

fig. 5; fig. 6a, in alcohol, *c*, the cell wall has shrunk; fig. 6b, a single blastomatous cavity (*a*); *b*, the cell wall shrunk; *c*, the mesoblast; the same as fig. 5.

Fig. 7. Part of a longitudinal section through the middle of the eye of an adult *Trachemys serrata*, 10 diam.; *a*, sclerotic portion of the conjunctiva; *a*¹, conjunctiva; *a*², fold where *a* and *a*¹ join; *b*, sclerotica; *c*, sclerotic squamula; *c*¹, cornea; *c*², base of iris; *d*, pigment layer; *e*, choroidea; *e*¹, iris; *e*², posterior lining of the iris, or ciliary process; *e*³, posterior border of the ciliary process; *f*, *f*¹, pigment layer lining the choroidea (*e*); *g*, membrana Jacobi; *g*¹, anterior border of *g*; *h*, retina; *i*, anterior edge of *h*; *i*¹, fibrous layer; *k*, membrana hyaloidea; *k*¹, prolongation of *k* over the back of the crystalline lens (*l*); *k*², fold where *k* recurves; *l*, crystalline lens; *m*, *m*¹, triple wall of the capsula of the lens; *n*, the membrana pupillaris; *n*¹, border of *n*.

Fig. 8. Longitudinal section through the middle of the left eye of a Turtle just hatched, about 10 diam. The optic nerve (*h*¹) is introduced here out of place, to show its relation to the retina. The letters are the same as in fig. 7, to which are added: *b*¹, continuation of the sclerotica over the optic nerve; *d*¹, posterior termination of the pigment layer which covers the choroidea (*e*); *e*¹, (this letter is erroneously marked *e*¹ in the plate, near *h*¹), continuation of the choroidea (*e*) over the optic nerve, *h*¹; fig. 8a, portion of fig. 8, about 20 diam., to show more distinctly the different membranes and layers of the eye bulb. The letters are the same as in fig. 8.

Fig. 9. Transverse section of the head through the eyes, 10 diam., date not noticed; *a*, musculo-cutaneous layer; *b*, corpora quadrigemina; *c*, eye; *c*¹, aqueous humor; *c*², crystalline lens; *d*, vitreous humor; *d*¹, retina; *e*, anterior half of the orbit of the eye, empty; *b*¹, hemispheres; *b*², the separate edges of *b*¹.

PLATE XXIII.

[Drawn from nature, by H. J. Clark.]

All the figures are from *Chelydra serpentina*. Fig. 1, 1a, 2, 2a, 2b, 2c, 2d, and 3, are all lettered alike: *a*, hemispheres; *b*, corpora quadrigemina; *c*, olfactory bulb; *c*¹, Schneiderian membrano; *c*², the same as *c*¹ cut across; *c*³, septum narium; *d*, pineal gland; *e*, cerebellum; *e*¹, edge of the still open portion of the spinal tube; *f*, upper wall of the spinal tube; *g*, vascular pia mater; *g*¹, choroid plexus over the medulla oblongata (*p*); *h*, the eyes; *i*, spinal tube; *k*, optic lobes; *k*¹, optic nerve; *l*, auditory

nerve; *m*, opening on the inner face of the hemispheres; *n*, commissure of the hemispheres; *o*, floor of *b*, the so-called pons Varolii; *o*¹, fourth ventricle; *p*, medulla oblongata; *p*¹, commissure of the optic lobe; *p*², anterior end of the commissure of the optic lobe.

Fig. 1. View of the left side of the brain and part of the spinal tube, about 3 diam. Laid June 23, opened Aug. 22, 1855; fig. 1a, the same as fig. 1, a longitudinal median section; about 4 diam.

Fig. 2. Left side of the brain and part of the spinal tube, 3 diam. Laid June 12, opened Aug. 16, 1855. Fig. 2a, view from above of fig. 2; 3 diam. From *c* to *c*¹, the olfactory nerve and the Schneiderian membrano are raised up higher than is natural. Fig. 2b, longitudinal median section of fig. 2 and 2a; nearly 6 diam. (In this figure *p* should be *k*, and *k*, just before it, should be *k*¹.) Fig. 2c, transverse section of the Schneiderian membrano; 10 diam. Fig. 2d, longitudinal and horizontal section of the hemisphere, exposing the interior and the corpora striata (*r*); *a*, walls of the hemispheres; *c*, olfactory lobe; *c*¹, olfactory nerve. Fig. 2e, the choroid plexus taken out from the hemisphere, 20 diam. Fig. 2f, small tuft of fig. 2e. Fig. 2g, profile of fig. 2f; *s*, a single vessel from which several are budding. Fig. 2h, end of one of these vessels; *a*, inner wall, formed of long columnar cells; *b*, outer wall, formed of short and broad cells; the centre is full of blood corpuscles; 500 diam.

Fig. 3. Longitudinal section of the brain and the skull, 5 diam.; 1, designates the crest of the occipital bone; 2, the base of the skull; 3, the ethmoid; 4, the end of the skull; 5, the end of the vomer; 6, the sphenoid; 7, the vertebrae of the neck; 8, the cartilaginous upper maxillary; 9, the entrance to the nostrils. Laid June 12, opened Aug. 28, 1855.

Fig. 4; compare wood-cut 3, p. 576. Longitudinal section of the head of a Turtle just hatched; 5 diam. An alcoholic specimen was used on account of the hardening of the brain; *a*, entrance to the nasal cavity; *b*, nasal cavity around which the Schneiderian expands; *c*, olfactory nerve; *d*, olfactory lobe; *e*, hemisphere with an opening on the inner face next to the commissure for the passage of the blood-vessel, (*e*¹) which expands in the interior into a vascular plexus in the form of a tuft; *f*, pineal gland, its superior or outer commissure (*f*¹) cut through; *g*, corpus quadrigeminum, cut at the commissure so as to allow an interior view. The outlines of the surface of the right lobe may be seen in the distance under the vascular membrano (*g*¹); *g*², bloodvessel of the enveloping membrano, (*pia mater*), which plunges between the corpora quadrigemina and the cerebellum (*k*); the same passes backwards into the