

Coronal, sagittal, and axial sections according to the bicommissural plane will be successively studied in 20 plates each composed of 4 pages, showing the plane of the section, details about structures, MRI views, and head section.

The following publications have aided identification of structures visible in the section: Sheps 1945; Olszewski 1952; Kuhlenbeck 1954; Riley 1960, Singer and Yakovlev 1964; Talairach and Szikla 1967; Andrew and Watkins 1969; Roberts and Hanaway 1970; Van Buren and Borke 1972; De Armond et al. 1974; Miller and Burack 1977; Duvernoy 1995, 1999a, b; Dejerine 1980; Gluhbegovic and Williams

1980; Salamon and Huang 1980; Koritké and Sick 1982; Unsöld et al. 1982; Braak and Braak 1983; Haines 1987; Naidich et al. 1987; Talairach and Tournoux 1988; Mark et al. 1993; Jack et al. 2003; Maguire et al. 2003; Theysohn et al. 2009; Thomas et al. 2008; Naidich et al. 2009.

7.1 Coronal Sections

Figures 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, and 7.11 show sections of the hippocampus from anterior to posterior levels.

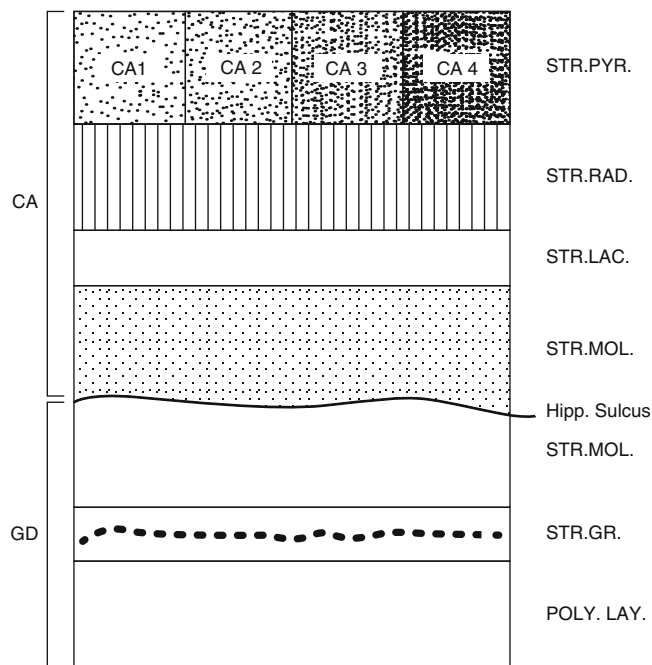


Fig. 7.1 Structure of the hippocampus CA cornu Ammonis, STR. PYR. stratum pyramidale, STR. RAD. stratum radiatum, STR. LAC. stratum lacunosum, STR. MOL. stratum moleculare, Hipp. Sulcus vestigial intrahippocampal sulcus, GD gyrus dentatus, STR. MOL. stratum moleculare, STR. GR. stratum granulosum, POLY. LAY. polymorphic layer

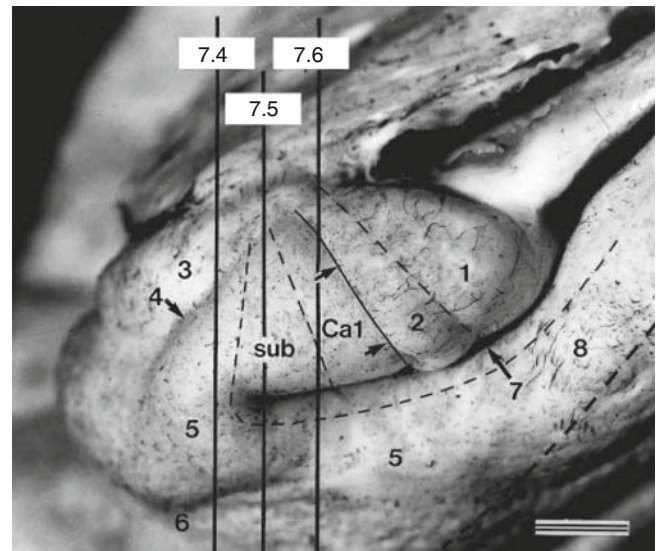


Fig. 7.2 Medial surface of the uncus. This preparation is an indication of the position of CA1 and the subiculum (sub), visible in Figs. 7.4b, 7.5b, and 7.6b. Arrows show the superficial hippocampal sulcus. Bar, 4.4 mm. 1 uncal apex, 2 band of Giacomini, 3 semilunar gyrus, 4 semiannular sulcus, 5 possible situation of the entorhinal area, 6 uncal notch, 7 uncal sulcus, 8 parahippocampal gyrus

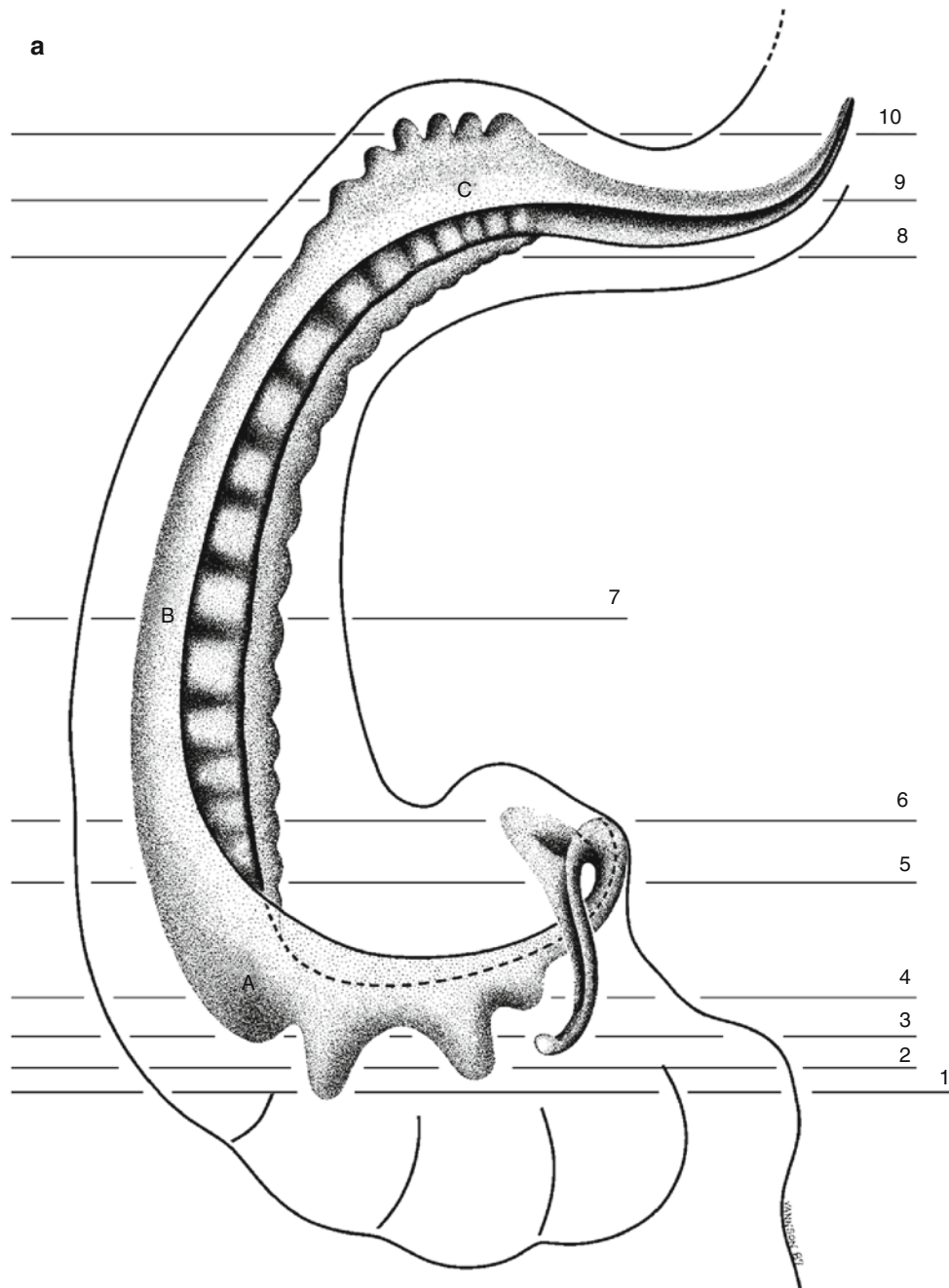


Fig. 7.3 (a, b) General position of the gyrus dentatus in the head (A), body (B), and tail (C) of the hippocampus 1–10. Successive planes of coronal sections are shown in (b)

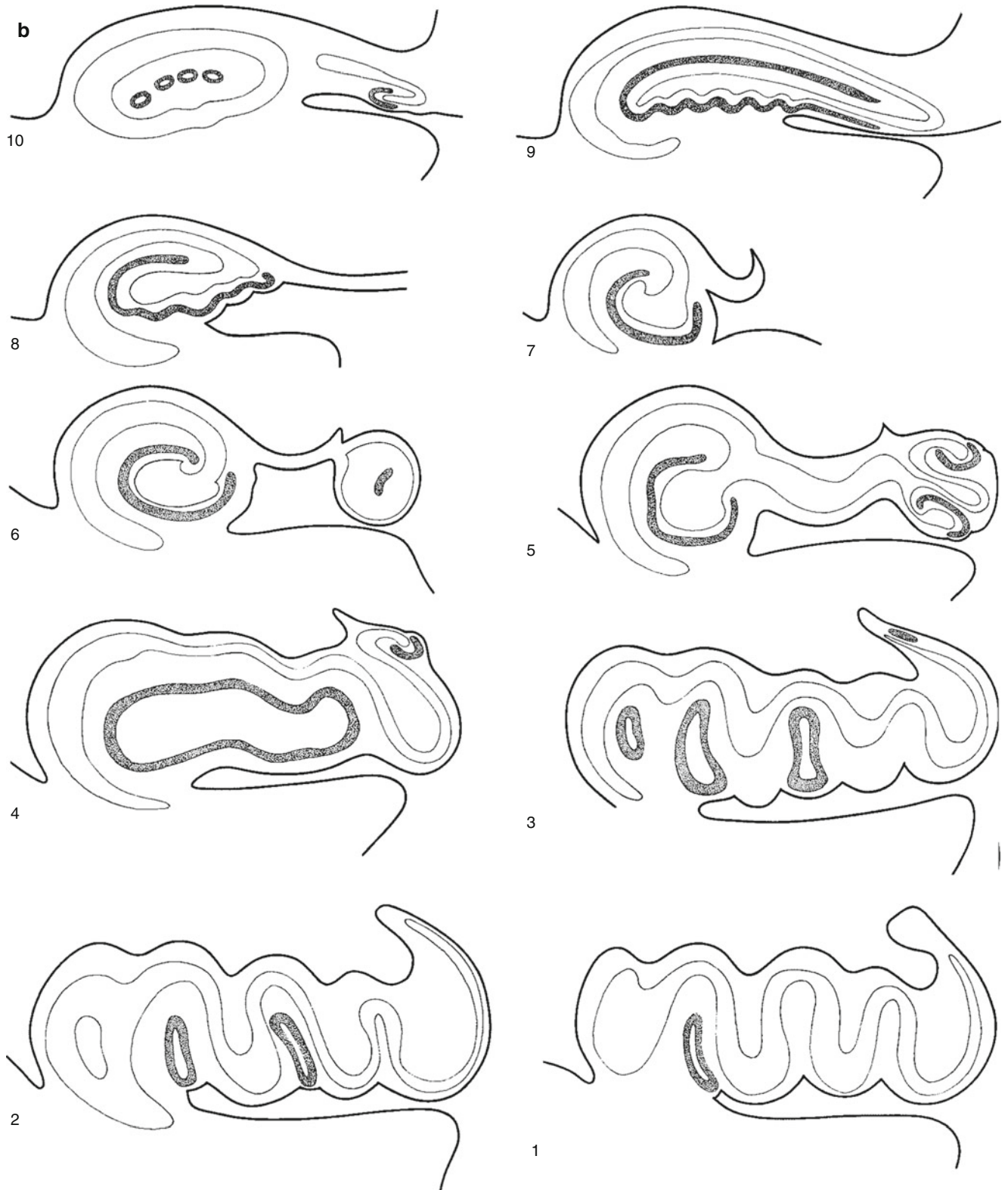


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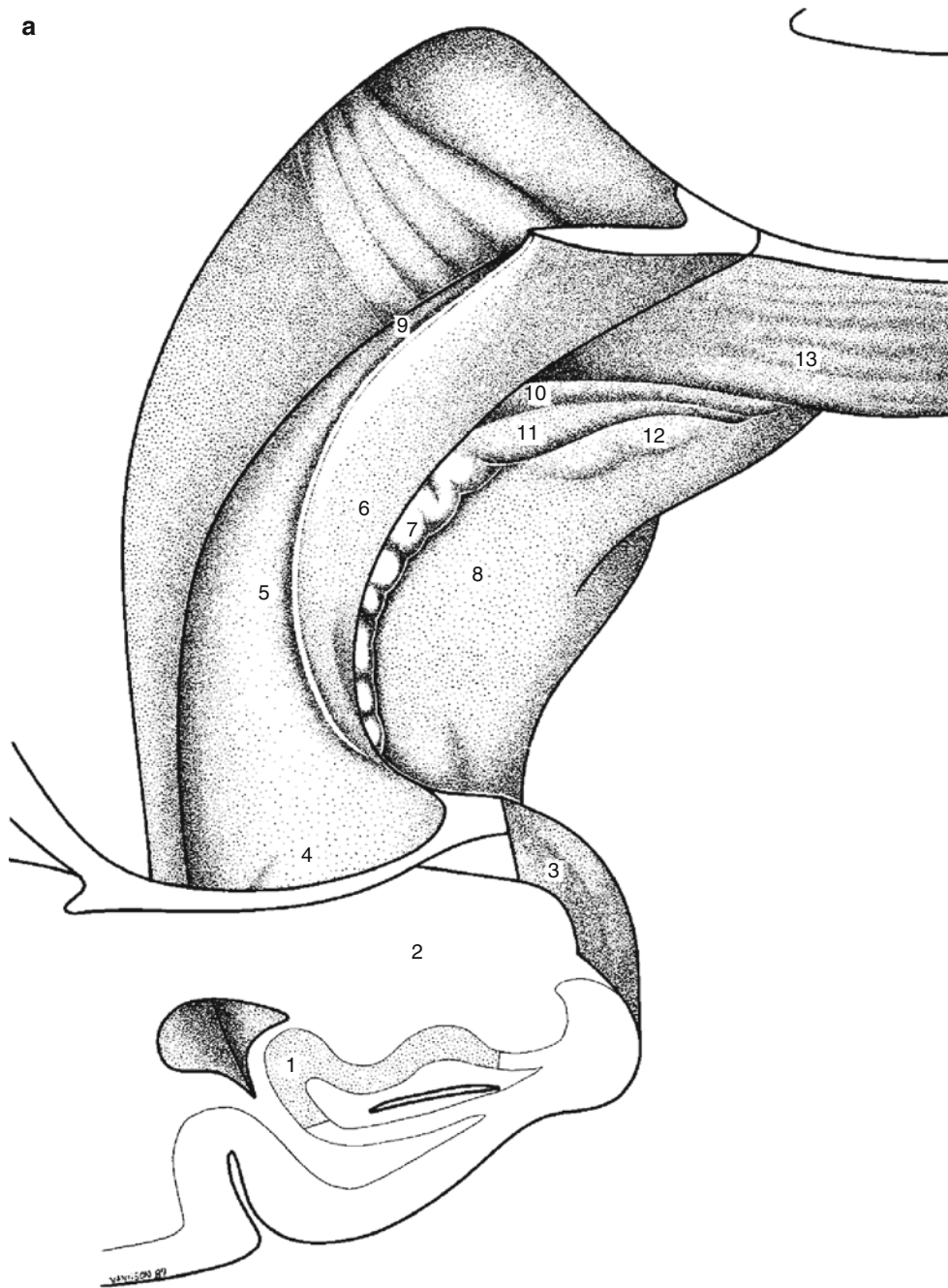


Fig. 7.4 (a) Coronal section of hippocampal head, showing plane of section. 1 *cornu* Ammonis, 2 amygdala, 3 semilunar gyrus, 4 hippocampal head, 5 hippocampal body, 6 fimbria, 7 margo denticulatus, 8 subiculum, 9 hippocampal tail, 10 gyrus fasciolaris, 11 fasciola cinerea, 12 gyri of Andreas Retzius, 13 Splenium (b) explanatory diagram (b') intravascular India ink injection (b'') 9.4T MRI view. 1 *cornu* Ammonis (CA1), 2 subiculum, 3 uncus sulcus, 4 parahippocampal gyrus, 5 uncus notch, 6 ambient gyrus and entorhinal area (see Fig. 7.2), 7 cortical nucleus of amygdala, 7' semilunar gyrus, 7'' semilunar sulcus, 8 entorhinal sulcus, 9 medial nucleus of amygdala, 10 central nucleus amygdala, 11 accessory basal nucleus amygdala, 12 basal nucleus of amygdala, 13 lateral nucleus amygdala, 14 temporal horn of lateral ventricle (c) 3T MRI view. 1 hippocampal head, 1' uncus sulcus, 1'' subiculum, 2 temporal (inferior) horn of the lateral ventricle, 3 lateral nucleus of amygdala, 4 basal nucleus of amygdala,

5 cortical nucleus of amygdala, 6 ambient gyrus, 7 parahippocampal gyrus, 8 collateral sulcus, 9 fusiform gyrus, 10 inferior temporal gyrus, 11 middle temporal gyrus, 11' inferior temporal sulcus, 12 superior temporal gyrus, 12' superior temporal sulcus, 13 temporal stem, 14 lateral fissure, 15 insula, 16 precentral gyrus, 17 middle frontal gyrus, 18 superior frontal gyrus, 19 cingulate sulcus, 20 cingulate gyrus, 21 corpus callosum, 22 fornix, 23 anterior commissure, median part, 24 frontal horn of the lateral ventricle, 25 caudate nucleus, 26 internal capsule, genu, 27 claustrum, 28 putamen, 29 globus pallidus, lateral part, 30 globus pallidus, medial part, 31 anterior commissure, lateral part, 32 optic tract, 33 column of fornix, 34 third ventricle, 35 internal carotid artery, 36 articular disc of the temporomandibular joint, 37 mandibular condyle, 38 basilar artery, 39 posterior cerebral artery, 40 tentorium cerebelli. (d) Coronal head section (posterior view of the section). Bar, 10 mm

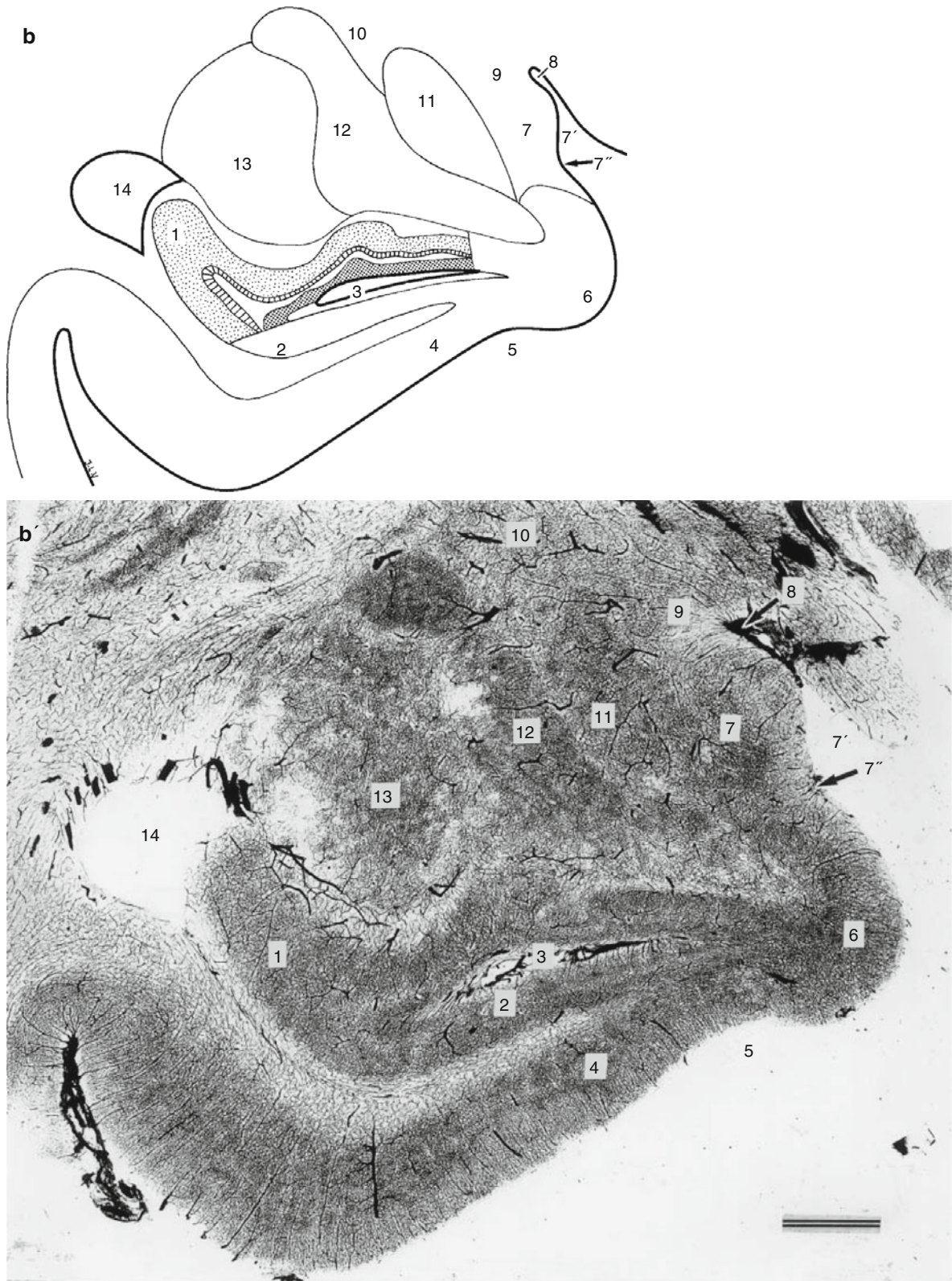


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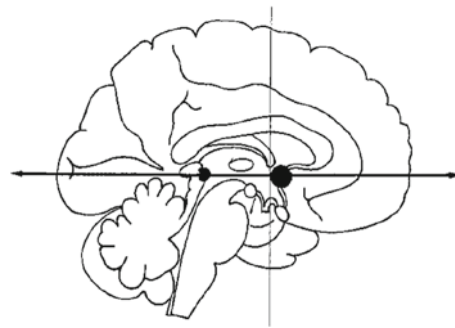
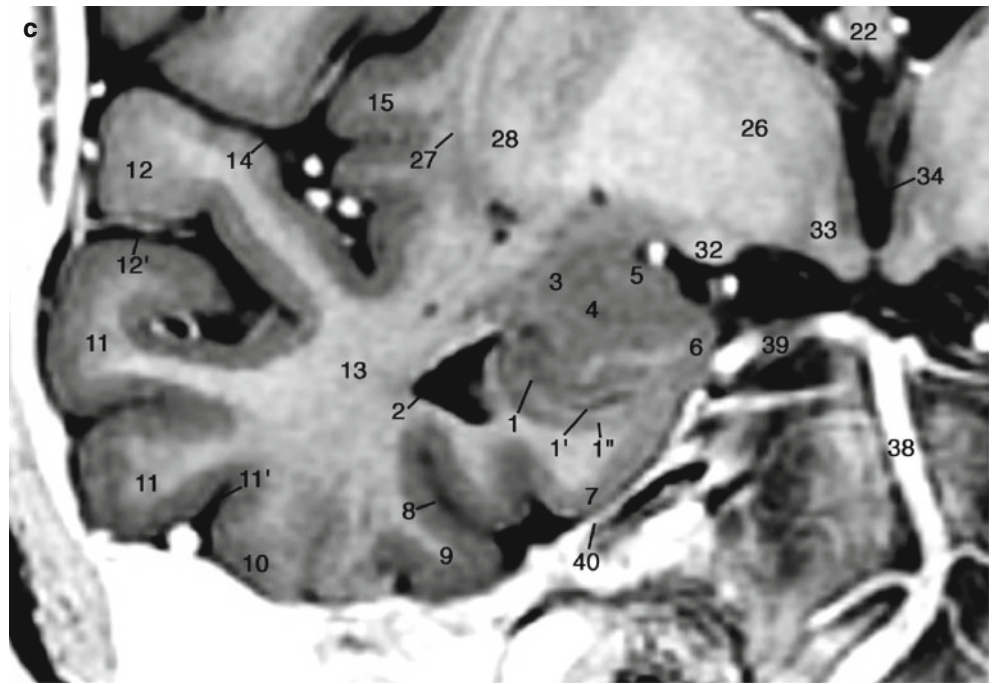
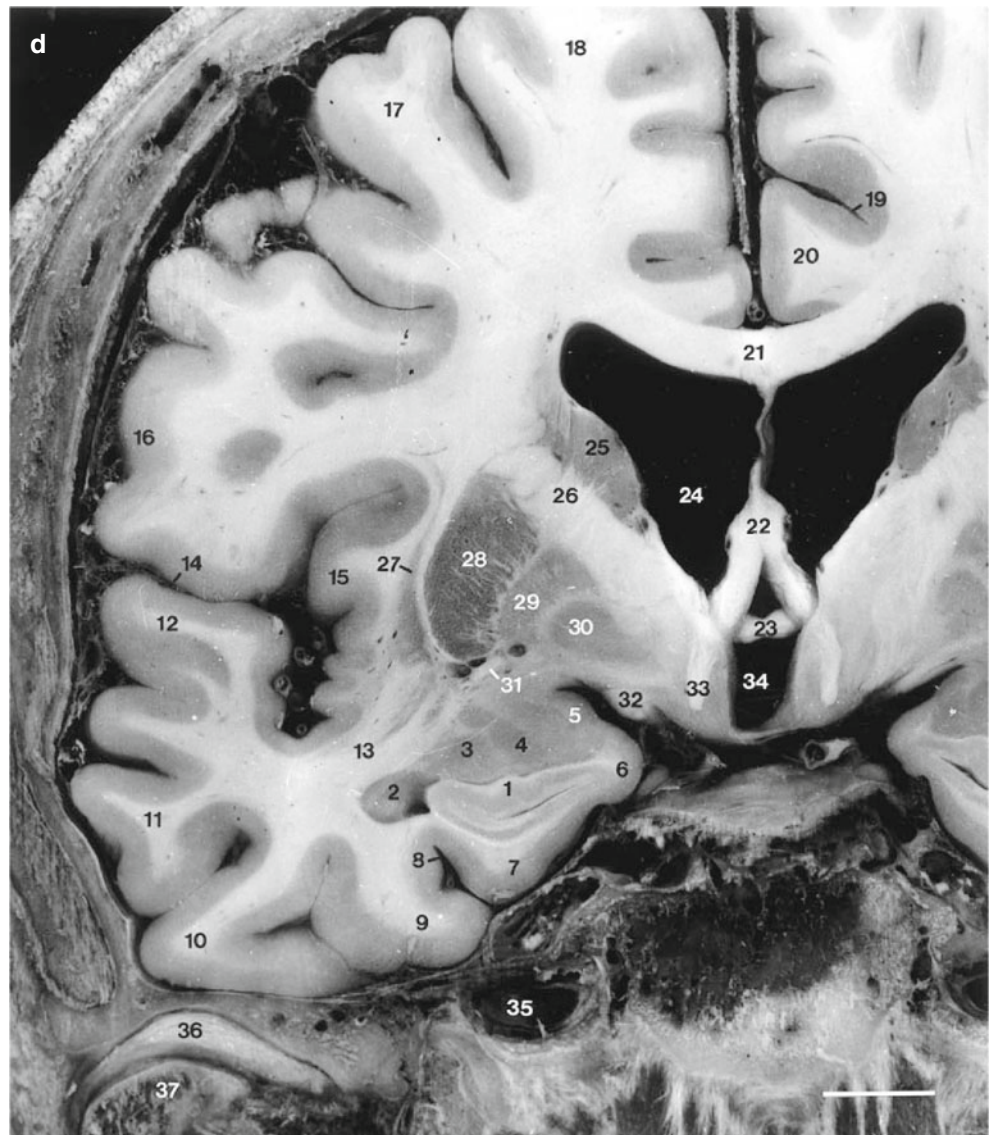


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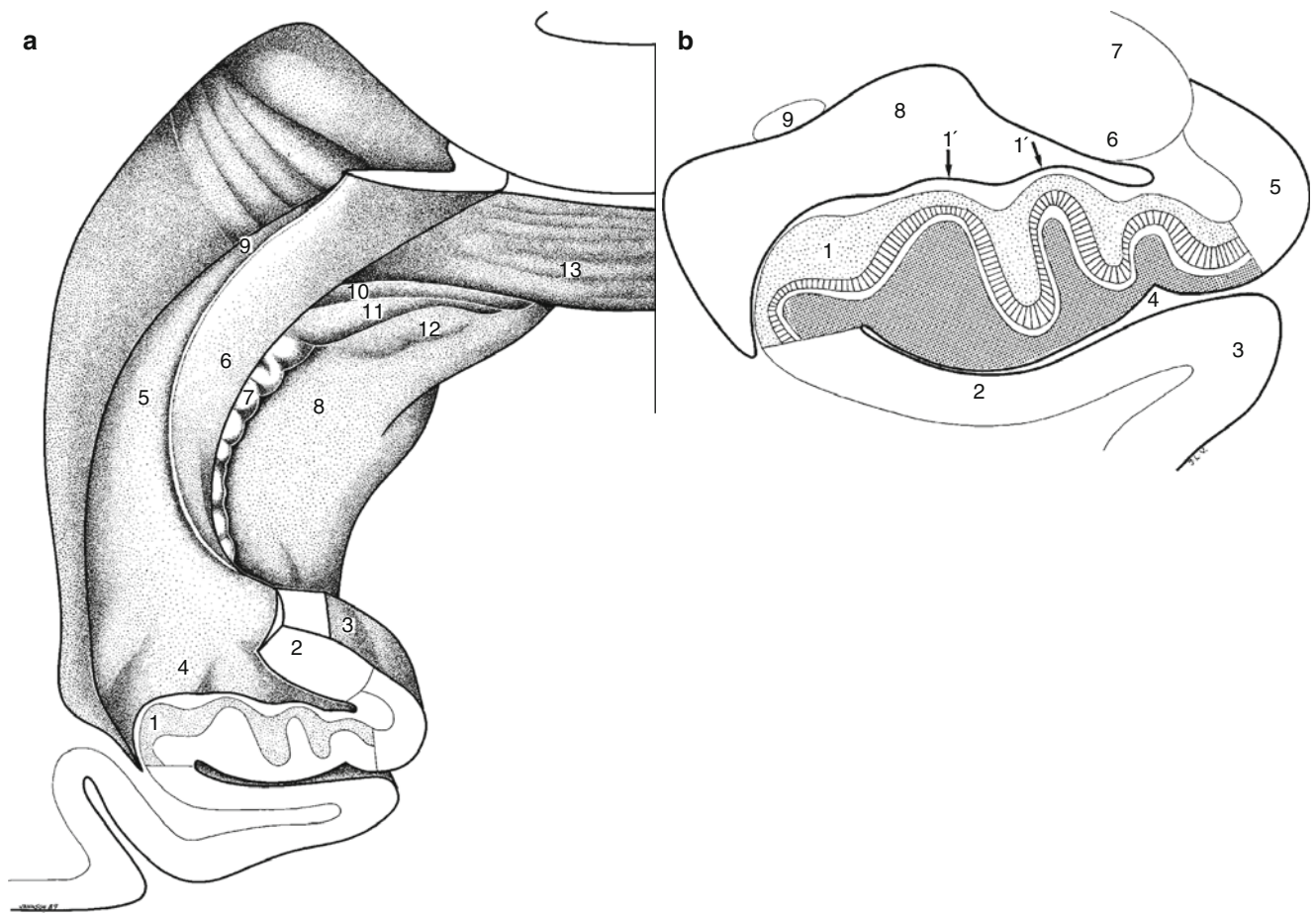


Fig. 7.5 (a) Coronal section of hippocampal head, showing plane of section. 1 cornu Ammonis, 2 amygdala, 3 semilunar gyrus, 4 hippocampal head, 5 hippocampal body, 6 fimbria, 7 margo denticulatus, 8 parahippocampal gyrus, 9 hippocampal tail, 10 gyrus fasciolaris, 11 fasciola cinerea, 12 gyri of Andreas Retzius, 13 splenium. Coronal section of hippocampal head (b) explanatory diagram (b') intravascular India ink injection (b'') 9.4T MRI view 1 cornu Ammonis (CA1), 1' internal digitations (digitationes hippocampi), 2 subiculum, 3 parahippocampal gyrus, 4 uncal sulcus, 5 subiculum in uncinale gyrus (see Fig. 7.2), 6 accessory basal nucleus of amygdala, 7 cortical nucleus of amygdala, 8 temporal horn, 9 tail of caudate nucleus, 10 lateral nucleus of amygdala, 11 basal nucleus of amygdala, 12 cortical nucleus of amygdala. (b') Bar, 2 mm. (b'') 9.4T MRI view. (c) 3T MRI view. 1 hippocampal head, cornu Ammonis, 1' internal digitations (digitationes hippocampi), 2 temporal (inferior) horn of the lateral ventricle, 3 amygdala, 4 uncal

sulcus, 4' uncinale gyrus, 5 parahippocampal gyrus, 6 collateral sulcus, 7 fusiform gyrus, 8 inferior temporal gyrus, 9 middle temporal gyrus, 10 superior temporal sulcus, 11 superior temporal gyrus, 12 temporal stem, 13 lateral fissure, 14 insula, 15 postcentral gyrus, 16 precentral gyrus, 17 middle frontal gyrus, 18 superior frontal gyrus, 19 cingulate sulcus, 20 cingulate gyrus, 21 corpus callosum, 22 fornix, 23 lateral ventricle, 24 caudate nucleus, 25 claustrum, 26 tail of caudate nucleus, 27 putamen, 28 globus pallidus, lateral part, 29 globus pallidus, medial part, 29' striate vessels, 30 internal capsule, posterior limb, 31 ventral anterior thalamic nucleus, 32 third ventricle, 33 optic tract, 34 mammillary body, 35 basilar artery, 36 pons, 37 internal carotid artery, 38 temporomandibular joint, 39 posterior cerebral artery, 40 tentorium cerebelli. (d) Coronal head section. Anterior view of the section. Bar, 10 mm

Fig. 7.5 (continued)

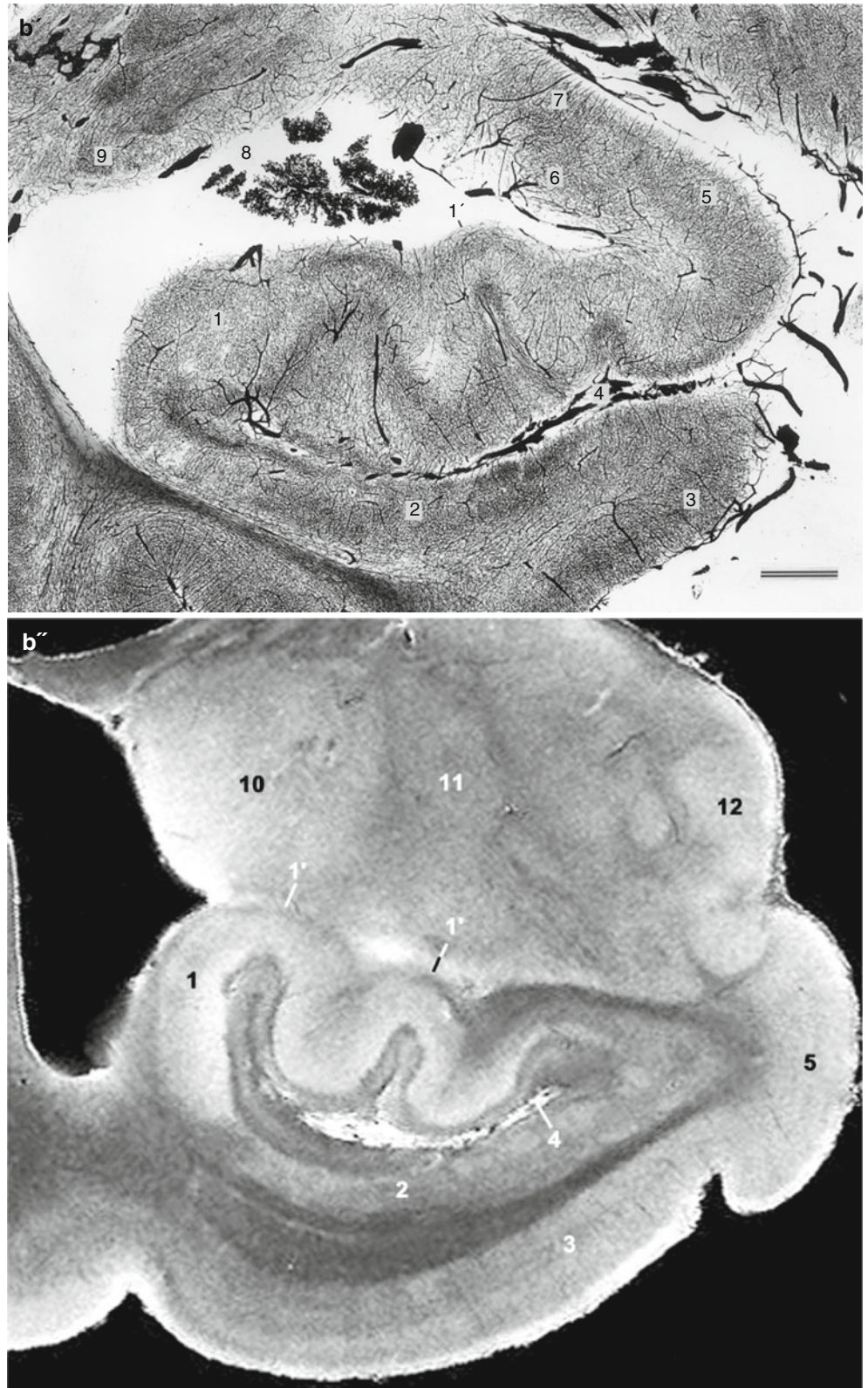


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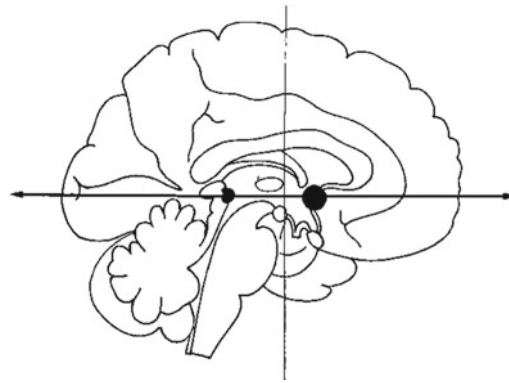
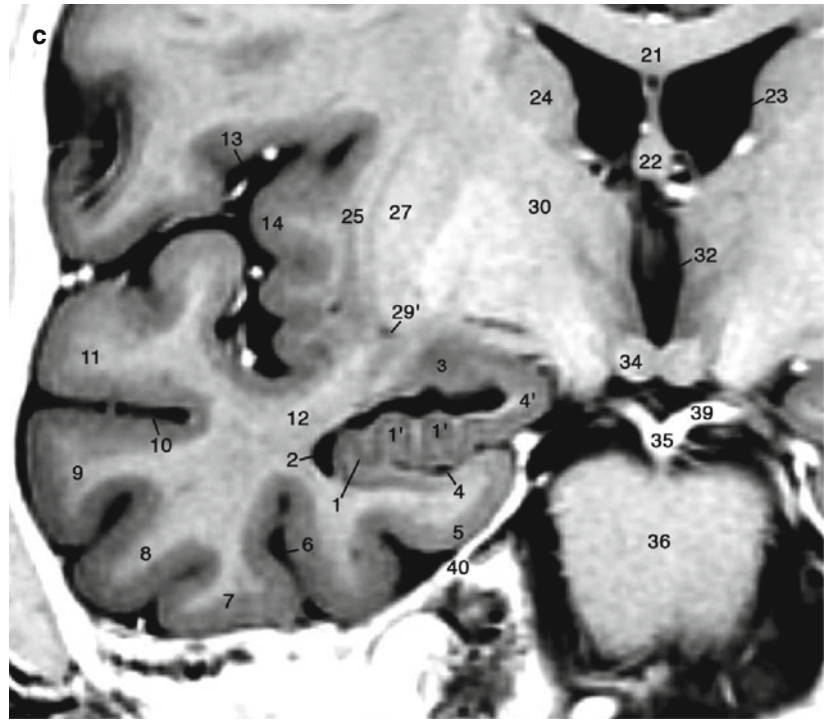
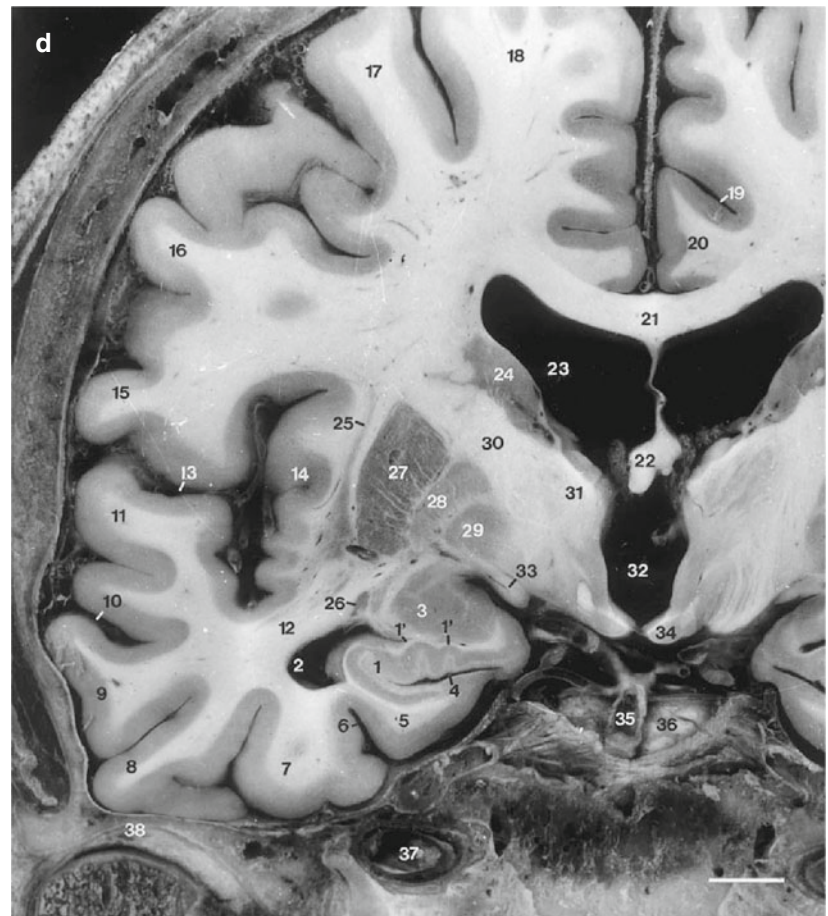


