

between the germino-amniotic (*a*) and subsidiary (*a'*) layers in the area pellucida; *d*, periphery of the area pellucida; *e*, edge of the primitive furrow, or of the spinal channel; *e'*, cephalic region of the spinal nervous system; *e''*, spinal marrow closed over; *e'''*, caudal portion of the same; *e''''*, lower floor of the spinal canal; *f*, vertebra; *f'*, vertebral layer; *f''*, lower edge of the vertebra; *f'''*, upper edge; *f''''*, outer or lateral limit of the vertebra; *g*, chorda dorsalis; *i*, incipient vena terminalis; *j*, dorsal artery; *n*, intestino-subsidiary layer; *n'*, stomach; *n''*, œsophagus; *n'''*, mesenterium of the intestine; *o*, subsidiary layer; *p*, musculo-cutaneous layer; *p'*, musculo-costal layer; *q*, Wolffian bodies; *q'*, their ducts; *r*, liver; *w*, the feet.

Fig. 1 corresponds to Pl. 10, fig. 12, 13, 14, 15. An ideal section.

Fig. 2 corresponds to Pl. 11, fig. 1, 6, 6a; 25 diam. An actual longitudinal section.

Fig. 3 corresponds to Pl. 11, fig. 3. Ideal longitudinal section. Fig. 3a, ideal transverse section of fig. 3.

Fig. 4 corresponds to Pl. 11, fig. 5, 5a. Ideal longitudinal section. Fig. 4a, ideal transverse section of fig. 4, through the point *e'*. Fig. 4b, another transverse section through the point *b*, so as to include the upper and lower bend of the body.

Fig. 5 corresponds to Pl. 12, fig. 1, 1a. An ideal transverse section at about midway between head and tail. (In this figure, the dots from the letter *e*, on the right, should extend to the next inner line, which runs close to *f'*.)

Fig. 6. An actual transverse section close behind *a'*, fig. 2, Pl. 12; 40 diam.

Fig. 7 corresponds to Pl. 13, fig. 7. Actual transverse section, near the posterior end of the body.

Fig. 8 corresponds to Pl. 14, fig. 2, 2a. Actual transverse section of the embryo of *Thalassochelys Caouana*, just behind the fore legs, about 5 diam.

Fig. 8a. The same as fig. 8. Actual transverse section through the middle region of the body.

Fig. 9. The same as fig. 8, 8a. Actual transverse section just behind the opening of the œsophagus. *Nanemys guttata*, 12 diam.

Fig. 9a. The same as fig. 8 and 9. Actual section across the root of the tail, 12 diam.

Fig. 10 to 10d. Spermatic particles from the testicle of an adult turtle. *Chrysemys picta*; fig. 10, 10a, 500 diam.; fig. 10b shows the swelling (*a'*) at the base of the so-called head (*a*); *b*, the tail; fig. 10c, another view of 10b, showing that the swelling (*a'*) is on one side. The origin of this swelling has not been traced in turtles; but,

from its similarity to what has been seen in several other animals, we have no hesitation in pronouncing it to be the remains of the cell in which the particle was developed; fig. 10d, a perfectly mature particle, the most numerous and lively of all, free from the remains of the parent cell; figs. 10b, 10c, 10d, 1100 diam.; April 8, 1856.

Fig. 11. Longitudinal section of the right branches of the lower jaw; *a*, channel of the nerve; *b*, lateral cavities connecting with *a*; *d*, teeth of the suture; fig. 11a, transverse section of fig. 11; the letters *a*, *b*, the same; *c*, cartilaginous strip in the sulcus inframaxillaris; *e*, line through which the longitudinal section was made. About 12 diam. *Chelydra serpentina*, just ready to be hatched.

Fig. 12. Transverse section of a rib and of the shield, 40 diam.; *a*, *a'*, cartilaginous part of the rib; *b*, its wings; *c*, the corium; *c'*, corium below the rib; *d*, fibrous lining of the shield; *e*, epidermis. *Chelydra serpentina*, just hatched.

#### PLATE X.

[Fig. 2, 3, 4, 12, 13, 14, from nature, by H. J. Clark; the others by A. Sonrel. Excepting fig. 12, 13, 14, all were taken from the oviduct of *Glyptemys insculpta*.]

In all the figures, *a* marks the region immediately around the embryonic area; *a'*, the "cones;" *b*, the space where segmentation is going on; *c*, the yolk; *d*, the albumen; *e*, the segment masses beyond the embryonic disc.

Fig. 1. The whole egg, the shell being removed, 3 diam., seen from above; fig. 1a, the same, nat. size. This was the anterior or first egg in the left oviduct.

Fig. 2. Deeper view of fig. 1.

Fig. 3. Anterior or first egg in the right oviduct.

Fig. 4. Second egg in the right oviduct.

Fig. 5. Third egg in the right oviduct.

Fig. 6. Third egg in the left oviduct.

Fig. 7. Second egg in the left oviduct.

Fig. 8. Fourth egg in the left oviduct.

All the eggs represented in fig. 1 to 8 were taken from the same turtle, May 27, 1854.

Fig. 9. Fourth egg in the right oviduct.

Fig. 10. Second egg in the left oviduct.

Fig. 11. First egg in the right oviduct, 25 diam.

Fig. 11a. The whole egg, without the shell, nat. size. The same as fig. 11.

Fig. 11b. The same as fig. 11. The whole egg, 3 diam.

All the eggs represented in fig. 9 to 11b were taken from one turtle, May 28, 1854.