(1.) *The palæontological history of the development of organisms,* the gradual appearance and the historical succession of the different species and groups of species, the empirical laws of the palæontological change of species, as furnished to us by the science of fossils, and more especially the *progressive differentiation and perfecting* of animal and vegetable groups in the successive periods of the earth's history.

(2.) *The individual history of development of organisms,* embryology and metamorphology, the gradual changes in the slow development of the body and its particular organs, especially *the progressive differentiation and perfecting* of the organs and parts of the body in the successive periods of the individual development.

(3.) *The inner causal connection between ontogeny and phylogeny,* the parallelism between the individual history of the development of organisms, and the palæontological history of the development of their ancestors, a connection which is actually established by the laws of *Inheritance* and *Adaptation,* and which may be summed up in the words: ontogeny, according to the laws of inheritance and adaptation, repeats in its large features the outlines of phylogeny.

(4.) *The comparative anatomy of organisms,* the proof of the essential agreement of the inner structure of kindred organisms, in spite even of the greatest difference of external form in the various species; their explanation by the causal dependence of the internal agreement of the structure on *Inheritance,* the external dissimilarity of the bodily form on *Adaptation.*

(5.) *The inner causal connection between comparative*