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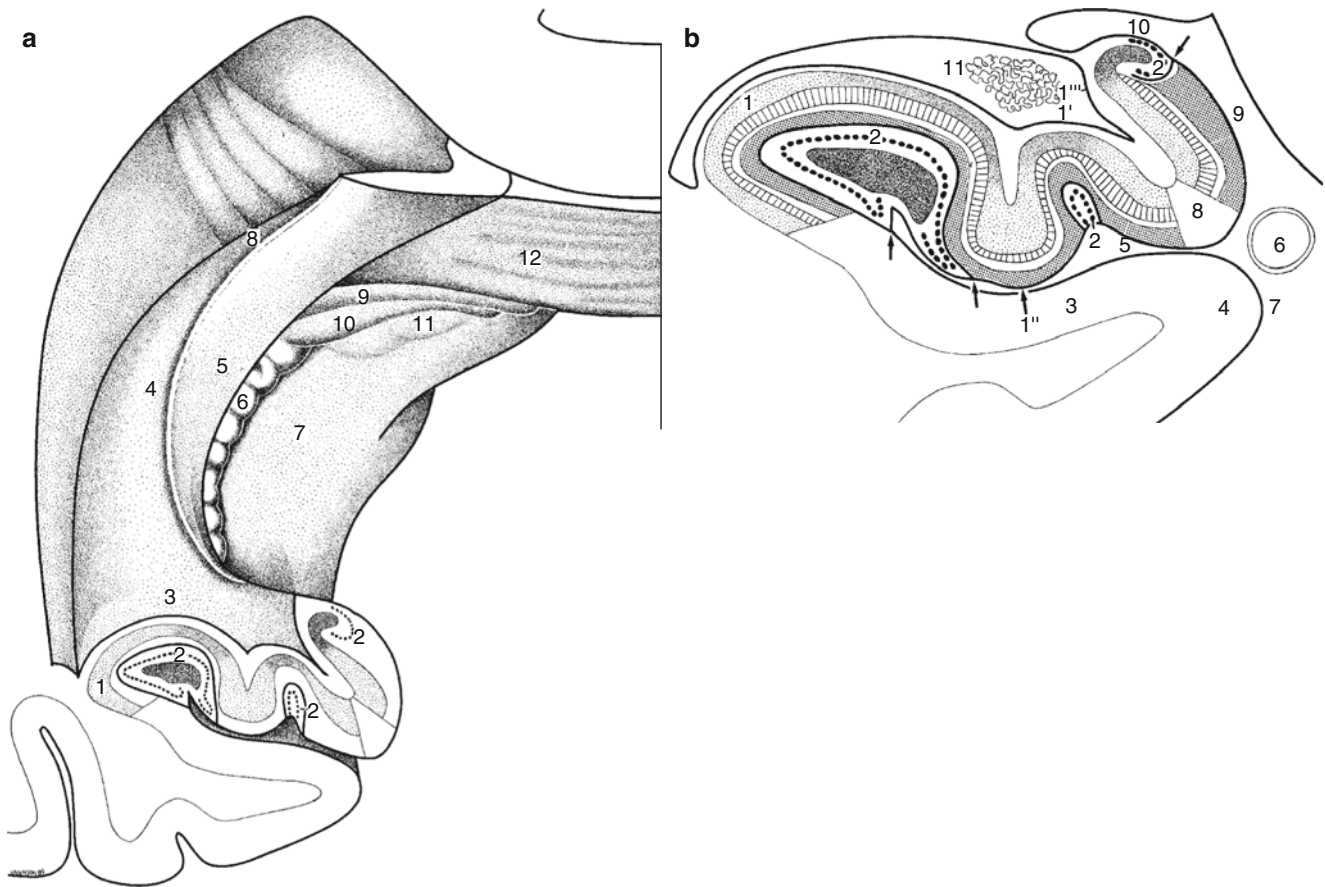


Fig. 7.6 (a) Coronal section of hippocampal head (b) explanatory diagram (b') intravascular India ink injection (b'') 9.4T MRI view. Note the end of stratum radiatum (*asterisk*) and the beginning of subiculum. *Arrows* indicate the superficial hippocampal sulcus. (a) Coronal section of hippocampal head, showing plane of section 1 cornu Ammonis, 2 gyrus dentatus, 3 hippocampal head, 4 hippocampal body, 5 fimbria, 6 margo denticulatus, 7 parahippocampal gyrus, 8 hippocampal tail, 9 gyrus fasciolaris, 10 fasciola cinerea, 11 gyri of Andreas Retzius, 12 splenium. (b) 1 cornu Ammonis 1 cornu Ammonis (CA1–CA4), 1' internal digitations (digitationes hippocampi), 1'' external digitations, 1''' vertical digitation, 2 gyrus dentatus, 3 subiculum, 4 parahippocampal gyrus, 5 uncal sulcus, 6 posterior cerebral artery (P2 segment), 7 crural cistern, 8 subiculum in the medial surface of uncus (see Fig. 7.2), 9 transverse fissure (lateral part), 10 band of Giacomini, 11 temporal horn of the lateral ventricle, 12 lateral nucleus of amygdala, 13 basal nucleus of amygdala, 14 cortical nucleus of amygdala. (b') Bar 2 mm. (b'') 9.4T MRI view. (c) 3T MRI view. 1 hippocampal head, cornu Ammonis, 1' internal digitations (digitationes hippocampi), 1'' external

digitations, 1''' vertical digitation, 2 hippocampal head, gyrus dentatus, 3 subiculum, 4 uncal sulcus, 5 parahippocampal gyrus, 5' collateral sulcus, 6 temporal (inferior) horn of the lateral ventricle, 7 fusiform gyrus, 8 inferior temporal gyrus, 9 middle temporal gyrus, 10 superior temporal sulcus, 11 superior temporal gyrus, 12 temporal stem, 13 lateral fissure, 14 insula, 15 postcentral gyrus, 16 central sulcus, 17 precentral gyrus, 18 middle frontal gyrus, 19 superior frontal gyrus, 20 cingulate sulcus, 21 cingulate gyrus, 22 corpus callosum, 23 fornix, 24 lateral ventricle, 25 caudate nucleus, 26 claustrum, 27 tail of caudate nucleus, 28 putamen, 29 globus pallidus, lateral part, 30 globus pallidus, medial part, 31 internal capsule, posterior limb, 32 optic tract, 33 anterior thalamic nucleus, 34 ventral lateral thalamic nucleus, 35 dorsomedial thalamic nucleus, 36 mamillothalamic tract, 37 subthalamic nucleus, 38 substantia nigra, 39 crus cerebri, 40 third ventricle, 41 mamillary body, 42 posterior cerebral artery, 43 pons, 44 tentorium cerebelli, 45 internal carotid artery, 46 temporomandibular joint. (d) Coronal head section. Anterior view of the section. Bar, 10 mm

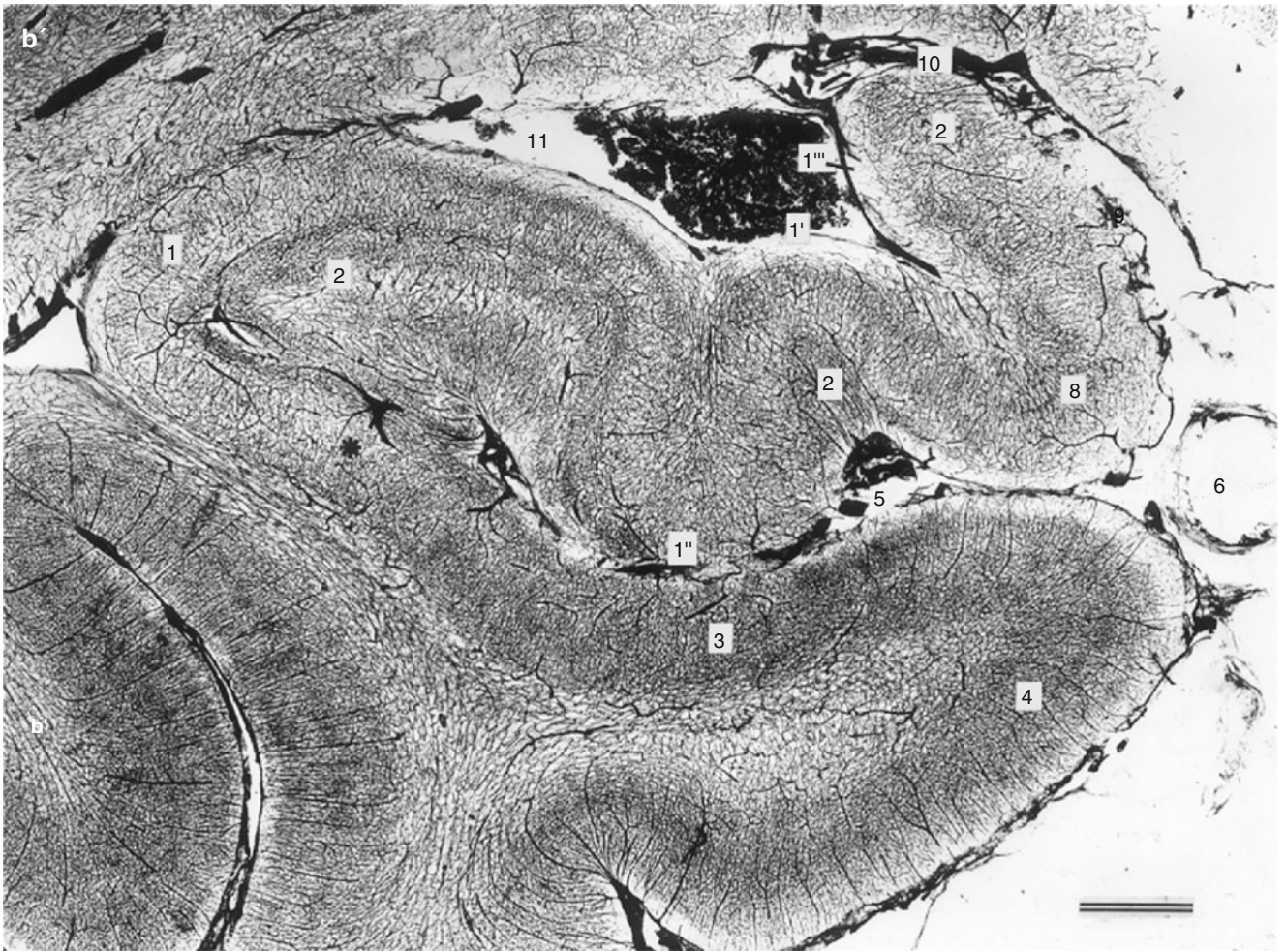


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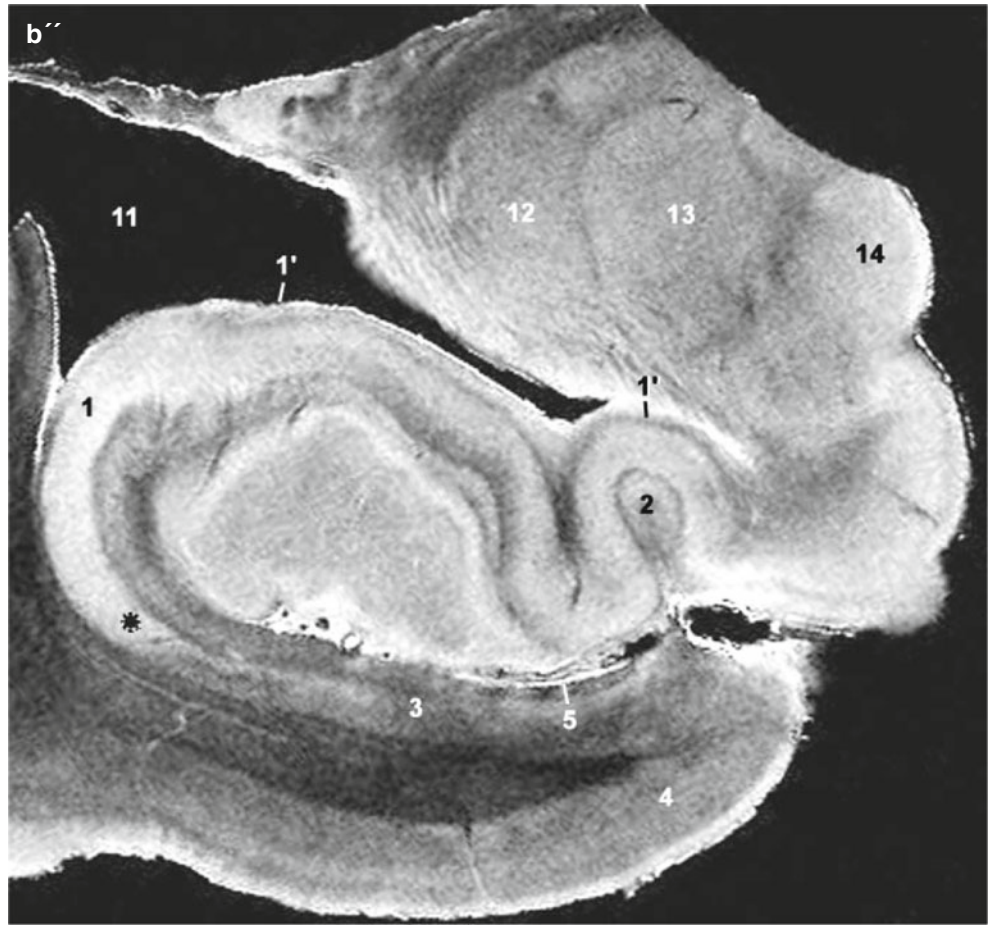


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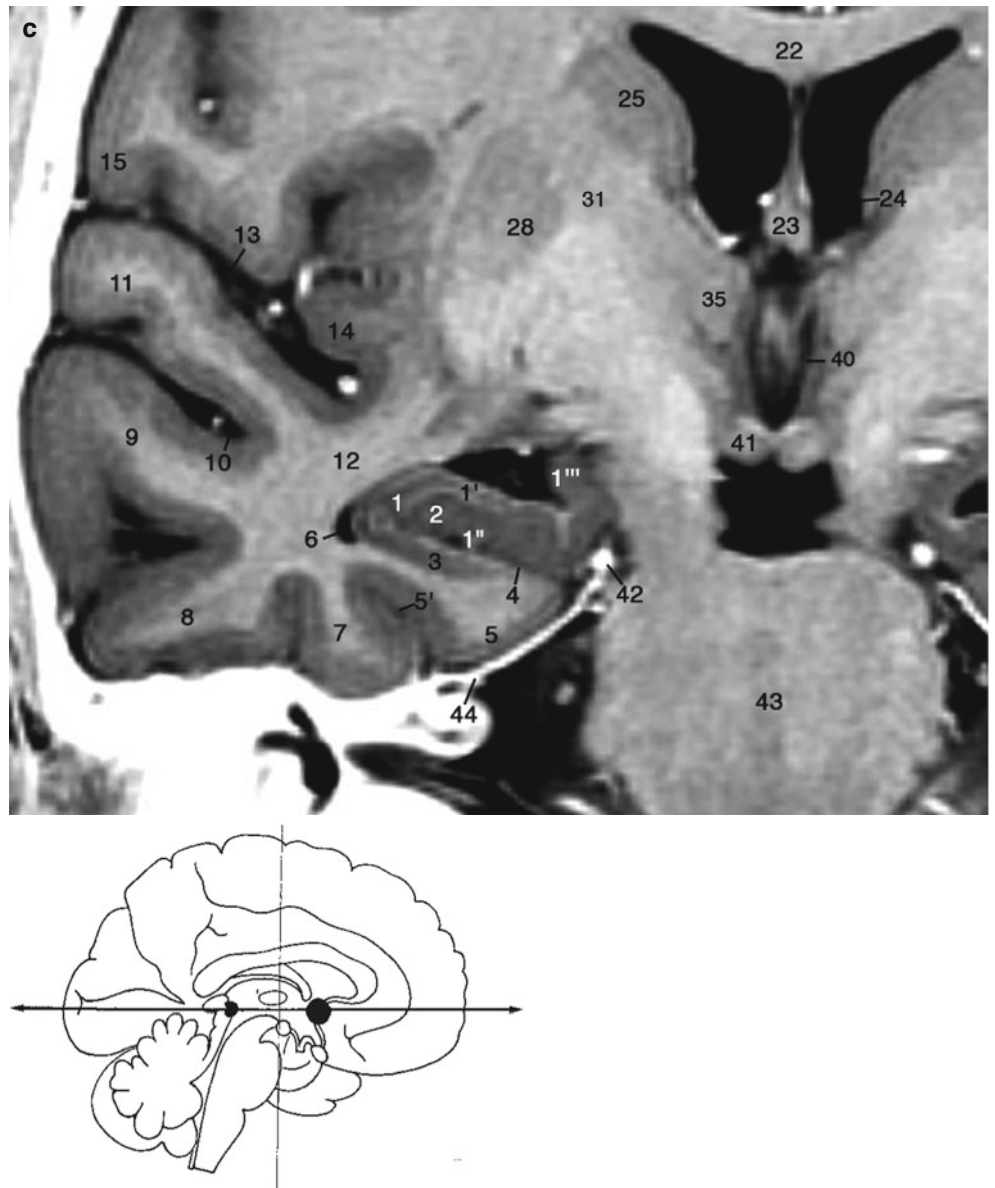
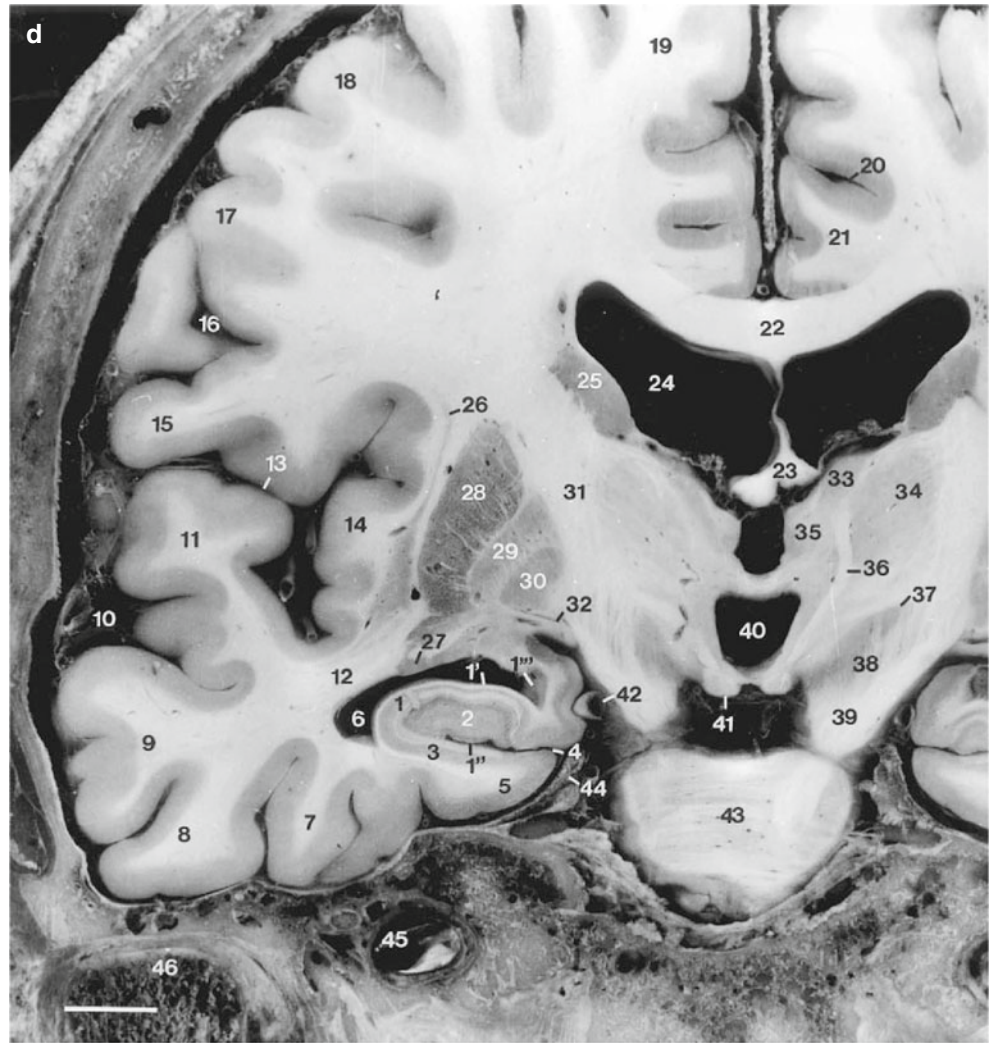


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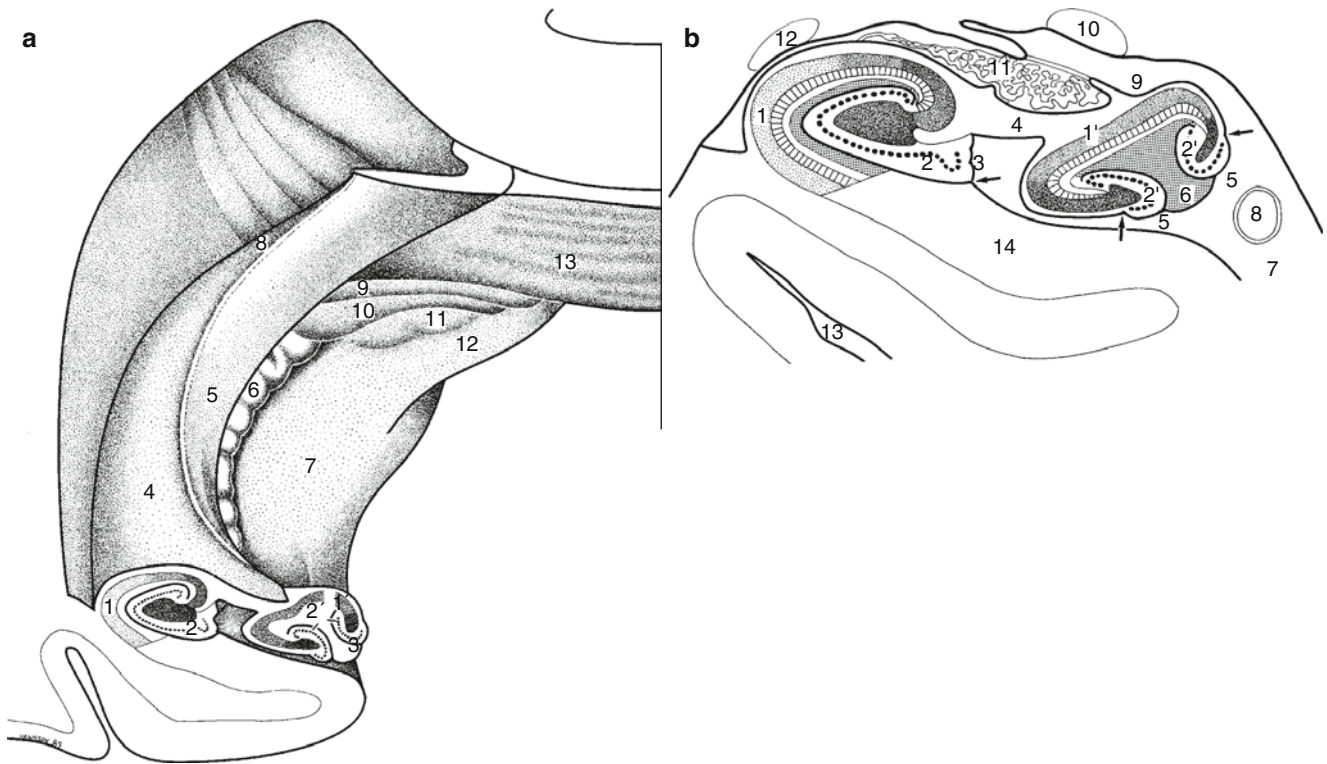


Fig. 7.7 (a) Coronal section of hippocampal body and head (uncal apex), showing plane of section. 1 cornu Ammonis in hippocampal body, 1' cornu Ammonis in hippocampal head, 2 gyrus dentatus in hippocampal body, 2' gyrus dentatus in hippocampal head (uncal apex), 3 uncal apex, 4 hippocampal body, 5 fimbria, 6 margo denticulatus, 7 parahippocampal gyrus, 8 hippocampal tail, 9 gyrus fasciolaris, 10 fasciola cinerea, 11 gyri of Andreas Retzius, 12 isthmus, 13 splenium. (b) Coronal section of hippocampal body and head (b') intravascular India ink injection (b'') 9.4T MRI view. Arrows indicate the superficial hippocampal sulcus. 1 cornu Ammonis (CA1–CA4) in hippocampal body, 1' cornu Ammonis (CA3, CA4) in hippocampal head, 2 gyrus dentatus in hippocampal body, 2' gyrus dentatus in hippocampal head, 3 margo denticulatus, 4 fimbria, 5 band of Giacomini, 6 uncal apex, 7 crural cistern, 8 posterior cerebral artery, 9 transverse fissure (lateral part), 10 optic tract and lateral geniculate body, 11 choroid plexuses and temporal horn, 12 caudate nucleus, 13 collateral sulcus, 14 subiculum. (b') Bar 2 mm. (b'') 9.4T MRI view. (c) 3T MRI view.

1 hippocampal body, cornu Ammonis, 2 hippocampal body, gyrus dentatus, 3 fimbria, 4 hippocampal head, uncal apex, 5 uncal sulcus, 6 subiculum, 7 parahippocampal gyrus, 8 collateral sulcus, 9 temporal (inferior) horn of the lateral ventricle, 10 fusiform gyrus, 11 inferior temporal gyrus, 12 middle temporal gyrus, 13 superior temporal sulcus, 14 temporal stem, 15 superior temporal gyrus, 16 lateral fissure, 17 insula, 18 postcentral gyrus, 19 central sulcus, 20 precentral gyrus, 21 centrum ovale, 22 cingulate sulcus, 23 cingulate gyrus, 24 corpus callosum, 25 fornix, 26 lateral ventricle, 27 caudate nucleus, 28 internal capsule, posterior limb, 29 putamen, 30 claustrum, 31 tail of caudate nucleus, 32 optic tract, 33 globus pallidus, lateral part, 34 globus pallidus, medial part, 35 ventral lateral thalamic nucleus, 36 anterior thalamic nucleus, 37 dorsomedial thalamic nucleus, 38 third ventricle, 39 red nucleus, 40 subthalamic nucleus, 41 substantia nigra, 42 crus cerebri, 43 pons, 44 tentorium cerebelli, 45 internal carotid artery, * vestigial hippocampal sulcus. (d) Head section, anterior view of the section. Bar, 10 mm

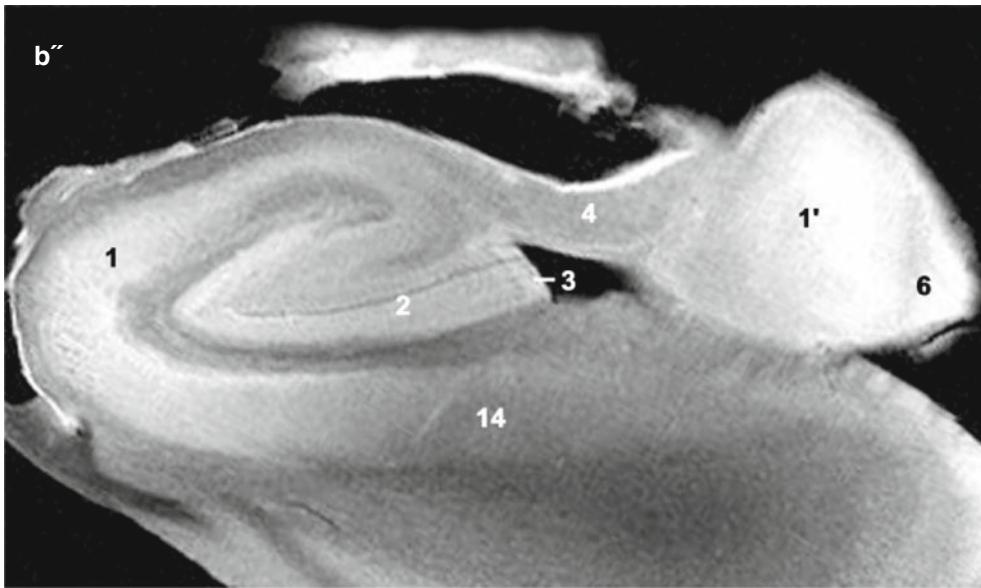
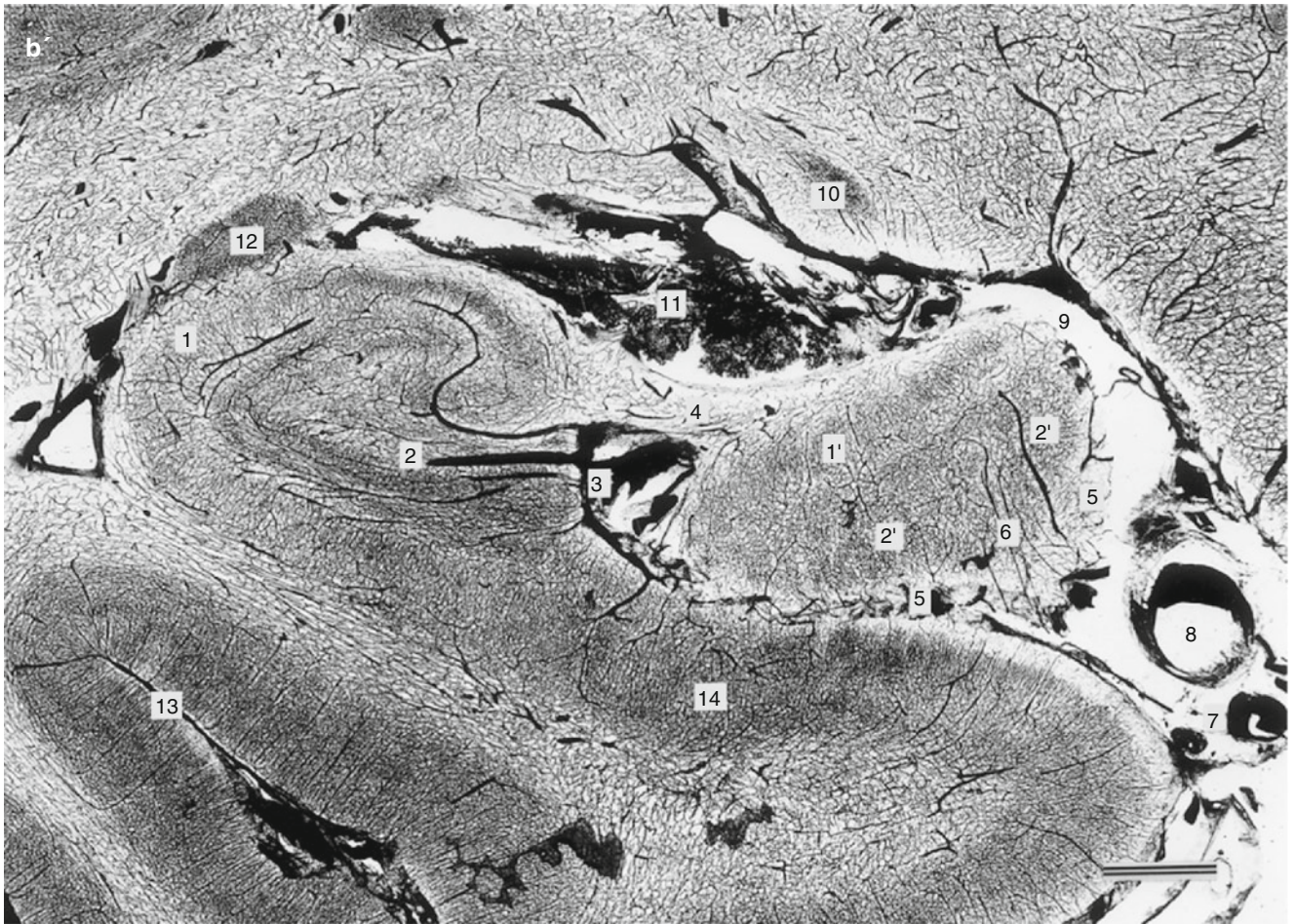


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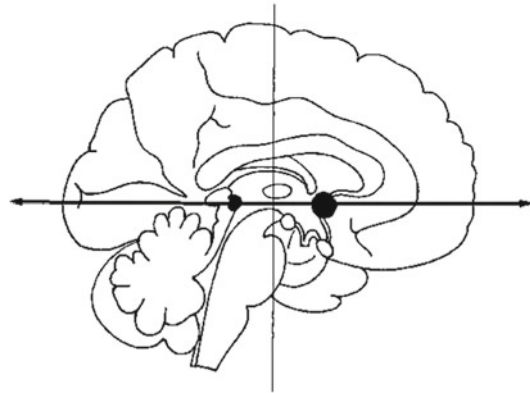
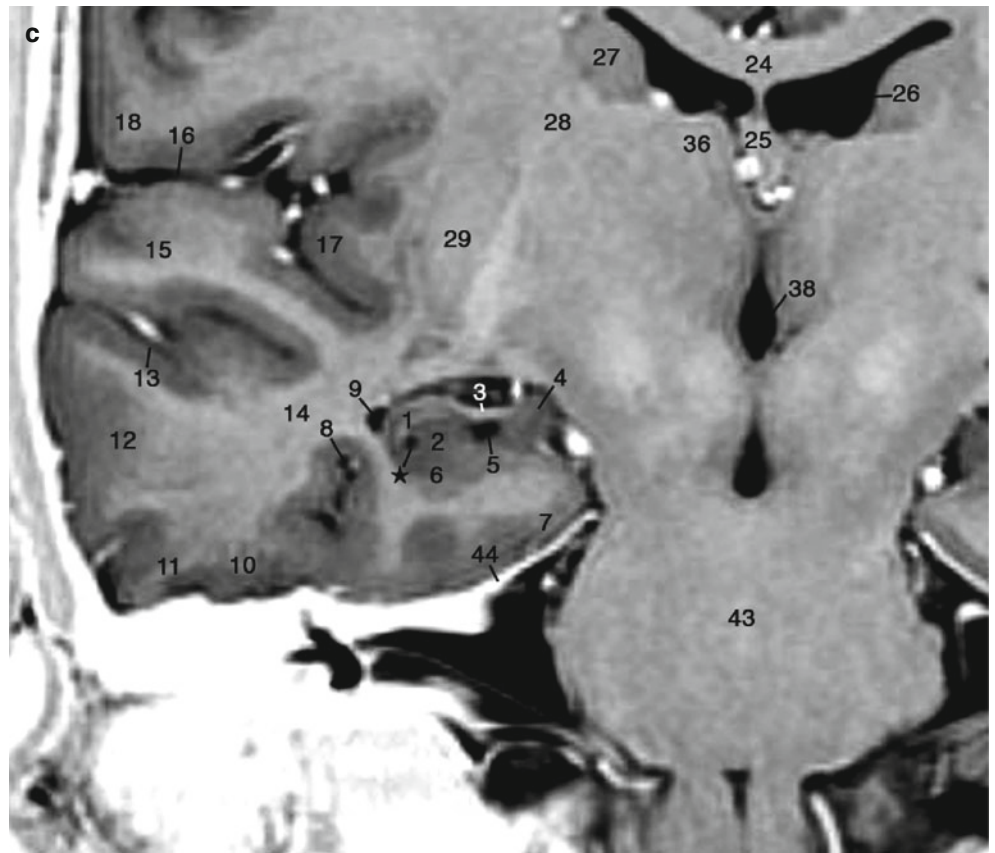
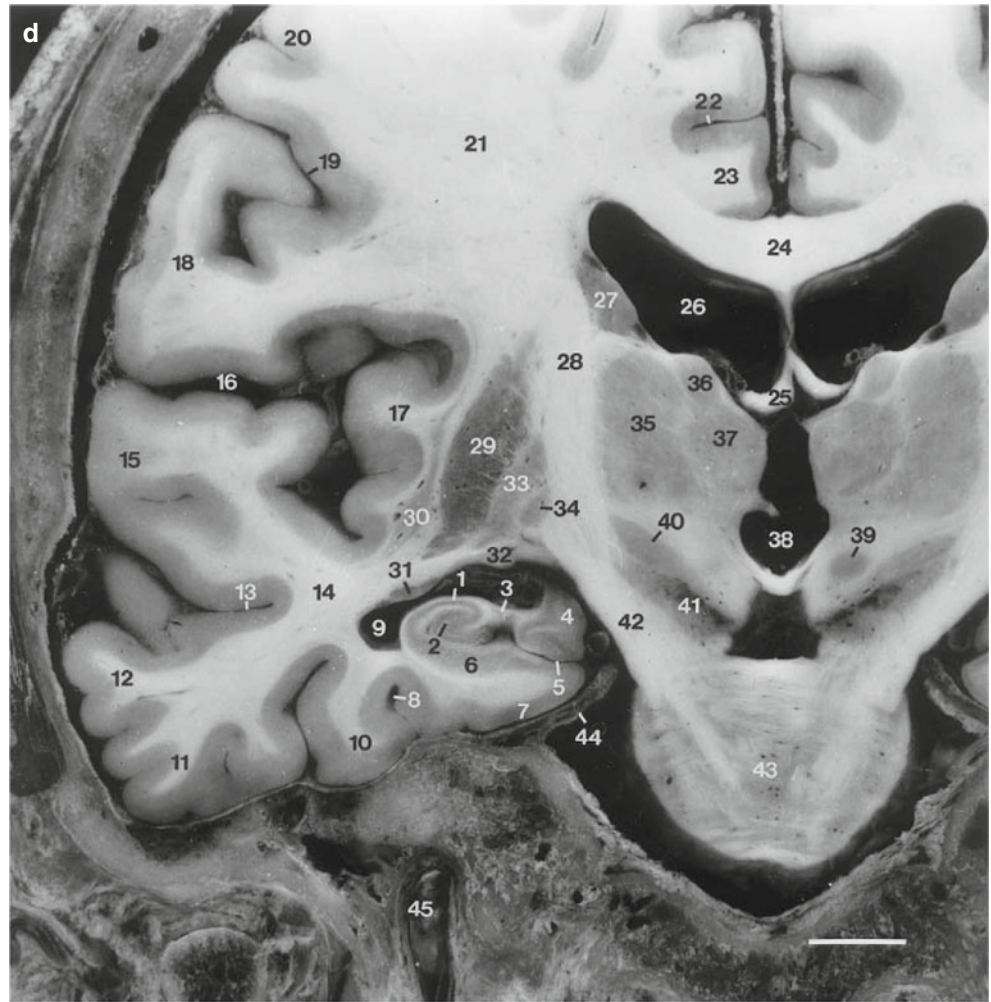


