

4, 5, 9); yet the thinnest portions are preferable, because of the greater homogeneity of the transmitted light.

It is beyond the reach of pen or pencil to illustrate satisfactorily the unmistakable physiognomy of the ovarian egg at that age, when it is smaller than the cells of the Graffian body which surround it. The task becomes more difficult still when the very natural question arises, How is it known that these peculiar forms are eggs? The most direct answer to this question is, by comparison, which is in fact at the base of all inductive reasoning. But the argument here is not to be one of words alone; for every step of the induction shall be illustrated by examples drawn from nature, and words will serve merely to point out their true character.

No one will deny that the most correct and philosophical method is that which follows the development of the life of the eggs, seizing upon and watching the changes and growth of the minutest cells till that period when, by their contents and acknowledged characteristics, they are recognized without reserve to be eggs; although, in an argument upon the identity of an unknown with a known body, our finite senses usually prefer to start from the latter, and proceed toward the former by a series of reductions, tracing embryonic life just as it sometimes apparently develops itself in a series of retrograde metamorphoses. Yet, although we have in a few rare cases seeming examples of this kind, it is, to a mind so deeply imbued with the phenomena of the whole course of development as to follow instinctively in the path of nature, a forced and unnatural mode of interpretation of the phases peculiar to the several successive stages of the genesis of the ovarian egg.

Upon submitting the ovary to the microscope, with a magnifying power of about five hundred diameters, there may be observed in the field, scattered among the larger eggs, quite a number of smaller ones, varying from mere granular, minute, dark specks (Pl. 8, fig. 1, *a*) to a size about four times the diameter of the cells of the corpus graffianum which inclose them (Pl. 8, fig. 1, *b-p*). These eggs have all one common physiognomy, which at once impels a belief that they are so many different grades in the development of one kind of cells, peculiar in themselves, and very different from the mass of hyaline and colorless cells of unvarying size about them. The thick, dark outline, the peculiarly brilliant and strongly refractive, homogeneous yellowish contents, and the lateral nucleus,¹ when present, are entirely different from the thin walls, transparent, irrefractive contents, and central nucleus of the neighboring cells of the corpus graffianum (Pl. 8, fig.

¹ The conflicting views entertained by anatomists upon the formation of cells have rendered some

changes necessary in the nomenclature of the cell, its envelope and contents, which are discussed below.