

within the highly refractive entoblast, they differ hardly at all, individually, from those of the mature ovarian egg (Pl. 9a, fig. 22). Considering their arrangement, however, we find that here they are all in one plane, forming only one stratum by their juxtaposition. By applying a magnifying power of eleven hundred diameters the mesoblasts and entoblasts are brought out more clearly and appreciably (Pl. 9a, fig. 24a): the former, the mesoblasts, appearing to be composed of a stratum of juxtaposed granular bodies; and the latter, the entoblasts, to contain in some instances simply a lateral, dot-like entosthoblast, such as could not be produced by any sort of refraction, and in others a hollow, vesicular entosthoblast. But the presence of entosthoblasts cannot be of great importance, since, as far as we have been able to see, they are no longer visible beyond this stage.

By the time that both the cephalic and caudal amniotic hoods are evident, (Pl. 11, fig. 2, a^1 , a^2) these cells have become excessively transparent, (Pl. 9a, fig. 25, 26, 29a, b , b), so that it is almost impossible to recognize them, except by the most careful manipulation, unless they are brought out by a process of maceration in reagents, which it is by no means safe to do, since they are greatly distorted by it. They may be best seen in the area pellucida (Pl. 11, fig. 2, c) without disturbing the neighboring layers, and in other regions by carefully removing the subjacent loose cells, or by folding a portion cut away so as to bring them into profile (Pl. 9a, fig. 29a, b , b). In the latter position their thickness may be seen to be considerable, and the superficial contour of each to be distinctly arched, the whole lying close against the germinal layer beneath them. By careful focussing, the mesoblasts may be shown to be attached to the arched surface of its cell, (Pl. 9a, fig. 29,) and so thin that it cannot be recognized in profile. Owing to their hyaline nature, the entoblasts were not recognized, although they were probably present, since in an older stage (Pl. 9a, fig. 23) they were detected, under more favorable circumstances. In some instances all trace of mesoblasts, entoblasts, and entosthoblasts, was lost (Pl. 9a, fig. 26); but their presence was proved by reagents. The figure just quoted represents the equatorial region of the cells below the horizon of the mesoblasts, so that the double thickness of the walls is shown. Were it not for the presence of granules within the cells, in the profile view, (Pl. 9a, fig. 29, b , b), we should suspect that those seen from the outside (Pl. 9a, fig. 25) were components of the layer below them. By this time the embryonal membrane has already such a consistency that it may be lifted up separately from the layer it covers; but, on account of the distortion of its cells, it is not safe to study it after such a process.

At a little later period, when the "primitive furrow" (Pl. 11, fig. 3, b) has commenced to form, the mesoblasts (Pl. 9a, fig. 23) contain faint entoblasts, which at first appear to be the result of an optical expression, oftentimes noticeable in