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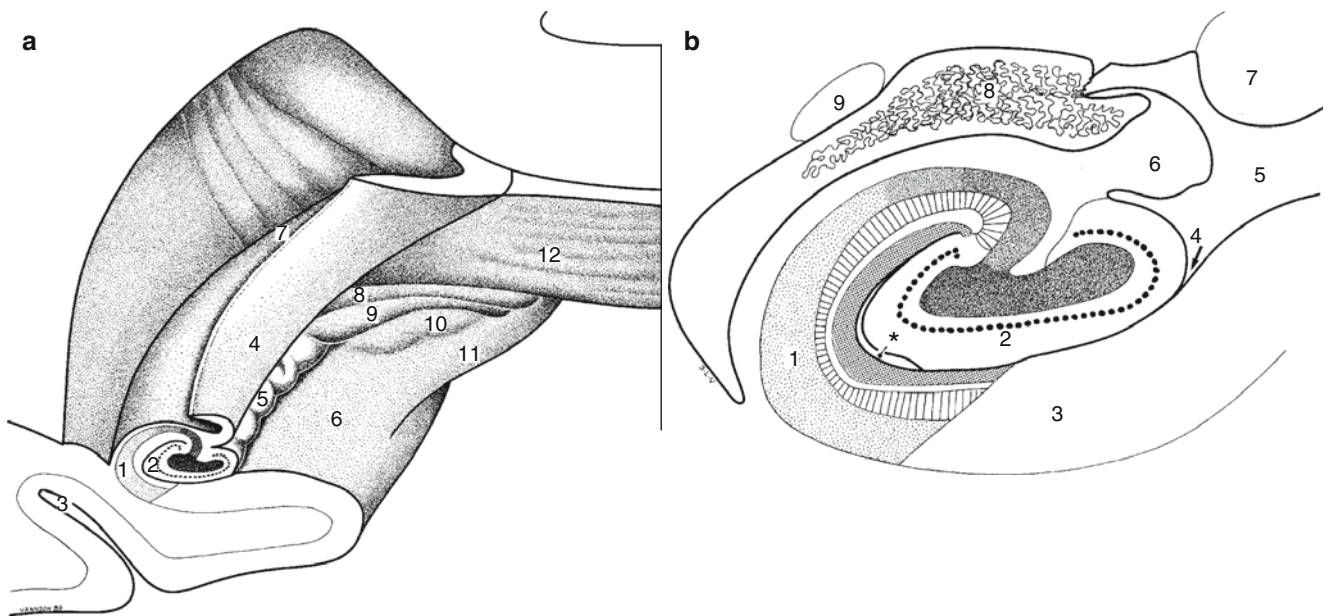


Fig. 7.8 (a) Coronal section of hippocampal body, showing plane of section. 1 cornu Ammonis, 2 gyrus dentatus, 3 collateral sulcus, 4 fimbria, 5 margo denticulatus, 6 parahippocampal gyrus, 7 hippocampal tail, 8 gyrus fasciolaris, 9 fasciola cinerea, 10 gyri of Andreas Retzius, 11 isthmus, 12 splenium. Coronal section of the hippocampal body. (b) Explanatory diagram, (b') intravascular India ink injection, (b'') 9.4T MRI view. *Arrow* indicates the superficial hippocampal sulcus, and *asterisk* shows a residual cavity in the vestigial hippocampal sulcus. 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 3 subiculum, 4 margo denticulatus, 5 lateral part of the transverse fissure, 6 fimbria, 7 lateral geniculate body, 8 choroid plexuses and temporal horn of lateral ventricle, 9 caudate nucleus. (b') Bar 1.2 mm. (b'') 9.4T MRI view. (c) 3T MRI view. 1 hippocampal body, cornu Ammonis: 1' CA1, 1'' CA2, 1''' CA3, 2 hippocampal body, gyrus dentatus, and CA4, 2' fimbria, 2'' choroid plexuses, 3 subiculum, 4 parahippocampal gyrus, 5 temporal (inferior) horn of the lateral ventricle, 5' alveus, 6 collateral sulcus, 7 fusiform gyrus, 7' lateral occipitotemporal sulcus, 8 inferior

temporal gyrus, 9 middle temporal gyrus, 10 superior temporal sulcus, 11 superior temporal gyrus, 12 transverse temporal gyrus, 13 temporal stem, 14 insula, 15 lateral fissure, 16 postcentral gyrus, 17 central sulcus, 18 precentral gyrus, 19 superior frontal gyrus, 20 cingulate sulcus, 21 cingulate gyrus, 22 corpus callosum, 23 fornix, 24 lateral ventricle, 25 caudate nucleus, 26 pontes grisei caudatolenticulares, 27 tail of caudate nucleus, 28 internal capsule, retrolentiform part, 29 lateral posterior thalamic nucleus, 30 lateral dorsal thalamic nucleus, 31 dorsomedial thalamic nucleus, 32 centromedian thalamic nucleus, 33 ventral posterolateral thalamic nucleus, 34 lateral geniculate body, 35 third ventricle, 36 decussation of superior cerebellar peduncles, 37 substantia nigra, 38 crus cerebri, 39 ambient cistern and posterior cerebral artery, 40 tentorium cerebelli, 41 cerebellum, 42 pons, 43 medulla, pyramid, 44 internal ear, 45 middle ear, 46 external acoustic meatus, * vestigial hippocampal sulcus. (d) Head section, posterior view of the section. Bar, 10 mm

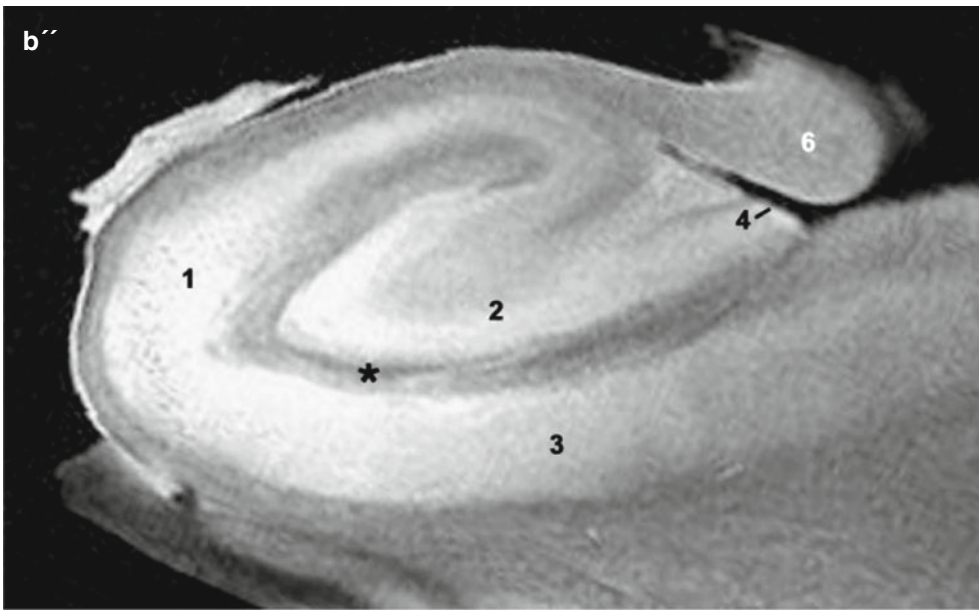


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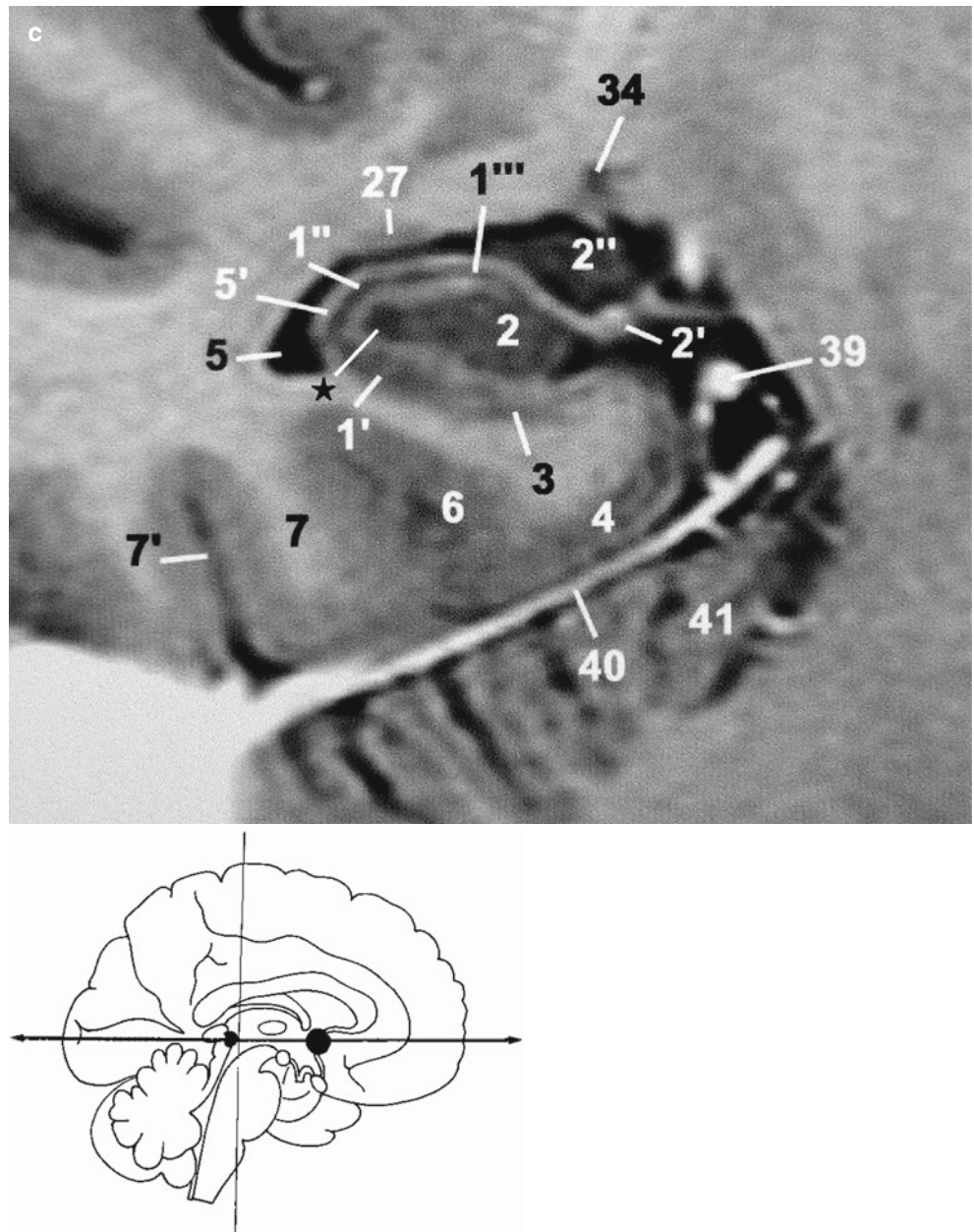
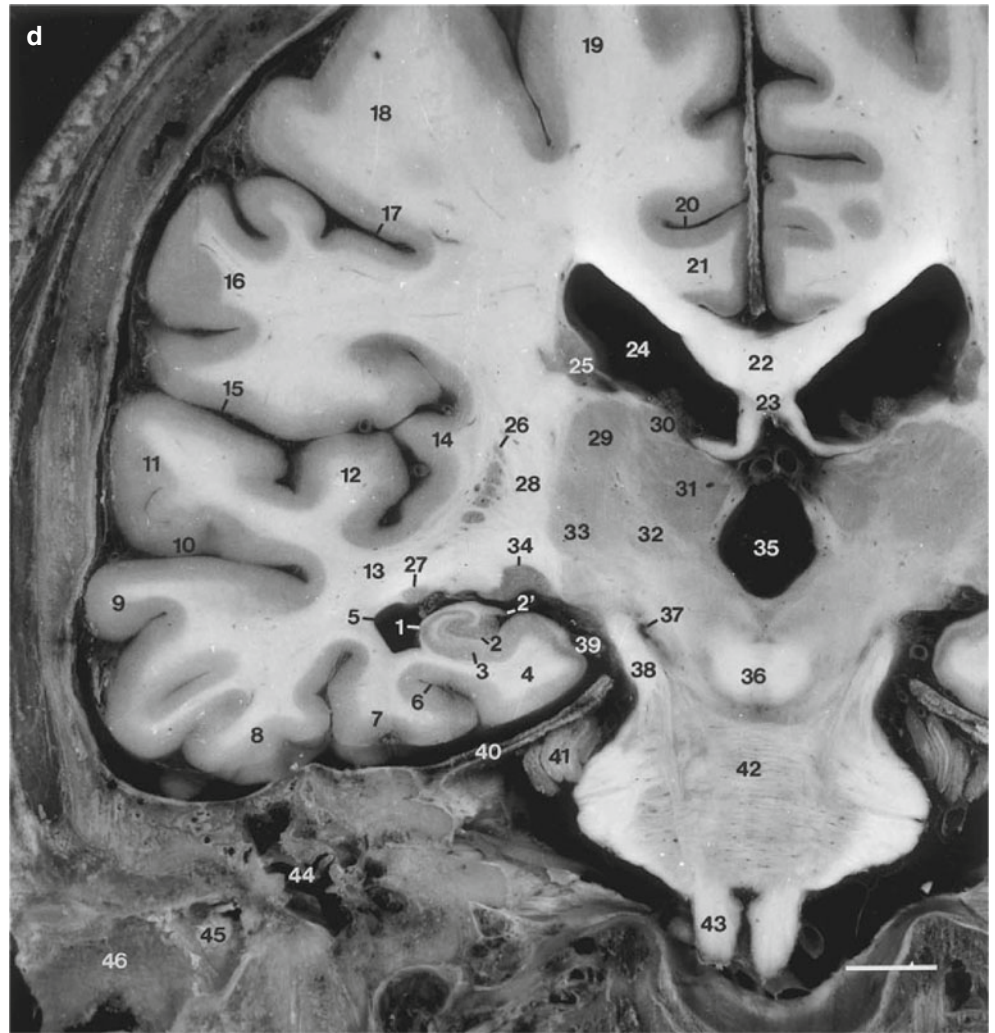


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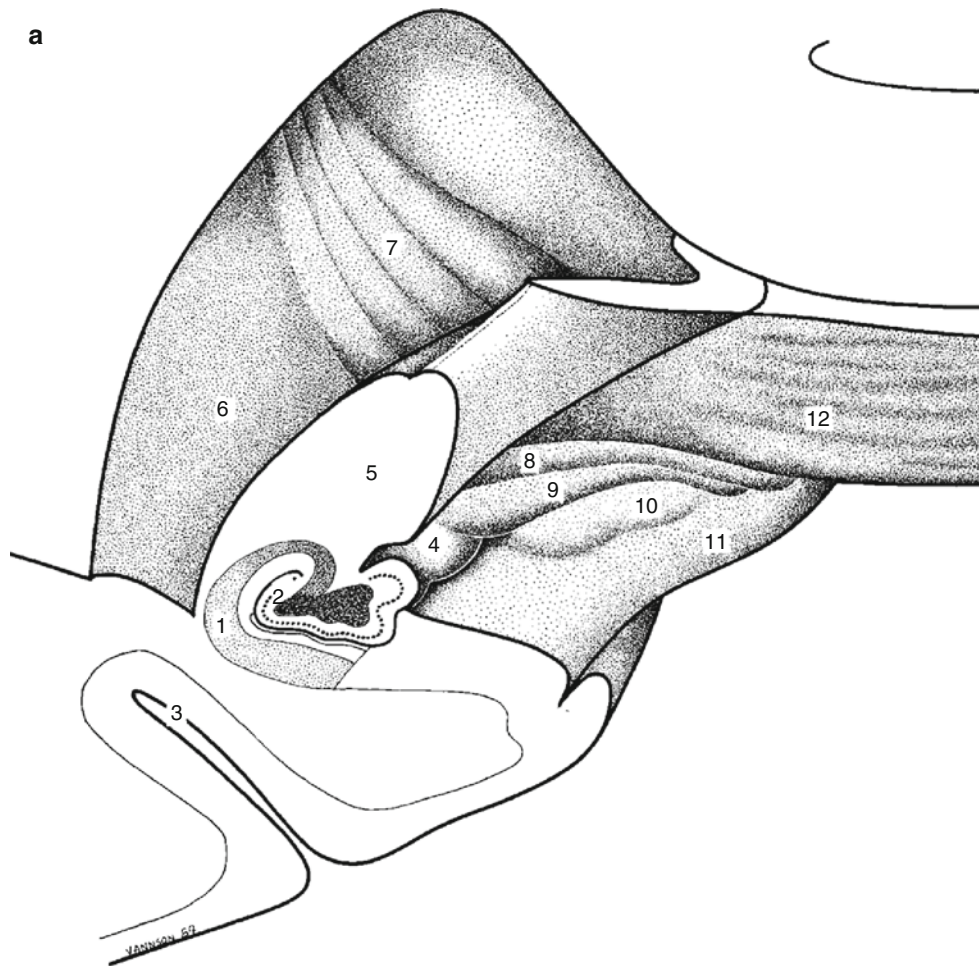


Fig. 7.9 (a) Coronal section of initial segment of the hippocampal tail, showing plane of section. 1 cornu Ammonis, 2 gyrus dentatus, 3 collateral sulcus, 4 margo denticulatus, 5 crus of fornix, 6 collateral trigone, 7 calcar avis, 8 gyrus fasciolaris, 9 fasciola cinerea, 10 gyrus of Andreas Retzius, 11 isthmus, 12 splenium. (b) Coronal section of the hippocampal tail. Intravascular India ink injection with explanatory diagram. Arrow indicates the superficial hippocampal sulcus. Bar, 1.3 mm. 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, stratum moleculare, 3 vestigial hippocampal sulcus, 4 subiculum, 5 lateral part of the transverse fissure, 6 margo denticulatus, 7 crus of fornix, 8 temporal horn of lateral ventricle. (c) 3TMRI view. 1 hippocampal tail, cornu Ammonis, 1' alveus, 2 hippocampal tail, gyrus dentatus, 3 fimbria, 3' margo denticulatus, 4 gyrus of Andreas Retzius, 5 subiculum, 6 parahippocampal gyrus, 7 collateral sulcus, 8 temporal (inferior) horn of the lateral ventricle, 9 fusiform gyrus,

10 inferior temporal gyrus, 10' lateral occipitotemporal sulcus, 11 middle temporal gyrus, 12 superior temporal sulcus, 13 superior temporal gyrus, 13' transverse temporal gyrus, 14 lateral fissure, 15 supramarginal gyrus, 16 postcentral gyrus, 17 central sulcus, 18 precentral gyrus, 19 superior frontal gyrus, 20 cingulate sulcus, 21 cingulate gyrus, 22 splenium of corpus callosum, 23 lateral ventricle, 24 caudate nucleus, 25 crus of fornix, 26 pulvinar, 27 tail of caudate nucleus, 28 wing of ambient cistern (lateral part of the transverse fissure), 29 ambient cistern, 30 pineal gland and quadrigeminal cistern, 31 superior colliculus, 32 inferior colliculus, 33 cerebral aqueduct, 34 brachium conjunctivum (superior cerebellar peduncle), 35 brachium pontis, 36 quadrangular lobule, 37 tentorium cerebelli, 38 flocculus, 39 medulla, 40 vertebral artery, 41 sigmoid sinus, 42 mastoid process, 43 mastoid air cells, * vestigial hippocampal sulcus. (d) Head section, posterior view of the section. Bar, 10 mm

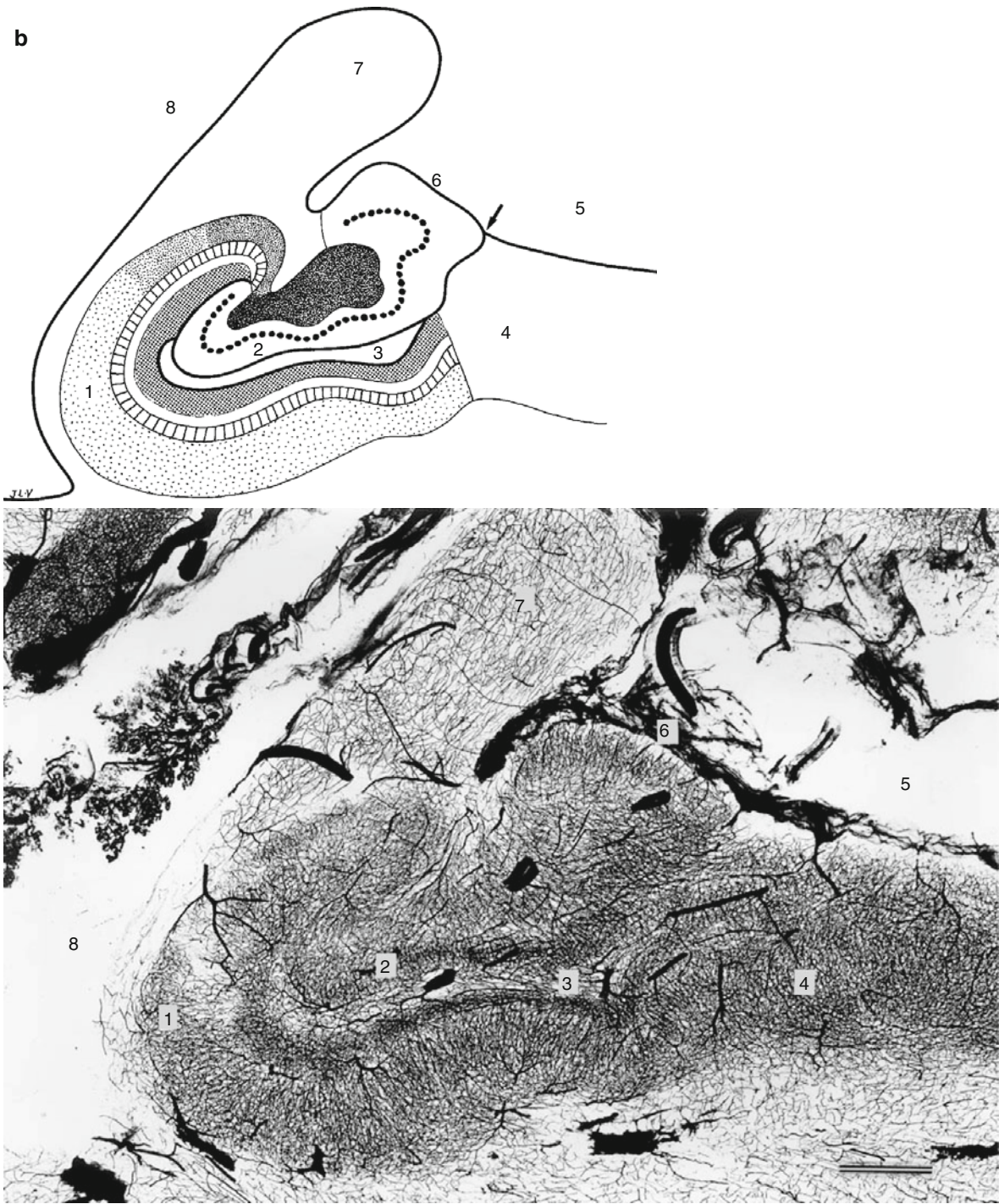


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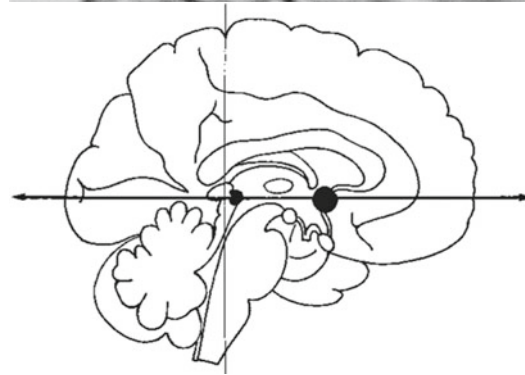
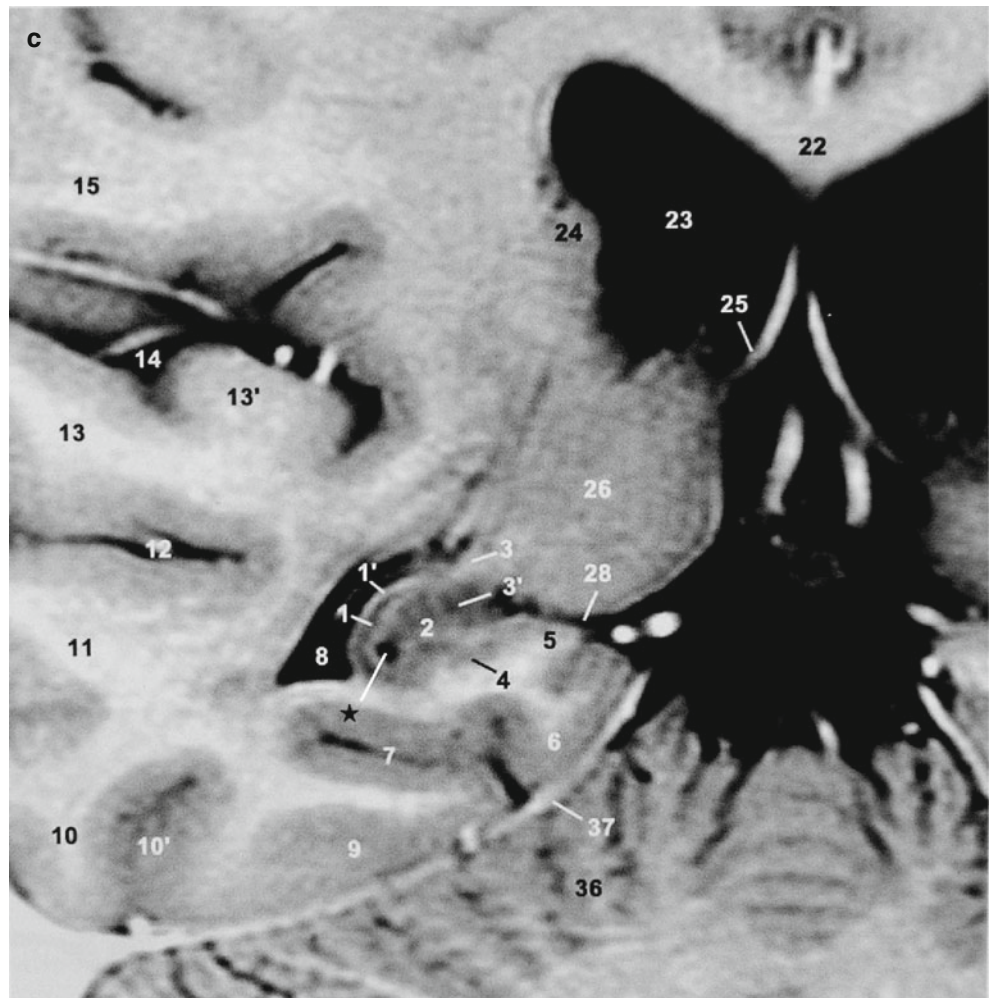
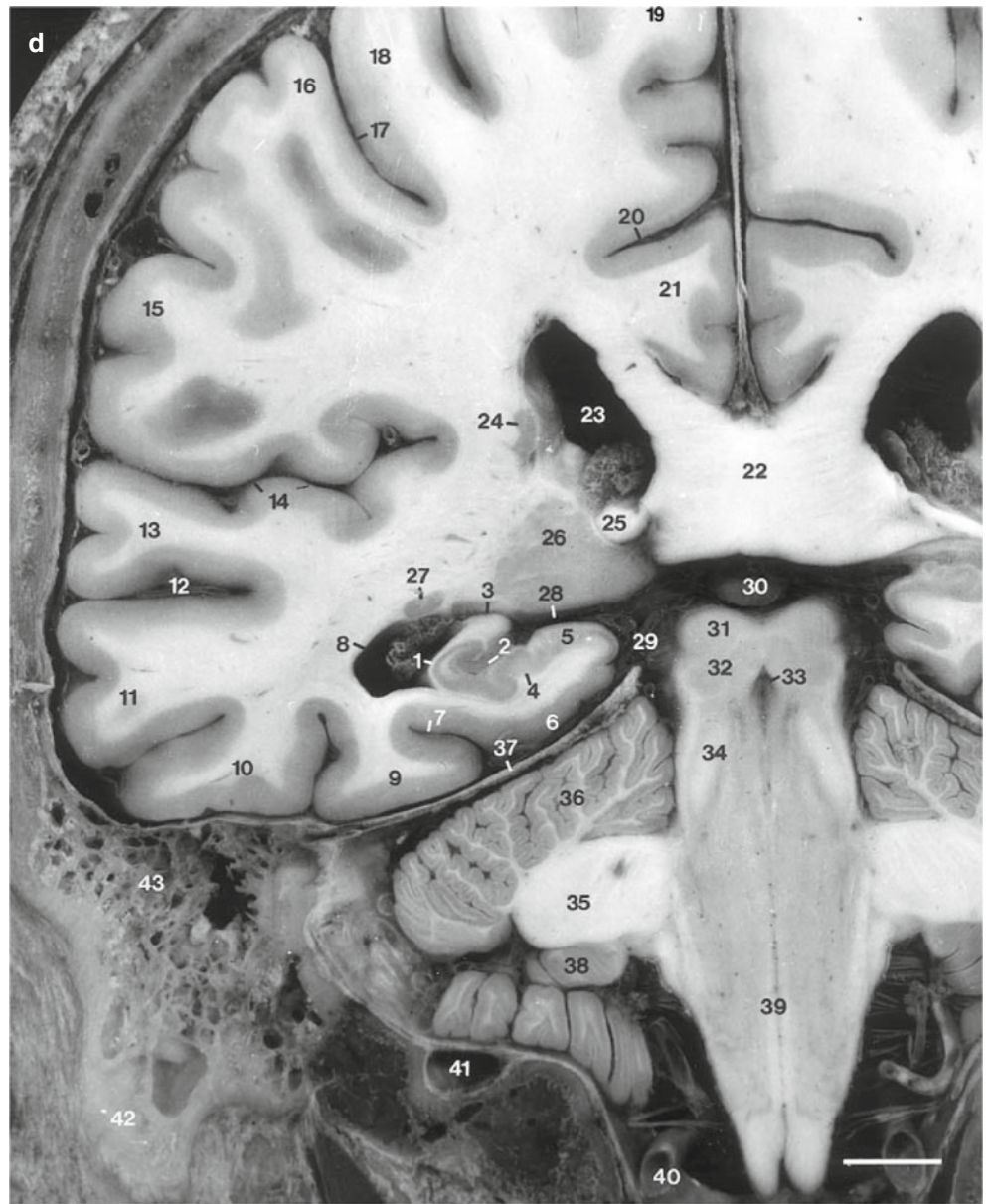


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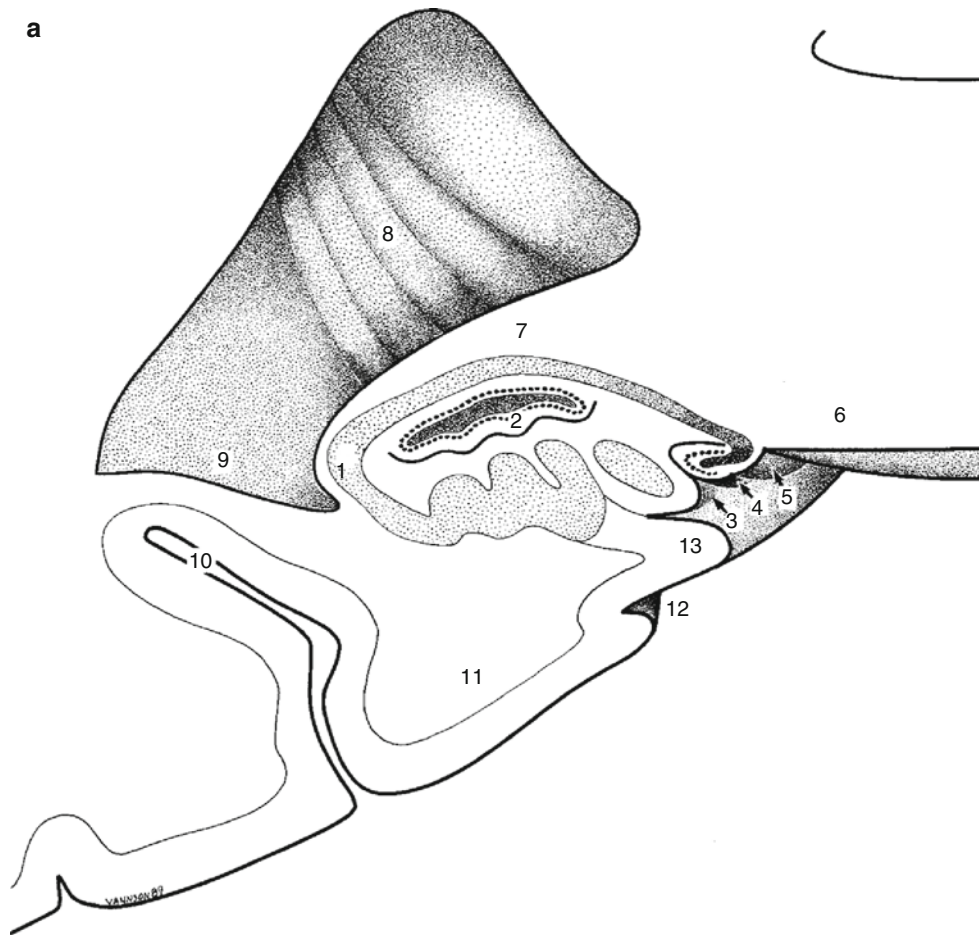


Fig. 7.10 (a) Coronal section of middle segment of the hippocampal tail, showing plane of section. 1 cornu Ammonis, 2 gyrus dentatus, 3 gyrus of Andreas Retzius, 4 fasciola cinerea, 5 gyrus fasciolaris, 6 splenium, 7 crus of fornix, 8 calcar avis, 9 collateral trigone, 10 collateral sulcus, 11 parahippocampal gyrus, 12 anterior calcarine sulcus, 13 isthmus. (b) Coronal section of the hippocampal tail. Intravascular India ink injection with explanatory diagram. Bar, 2.2 mm. 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 3 gyri of Andreas Retzius, 4 fasciola cinerea, 5 gyrus fasciolaris, 6 splenium, 7 crus of fornix, 8 anterior calcarine sulcus, 9 isthmus. (c) 3T MRI view. 1 hippocampal tail, cornu Ammonis, 1' inferior part of CA1 with a folded aspect, 2 hippocampal tail, gyrus dentatus, 3 crus of fornix, 4 atrium of the lateral ventricle, 5 isthmus, 5' gyrus fasciolaris, 6 anterior calcarine sulcus, 7 parahip-

pocampal gyrus, 8 collateral sulcus, 9 collateral trigone, 10 fusiform gyrus, 11 inferior temporal gyrus, 12 middle temporal gyrus, 13 superior temporal sulcus, 14 superior temporal gyrus, 15 supramarginal gyrus, 16 lateral fissure, posterior ascending segment, 16' caudate nucleus, 17 intraparietal sulcus, 18 postcentral gyrus, 19 central sulcus, 20 precentral gyrus, 21 superior frontal gyrus, 22 cingulate sulcus, 23 cingulate gyrus, 24 splenium, 25 optic radiations, 26 pineal gland and quadrigeminal cistern, 27 superior colliculus, 28 cerebral aqueduct, 29 brachium conjunctivum, 30 quadrangular lobule, 31 tentorium cerebelli, 32 brachium pontis, 33 flocculus, 34 medulla, 35 vertebral artery, 36 sigmoid sinus, 37 mastoid air cells, 38 mastoid process. (d) Head section, posterior view of the section. Bar, 10 mm

