cingulum and inferior longitudinal fasciculus dissected further

The gyrus cinguli has been partially removed to reveal the course of the cingulum above the corpus callosum. Cortex which lay deep in the collateral fissure has been scraped away and the fusiform gyrus partly removed. More of the inferior longitudinal fasciculus is thus exposed. The brain is now turned so that more of the basal surface is shown than previously.

- | | |
|---|---|
| 1. Sulcus cinguli | 11. Inferior surface of left frontal lobe |
| 2. Cingulum | 12. Fissura parieto-occipitalis |
| 3. Gyrus cinguli (partly resected) | 13. Fissura calcarina |
| 4. Pulvinar | 14. Corpus callosum (divided, left half mostly removed) |
| 5. Capsula interna (cut across) | 15. Fasciculus longitudinalis inferior |
| 6. Mesencephalon (cut across) | 16. A. cerebri posterior dextra |
| 7. A. cerebri posterior sinistra | 17. Sulcus temporalis inferior |
| 8. A. basilaris (cut across) | 18. Fissura collateralis |
| 9. A. cerebri media sinistra (cut across) | 19. Polus temporalis |
| 10. Tractus olfactorius | |



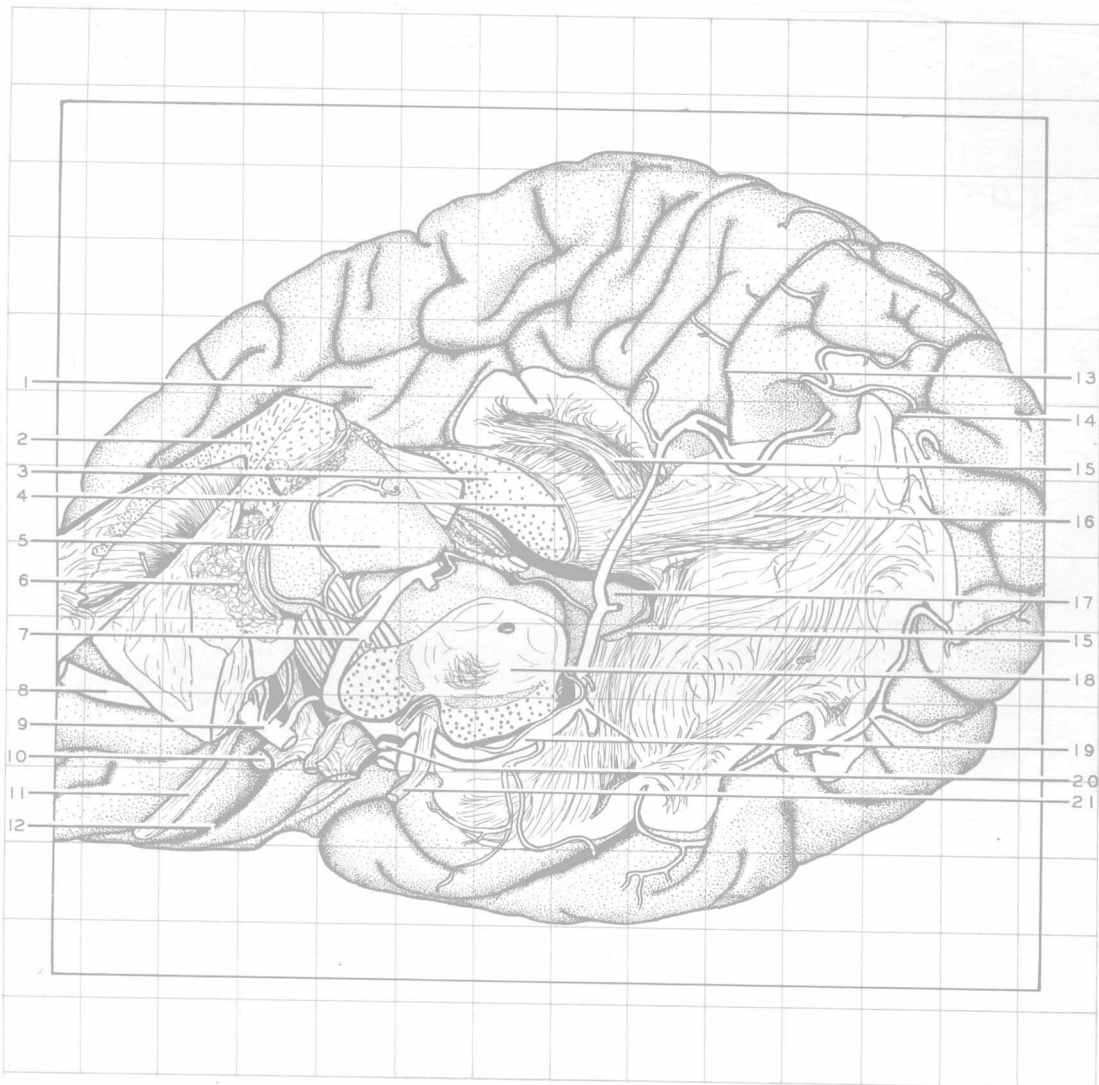
Scale—1 division=12 mm.

