animals—in Sponges, Medusæ, Corals, Worms, Sea-squirts Radiated animals, Molluscs, and even in the lowest Vertebrata (Amphioxus: compare p. 200, Plate XII., Fig. *B* 4; see also in the same place the Ascidian, Fig. *A* 4).

From the ontogenetic occurrence of the Gastrula in the most different animal classes, from Zoophytes up to Vertebrata, we may, according to the biogenetic principle, safely draw the conclusion that during the Laurentian period there existed a common primary form of the six higher anima, tribes, which in all essential points was formed like the Gastrula, and which we shall call the Gastræa. This Gastræa possessed a perfectly simple globular or oval body, which enclosed a simple cavity of like form, namely, the progaster; at one of the poles of the longitudinal axis the primary intestine opened by a mouth which served for the reception of nutrition. The body wall (which was also the intestinal wall) consisted of two layers of cells, the unfringed entoderm, or intestinal layer, and the fringed ectoderm, or skin-layer; by the motion of the cilia or fringes of the latter the Gastræa swam about freely in the Laurentian ocean. Even in those higher animals, in the ontogenesis of which the original Gastrula form has disappeared, according to the laws of abbreviated inheritance (vol. i. p. 212), the composition of the Gastræa body has been transmitted to the phase of development which directly arises out of the Morula. This phase is an oval or round disc consisting of two cell-layers or membranes: the outer cell-layer, the *animal or dermal layer* (ectoblast), corresponds to the ectoderm of the Gastræa; out of it develops the external, loose skin (epidermis), with its glands and appendages, as well as the central nervous system. The inner cell-layer, the