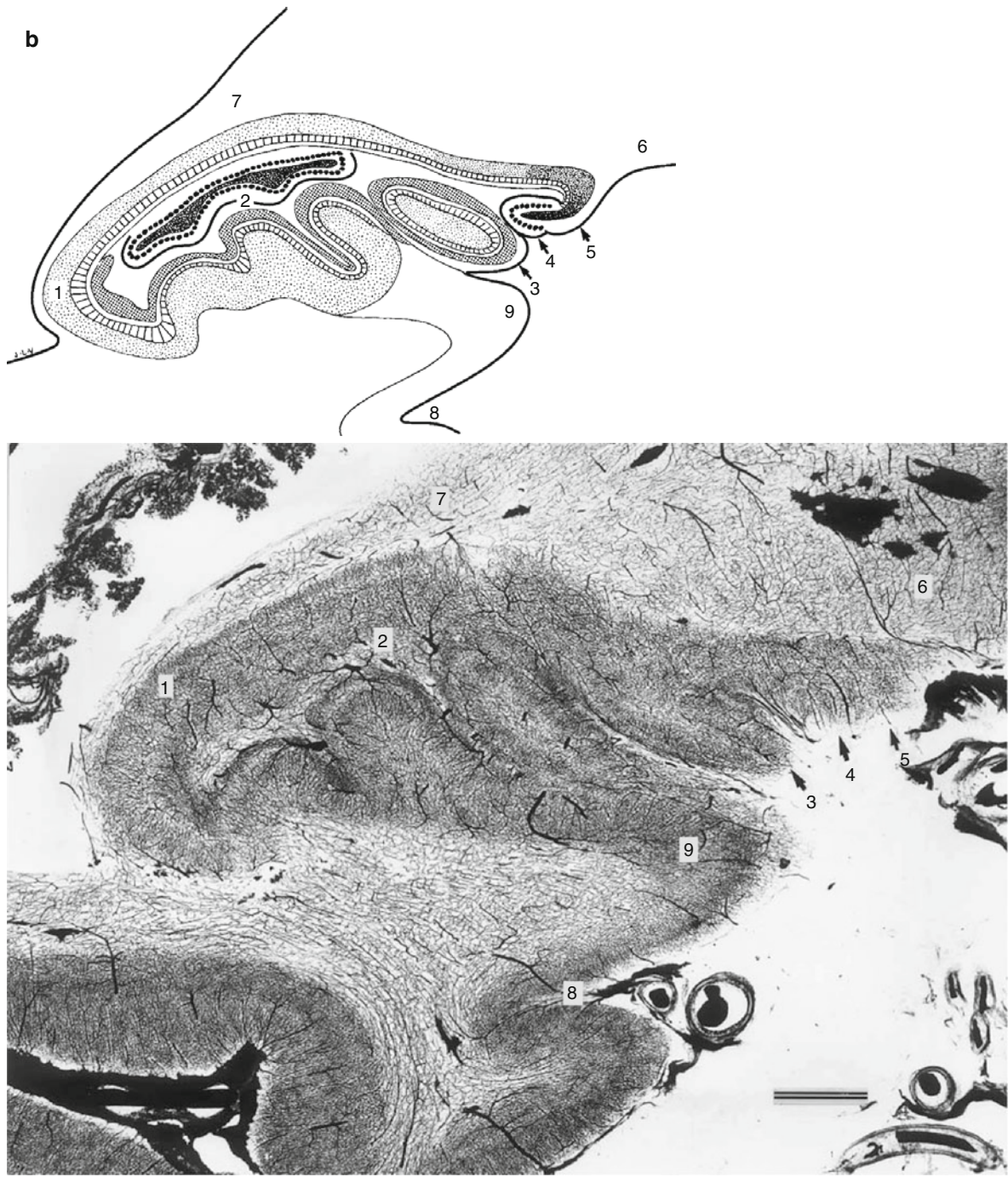


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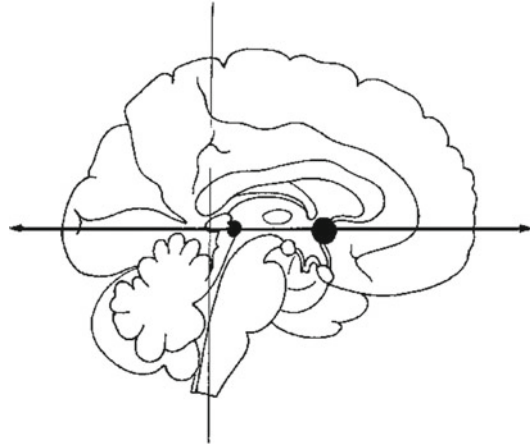
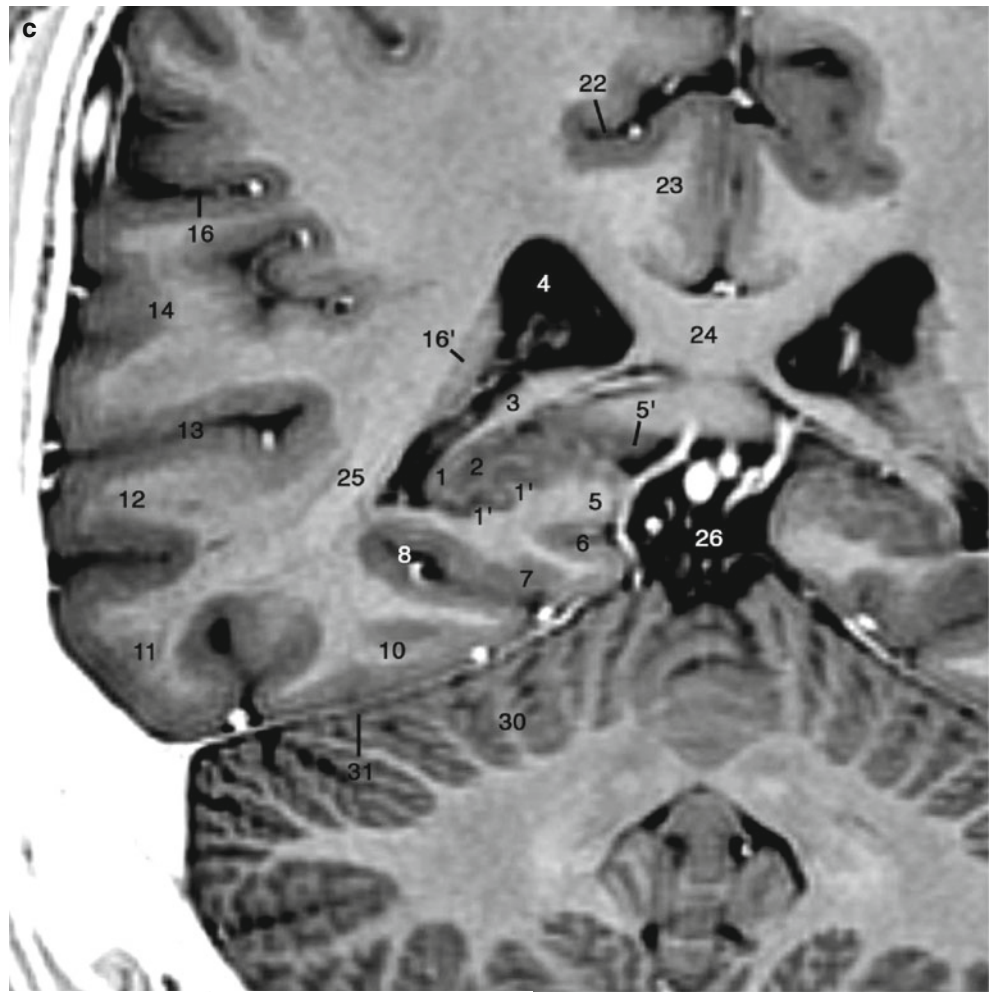
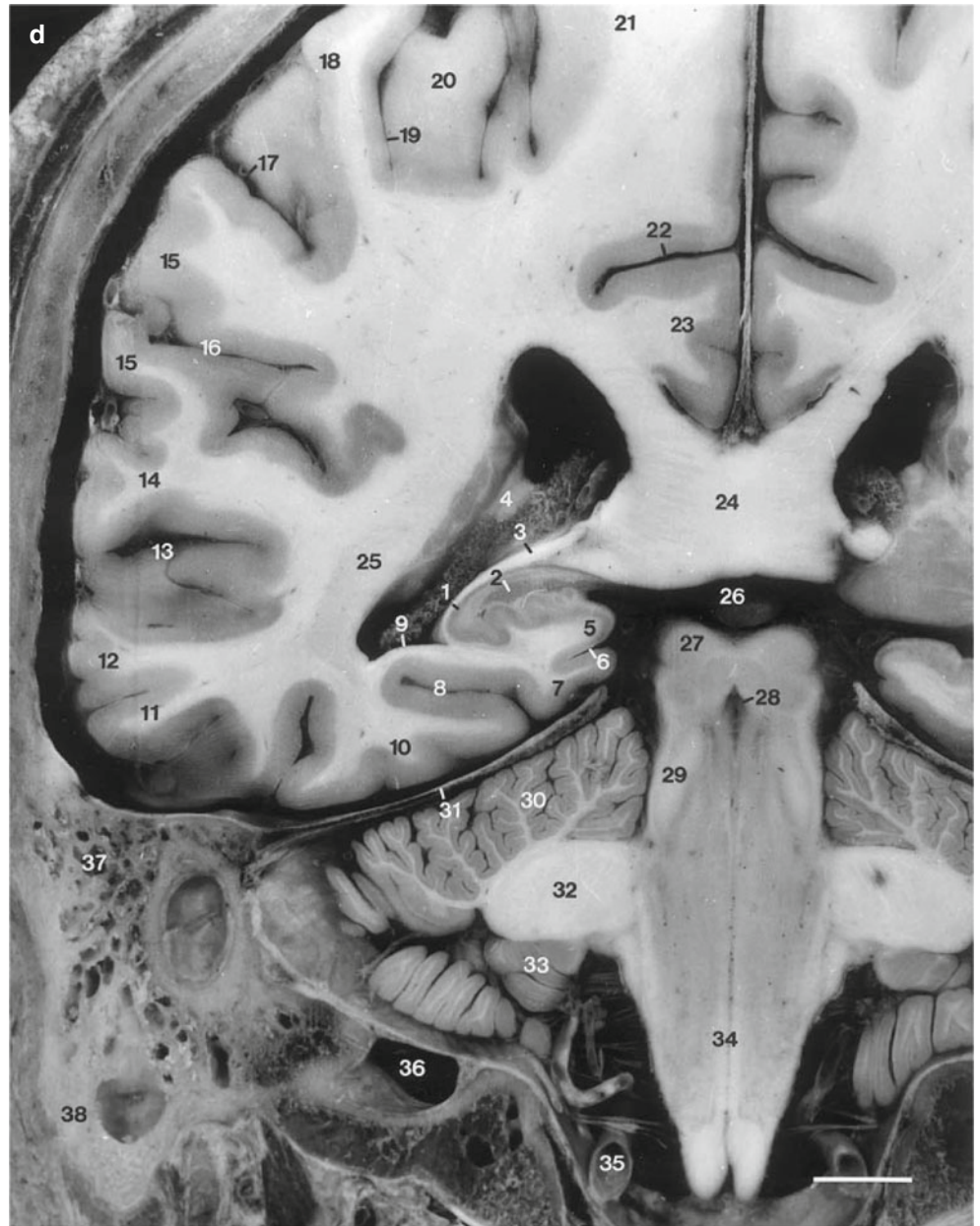


Fig. 7.10 (continued)



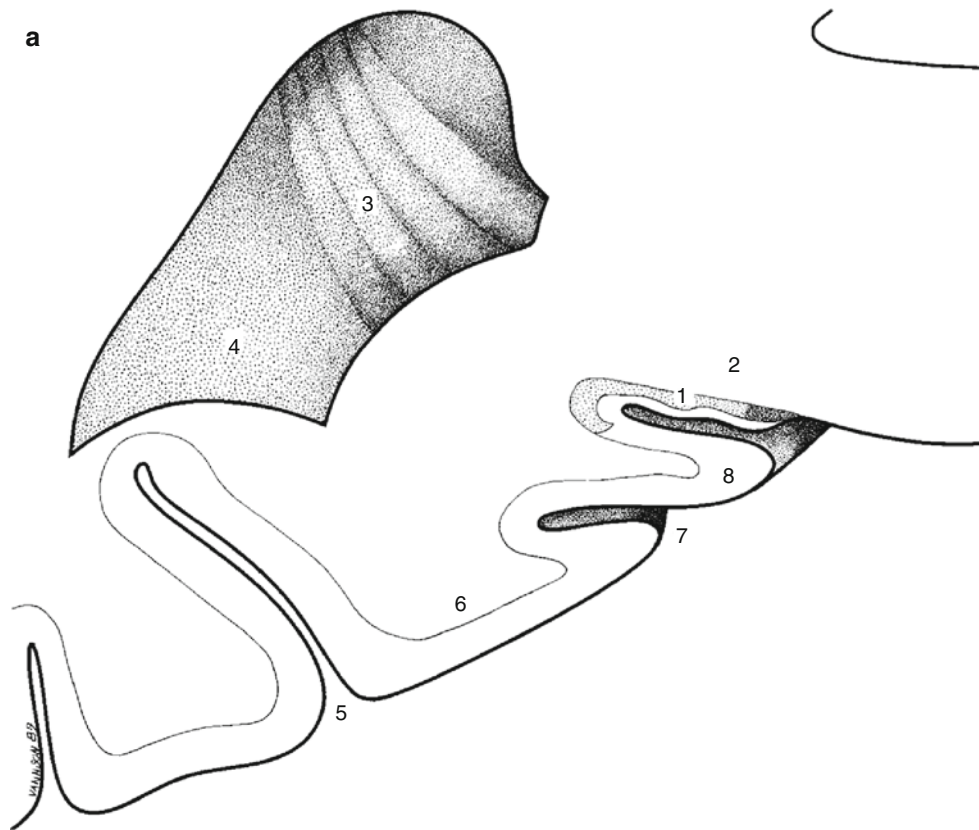


Fig. 7.11 (a) Coronal section of terminal segment of the hippocampal tail, showing plane of section. 1 cornu Ammonis (subsplenial gyrus), 2 splenium, 3 calcar avis, 4 collateral trigone, 5 collateral sulcus, 6 parahippocampal gyrus (posterior part), 7 anterior calcarine sulcus, 8 isthmus. (b) Coronal section of the hippocampal tail. Intravascular India ink injection with explanatory diagram. Bar, 1 mm. 1 cornu Ammonis (subsplenial gyrus, CA1, CA3), 2 longitudinal striae, 3 splenium, 4 subiculum, 5 isthmus. (c) 3T MRI view. 1 cornu Ammonis (subsplenial gyrus), 2 splenium, 3 atrium of the lateral ventricle, 4 isthmus, 5 anterior calcarine sulcus, 6 parahippocampal gyrus, 7 collateral sulcus, 8

collateral trigone, 9 fusiform gyrus, 10 inferior temporal gyrus, 10' inferior temporal sulcus, 11 middle temporal gyrus, 12 superior temporal sulcus, 13 optic radiations, 14 superior temporal gyrus, 15 supramarginal gyrus, 15' lateral fissure, posterior ascending segment, 16 intraparietal sulcus, 17 postcentral gyrus, 18 central sulcus, 19 precentral gyrus, 20 cingulate sulcus, 21 cingulate gyrus, 22 central lobule, 23 tentorium cerebelli, 24 quadrangular lobule, 25 superior semilunar lobule, 26 brachium pontis, 27 fourth ventricle, 28 biventer lobule, 29 transverse sinus. (d) Head section, posterior view of the section Bar, 10 mm

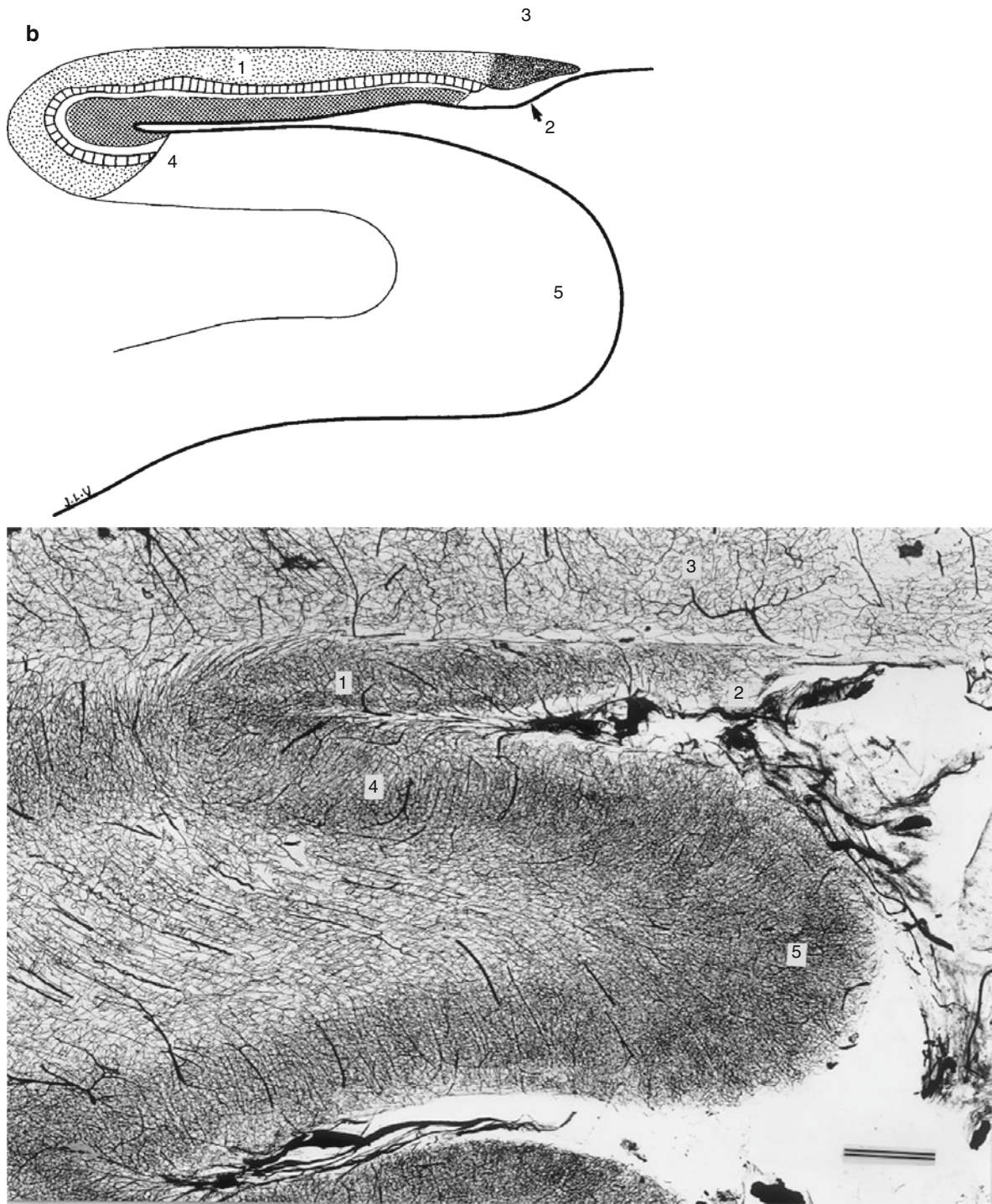


Fig. 7.11 (continued)

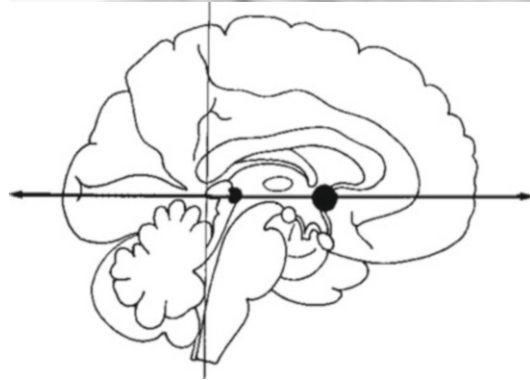
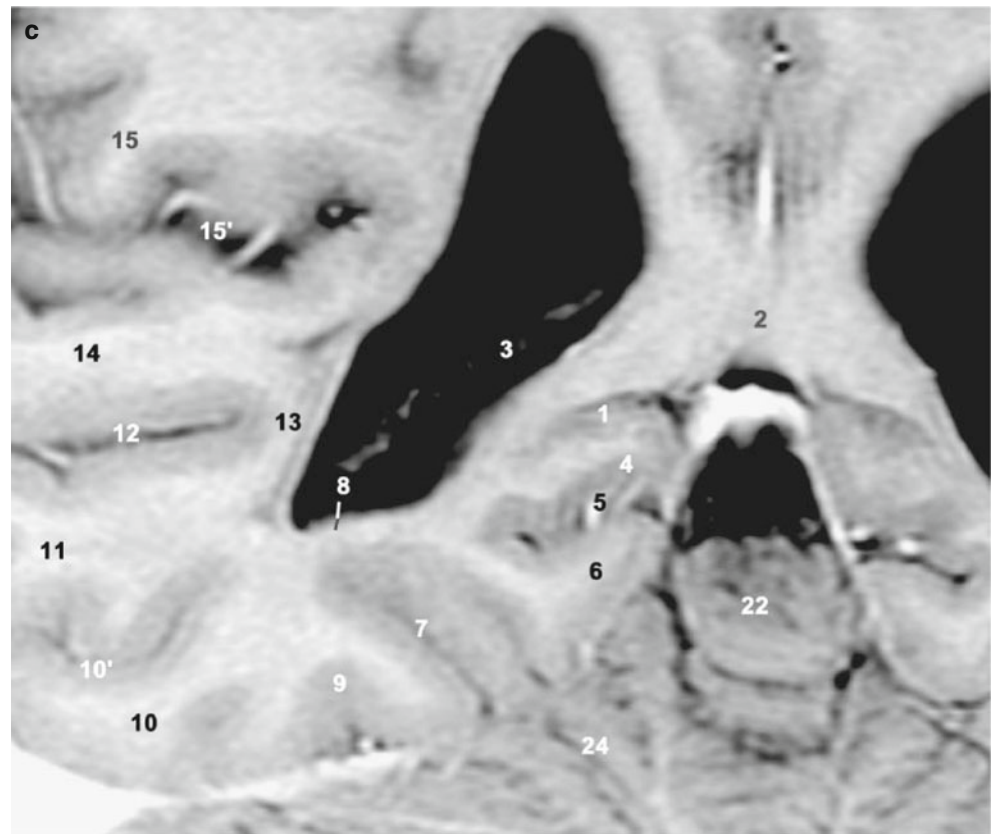
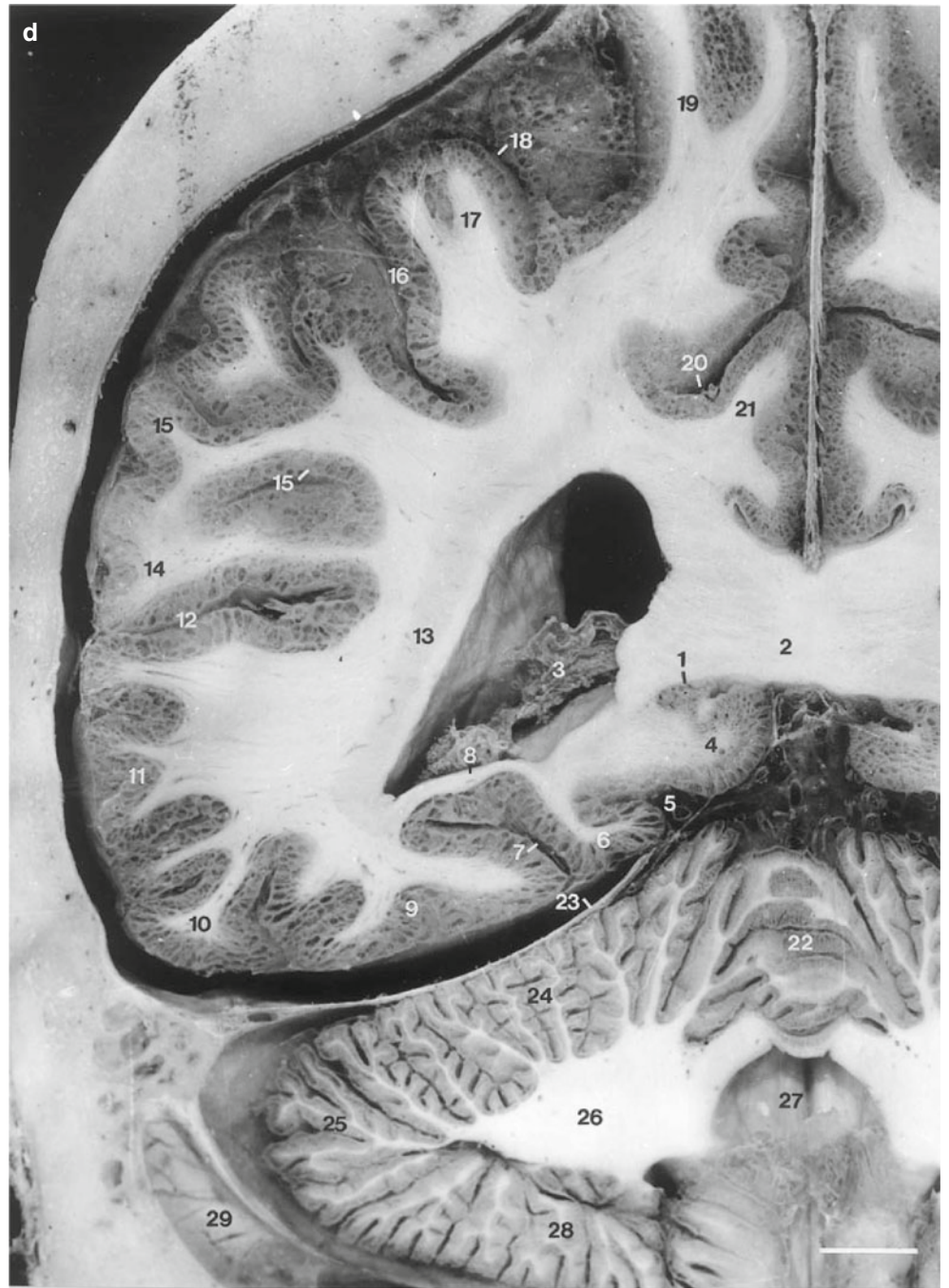
Fig. 7.11 (continued)

Fig. 7.11 (continued)



7.2 Sagittal Sections

Figures 7.14, 7.15, 7.16, 7.17, 7.18, and 7.19 show sagittal sections of the hippocampus from medial to lateral levels.

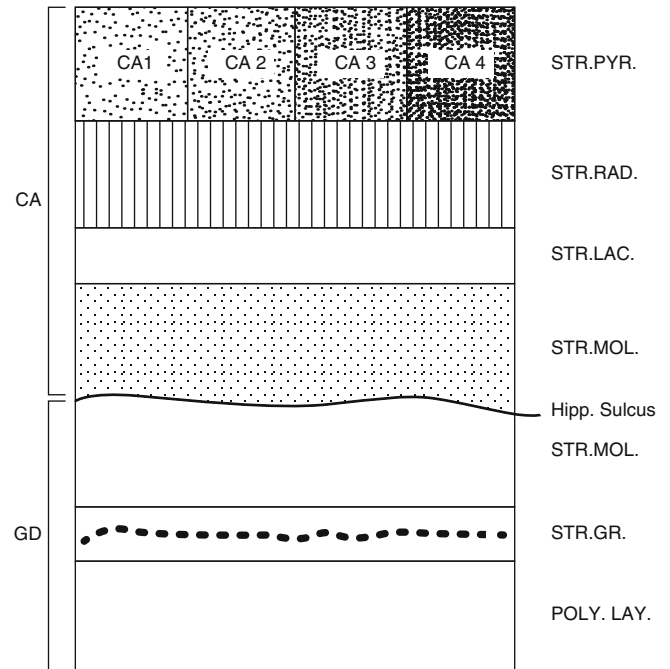


Fig. 7.12 Structure of the hippocampus *CA* cornu Ammonis, *STR. PYR.* stratum pyramidale, *STR. RAD.* stratum radiatum, *STR. LAC.* stratum lacunosum, *STR. MOL.* stratum moleculare, Hipp. Sulcus, vestigial hippocampal sulcus, *GD* gyrus dentatus, *STR. MOL.* stratum moleculare, *STR. GR.* stratum granulosum, *POLY.LAY.* polymorphic layer

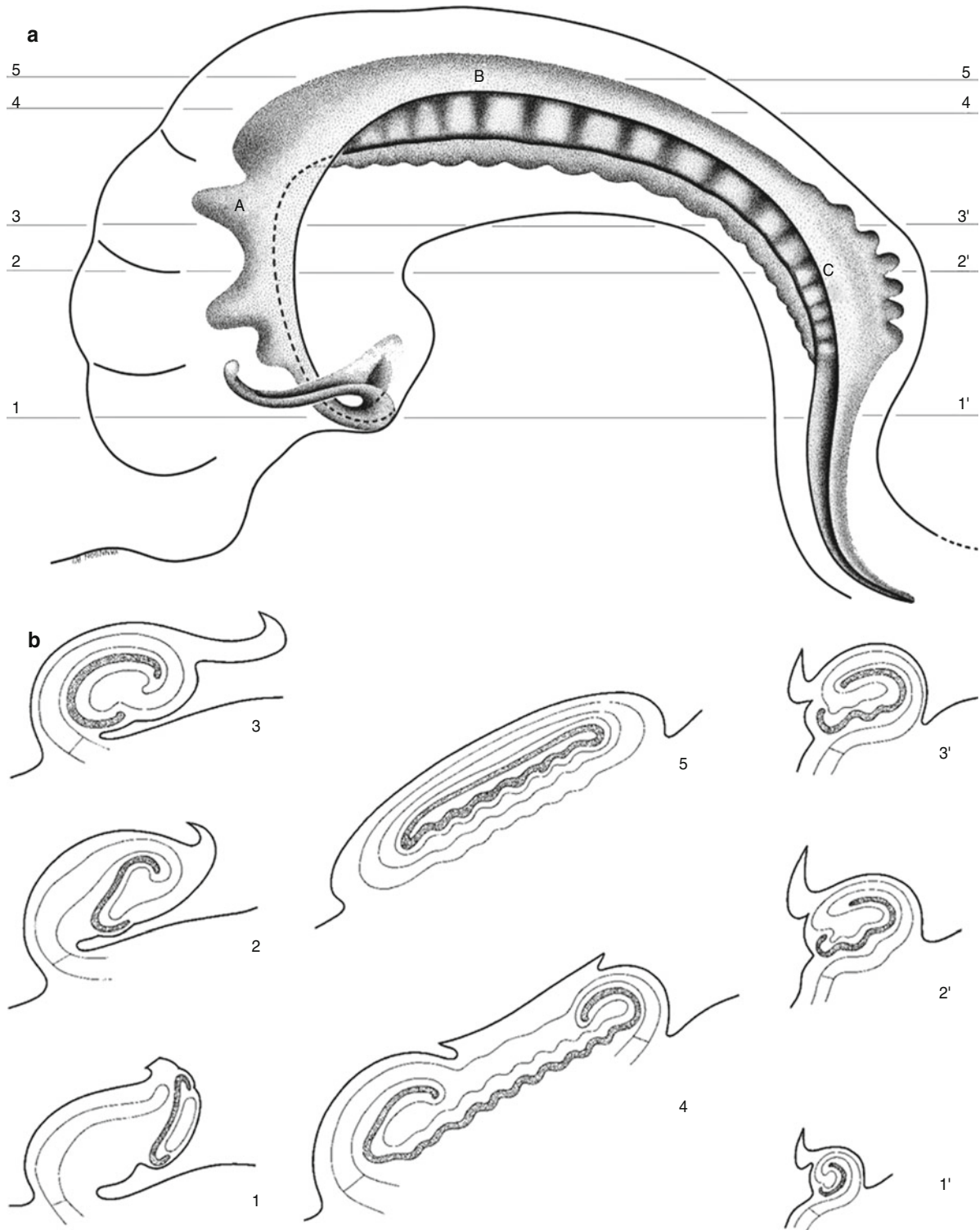


Fig. 7.13 (a, b) General position of the gyrus dentatus in the head (A), body (B), and tail (C) of the hippocampus. One to five, successive planes of sections shown in Fig. 7.13b

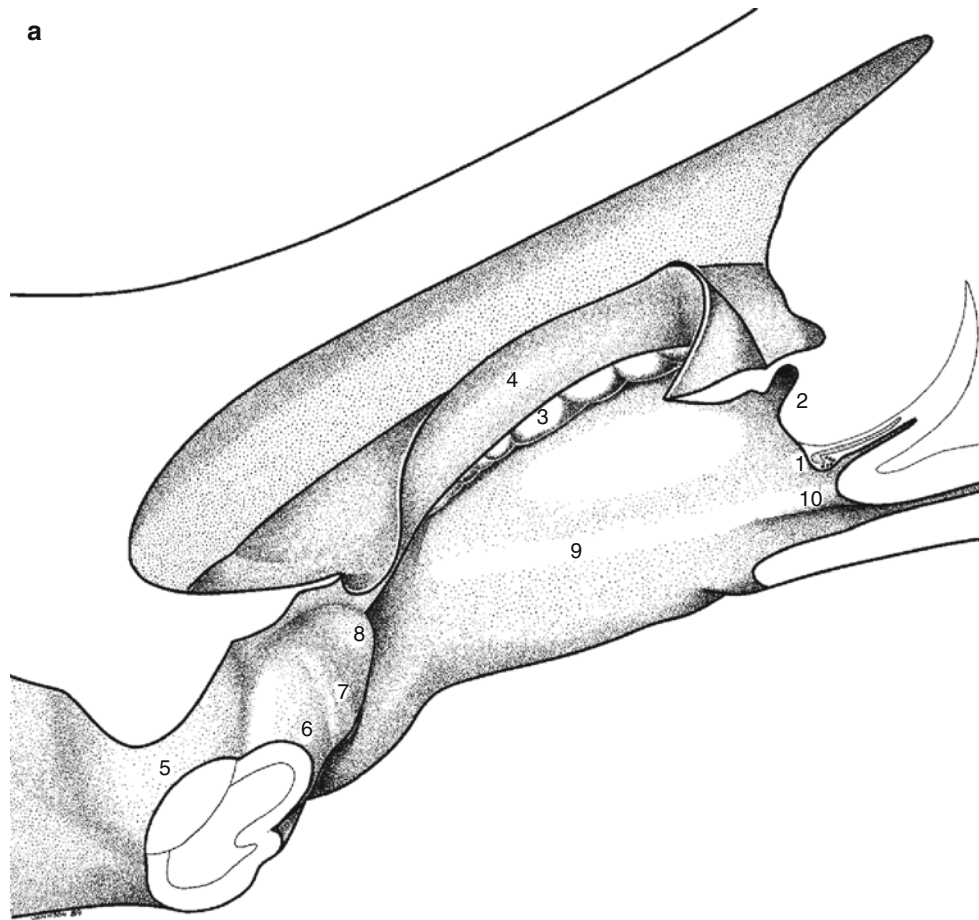


Fig. 7.14 (a) Sagittal section of hippocampus, showing plane of section. 1 hippocampal tail, 2 splenium, 3 margo denticulatus, 4 fimbria, 5 semilunar gyrus, 6 uncinatus gyrus, 7 band of Giacomini, 8 uncus apex, 9 parahippocampal gyrus, 10 isthmus. (b) Sagittal section of uncus. Intravascular India ink injection with explanatory diagram. Bar, 2 mm. 1 uncinatus gyrus, 2 anterior choroidal artery, 3 optic tract, 4 cortical nucleus of amygdala, 5 accessory basal nucleus of amygdala, 6 middle cerebral artery, 7 ambient gyrus, 8 parahippocampal gyrus. (c) Sagittal section of hippocampal tail. Intravascular India ink injection with explanatory diagram. Bar, 2 mm. 1 gyrus fasciolaris, 2 fasciola cinerea, 3 splenium, 4 fornix, 5 pulvinar, 6 isthmus. (d) 3T MRI view. 1 uncinatus gyrus (head of hippocampus), 1' hippocampal tail, 1'' uncal recess of the

temporal horn, 2 amygdala, 3 ambient gyrus, 4 middle cerebral artery, 5 optic tract, 6 putamen, 7 anterior commissure, lateral part, 8 globus pallidus, lateral part, 9 globus pallidus, medial part, 10 caudate nucleus, 11 internal capsule, posterior limb, 12 lateral posterior thalamic nucleus, 13 medial geniculate body, 14 pulvinar, 15 crus of fornix, 16 lateral ventricle, 17 corpus callosum, 18 parieto-occipital fissure, 19 cuneus, 20 calcarine sulcus and striate cortex, 21 lingual gyrus, 22 isthmus, 23 parahippocampal gyrus, 24 tentorium cerebelli, 25 quadrangular lobule, 26 simple lobule, 27 superior semilunar lobule, 28 horizontal fissure, 29 inferior semilunar lobule, 30 biventer lobule, 31 flocculus, 32 trigeminal nerve, 33 trigeminal cave, 34 temporal, petrous part, 35 internal carotid artery, 36 dentate nucleus. (e) Head section. Bar, 10 mm

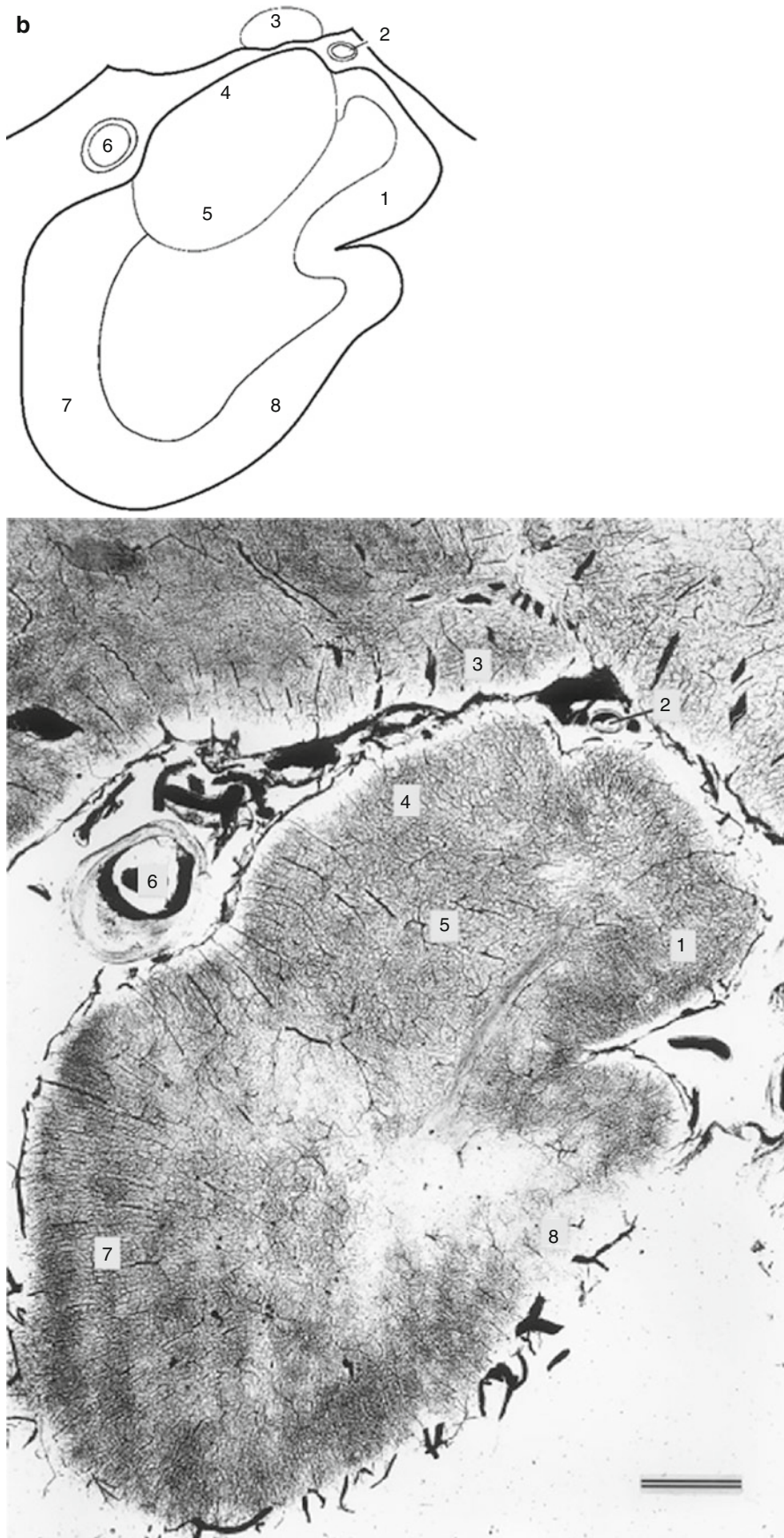


Fig. 7.14 (continued)