EXPLORATION OF THOSE PARTS OF THE BRAIN SUPPLIED BY THE POSTERIOR CEREBRAL ARTERY

Occipital radiation of corpus callosum; pulvinar

Removal of a portion of the cingulum (15) has exposed the right pulvinar of the thalamus (17) and, just above it, the occipital radiation of the corpus callosum (16), the two separated by the transverse fissure. Note the spiraling course of the fibers in the radiation.

- | | |
|---|--|
| 1. Gyrus cinguli | 12. Fissura longitudinalis cerebri |
| 2. Capsula interna (cut across) | 13. Fissura parieto-occipitalis |
| 3. Corpus callosum (divided in
midline) | 14. Fissura calcarina |
| 4. Stria longitudinalis medialis | 15. Cingulum (divided) |
| 5. Pulvinar | 16. Pars occipitalis radiationis corporis
callosi |
| 6. Plexus chorioideus ventriculi
lateralis | 17. Pulvinar |
| 7. A. cerebri posterior | 18. Mesencephalon (cut across) |
| 8. A. cerebri media | 19. A. cerebri posterior and its
posterior temporal branch (partly
resected) |
| 9. A. cerebri media | 20. A. basilaris |
| 10. N. opticus (II) | 21. N. oculomotorius (III) |
| 11. Tractus olfactorius | |



