

left to his successors. Without dwelling on the intermediate labors, we come to modern times, and find that this examination owes its greatest advance to those who had the greatest share in the discovery of the circulation of the blood;—Fabricius of Acquapendente, and Harvey. The former<sup>3</sup> published a valuable work on the Egg and the Chick. In this are given, for the first time, figures representing the developement of the chick, from its almost imperceptible beginning, to the moment when it breaks the shell. Harvey pursued the researches of his teacher. Charles<sup>4</sup> the First had supplied him with the means of making the experiments which his purpose required, by sacrificing a great number of the deer in Windsor Park in the state of gestation: but his principal researches were those respecting the egg, in which he followed out the views of Fabricius. In the troubles which succeeded the death of the unfortunate Charles the house of Harvey was pillaged; and he lost the whole of the labors he had bestowed on the generation of insects. His work, *Exercitationes de Generatione Animalium*, was published at London in 1651; it is more detailed and perfect than that of Fabricius; but the author was prevented by the unsettled condition of the country from getting figures engraved to accompany his descriptions.

Many succeeding anatomists pursued the examination of the series of changes in generation, and of the organs which are concerned in them, especially Malpighi, who employed the microscope in this investigation, and whose work on the Chick was published in 1673. It is impossible to give here any general view of the result of these laborious series of researches: but we may observe, that they led to an extremely minute and exact survey of all the parts of the foetus, its envelopes and appendages, and, of course, to a designation of these by appropriate names. These names afterwards served to mark the attempts which were made to carry the analogy of animal generation into the vegetable kingdom.

There is one generalization of Harvey which deserves notice.<sup>5</sup> He was led by his researches to the conclusion, that all living things may be properly said to come from eggs: "Omne vivum ex ovo." Thus not only do oviparous animals produce by means of eggs, but in those which are viviparous, the process of generation begins with the developement of a small vesicle, which comes from the ovary, and which exists before the embryo: and thus viviparous or suckling-beasts, not-

<sup>3</sup> Cuv. *Hist. Sc. Nat.* p. 46.

<sup>4</sup> *Ib.* p. 53.

<sup>5</sup> *Exerc.* lxiii.