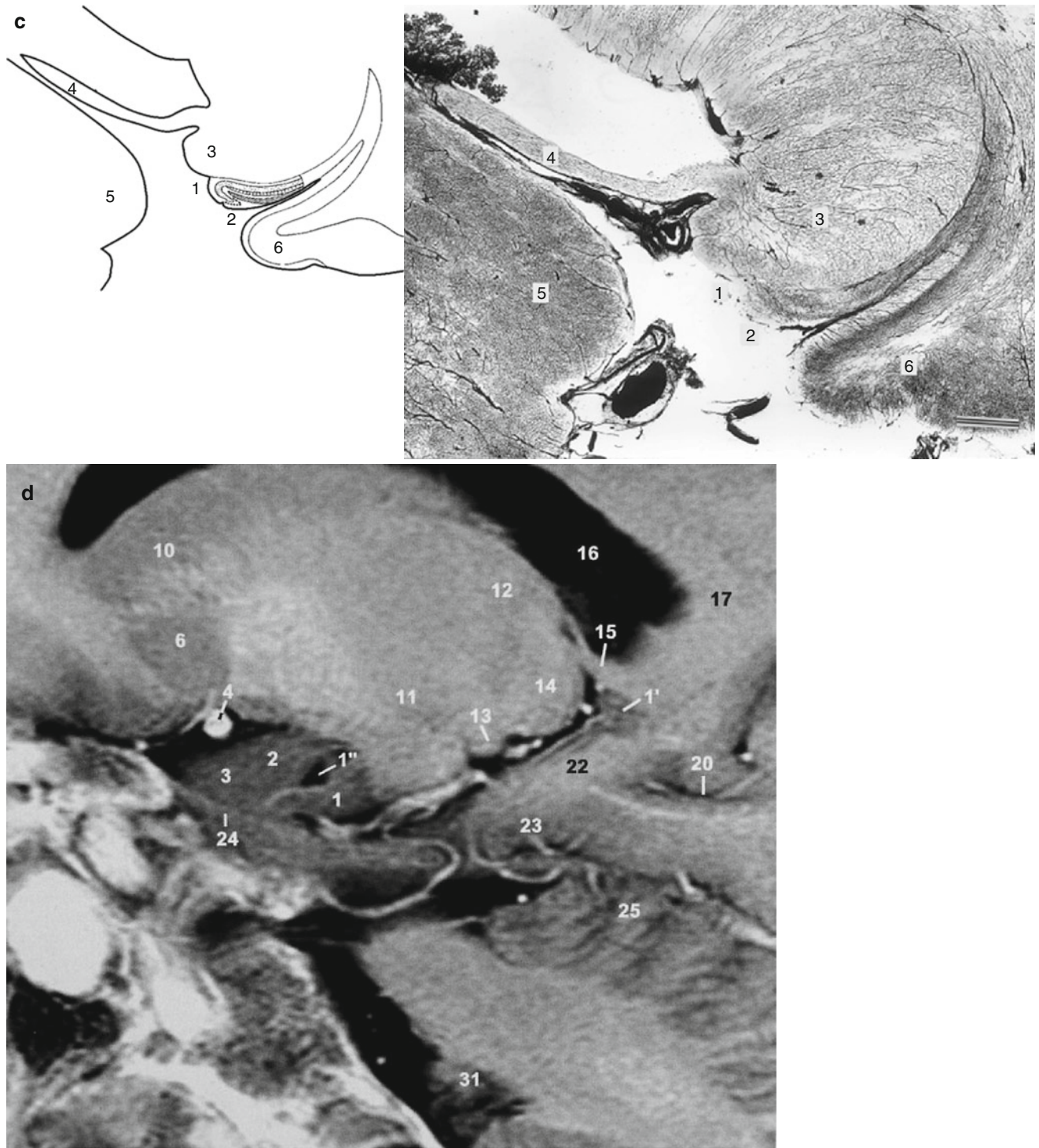


Fig. 7.14 (continued)

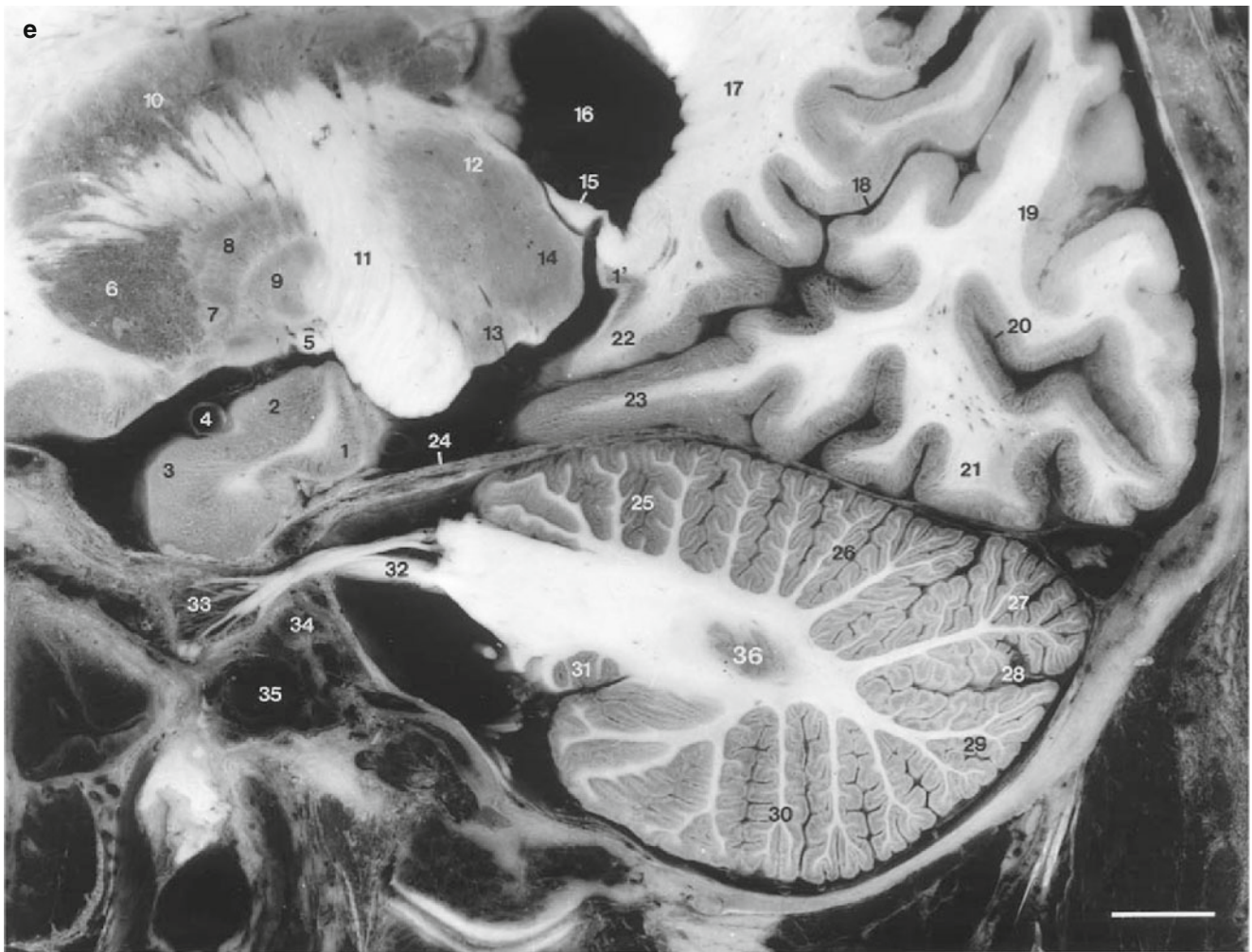


Fig. 7.14 (continued)

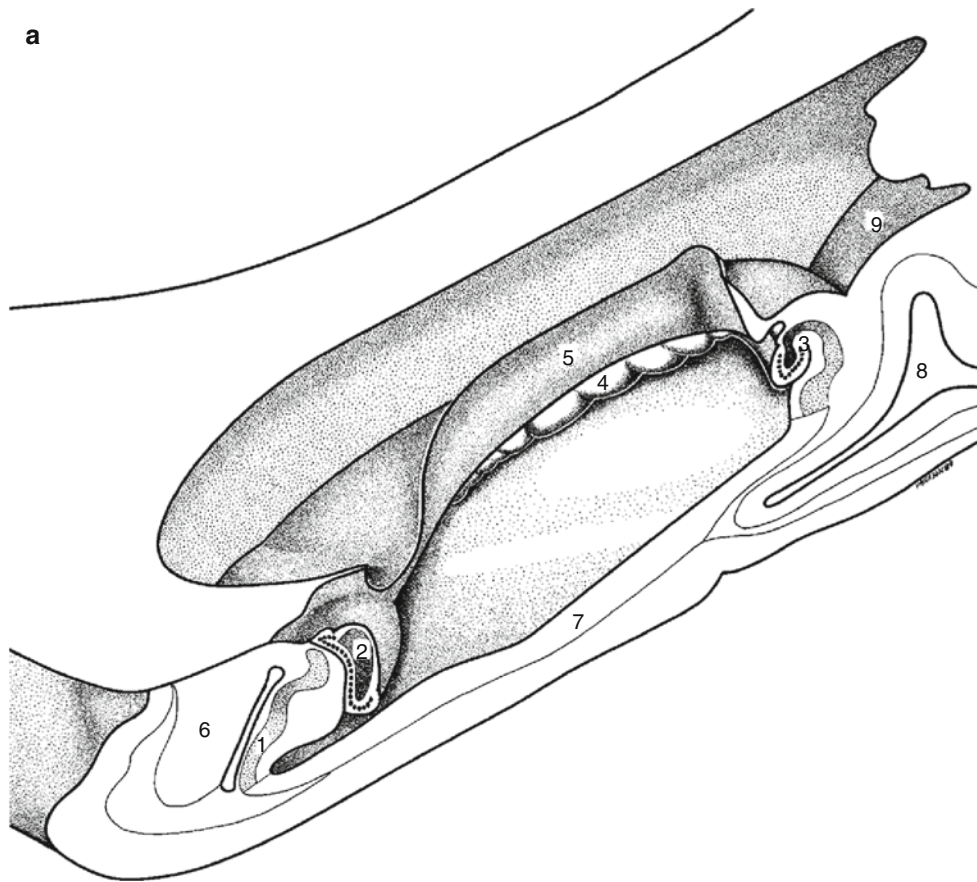


Fig. 7.15 (a) Sagittal section of hippocampus, showing plane of section. 1 hippocampal head, 2 uncal apex, 3 hippocampal tail, 4 margo denticulatus, 5 fimbria, 6 amygdala, 7 parahippocampal gyrus, 8 anterior calcarine sulcus, 9 calcar avis. (b) Sagittal section of hippocampal head. Intravascular India ink injection with explanatory diagram. Note the maculate aspect of the vascular network of the presubiculum (13) in relation to its nervous structure (see p. 17). The *arrow* indicates the superficial hippocampal sulcus. *Bar*, 2.4 mm. 1 cornu Ammonis (CA1, CA2), 2 gyrus dentatus, 3 uncal apex (CA3, CA4), 4 band of Giacomini, 5 cortical nucleus of amygdala, 6 endorhinal sulcus, 7 medial nucleus of amygdala, 8 temporal horn of the lateral ventricle, 9 accessory basal nucleus of amygdala, 10 basal nucleus of amygdala, 11 ambient gyrus, 12 uncal sulcus, 13 presubiculum. (c) Sagittal section of hippocampal tail (middle segment). Vascular India ink injection with explanatory diagram. The *arrow* indicates the superficial hippocampal sulcus. *Bar*, 2.3 mm. 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 3 fimbria, 4 pulvinar, 5 gyrus fasciolaris,

6 fasciola cinerea, 7 gyri of Andreas Retzius, 8 subiculum, 9 anterior calcarine sulcus, 10 calcar avis, 11 lateral geniculate body. (d) 3T MRI view. 1 hippocampal head, cornu Ammonis, 1' uncal sulcus, 2 hippocampal head, uncal apex, 3 temporal (inferior) horn of the lateral ventricle, 4 amygdala, 4' ambient gyrus, 5 middle cerebral artery, 6 hippocampal tail, cornu Ammonis, 7 hippocampal tail, gyrus dentatus, 8 fimbria, 9 gyri of Andreas Retzius, 10 subiculum, 11 parahippocampal gyrus, 12 putamen, 13 anterior commissure, lateral part, 14 globus pallidus, lateral part, 15 globus pallidus, medial part, 16 caudate nucleus, 17 internal capsule, posterior limb, 18 pulvinar, 19 lateral geniculate body, 19' medial geniculate body, 20 lateral ventricle, 21 superior occipital gyrus, 22 lingual gyrus, 22' calcarine sulcus, 23 quadrangular lobule, 24 simple lobule, 25 superior semilunar gyrus, 26 horizontal fissure, 27 inferior semilunar gyrus, 28 biventer lobule, 29 flocculus, 30 brachium pontis, 31 tentorium cerebelli, 32 trigeminal nerve, 33 trigeminal cave, 34 temporal, petrous part, 35 internal cerebral artery. (e) Head section. *Bar*, 10 mm

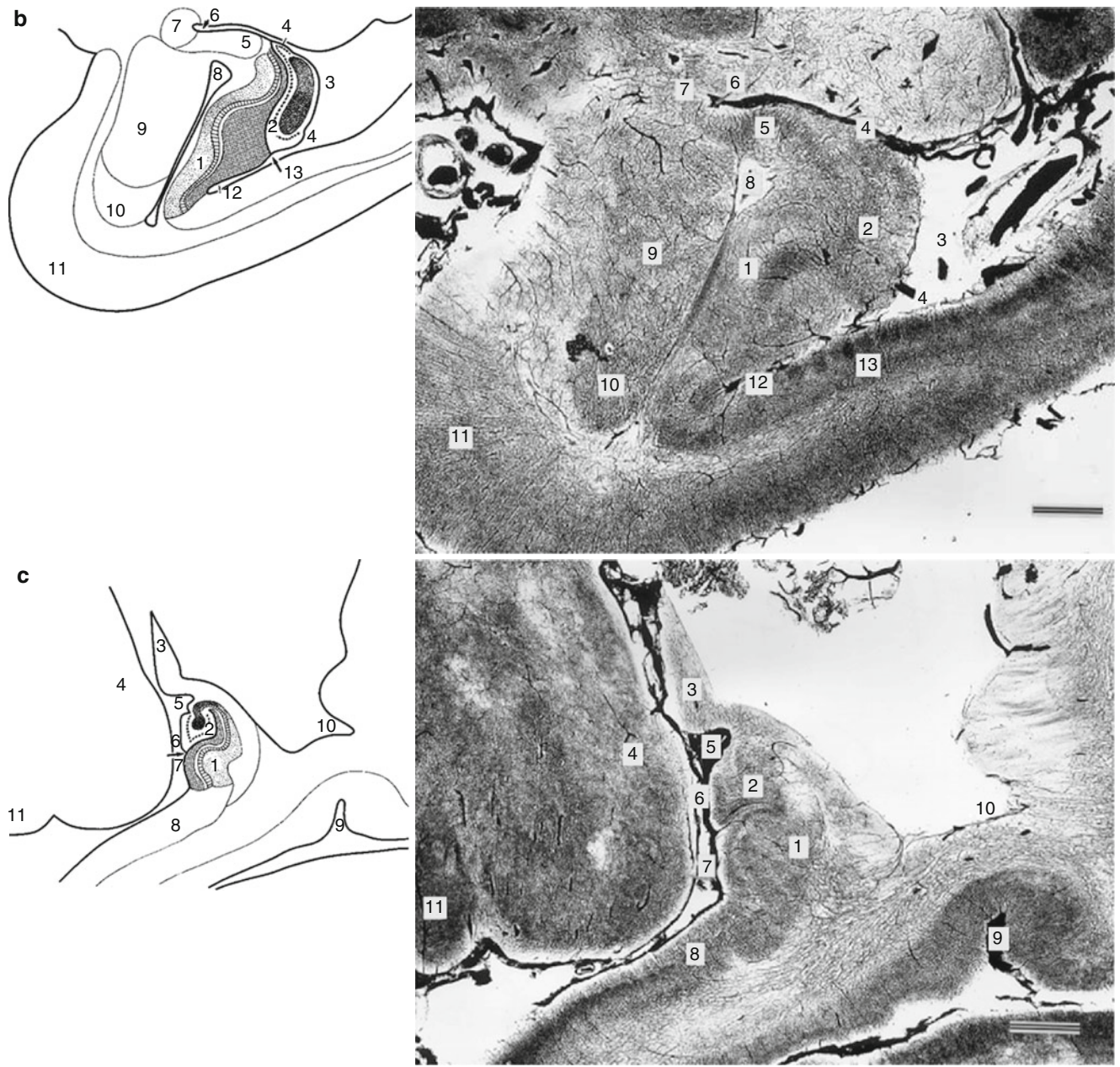
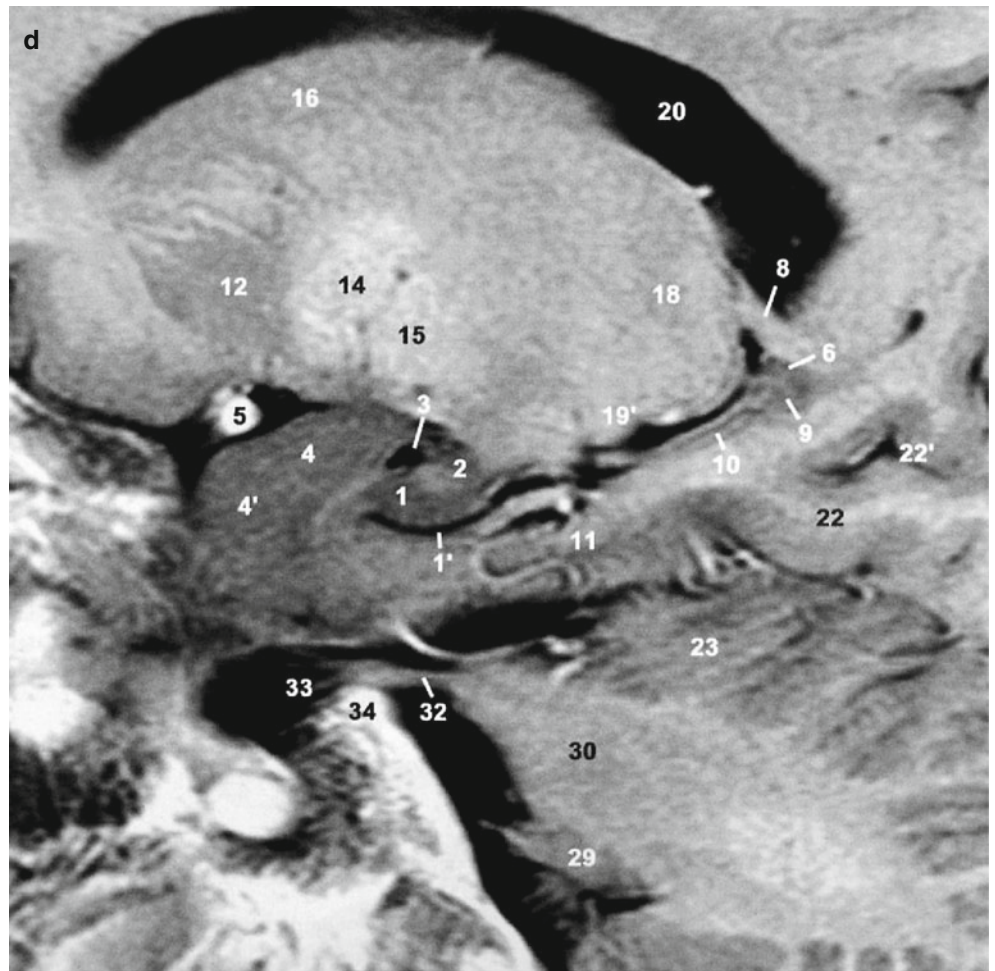


Fig. 7.15 (continued)

Fig. 7.15 (continued)



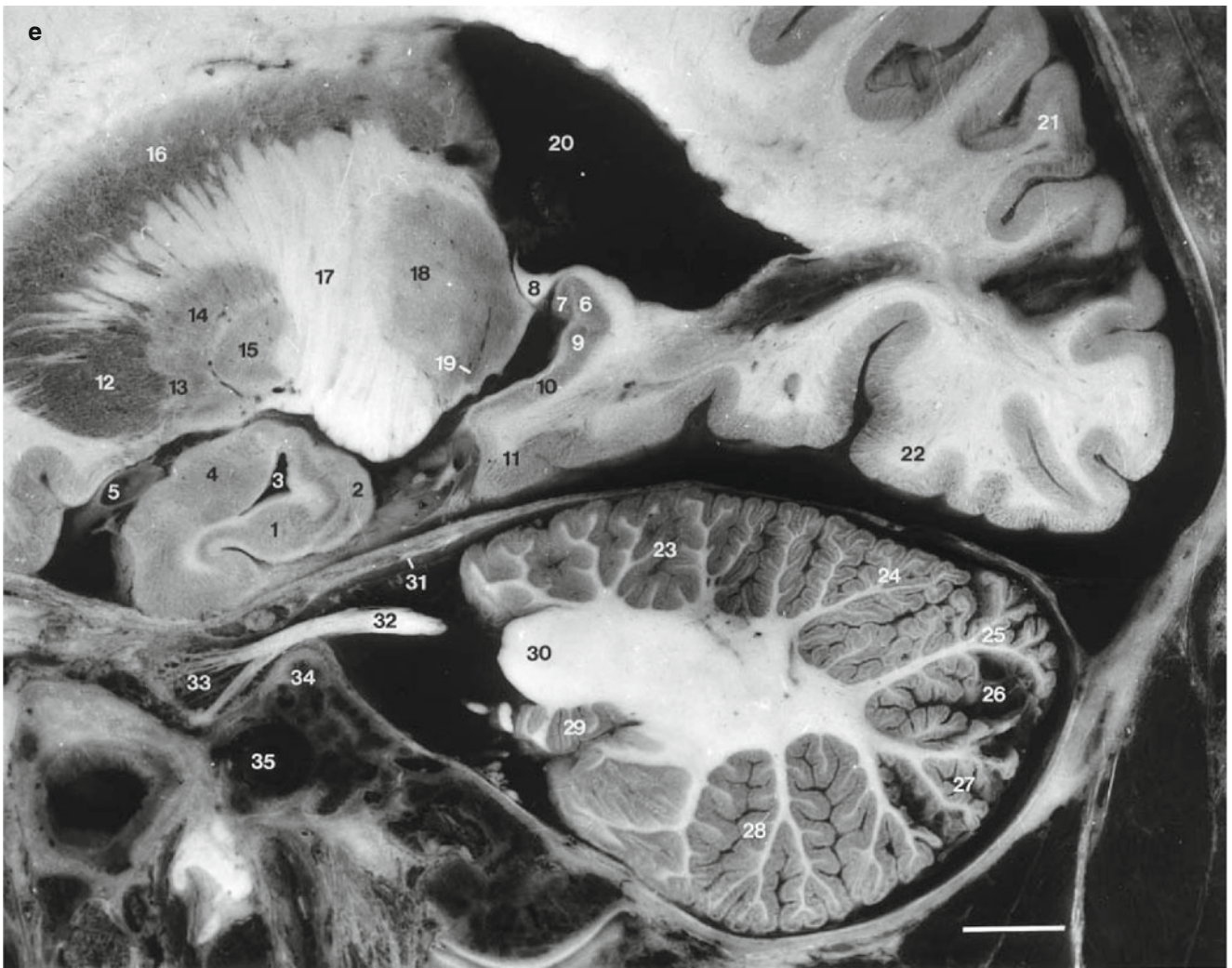


Fig. 7.15 (continued)

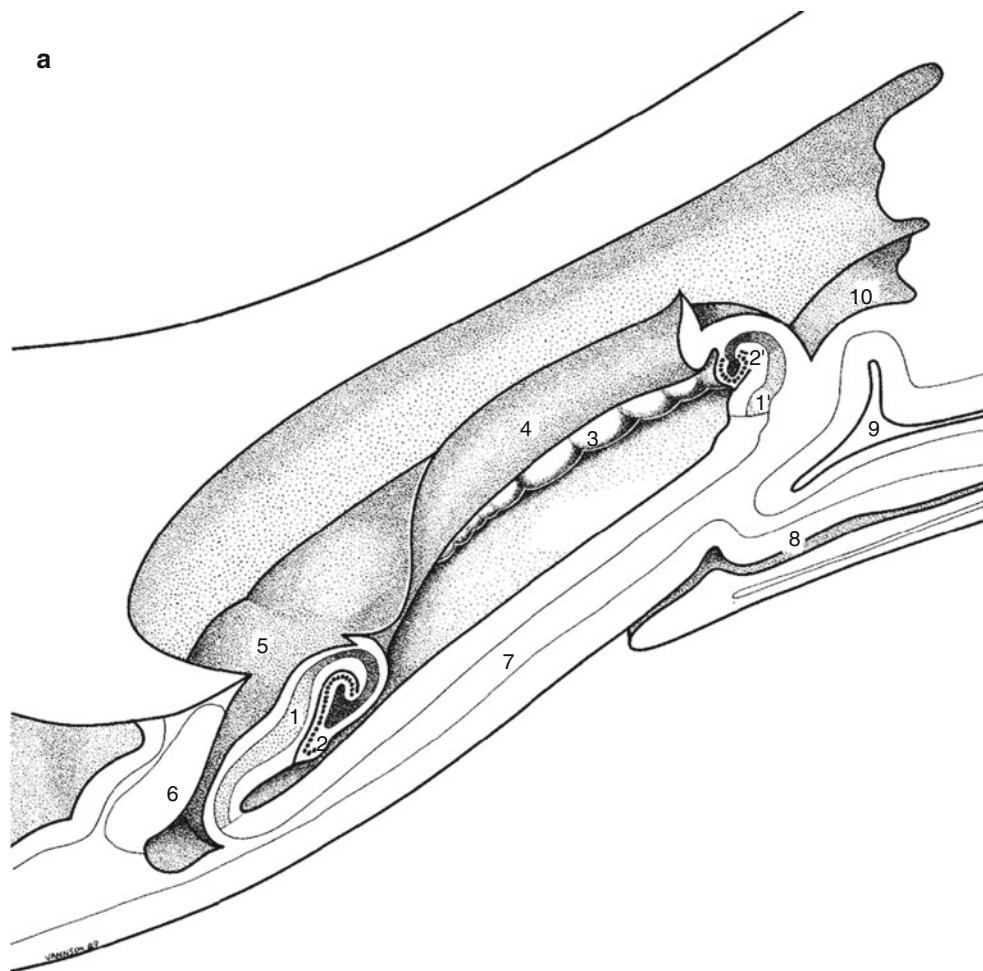


Fig. 7.16 (a) Sagittal section of hippocampus, showing plane of section. 1 cornu Ammonis in the head, 1' cornu Ammonis in the tail, 2 gyrus dentatus in the head, 2' gyrus dentatus in the tail, 3 margo denticulatus, 4 fimbria, 5 digitationes hippocampi, 6 amygdala, 7 parahippocampal gyrus, 8 collateral sulcus, 9 anterior calcarine sulcus, 10 calcar avis. (b) Sagittal section of hippocampal head. Intravascular India ink injection with explanatory diagram. The arrow indicates the superficial hippocampal sulcus. Note the maculate aspect of the capillary network in relation to the structure of the presubiculum (11) (see p. 17). Bar, 2.2 mm. 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 3 band of Giacomini, 4 uncal apex, 5 fimbria, 6 lateral geniculate body, 7 temporal horn of lateral ventricle, 8 basal nucleus of amygdala, 9 lateral nucleus of amygdala, 10 uncal sulcus, 11 presubiculum. (c) Sagittal section of hippocampal tail (middle segment). Intravascular India ink injection with explanatory diagram. The arrow indicates the superficial hippocampal sulcus. Bar, 2 mm. 1 cornu Ammonis (CA1–CA4),

2 gyrus dentatus, 3 fimbria, 4 pulvinar, 5 fasciola cinerea, 6 gyri of Andreas Retzius, 7 subiculum, 8 calcar avis, 9 atrium. (d) 3T MRI view. 1 hippocampal head, cornu Ammonis, 2 hippocampal head, gyrus dentatus, 2' fimbria, 3 uncal apex, 4 temporal (inferior) horn of the lateral ventricle, 5 amygdala, 6 subiculum, 7 uncal sulcus, 8 hippocampal tail, cornu Ammonis, 9 hippocampal tail, gyrus dentatus, 10 fimbria, 11 middle cerebral artery, 12 anterior commissure, lateral part, 13 putamen, 14 caudate nucleus, 15 globus pallidus, lateral part, 16 globus pallidus, medial part, 17 internal capsule, posterior limb, 18 pulvinar, 19 lateral geniculate body, 20 lateral ventricle, 21 superior occipital gyrus, 22 lingual gyrus, 23 transverse sinus, 24 quadrangular lobule, 25 simple lobule, 26 superior semilunar lobule, 27 horizontal fissure, 28 inferior semilunar lobule, 29 biventer lobule, 30 flocculus, 31 tentorium cerebelli, 32 trigeminal nerve, 33 temporal, petrous part, 34 trigeminal cave, 35 internal carotid artery. (e) Head section. Bar, 10 mm

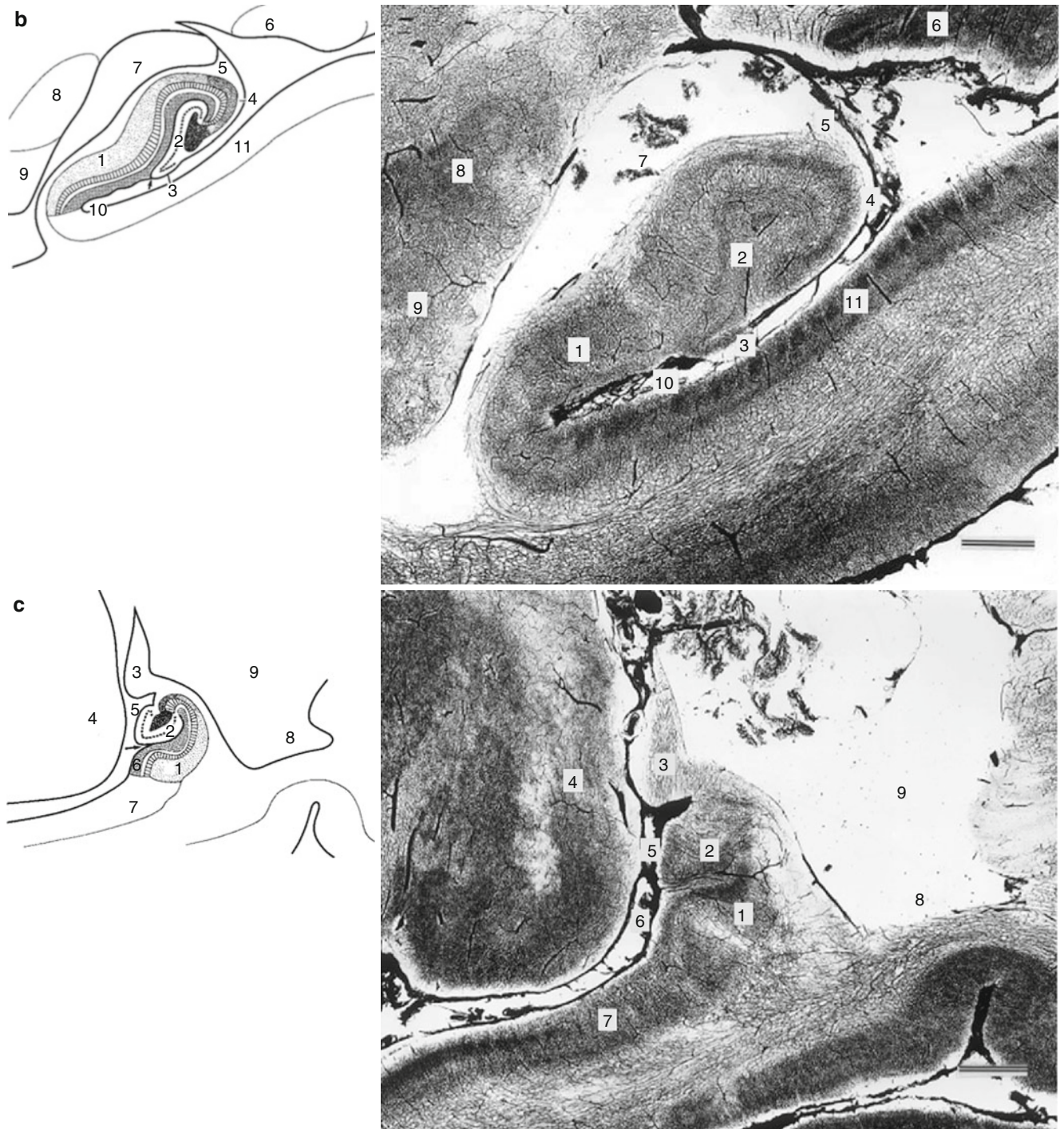
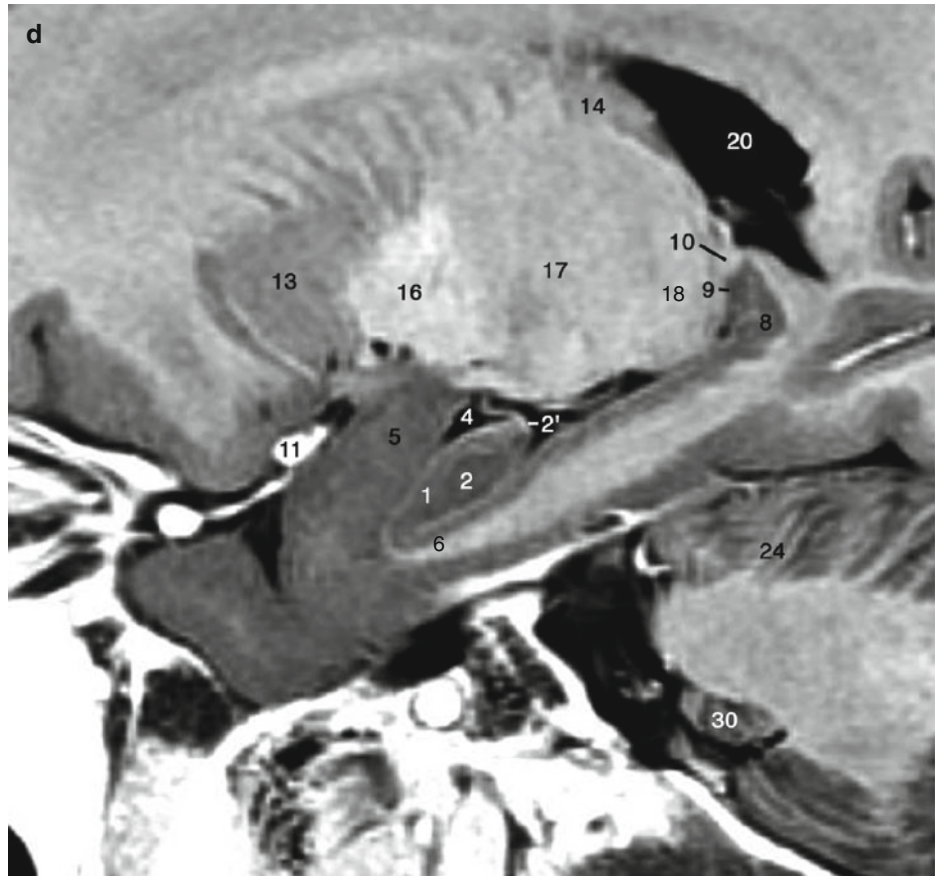


Fig. 7.16 (continued)

Fig. 7.16 (continued)



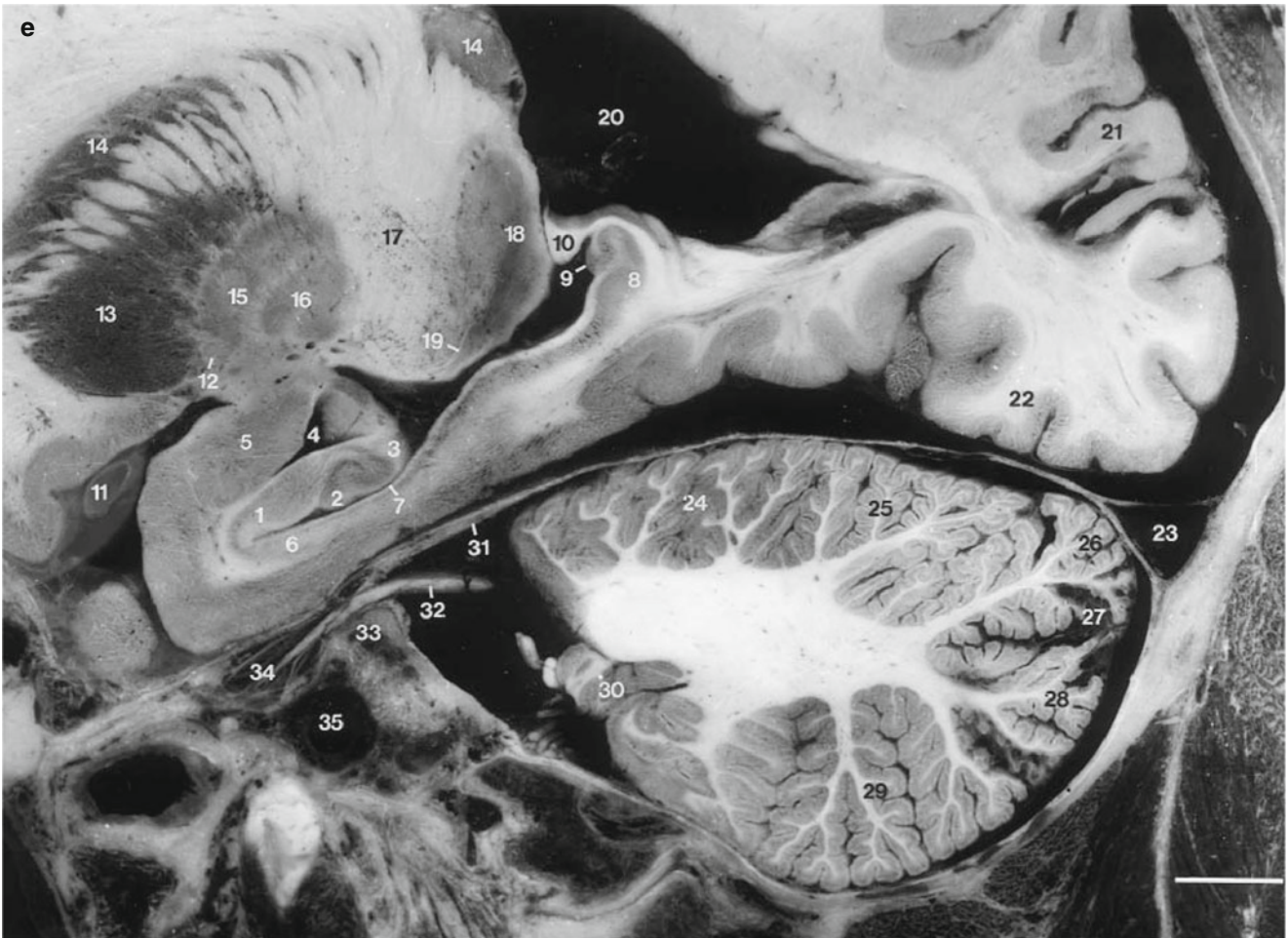


Fig. 7.16 (continued)