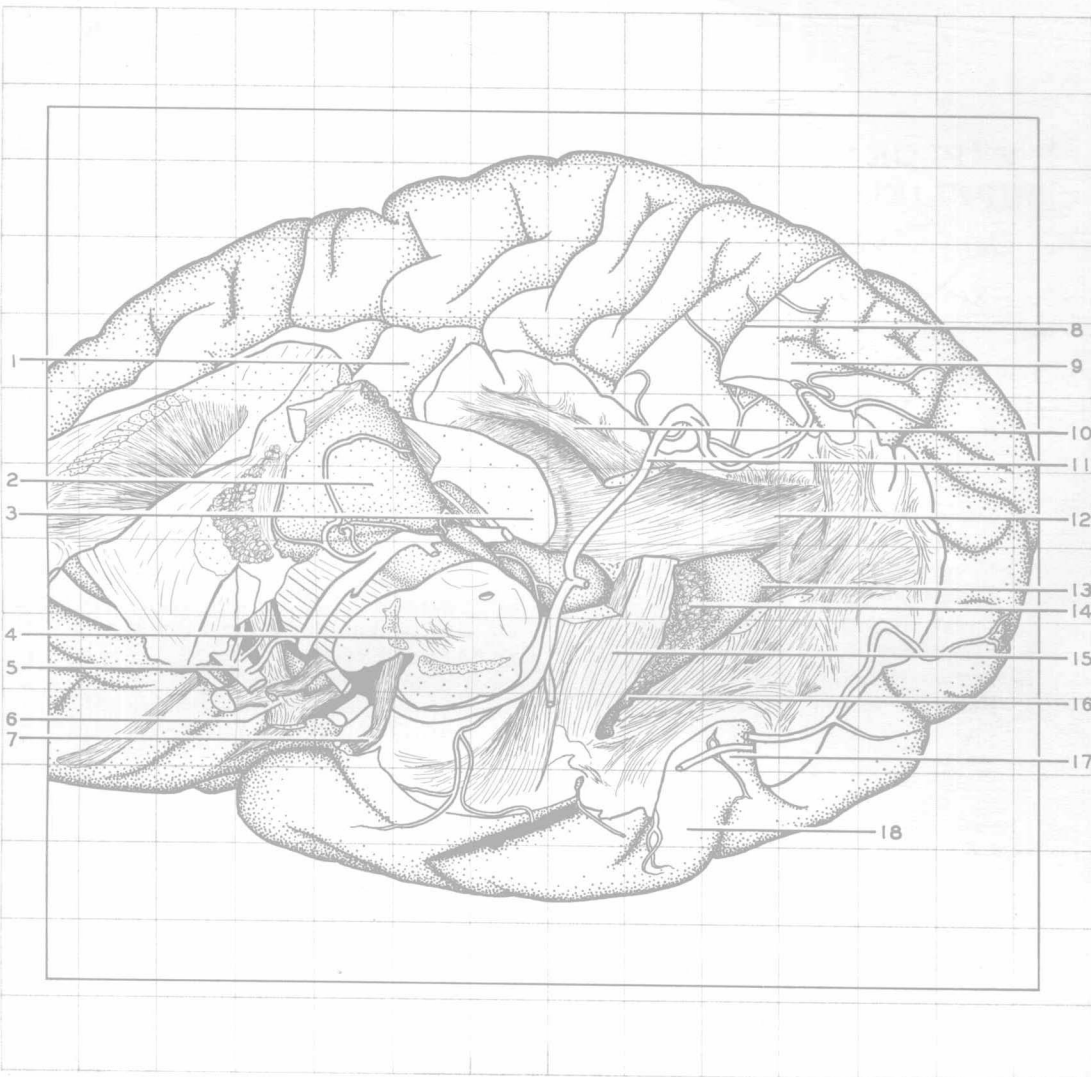
Scale—1 division=12 mm.

EXPLORATION OF THOSE PARTS OF THE BRAIN SUPPLIED BY THE POSTERIOR CEREBRAL ARTERY

Inferior and posterior horns of lateral ventricle

The systems of long association fibers of the temporal and occipital lobes which lie beneath the lateral ventricle have been cut away and the ventricle opened from below.

1. Gyrus cinguli
2. Pulvinar
3. Splenium corporis callosi
4. Decussatio brachiorum conjunctivorum
5. A. cerebri media sinistra
6. Chiasma opticum
7. N. oculomotorius (III)
8. Fissura parieto-occipitalis
9. Cuneus
10. Cingulum
11. Parieto-occipital branch of a. cerebri posterior
12. Pars occipitalis radiationis corporis callosi
13. Cornu posterius ventriculi lateralis
14. Plexus chorioideus ventriculi lateralis
15. Continuation of the cingulum into the temporal lobe and hippocampal gyrus
16. Cornu inferius ventriculi lateralis
17. Sulcus temporalis inferior
18. Gyrus temporalis inferior



