of the allantois; the green to the venous system of the allantois. *a*, the shell; *b*, shell membrane; *c*, zona pellucida (see p. 485); *d*, embryonal membrane; *e*, outer peripheric portion of the amnios (see p. 541); *f*, *h*, *m*, *l*, the allantois; *m*, *m*, edges of its superior folds; *h*, its lower border; *l*, its pedunculer base; —·—·—·, its posterior portion next to the yolk on the right side; *k*, *k'*, amnios; (*k*,) its umbilicus; . . . . embryonal membrane lining the amniotic sac, (*k*, *k'*,) and covering the shield of the embryo, here represented by a transverse, triangular section; *g*, vascular area; *i*, its lower border; *i'*, subsidiary layer, in which run the omphalo-meseraic arteries (*q'*); *j*, yolk; *n*, intestine; *o*, allantoidian arteries; *o'*, the same passing close to the body, and then more outwardly; *p*, ventricle with aorta (darker red) in the middle; *p'*, branchial arteries; *p''*, dorsal artery foreshortened; *p''* to *q*, single omphalo-meseraic artery passing down behind the heart (*p*, *r*); *q*, two branches of the same; *q'*, omphalo-meseraic arteries of the yolk, which anastomoze with the veins at *i*; *r*, the double ventricle; *r'*, omphalo-meseraic veins ramifying through the mass of the yolk; *s*, abdominal veins foreshortened, in part, and turned in to enter the auricles (*r*); *t*, allantoidian veins, foreshortened in part, which run along the sides of the body, and pass in behind, and into the ventricle (*r*); *t'*, allantoidian veins, which run on the outer folds; *t''*, the same as *t'*, running along the inner folds, close against the body, and then on the outer folds. Chelydra serpentina, about 4 diam., corresponds to Pl. 15, fig. 4, 5, 5a, and to Pl. 16, fig. 2, 2a, 2b.

Fig. 9, 10, 11, 12, 15, 16, 17, 13, 14, 4, 5, and 6 represent a series of embryos of Chelydra serpentina, from the time the shield begins to be distinct to the moment of hatching. Fig. 6 represents a young just breaking through the egg-shell. All in their natural size.

Fig. 7, and 8. Ozotheca odorata; fig. 7, head from below; fig. 8, young breaking through the egg-shell; nat. size.

Fig. 22, 23, 18, 19, 20, and 21, represent a series of embryos of Chrysemys picta; nat. size.

PLATE IXd.

[Drawn by H. J. Clark.]

Fig. 1. An actual longitudinal section of an embryo, 40 diam. The embryo is nearer to the yolk (*yk*) than is natural. The two opposite sides of the lateral halves of the yolk are approximated here for want of room, but the level of the vitelline surface is kept in its proper relation to the position of the embryo. *a*, *a*^{1}, *a*^{2}, *a*^{3}, *a*^{5}, the amnios; *a*, its peripheric part; *a*^{1}, *a*^{2} above, the edge of its dorsal aperture; *a*^{2} at the tail, to *a*^{2} above, the caudal hood; *a*^{6}, *a*^{4}, *a*^{1}, the cephalic hood; *a*^{2}, *a*^{4}, the area pellucida of the subsidiary layer (*n*, *o*^{1}); *c*, *c*, the area pellucida; *d*, *d*, its periphery; *e*, *e*^{1}, *e*^{2}, *e*^{3}, *e*^{4}, *e*^{5}, spinal marrow; *e*, edge of the channel of the spinal marrow; *e*^{1}, floor of the same; *e*^{1}, *e*^{2}, edge of the broad channel of the brain; *e*^{2}, point where the edges touch; *e*^{3}, lower floor of the brain; *e*^{4}, posterior end of the germino-spinal layer; *f*^{1}, vertebral layer; *f*, vertebræ; *g*, anterior end of the chorda dorsalis; *g*^{1}, its posterior end; *h*, heart; *i*^{1}, incipient vena terminalis; *j*^{2}, cavity between the vertebræ (*f*^{1}) and the subsidiary (*n*) layer; *n*, intestino-subsidiary layer; *o*^{1}, peripheric part of the subsidiary layer; —·—·—·, point where the lower half of the egg joins the segment of the upper part; *yk*, the yolk (its cells are magnified just as much as the embryo); *al*, albumen; *vs*, yolk sac, or rather zona pellucida; . . . ., embryonal membrane. Chelydra serpentina; the same as Pl. 12, fig. 1, 1a.

Fig. 2. An actual section of the walls of the Graafian follicle, and of a full-grown egg, 500 diam. *a*, *a*^{1}, the two walls of the stroma; *b*, tunica granulosa; *c*, zona pellucida; *vs*, vitelline or yolk sac; *d*^{1}, embryonal membrane; *e*, yolk cells about the Purkinjean vesicle (*g*); *vc*, yolk cells from the centre of the yolk. Chrysemys picta. Compare fig. 11b, Pl. 9.

Fig. 3. View from above of fig. 2, Pl. 9c; the letters are the same.

Fig. 4. Profile of an egg of Ozotheca odorata, nat. size; the shell broken open at the side to expose the yolk; *e*, embryonic disc.

Fig. 5. The albumen of a hen's egg, at the point where resorption is going on, showing the exposed edges of all the layers of albumen, down to the yolk.

PLATE IXe.

[Drawn by H. J. Clark.]

Fig. 1 to fig. 9a are longitudinal and transverse sections of the embryo. The same parts are lettered alike in all; . . . ., embryonal membrane; *al*, albumen; *yk*, yolk; *a*, germinal layer; *a*^{1}, fold of the cephalic hood; *a*^{2}, fold of the caudal hood; *a*^{3}, the subsidiary layer in the area pellucida about the head; *a*^{4}, the same about the tail; *a*^{5}, cephalic hood; *a*^{6}, base of attachment of the cephalic hood; *b*, primitive furrow; *c*, area pellucida; *c*^{1}, cavity