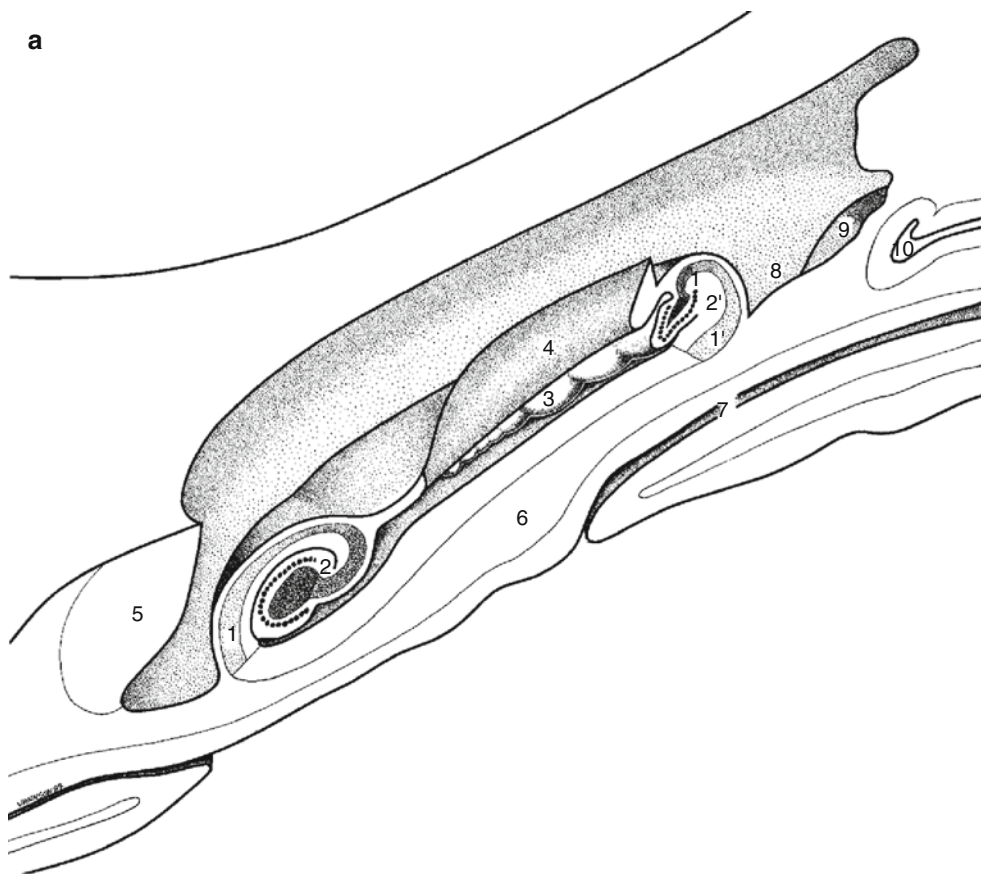


Fig. 7.17 (a) Sagittal section of hippocampus, showing plane of section. 1 cornu Ammonis in the head, 1' cornu Ammonis in the tail, 2 gyrus dentatus in the head, 2' gyrus dentatus in the tail, 3 margo denticulatus, 4 fimbria, 5 amygdala, 6 parahippocampal gyrus, 7 collateral sulcus, 8 collateral trigone, 9 calcar avis, 10 calcarine sulcus. (b) Sagittal section of hippocampal head. Intravascular India ink injection with explanatory diagram. Arrow indicates the superficial hippocampal sulcus. Bar, 2 mm, 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 2' band of Giacomini, 3 fimbria, 4 stria terminalis, 5 tail of caudate nucleus, 6 basal nucleus of amygdala, 7 lateral nucleus of amygdala, 8 temporal horn of lateral ventricle (uncal recess), 9 uncal sulcus, 10 subiculum, 11 lateral geniculate body. (c) Sagittal section of hippocampal tail (initial segment following the hippocampal body). Vascular injection with explanatory diagram. Arrow indicates the superficial hippocampal sulcus. Bar, 2.5 mm 1 cornu Ammonis (CA1–CA4), 2 gyrus

dentatus, 3 fimbria, 4 margo denticulatus, 5 pulvinar, 6 lateral geniculate body, 7 subiculum, 8 atrium. (d) 3T MRI view. 1 hippocampal head cornu Ammonis, 2 hippocampal head, gyrus dentatus, 3 fimbria, 4 temporal (inferior) horn of the lateral ventricle, 5 amygdala, 6 subiculum, 7 uncal sulcus, 8 hippocampal tail, cornu Ammonis, 8' gyri of Andreas Retzius, 9 hippocampal tail, gyrus dentatus, 10 fimbria, 10' alveus, 11 middle cerebral artery, 12 anterior commissure, lateral part, 13 putamen, 14 globus pallidus, lateral part, 15 globus pallidus, medial part, 16 caudate nucleus, 17 pulvinar, 18 lateral ventricle, 19 middle occipital gyrus, 20 inferior occipital gyrus, 21 fusiform gyrus, 22 collateral sulcus, 23 parahippocampal gyrus, 24 quadrangular lobule, 25 simple lobule, 26 superior semilunar lobule, 27 transverse sinus, 28 horizontal fissure, 29 inferior semilunar lobule, 30 biventer lobule, 31 flocculus, 32 tentorium cerebelli, 33 temporal, petrous part, 34 internal carotid artery, 35 auditory tube. (e) Head section. Bar, 10 mm

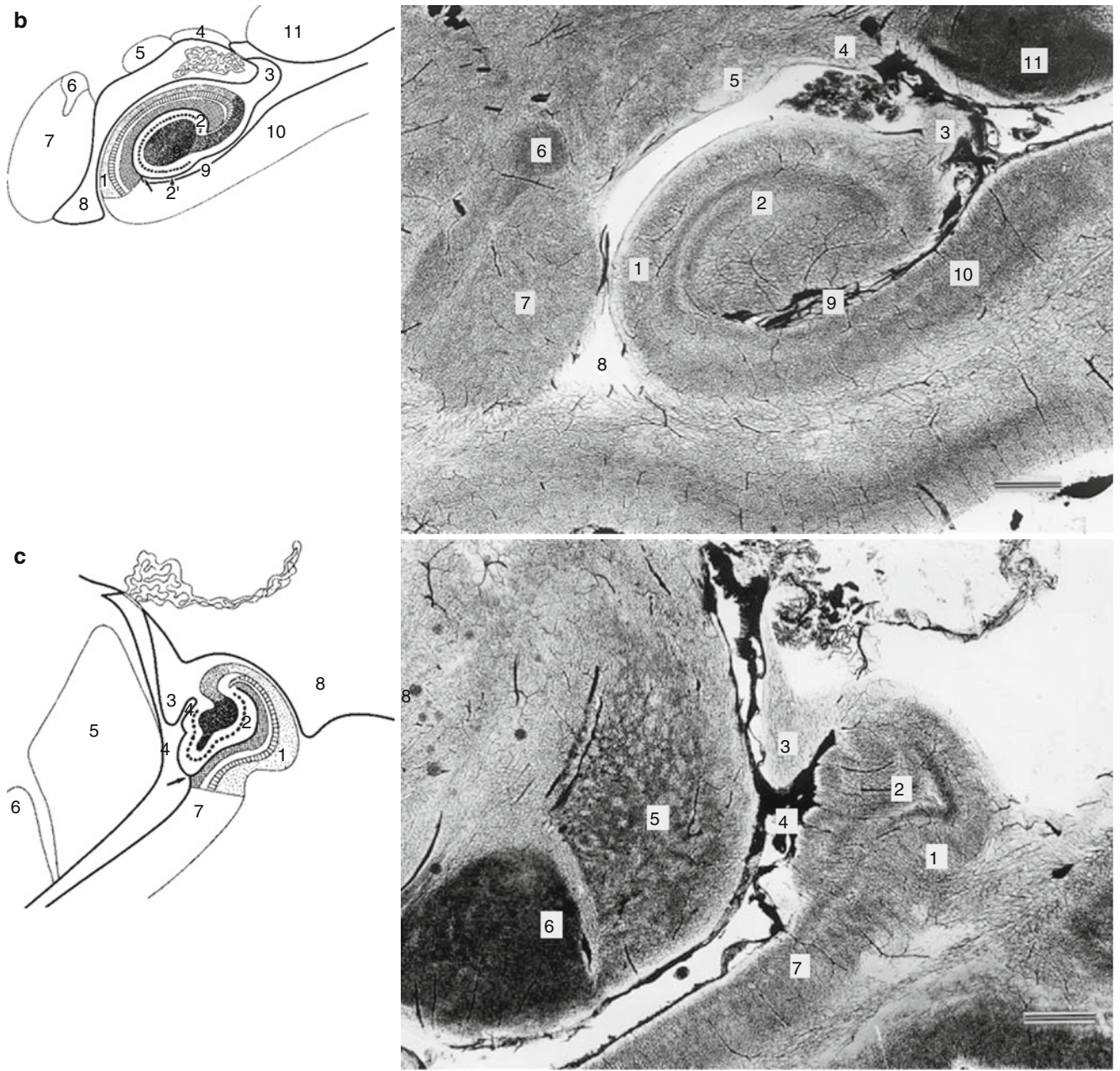


Fig. 7.17 (continued)

Fig. 7.17 (continued)



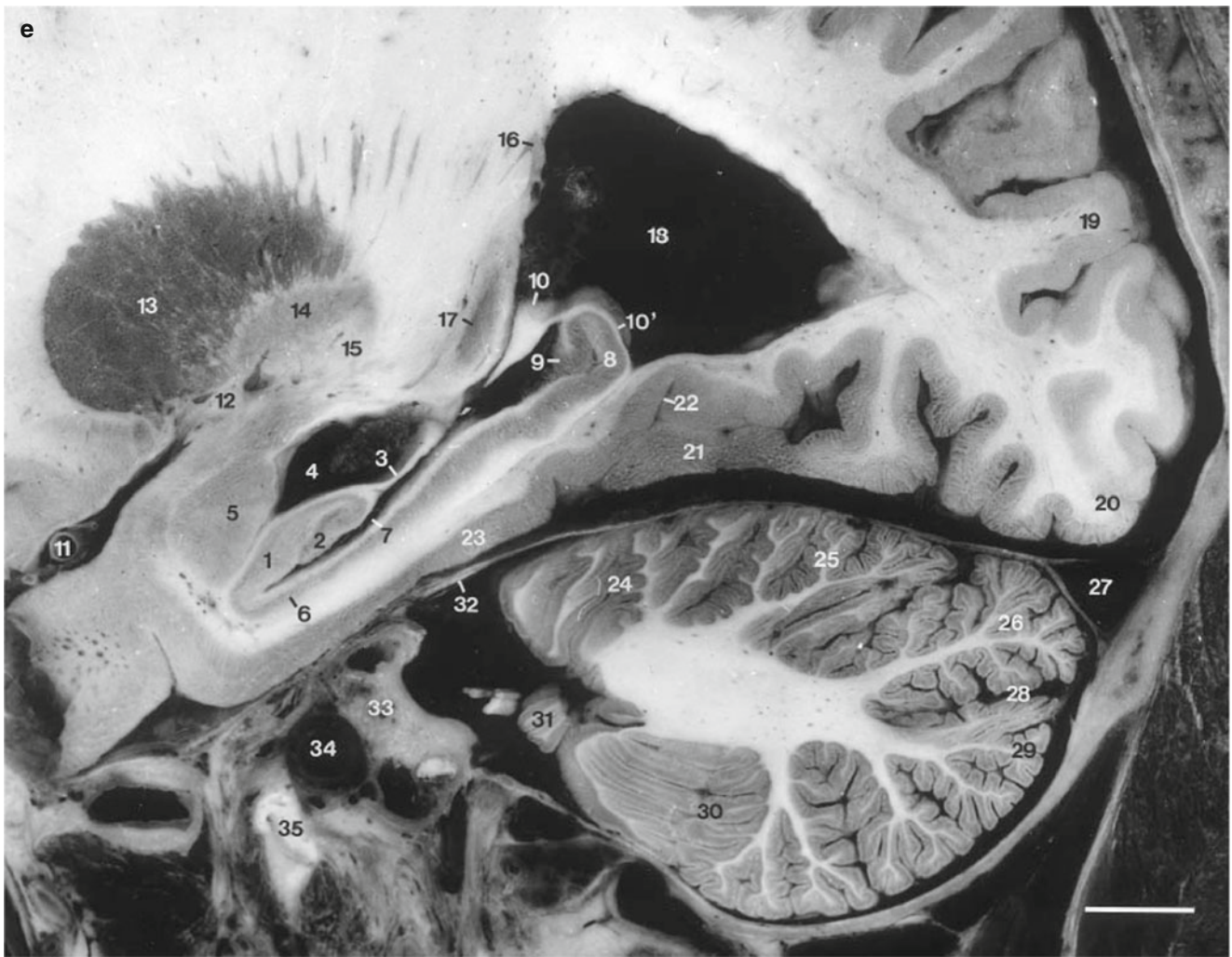


Fig. 7.17 (continued)

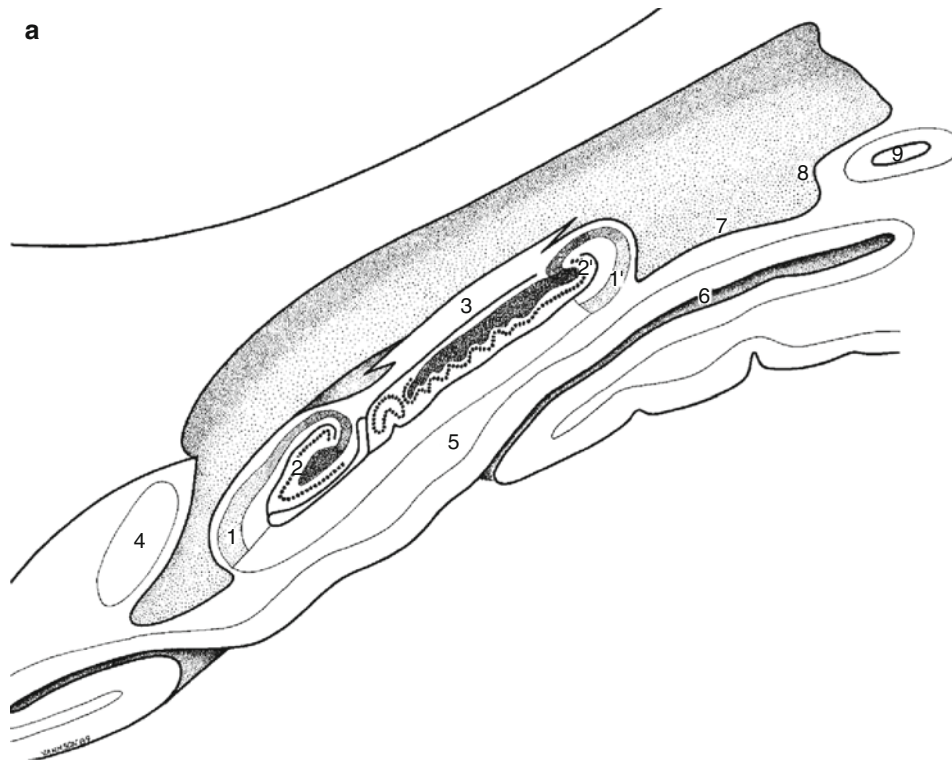


Fig. 7.18 (a) Sagittal section of hippocampus, showing plane of section. 1 cornu Ammonis in the head, 1' cornu Ammonis in the body, 2 gyrus dentatus in the head, 2' gyrus dentatus in the body, 3 fimbria, 4 amygdala, 5 parahippocampal gyrus, 6 collateral sulcus, 7 collateral trigone, 8 calcar avis, 9 calcarine sulcus. (b) Sagittal section of hippocampus. Intravascular India ink injection with explanatory diagram. Arrows indicate the superficial hippocampal sulcus. Bar, 3 mm 1 cornu Ammonis in the head (CA1–CA4), 1' cornu Ammonis in the body (CA1–CA4), 2 gyrus dentatus in the head, 2' gyrus dentatus in the body, 3 fimbria, 4 stria terminalis, 5 caudate nucleus, 6 lateral nucleus of amygdala, 7 temporal horn of lateral ventricle (uncal recess), 8 subiculum, 9 parahippocampal gyrus, 10 collateral trigone, * vestigial hippocampal sulcus. (c) 3T MRI view. 1 hippocampal head, cornu Ammonis, 1' inferior part of CA1 with a folded aspect, 2 hippocampal head, gyrus dentatus, 3 fimbria, 4 temporal (inferior) horn of the lateral ventricle, 5 Amygdala, 8 putamen, 8' striate vessels,

10 atrium of the lateral ventricle, 15 collateral sulcus, 15' collateral trigone, 16 fusiform gyrus, 17 parahippocampal gyrus, 18 quadrangular lobule, 24 tentorium cerebelli, * vestigial hippocampal sulcus. (d) Head section. Bar, 10 mm. 1 hippocampal head, gyrus dentatus, 3 temporal (inferior horn) of the lateral ventricle, 4 amygdala, 5 hippocampal body, cornu Ammonis, 5' inferior part of the cornu Ammonis with a folded aspect, 6 fimbria, 6' alveus, 7 gyrus dentatus (margo denticulatus), 8 subiculum, 9 parahippocampal gyrus, 10 middle cerebral artery, 11 anterior commissure, lateral part, 12 putamen, 13 globus pallidus, lateral part, 14 caudate nucleus, 15 pulvinar, 16 atrium of the lateral ventricle, 17 middle occipital gyrus, 18 inferior occipital gyrus, 19 transverse sinus, 20 fusiform gyrus, 21 collateral sulcus, 22 quadrangular lobule, 23 simple lobule, 24 superior semilunar lobule, 25 horizontal fissure, 26 inferior semilunar lobule, 27 biventer lobule, 28 tentorium cerebelli, 29 temporal, petrous part, 30 internal carotid artery, 31 auditory tube



Fig. 7.18 (continued)

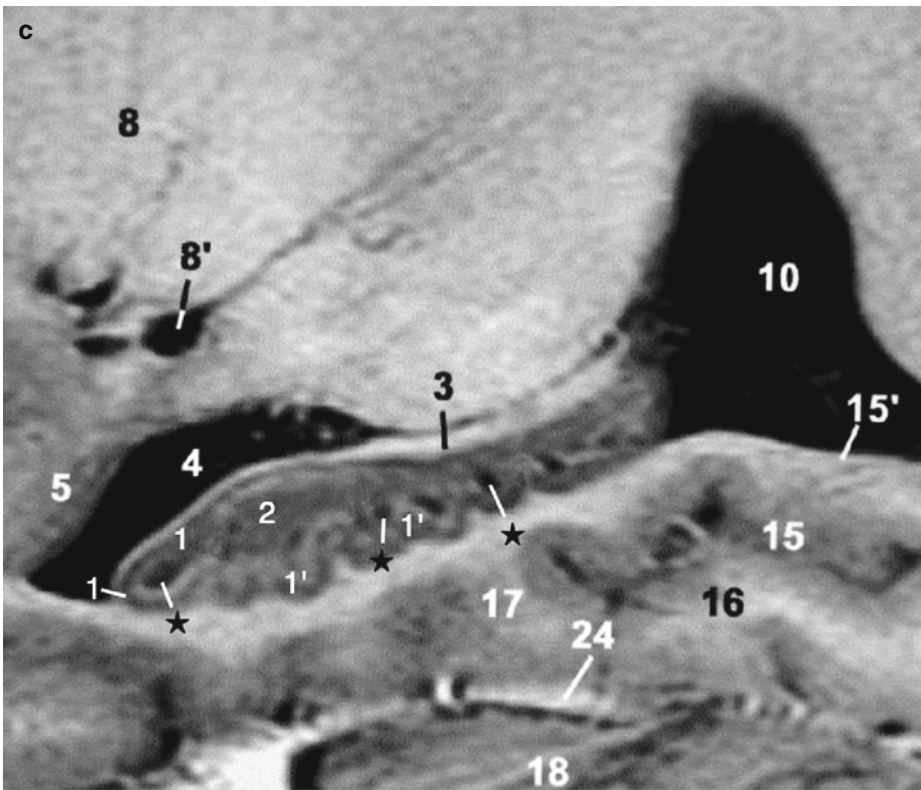


Fig. 7.18 (continued)

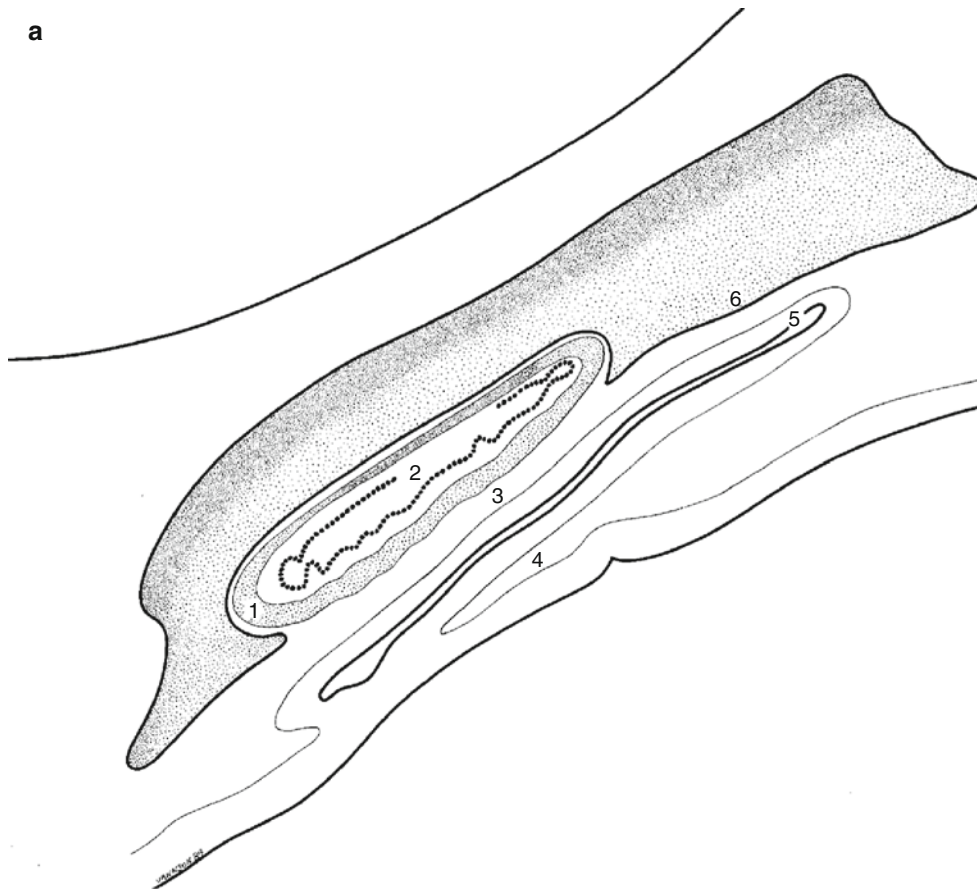


Fig. 7.19 (a) Sagittal section of hippocampus, showing plane of section. 1 cornu Ammonis in the body, 2 gyrus dentatus, 3 parahippocampal gyrus, 4 fusiform gyrus, 5 collateral sulcus, 6 collateral trigone. (b) Sagittal section of hippocampus. Intravascular India ink injection with explanatory diagram. Bar, 3 mm 1 cornu Ammonis (CA1, CA2), 1' cornu Ammonis (CA4), 1'' alveus, 2 gyrus dentatus, 3 collateral trigone, 4 atrium, 5 caudate nucleus, 6 optic radiations, 7 temporal horn, 8 parahippocampal gyrus, 9 fusiform gyrus, * vestigial hippocampal sulcus. (c) 3T MRI view. 1 cornu Ammonis, 1' inferior part of CA with a folded aspect, 2 gyrus dentatus, 3 fimbria, 4 temporal (inferior) horn of the

lateral ventricle, 5 amygdala, 6 claustrum, 7 insula, 8 putamen, 8' striate vessels, 9 caudate nucleus, 10 atrium of the lateral ventricle, 11 superior occipital gyrus, 12 middle occipital gyrus, 13 inferior occipital gyrus, 14 fourth occipital gyrus, 15 collateral sulcus, 15' collateral trigone, 16 fusiform gyrus, 17 parahippocampal gyrus, 18 simple lobule, 19 superior semilunar lobule, 20 transverse sinus, 21 horizontal fissure, 22 inferior semilunar lobule, 23 biventer lobule, 24 tentorium cerebelli, 25 temporal, petrous part, * vestigial hippocampal sulcus. (d) Head section. Bar, 10 mm

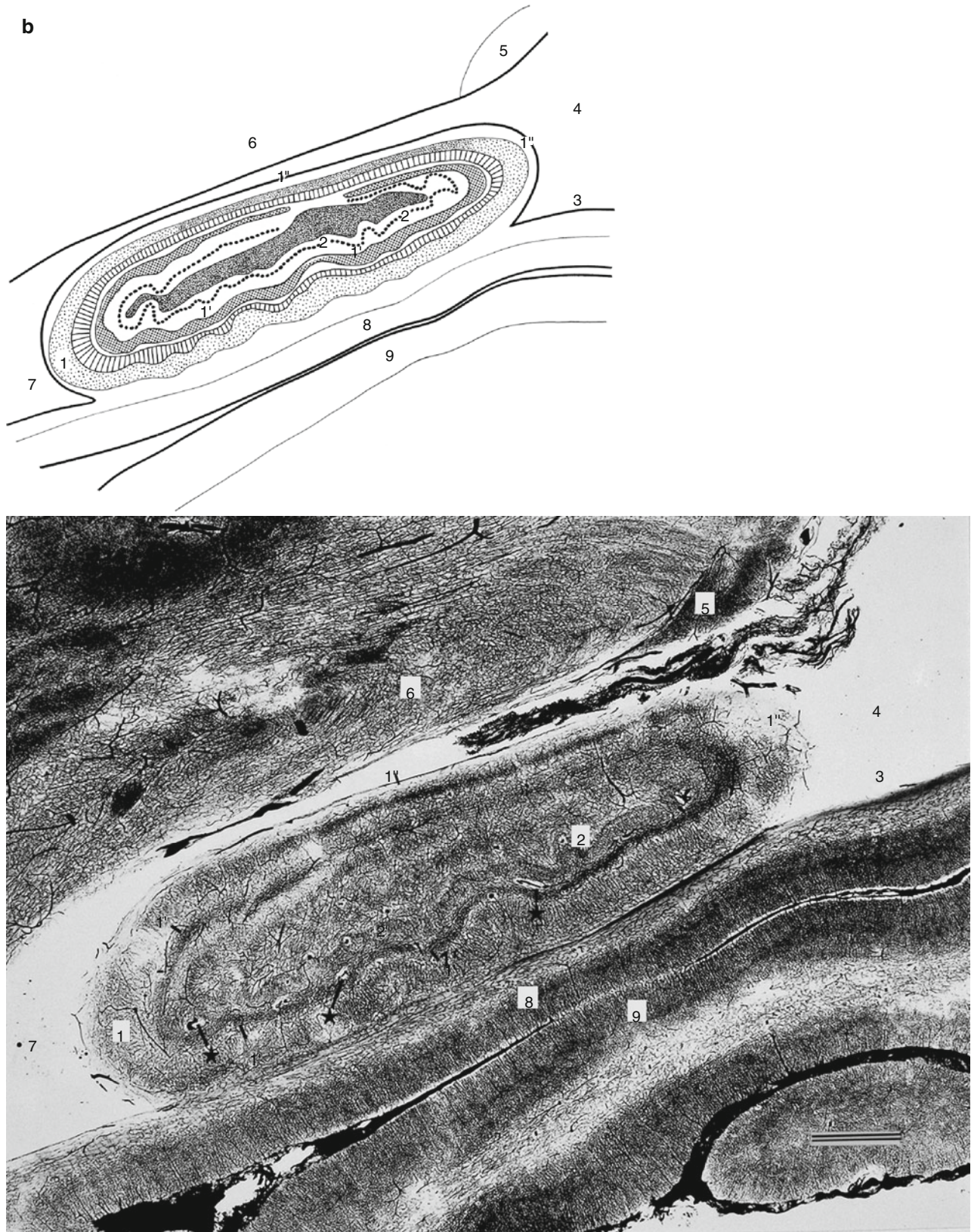


Fig. 7.19 (continued)

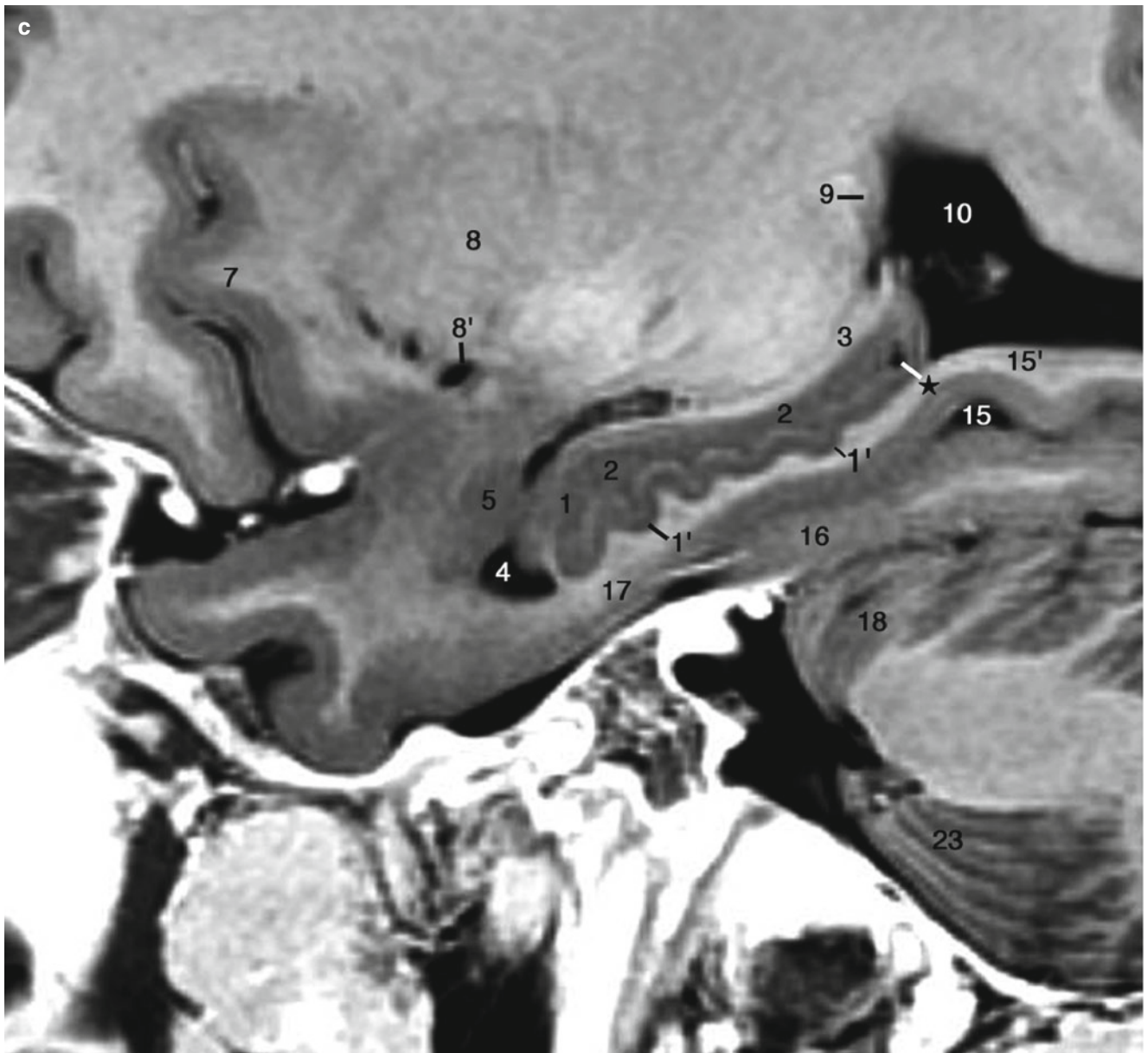


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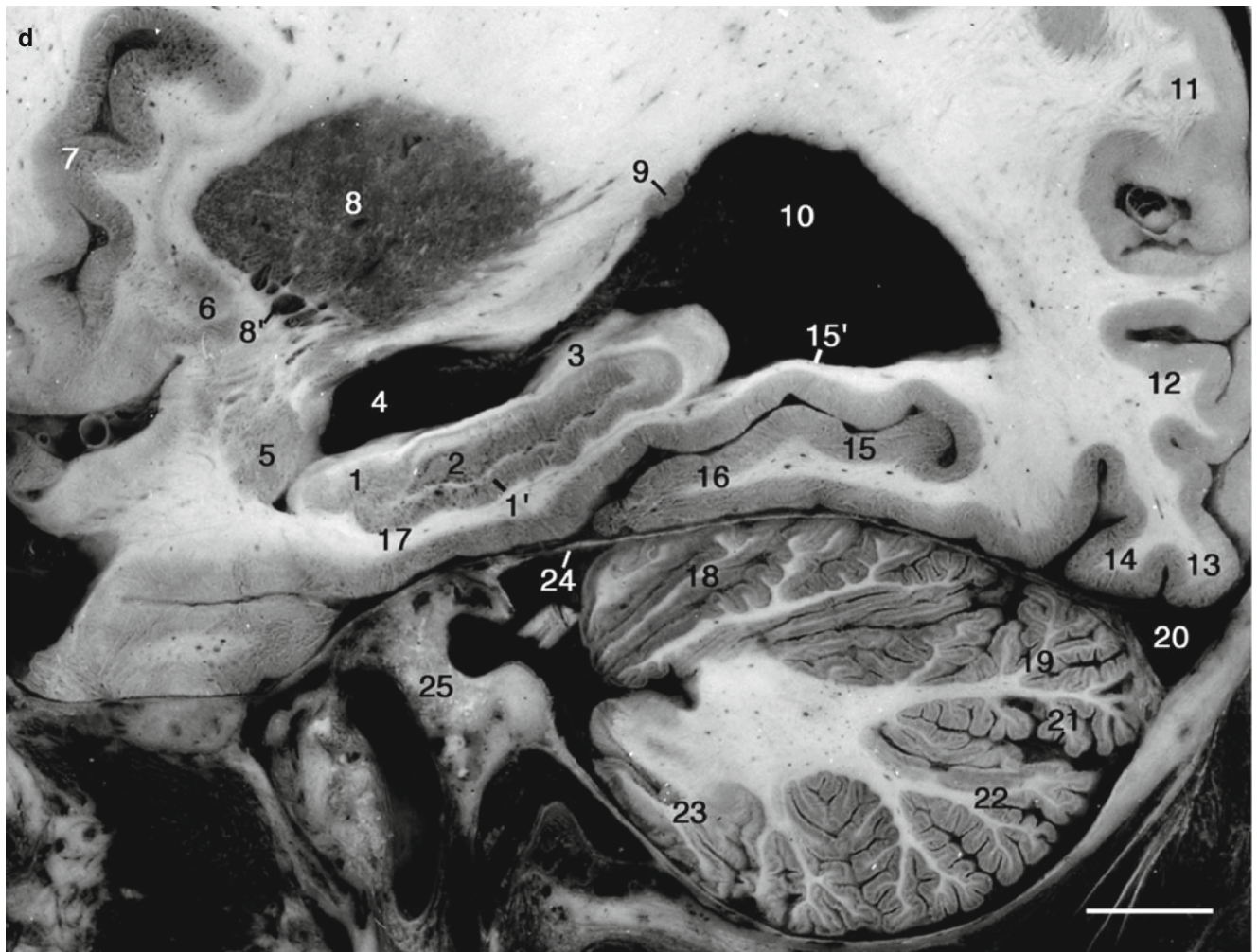


Fig. 7.19 (continued)

7.3 Axial Sections

Figures 7.21, 7.22, 7.23, 7.24, 7.25, and 7.26 show serial axial sections of the hippocampus from upper to lower levels.