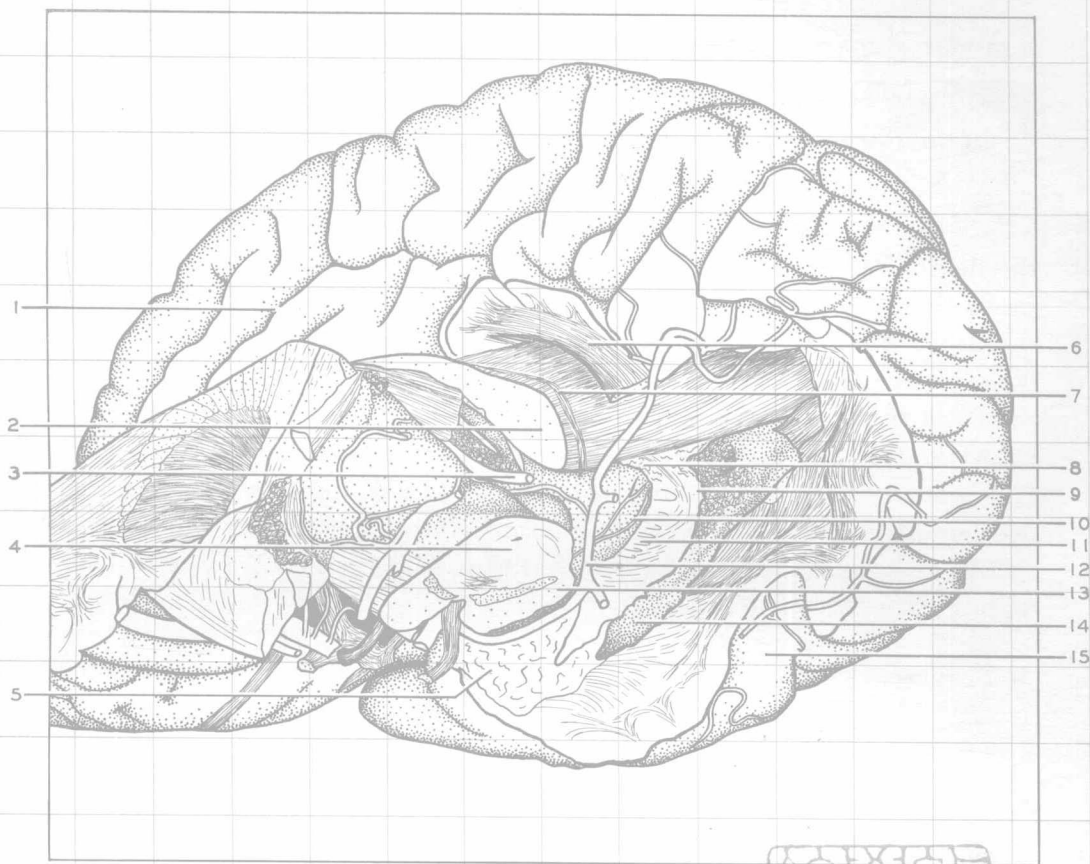
Scale—1 division=12 mm.

EXPLORATION OF THOSE PARTS OF THE BRAIN SUPPLIED BY THE POSTERIOR CEREBRAL ARTERY

General view of relations of dentate fascia and hippocampus

Removal of the remaining portion of the cingulum as well as the hippocampal gyrus lying above and medial to it has exposed the dentate fascia. The line of separation of the dentate fascia from the hippocampal gyrus is along the hippocampal fissure which in the adult brain is represented by a shallow groove.

1. Sulcus cinguli
2. Splenium corporis callosi
3. V. cerebri magna [Galen]
4. Mesencephalon
5. Gyrus hippocampi (dissected)
6. Cingulum
7. Stria longitudinalis medialis
8. Fasciola cinerea
9. Fimbria hippocampi (seen from deep aspect)
10. Choroidal branch of a. cerebri posterior lying within transverse fissure
11. Fascia dentata (internal aspect)
12. A. cerebri posterior
13. Pedunculus cerebri
14. Cornu inferius ventriculi lateralis
15. Gyrus temporalis inferior



Scale—1 division=13 mm.

