

being *naked* cells, as the outer covering, or cell-membrane, is wanting.

As soon as the egg (ovulum) of the mammal has attained its full maturity, it leaves the ovary of the female, in which it originates, and passes into the oviduct, and through this narrow passage into the wider pouch or womb (uterus). If, meanwhile, the egg is fructified by the male seed (sperm), it develops itself in this pouch into an embryo, and does not leave it until perfectly developed and capable of coming into the world at birth as a young mammal.

The process of *fertilization*, which was formerly considered one of the most mysterious and wonderful phenomena, has become perfectly clear and intelligible to us owing to the great advances of our scientific knowledge during the last ten years, and these we owe, above all, to the admirable investigations made by the brothers Oscar and Richard Hertwig, Edward Strasburger, Bütschli, and many others. We now know that the fertilization of the egg, as the most essential process in sexual propagation, is nothing further than a commingling of two different cells, the paternal sperm-cell and the maternal egg-cell. Of the thousands of agile little whip-cells which are contained in a drop of the male seminal fluid, a single one penetrates into the female egg-cell, and becomes completely mixed with it. And in this commingling of the two sexual cells, the main process is the copulation of the two cell-kernels. The male sperm-nucleus commingles with the female egg-nucleus, and this gives rise to the new progeny-nucleus, the nucleus of the new progeny-cell (Cytula).

Twenty-three years ago, in my "General Morphology" (vol. i. p. 288), I defined the importance of the two active