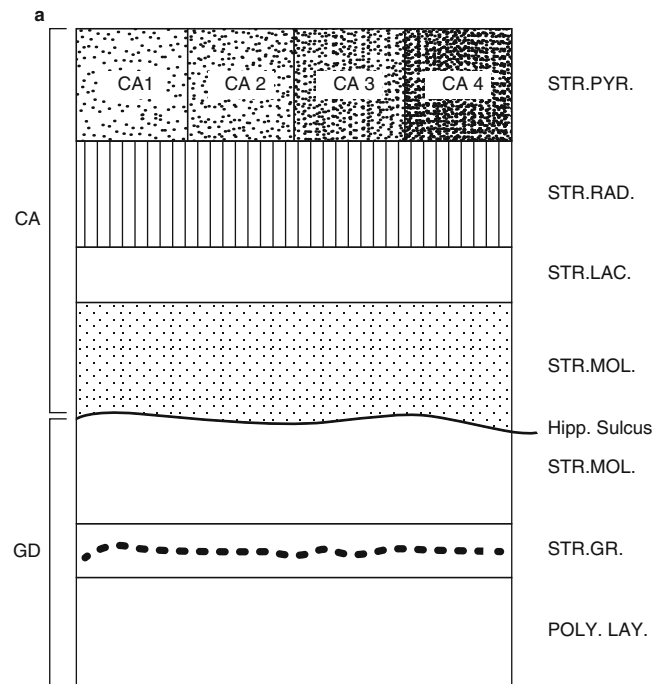


Fig. 7.20 Structure of the hippocampus *CA* cornu Ammonis, *STR. PYR.* stratum pyramidale, *STR. RAD.* stratum radiatum, *STR. LAC.* stratum lacunosum, *STR. MOL.* stratum moleculare, *Hipp. Sulcus* vestigial hippocampal sulcus, *GD* gyrus dentatus, *STR. GR.* stratum granulosum, *POLY. LAY.* polymorphic layer

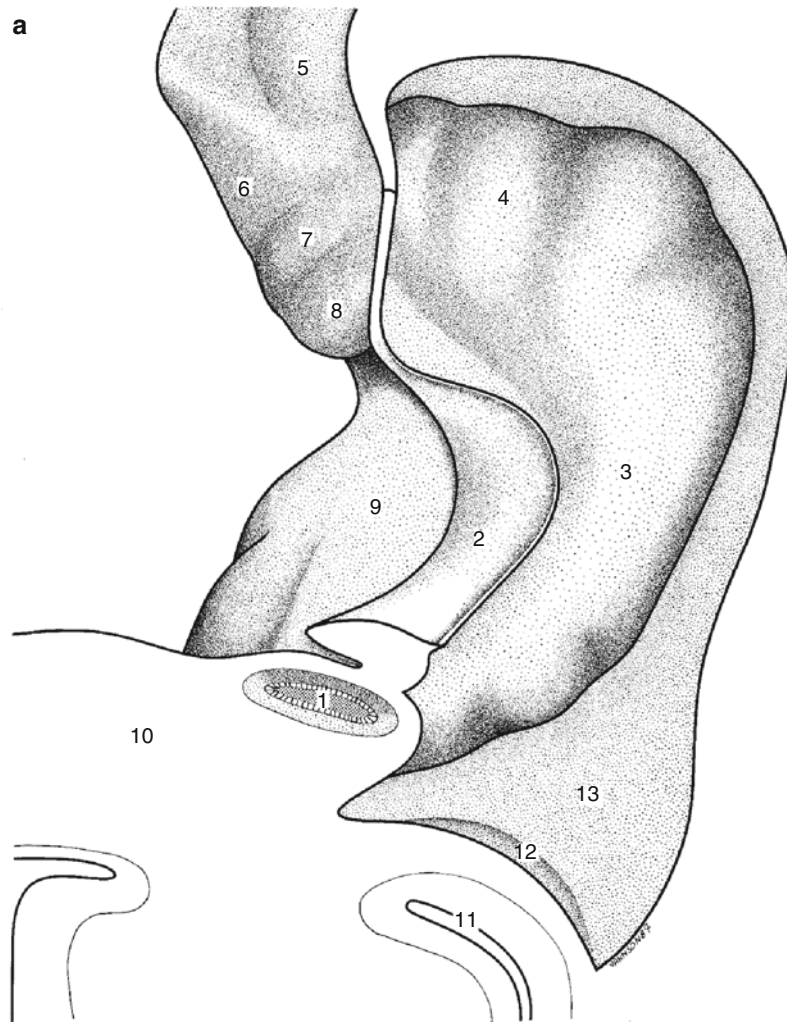


Fig. 7.21 (a) Axial section of hippocampal tail, showing plane of section and structure 1 hippocampal tail, cornu Ammonis (CA1, CA3), 2 fimbria, 3 hippocampal body, 4 hippocampal head (digitationes hippocampi), 5 semilunar gyrus, 6 uncinatus gyrus, 7 band of Giacomini, 8 uncus apex, 9 parahippocampal gyrus, 10 splenium, 11 anterior calcarine sulcus, 12 calcar avis, 13 collateral trigone. (b) Axial section of hippocampal tail. Intravascular India ink injection. Bar, 2.3 mm 1 cornu Ammonis, 2 fimbria, 3 atrium of the lateral ventricle, 4 caudate nucleus, 5 pulvinar, 6 transverse fissure, lateral part, 7 splenium. (c) 3T MRI view. 1 hippocampal tail, cornu Ammonis, 2 fimbria, 3 tail of caudate nucleus, 4 atrium of the lateral ventricle, 5 splenium of corpus callosum,

6 pulvinar, 7 stria medullaris, 7' internal cerebral veins, 8 third ventricle, 9 dorsomedial thalamic nucleus, 10 lateral posterior thalamic nucleus, 11 ventral lateral thalamic nucleus, 12 anterior thalamic nucleus, 13 fornix, 14 frontal (anterior) horn of the lateral ventricle, 15 genu of corpus callosum, 16 head of caudate nucleus, 17 internal capsule, anterior limb, 18 internal capsule, genu, 19 internal capsule, posterior limb, 20 putamen, 21 claustrum, 22 insula, 23 precentral gyrus, 24 central sulcus, 25 postcentral gyrus, 26 superior temporal gyrus, 27 superior temporal sulcus, 28 middle temporal gyrus, 29 calcarine sulcus and striate cortex, 30 parieto-occipital fissure, 31 cingulate gyrus. (d) Head section. Bar, 10 mm



Fig. 7.21 (continued)

Fig. 7.21 (continued)

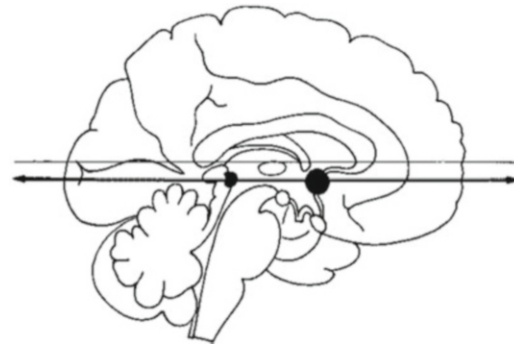




Fig. 7.21 (continued)

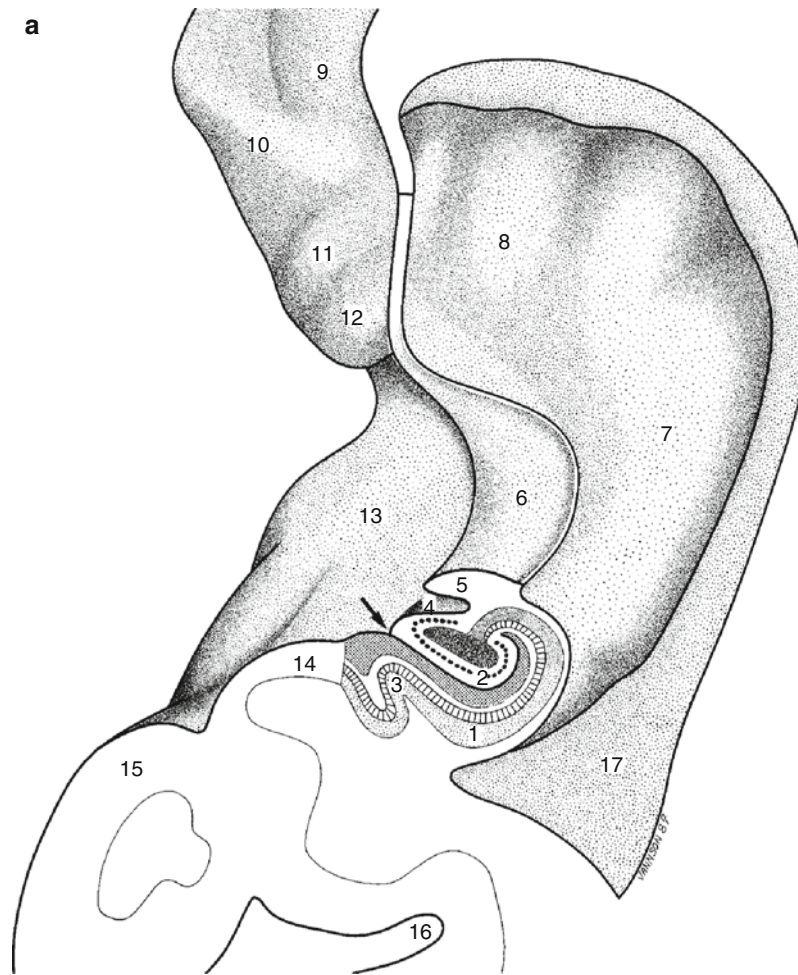


Fig. 7.22 (a) Axial section of hippocampal tail, showing plane of section and structure. *Arrow* indicates the superficial hippocampal sulcus 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 3 fold of CA1 and gyri of Andreas Retzius (not clearly visible at the surface here), 4 margo denticulatus, 5 cut surface of the fimbria, 6 fimbria, 7 hippocampal body, 8 hippocampal head (digitationes hippocampi), 9 semilunar gyrus, 10 uncinat gyrus, 11 band of Giacomini, 12 uncal apex, 13 parahippocampal gyrus, 14 subiculum, 15 isthmus, 16 anterior calcarine sulcus, 17 collateral eminence. (b) Axial section of hippocampal tail. Intravascular India ink injection. *Bar*, 2 mm 1 cornu Ammonis, 2 gyrus dentatus, 3 fold of CA1 and gyri of Andreas Retzius (not clearly visible at the surface here), 4 margo denticulatus, 5 fimbria, 6 tail of caudate nucleus, 7 stria terminalis, 8 pulvinar, 9 transverse fissure, lateral part, 10 subiculum, 11 temporal horn of the lateral ventricle. (c) 3T MRI view. 1 hippocampal

tail, cornu Ammonis, 2 hippocampal tail, gyrus dentatus, 3 gyrus of Andreas Retzius, 4 fimbria, 5 tail of caudate nucleus, 6 pulvinar, 7 ventral posterolateral thalamic nucleus, 8 superior colliculus, 9 pineal gland, 10 posterior commissure, 11 third ventricle, 12 dorsomedial thalamic nucleus, 13 ventral lateral thalamic nucleus, 14 mamillothalamic tract, 15 interthalamic adhesion, 16 column of fornix, 16' anterior commissure, lateral part, 17 lateral ventricle, frontal horn, 18 head of caudate nucleus, 19 internal capsule, anterior limb, 20 claustrum, 21 insula, 22 putamen, 23 globus pallidus, lateral part, 24 globus pallidus, medial part, 25 internal capsule, posterior limb, 26 lateral fissure, 27 superior temporal gyrus, 28 superior temporal sulcus, 29 middle temporal gyrus, 30 optic radiations, 31 occipital horn of the lateral ventricle, 32 isthmus, 33 anterior calcarine sulcus, 34 lingual gyrus, 35 culmen, 36 tentorium cerebelli, 37 quadrigeminal cistern. (d) Head section. *Bar*, 10 mm

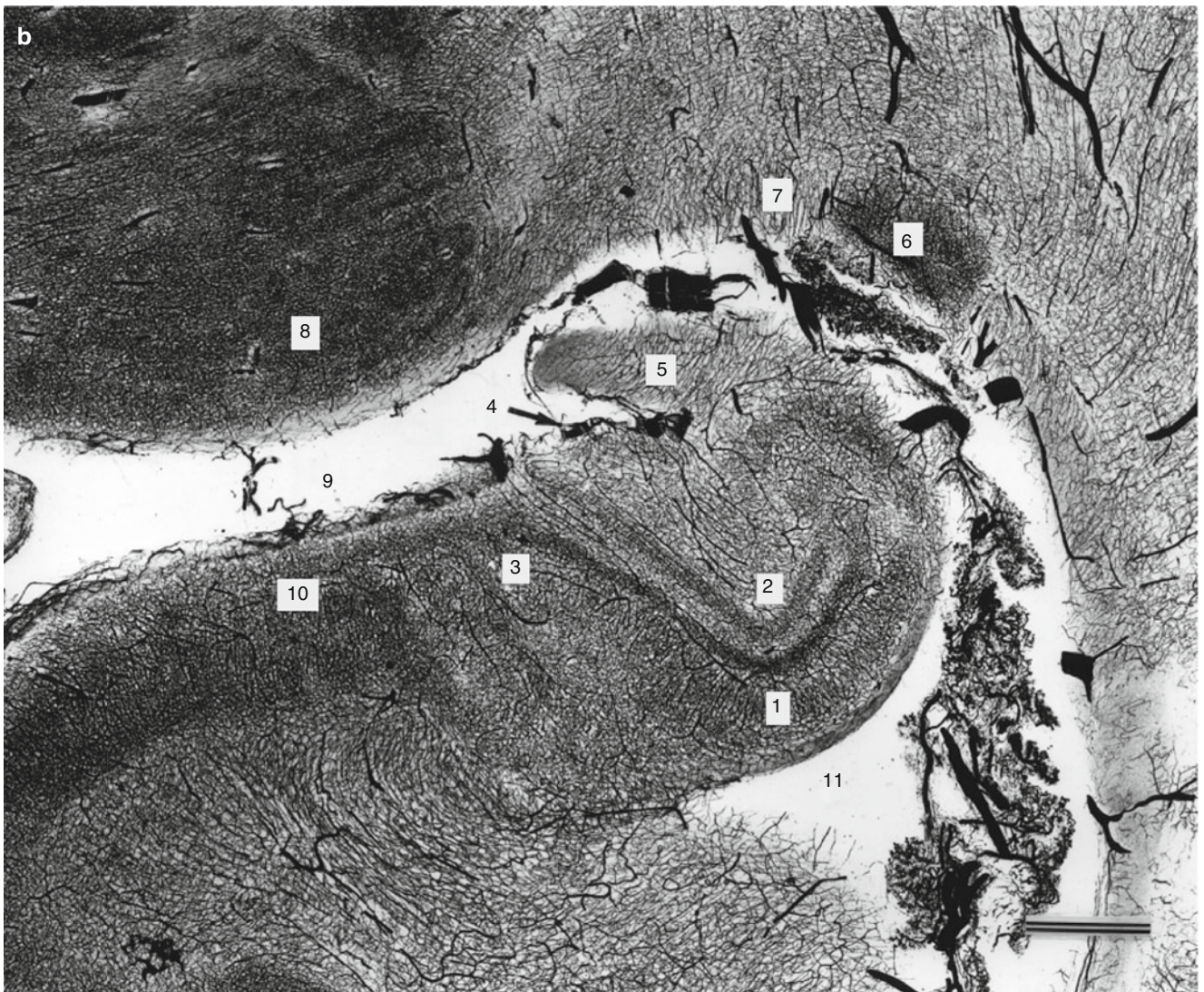
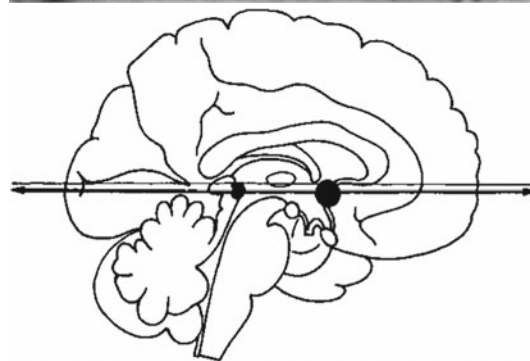
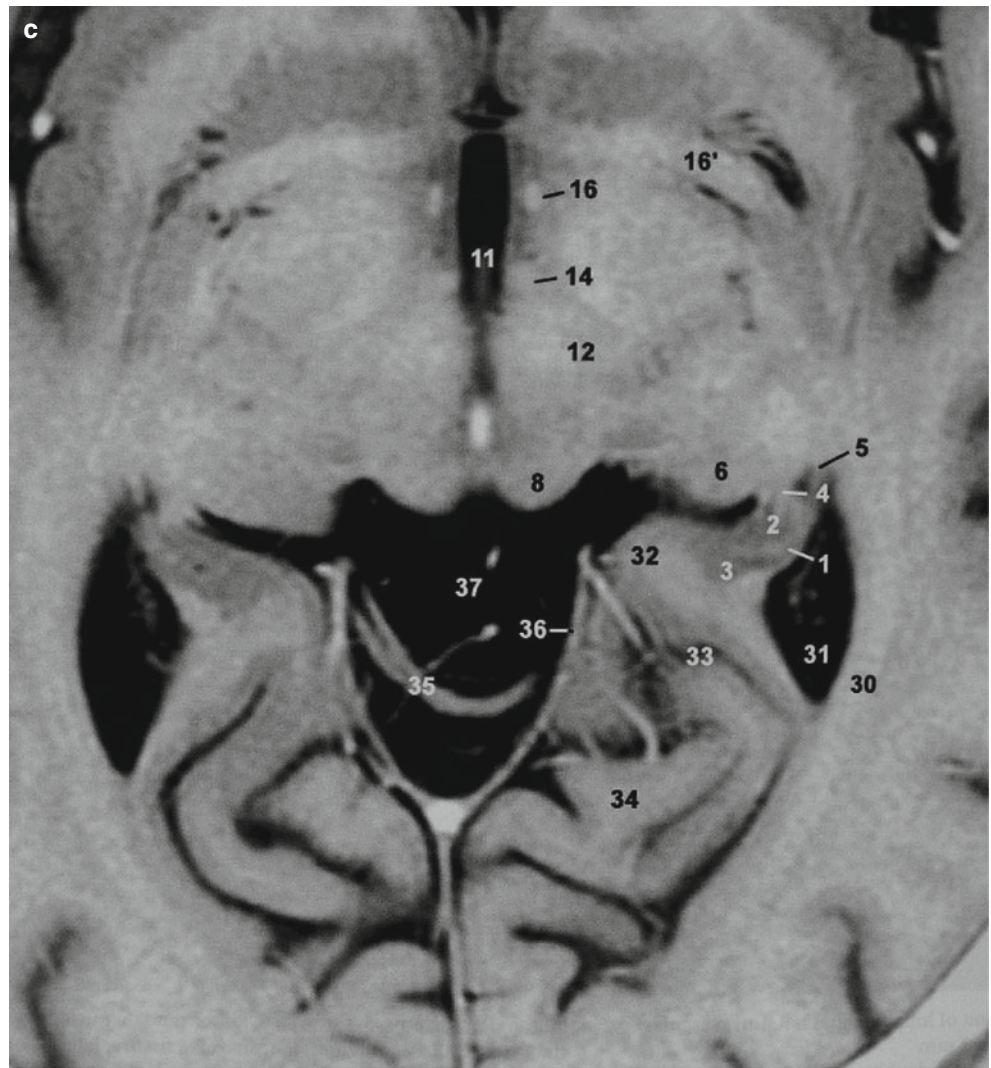


Fig. 7.22 (continued)

Fig. 7.22 (continued)



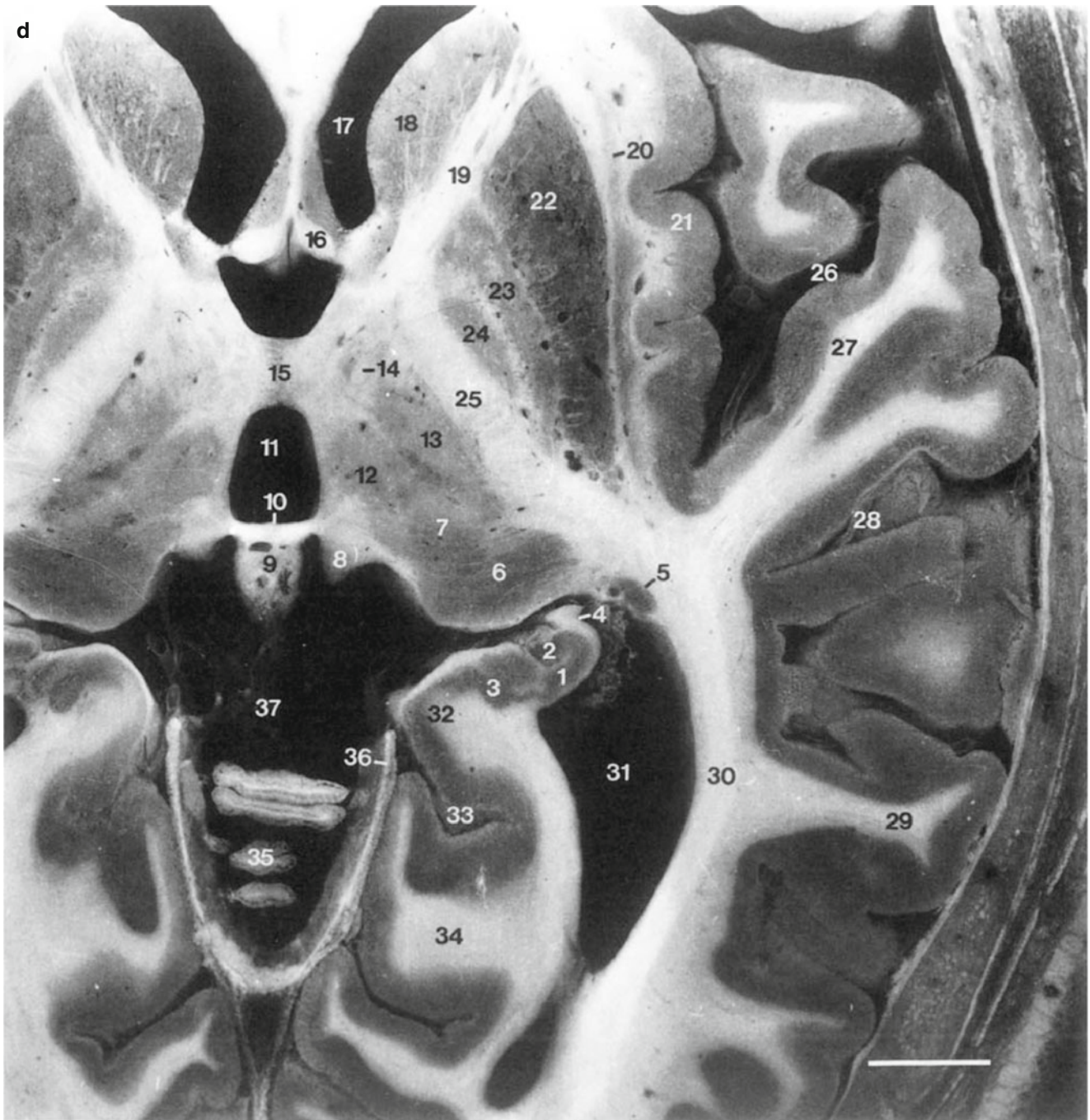


Fig. 7.22 (continued)

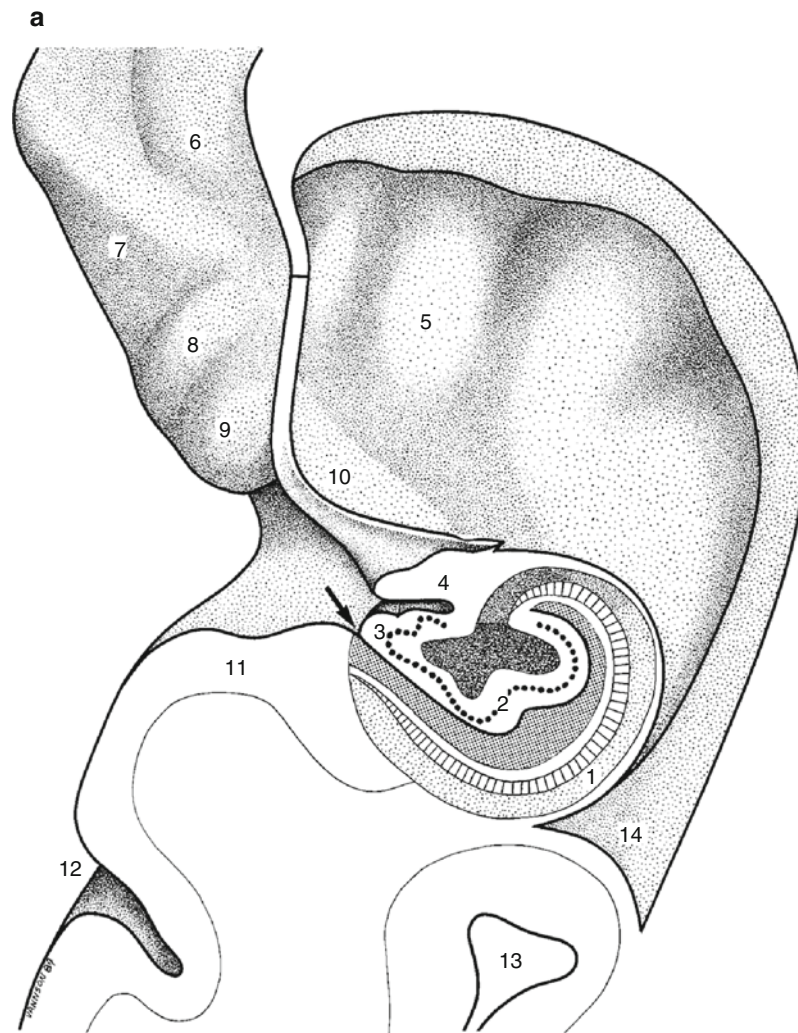


Fig. 7.23 (a) Axial section of hippocampal body, showing plane of section and structure. Arrow indicates the superficial hippocampal sulcus. 1 cornu Ammonis (CA1–CA4), 2 gyrus dentatus, 3 margo denticulatus, 4 cut surface of fimbria, 5 hippocampal head (digitations hippocampi), 6 semilunar gyrus, 7 uncinatus gyrus, 8 band of Giacomini, 9 uncus apex, 10 fimbria, 11 subiculum, 12 anterior calcarine sulcus, 13 collateral sulcus, 14 collateral eminence. (b) Axial section of hippocampal body. Intravascular India ink injection. Bar, 2.3 mm 1 cornu Ammonis, 2 gyrus dentatus, 3 margo denticulatus, 4 fimbria, 5 tail of caudate nucleus, 6 stria terminalis, 7 lateral geniculate body, 8 pulvinar, 9 medial geniculate body, 10 subiculum, 11 anterior calcarine sulcus, 12 collateral sulcus, 13 collateral eminence, 14 temporal horn of the lateral ventricle. (c) 3T MRI view. 1 hippocampal body, cornu Ammonis, 2 hippocampal body, gyrus dentatus, 3 fimbria, 4

subiculum, 5 collateral eminence, 6 temporal (inferior) horn of the lateral ventricle, 7 pulvinar, 8 lateral geniculate body, 9 medial geniculate body, 10 superior colliculus, 11 cerebral aqueduct, 11' periaqueductal gray matter, 12 red nucleus, 13 substantia nigra, 14 mamillothalamic tract, 15 third ventricle, 16 column of fornix, 17 anterior commissure, medial part, 17' anterior commissure, lateral part, 18 caudate nucleus, 19 claustrum, 20 insula, 21 putamen, 22 globus pallidus, lateral part, 23 globus pallidus, medial part, 24 internal capsule, posterior limb, 25 lateral fissure, 26 superior temporal gyrus, 27 superior temporal sulcus, 28 middle temporal gyrus, 29 collateral sulcus, 29' lingual sulcus, 30 lingual gyrus, 31 tentorium cerebelli, 32 parahippocampal gyrus, 32' anterior calcarine sulcus, 33 quadrigeminal cistern, 34 ambient cistern, 35 wing of ambient cistern, 36 culmen. (d) Head section. Bar, 10 mm

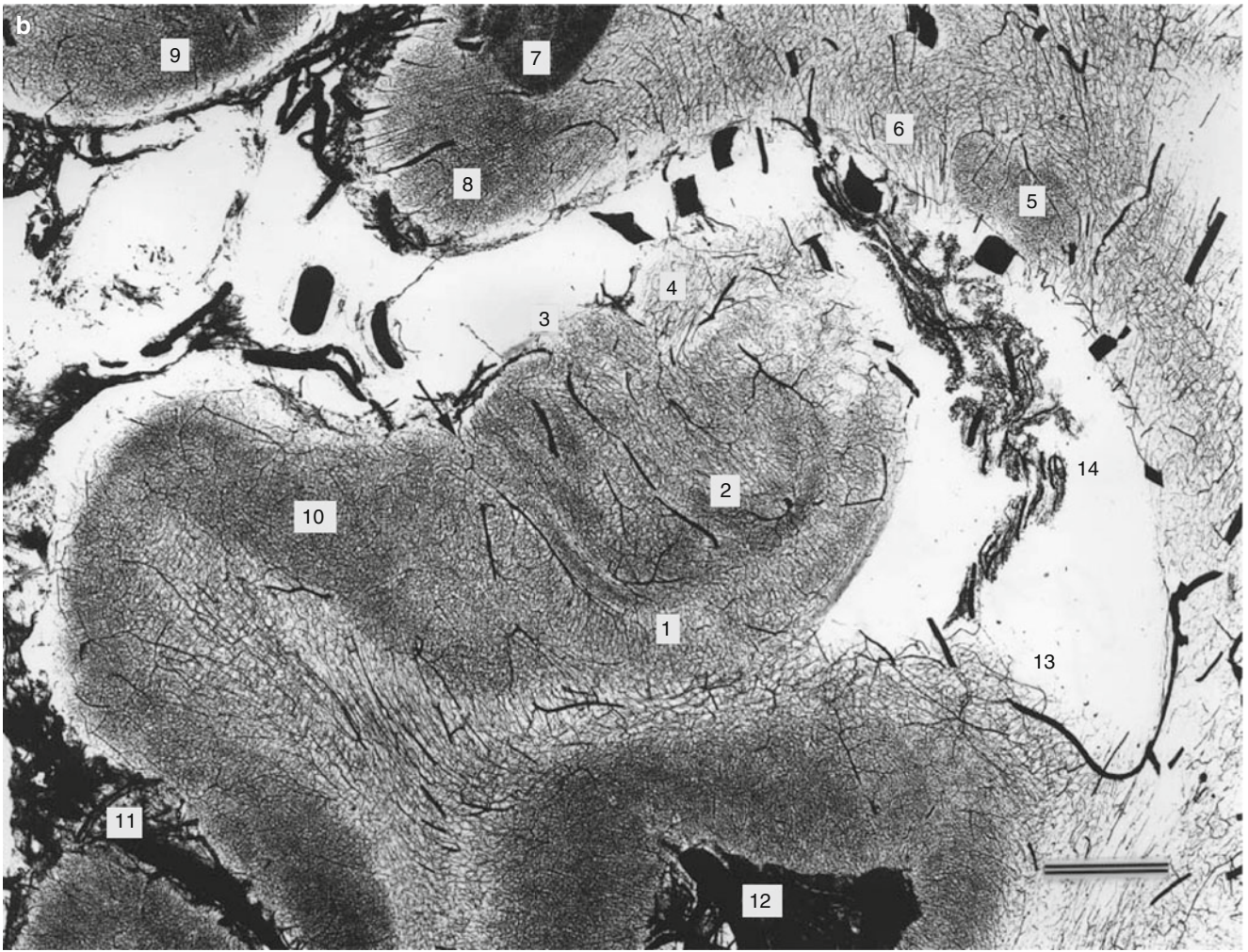
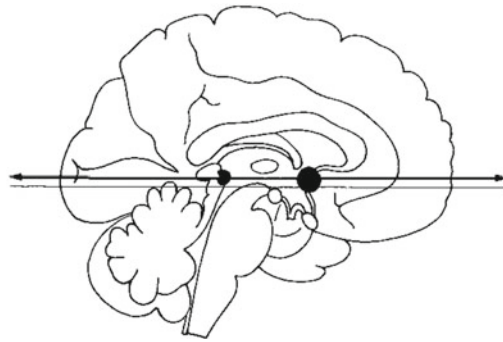
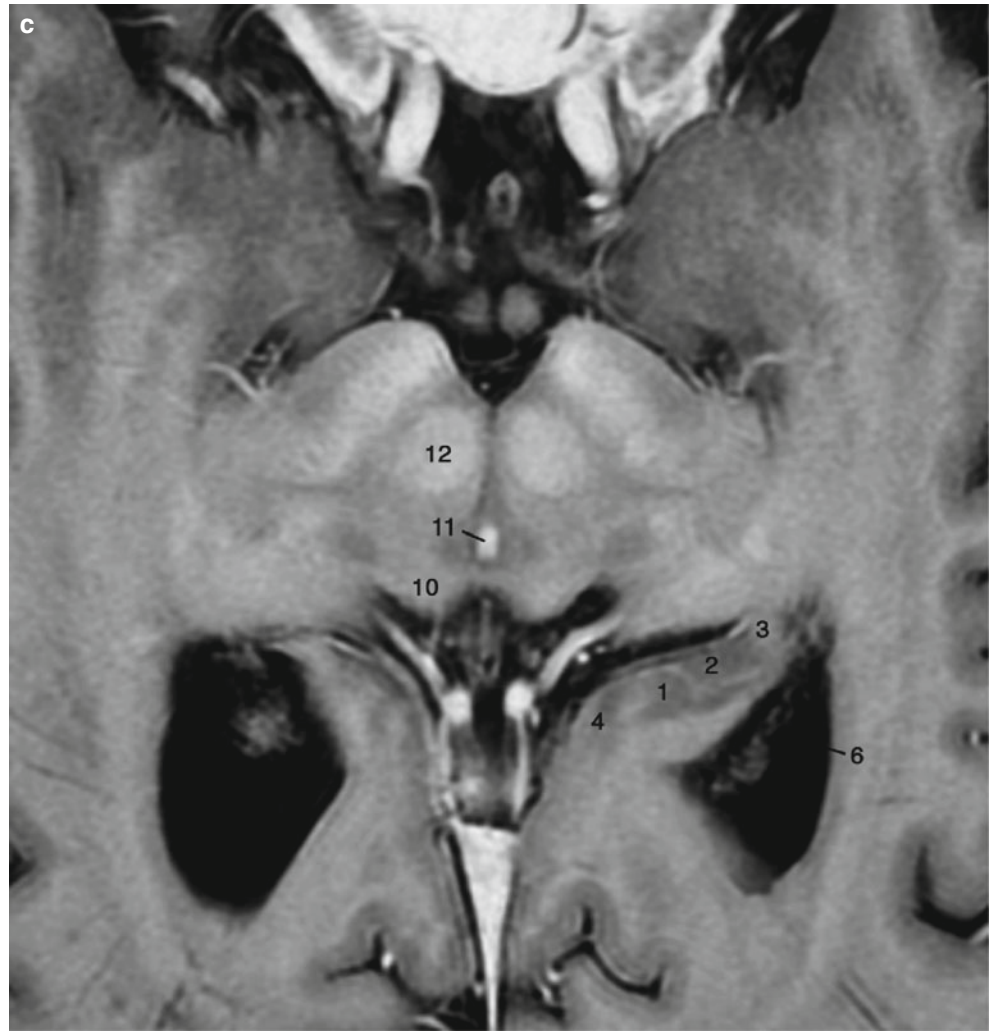


Fig. 7.23 (continued)

Fig. 7.23 (continued)



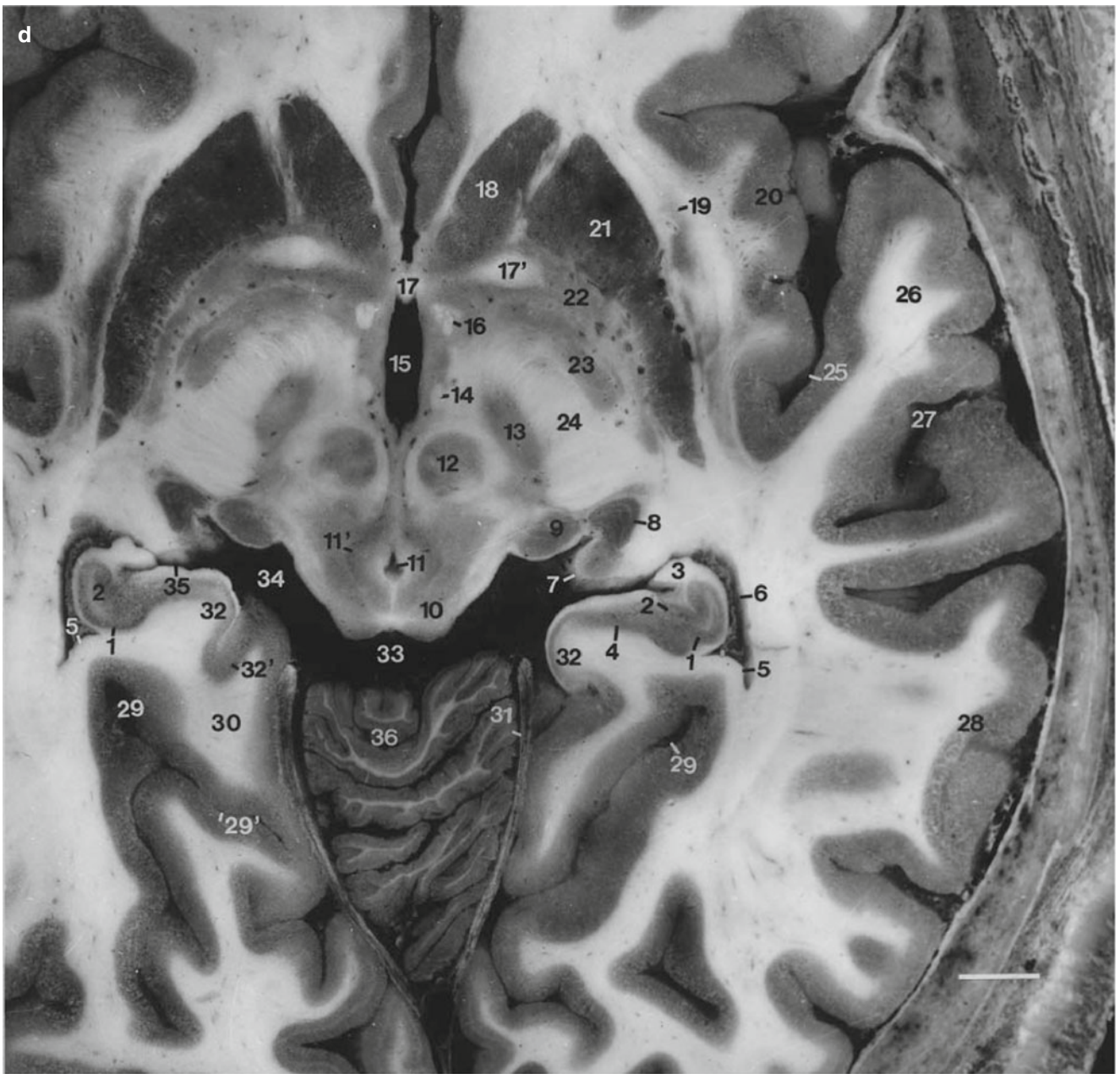


Fig. 7.23 (continued)

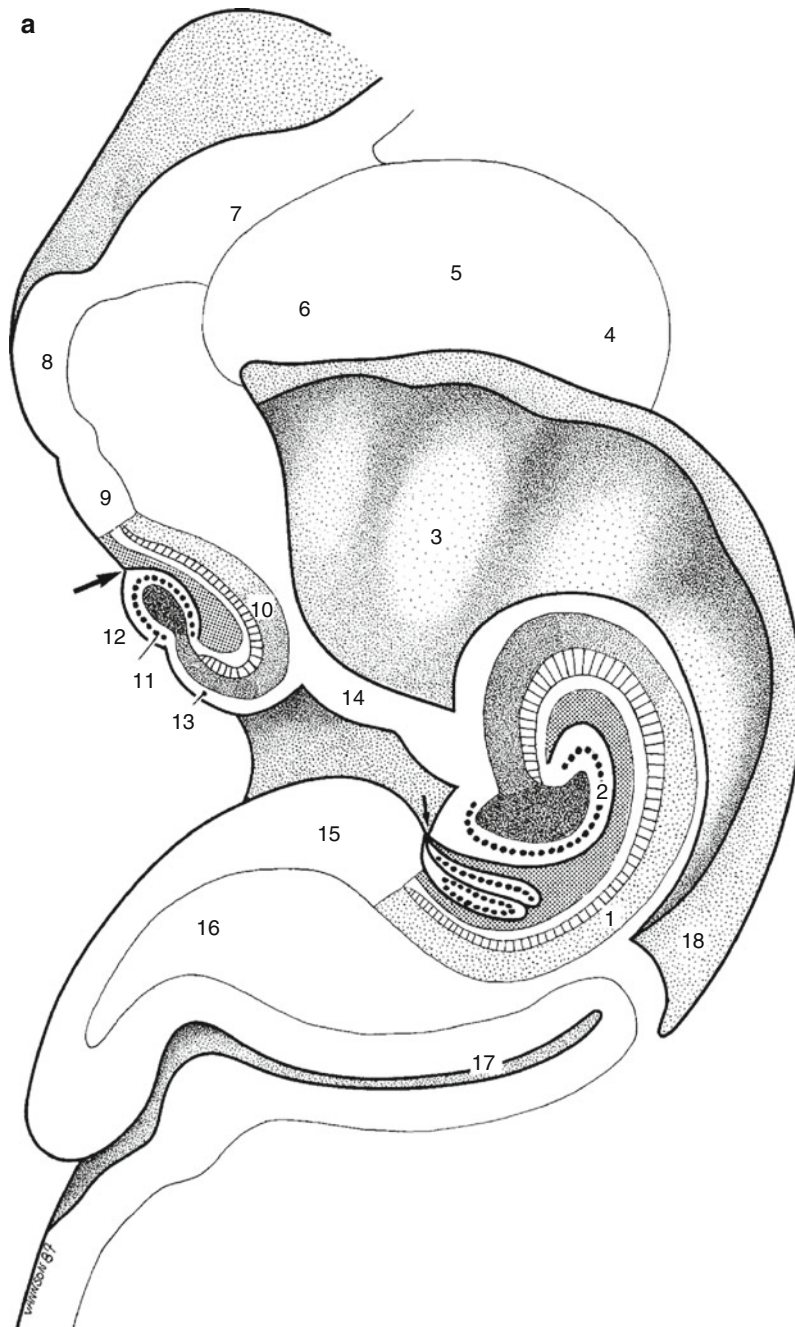


Fig. 7.24 (a) Axial section of the hippocampal body and head, showing plane of section and structure. *Arrows* indicate the superficial hippocampal sulcus. 1 cornu Ammonis in the body (CA1–CA4), 2 gyrus dentatus in the body, 3 hippocampal head (digitationes hippocampi), 4 lateral nucleus of amygdala, 5 basal nucleus of amygdala, 6 accessory basal nucleus of amygdala, 7 cortical nucleus of amygdala, 8 uncinatus gyrus, 9 subiculum, 10 cornu Ammonis in the uncus (CA1–CA4), 11 gyrus dentatus in the uncus, 12 band of Giacomini, 13 uncal apex covered with alveus, 14 fimbria, 15 subiculum, 16 parahippocampal gyrus, 17 collateral sulcus, 18 collateral eminence. (b) Axial section of the hippocampal body and head. Intravascular India ink injection. *Bar*, 2.6 mm 1 cornu Ammonis in the body, 2 gyrus dentatus in the body, 3 tail of caudate nucleus, 4 lateral nucleus of amygdala, 5 basal nucleus of amygdala, 6 accessory basal nucleus of amygdala, 7 cortical nucleus of amygdala, 8 uncinatus gyrus, 9 subiculum in the uncinatus gyrus, 10 cornu Ammonis in

the uncus, 11 gyrus dentatus in the uncus, 12 band of Giacomini, 13 uncal apex, 14 fimbria, 15 temporal horn of the lateral ventricle and choroid plexuses, 16 subiculum. (c) 3T MRI view. 1 hippocampal body, cornu Ammonis, 1' digitationes hippocampi, 2 hippocampal body, gyrus dentatus, 3 subiculum, 4 temporal (inferior) horn of the lateral ventricle, 5 hippocampal head, uncal apex, 6 amygdala, lateral nucleus, 7 amygdala, basal nucleus, 8 amygdala, cortical nucleus, 9 optic tract, 9' optic chiasma, 10 mamillary body, 11 tuber, 12 third ventricle, 13 anterior perforated substance, 14 nucleus accumbens, 15 claustrum, 16 insula, 17 lateral fissure, 18 superior temporal gyrus, 19 superior temporal sulcus, 20 middle temporal gyrus, 21 collateral sulcus, 22 lingual gyrus, 23 parahippocampal gyrus, 24 tentorium cerebelli, 25 culmen, 26 quadrigeminal cistern, 27 cerebral aqueduct, 27' periaqueductal gray matter, 28 brachium conjunctivum, 29 red nucleus, 30 substantia nigra, 31 crus cerebri, 32 crural cistern, 33 ambient cistern. (d) Head section. *Bar*, 10 mm

Fig. 7.24 (continued)

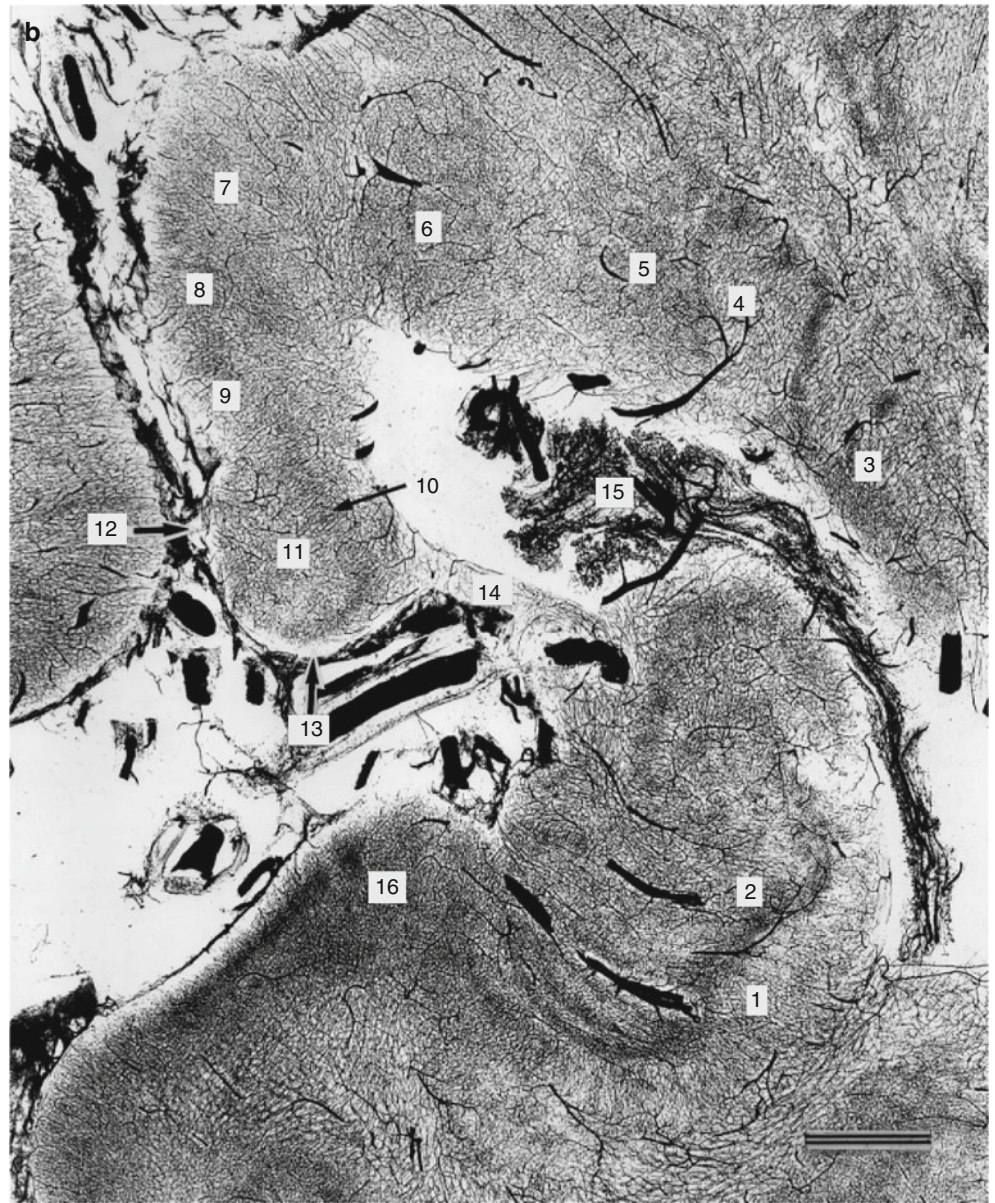


Fig. 7.24 (continued)

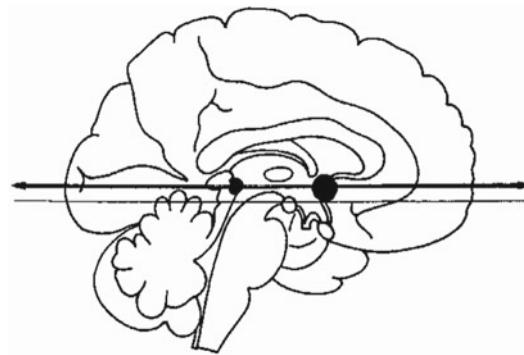
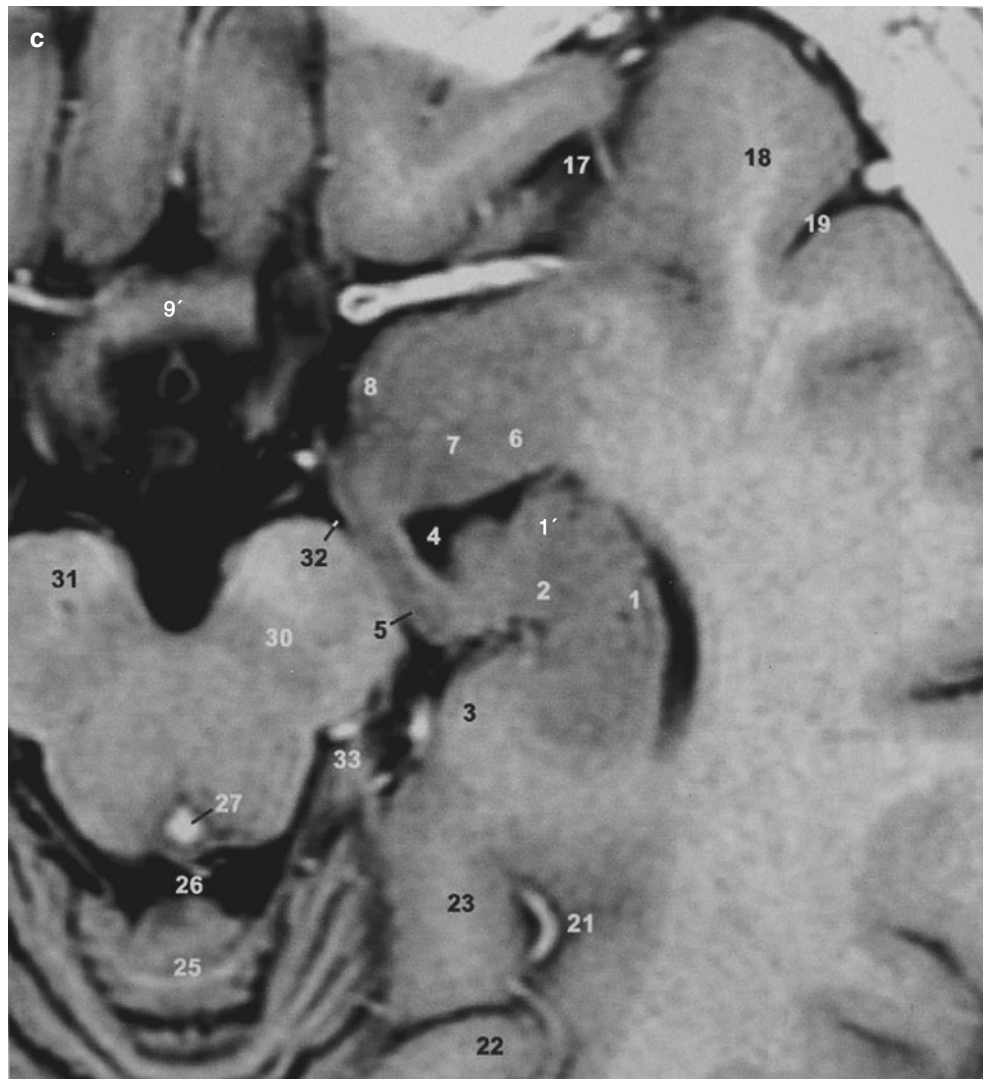




Fig. 7.24 (continued)

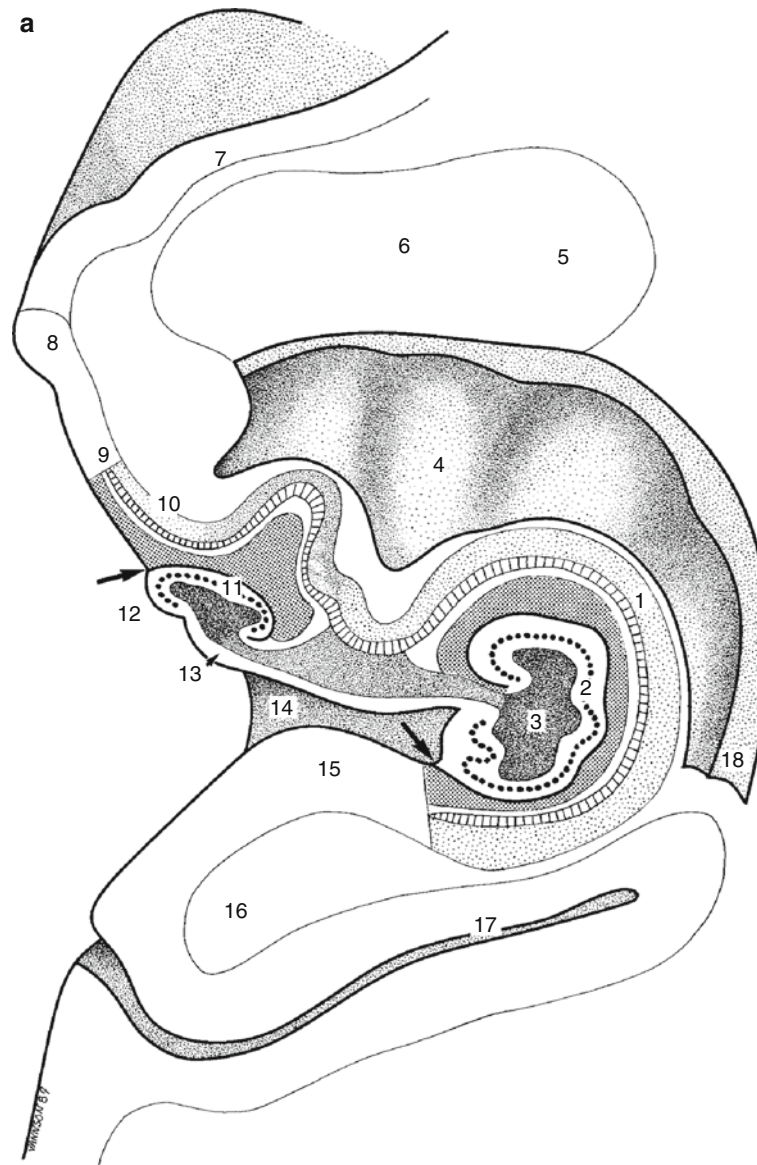


Fig. 7.25 (a) Axial section of hippocampal head, showing plane of section and structure. *Arrows* indicate the superficial hippocampal sulcus 1 cornu Ammonis (CA1) in digitationes hippocampi (internal digitations), 2 gyrus dentatus, 3 CA4 field of cornu Ammonis, 4 digitationes hippocampi (internal digitations), 5 lateral nucleus of amygdala, 6 basal nucleus of amygdala, 7 ambient gyrus, 8 uncinata gyrus, 9 subiculum in the uncinata gyrus, 10 cornu Ammonis in the uncinata gyrus (CA1), 11 gyrus dentatus in the uncal apex, 12 band of Giacomini, 13 uncal apex covered with alveus, 14 uncal sulcus, 15 subiculum, 16 parahippocampal gyrus, 17 collateral sulcus, 18 collateral eminence. (b) Axial section of hippocampal head. Intravascular India ink injection. *Bar*, 2.6 mm 1 cornu Ammonis, 2 gyrus dentatus, 3 CA4 field, 4 digitationes hippocampi (internal digitations), 5 lateral nucleus of amygdala, 6 basal nucleus of amygdala, 7 ambient gyrus, 8 uncinata gyrus, 9 subiculum in the uncinata gyrus, 10 cornu Ammonis in the uncinata gyrus, 11 gyrus dentatus, 12 band of Giacomini, 13 uncal apex covered with alveus, 14 uncal sulcus, 15 subiculum, 16 posterior

cerebral artery, 17 parahippocampal gyrus, 18 collateral sulcus, 19 collateral eminence, 20 temporal horn of the lateral ventricle. (c) 3T MRI view. 1 hippocampal head, cornu Ammonis, 2 hippocampal head, gyrus dentatus, 3 temporal (inferior) horn of the lateral ventricle, 4 digitationes hippocampi (internal digitations), 5 uncal apex, 6 amygdala, lateral nucleus, 7 amygdala, basal nucleus, 8 optic tract, 8' optic chiasma, 9 nucleus accumbens, 10 insula, 10' lateral fissure and middle cerebral artery, 11 superior temporal gyrus, 12 superior temporal sulcus, 13 middle temporal gyrus, 14 lingual gyrus, 15 tentorium cerebelli, 16 collateral sulcus, 17 parahippocampal gyrus, 18 culmen, 19 quadrigeminal cistern, 20 ambient cistern, 21 wing of ambient cistern, 22 superior colliculus, 23 cerebral aqueduct, 24 brachium conjunctivum (superior cerebellar peduncle), 25 substantia nigra, 26 crus cerebri, 27 crural cistern, 28 intercrural (interpeduncular) cistern, 29 mammillary body, 30 tuber, 31 third ventricle, 32 lamina terminalis, * vestigial hippocampal sulcus. (d) Head section. *Bar*, 10 mm

Fig. 7.25 (continued)

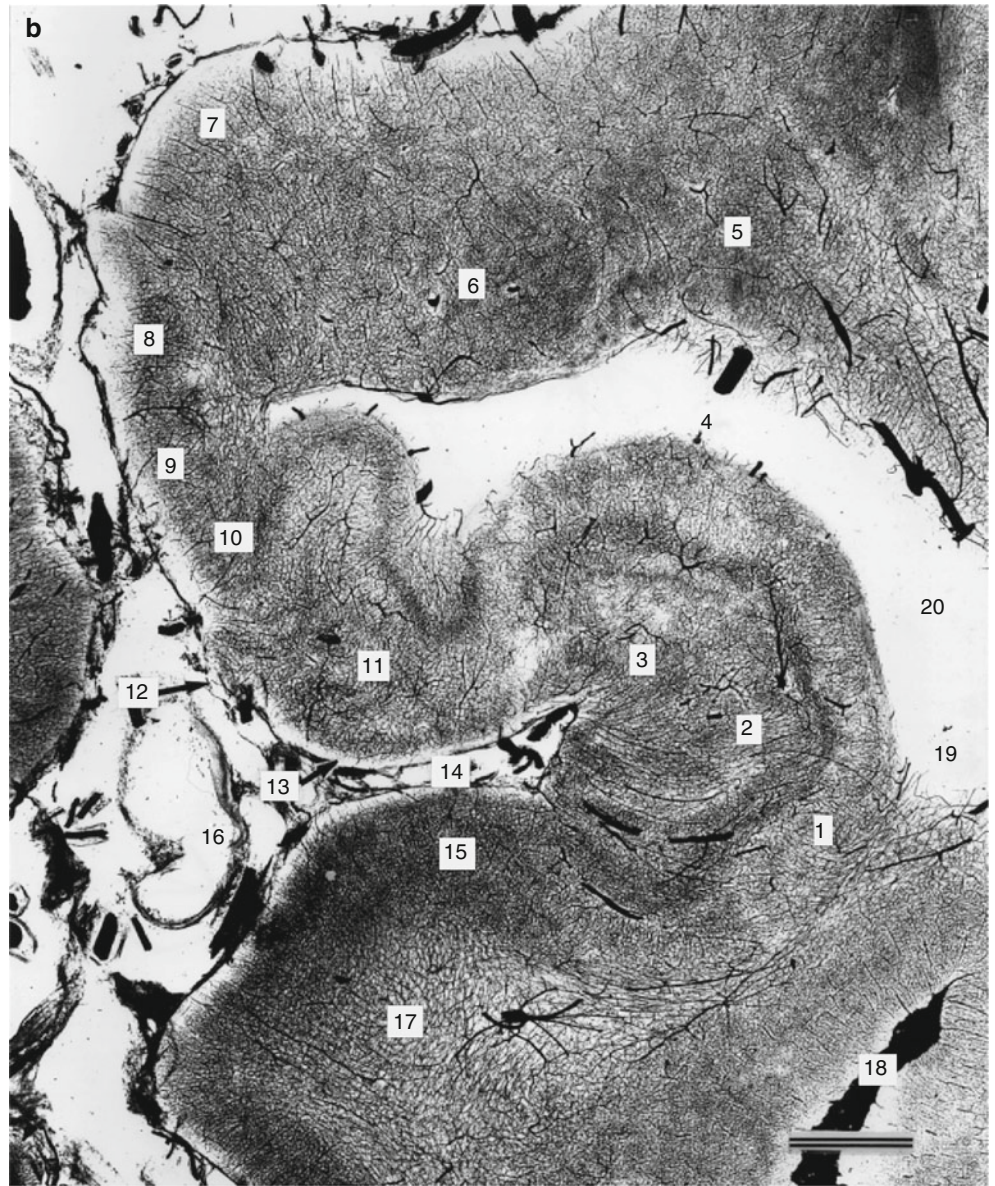
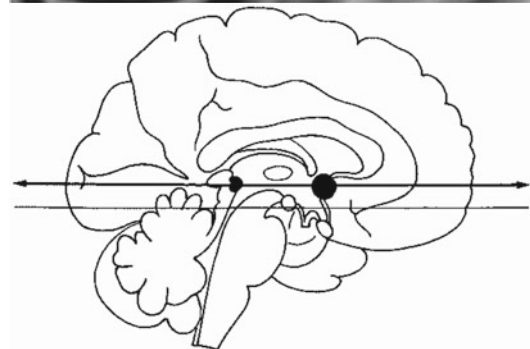
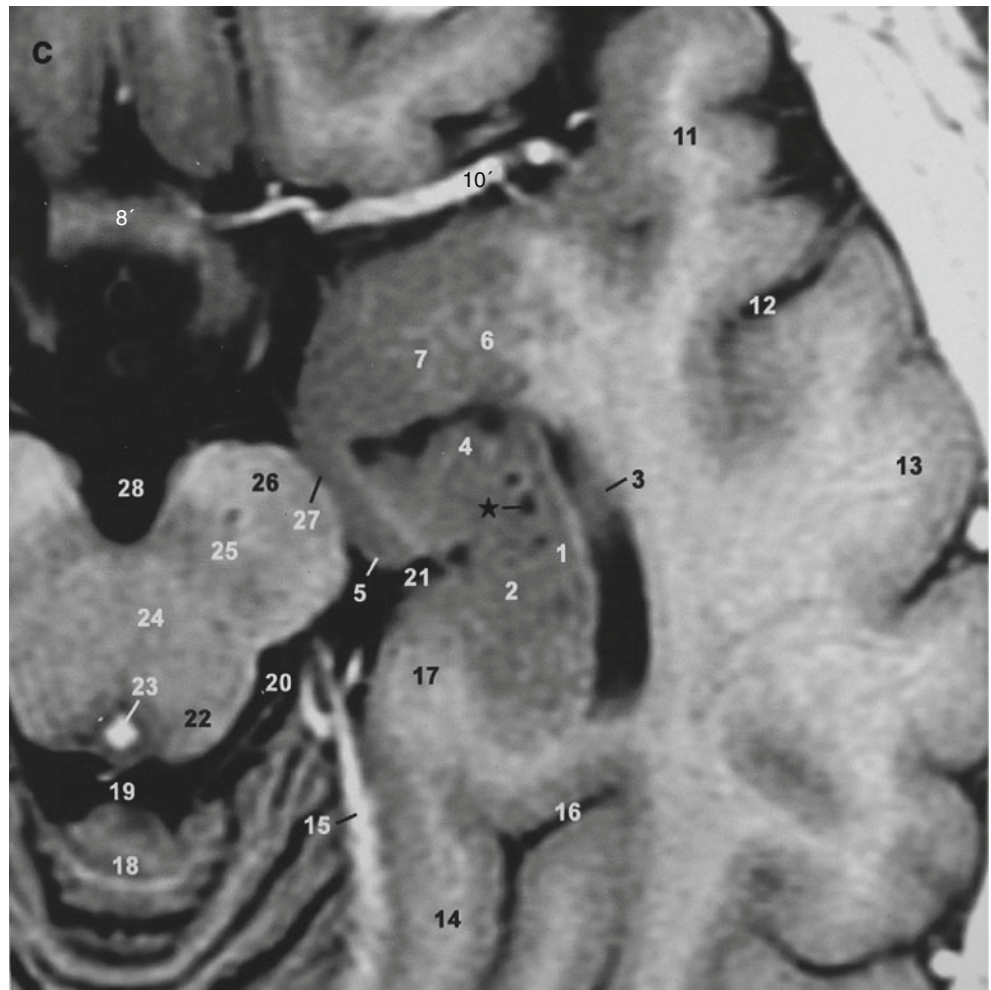


Fig. 7.25 (continued)



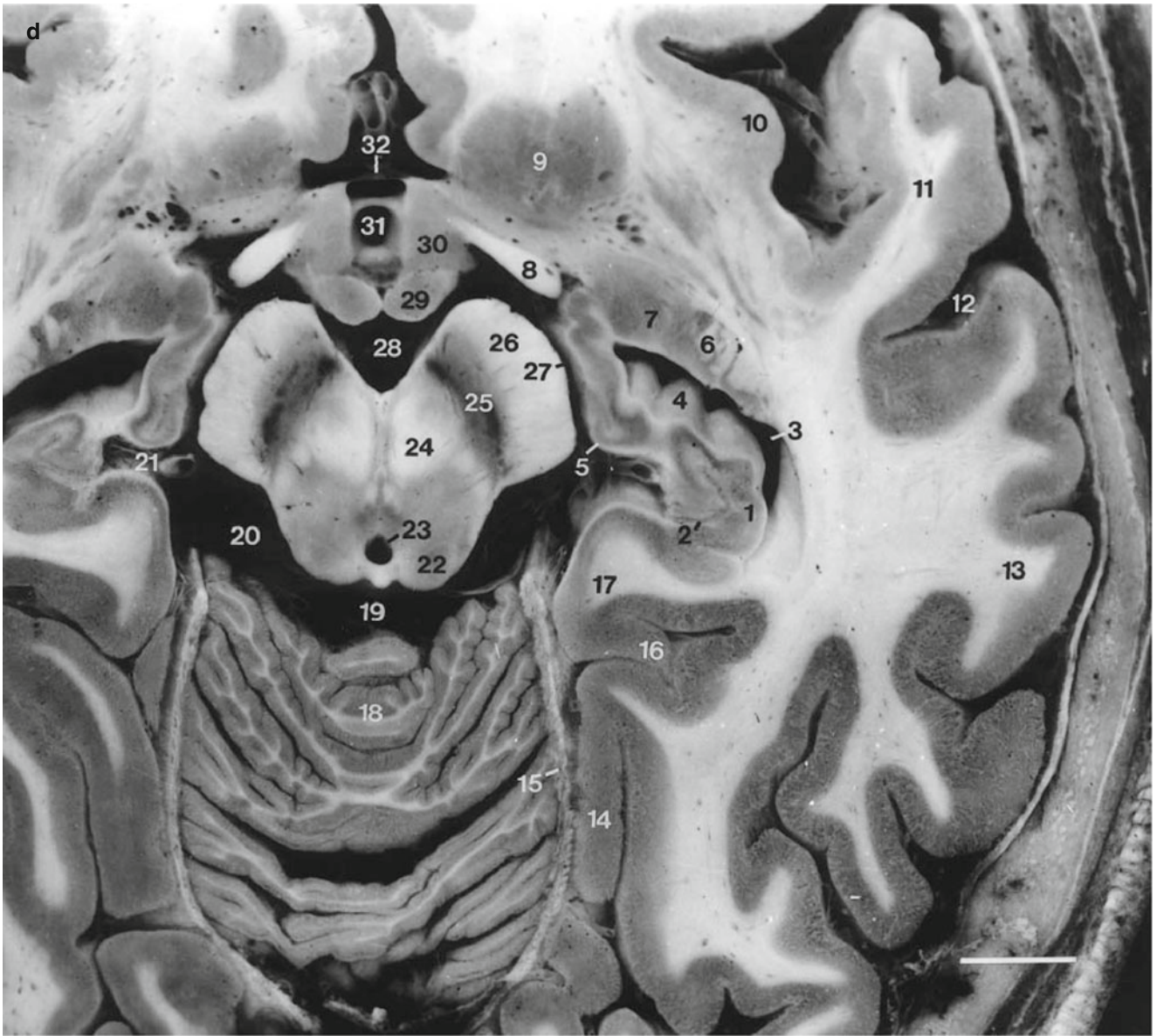


Fig. 7.25 (continued)

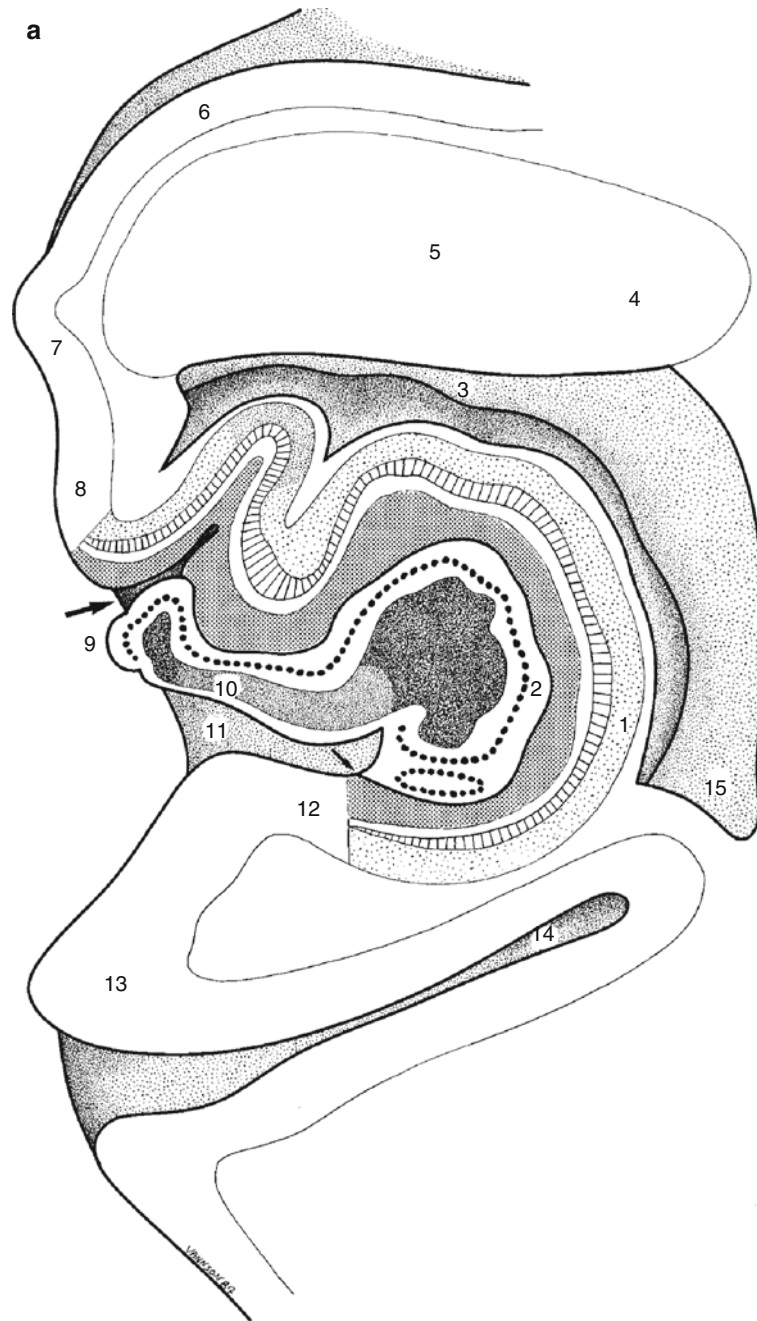


Fig. 7.26 (a) Axial section of hippocampal head, showing plane of section and structure. *Arrows* indicate the superficial hippocampal sulcus 1 cornu Ammonis (CA1) in digitationes hippocampi, 2 gyrus dentatus, 3 uncal recess of temporal horn, 4 lateral nucleus of amygdala, 5 basal nucleus of amygdala, 6 ambient gyrus, 7 uncinata gyrus, 8 subiculum in the uncinata gyrus, 9 band of Giacomini, 10 uncal apex, 11 uncal sulcus, 12 subiculum, 13 parahippocampal gyrus, 14 collateral sulcus, 15 collateral eminence. (b) Axial section of hippocampal head. Intravascular India ink injection. *Bar*, 2.4 mm 1 hippocampal head, cornu Ammonis, 2 hippocampal head, gyrus dentatus, 3 temporal horn (uncal recess), 4 lateral nucleus of amygdala, 5 basal nucleus of amygdala, 6 ambient gyrus, 7 uncinata gyrus, 8 subiculum in the uncinata gyrus, 9 band of Giacomini, 10 uncal apex, 11 uncal sulcus, 12 subiculum, 13 parahippocampal gyrus, 14 collateral eminence. (c) 3T

MRI view. 1 hippocampal head, digitationes hippocampi, 1' hippocampal head, digitationes hippocampi, 2 hippocampal head, gyrus dentatus, 3 uncal apex, 4 temporal (inferior) horn of the lateral ventricle, 5 amygdala, lateral nucleus, 6 amygdala, basal nucleus, 7 ambient gyrus, 8 crural cistern and posterior cerebral artery, 9 brachium conjunctivum, 10 pons, upper part, 10' crus cerebri, 11 intercrural (interpeduncular) cistern and basilar artery, 11' internal carotid artery, 12 oculomotor nerve, 13 hypophysial stalk, 14 optic chiasma, 15 gyrus rectus, 16 posterior orbital gyrus, 17 lateral fissure, basal part and middle cerebral artery, 18 superior temporal gyrus, 19 middle temporal gyrus, 20 inferior temporal gyrus, 21 collateral sulcus, 22 parahippocampal gyrus, 23 tentorium cerebelli, 24 culmen, 25 central lobule, * vestigial hippocampal sulcus. (d) Head section. *Bar*, 10 mm

Fig. 7.26 (continued)

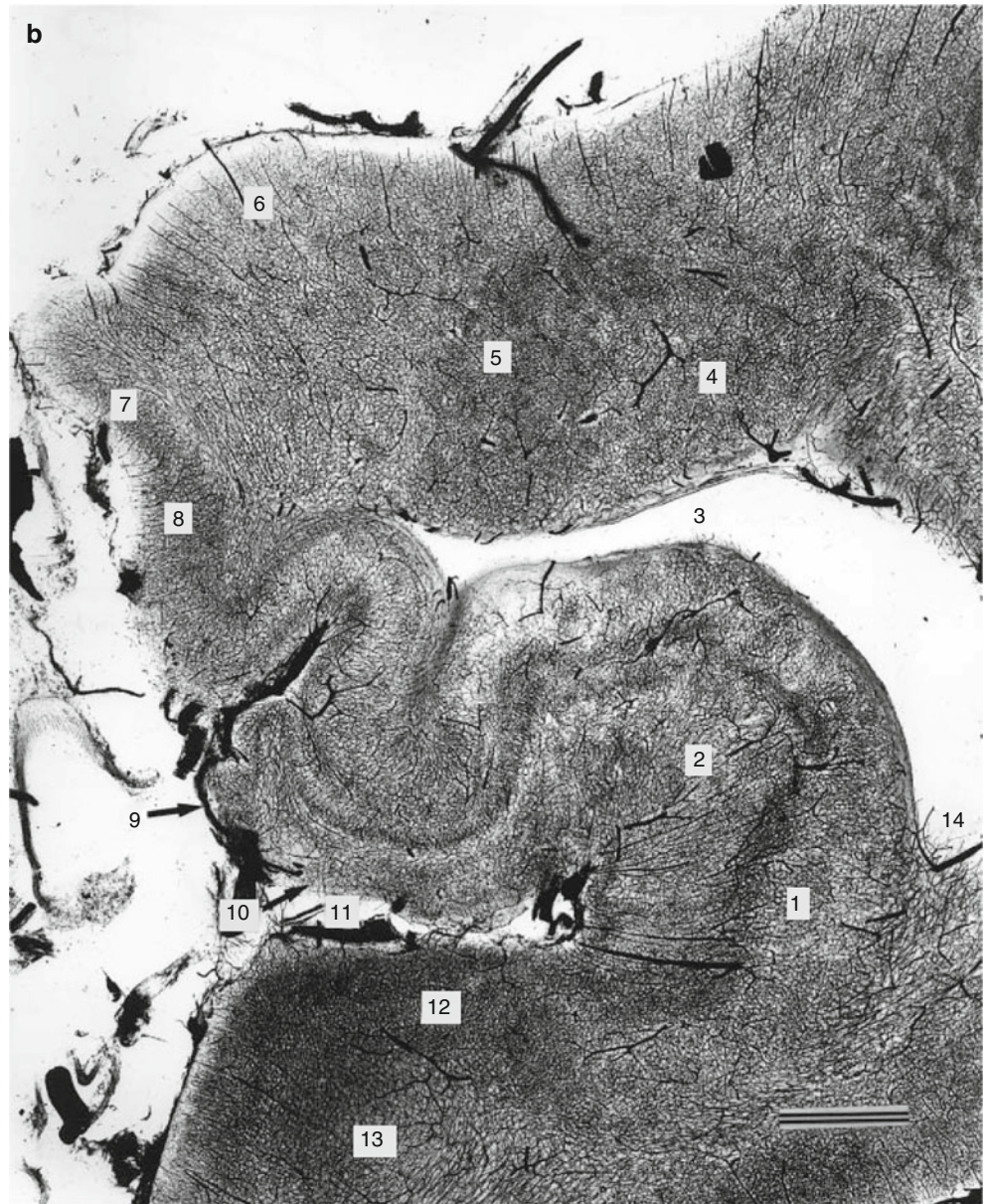
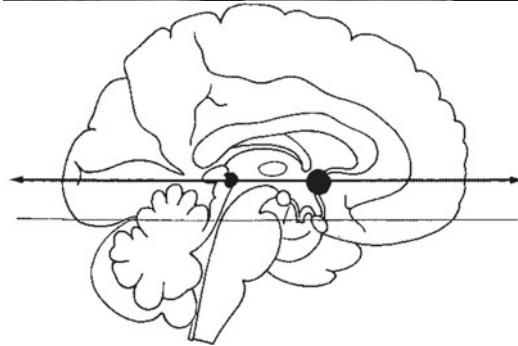


Fig. 7.26 (continued)



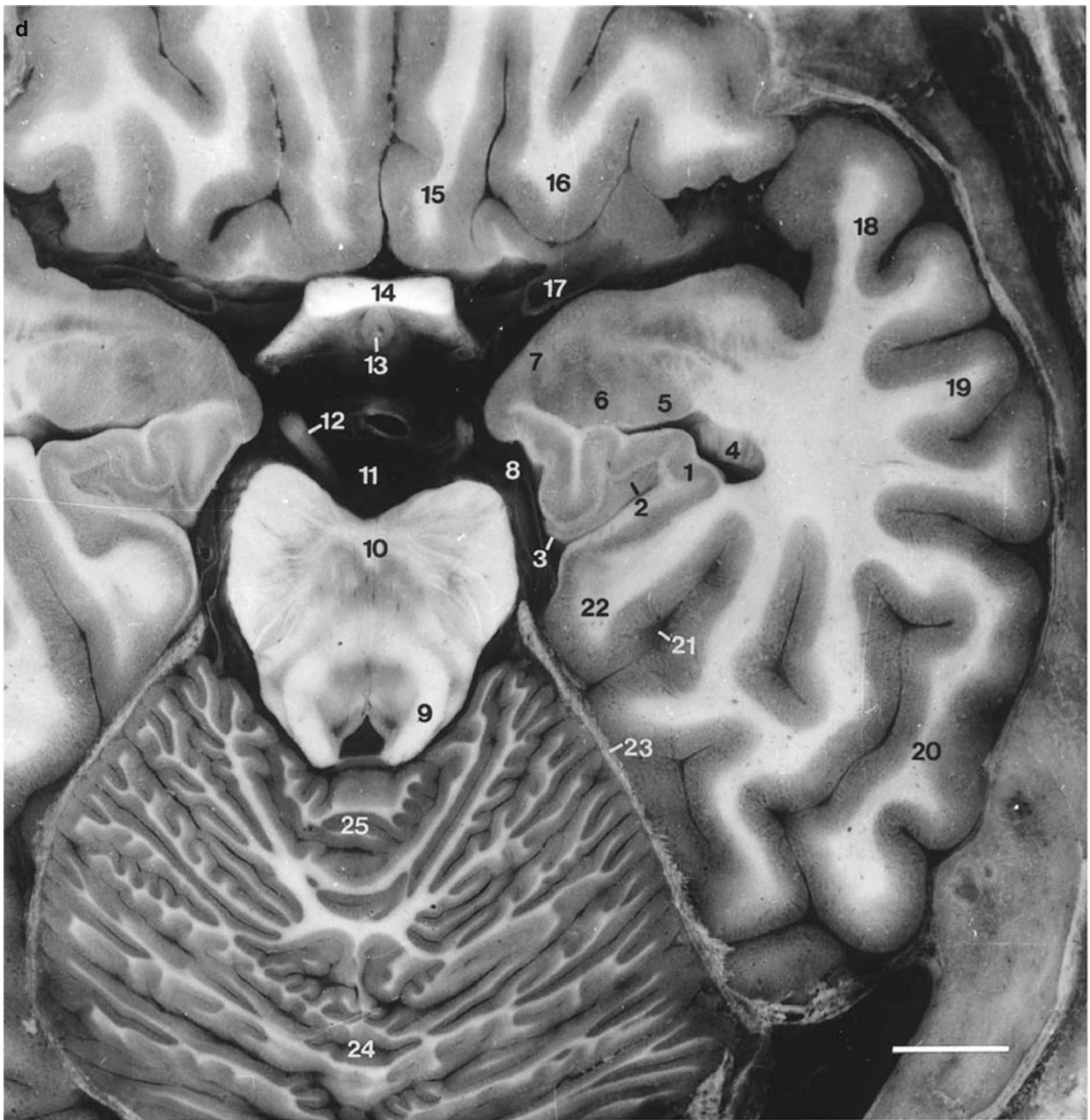


Fig. 7.26 (continued)