

the many extinct fossil forms of animal life succeeded one another upon the early surface of the globe : this evidence consists in the petrified remains of eyes of animals, found in geological formations of various ages. In a future chapter I shall show, that the eyes of Trilobites, which are preserved in strata of the transition formation, (Pl. 45, Figs. 9, 10, 11), were constructed in a manner so closely resembling those of existing crustacea ; and that the eyes of Ichthyosauri, in the lias, (Pl. 10, Figs. 1, 2), contained an apparatus, so like one in the eyes of many birds, as to leave no doubt that these fossil eyes were optical instruments, calculated to receive, in the same manner, impressions of the same light, which conveys the perception of sight to living animals. This conclusion is further confirmed by the general fact, that the heads of all fossil fishes and fossil reptiles, in every geological formation, are furnished with cavities for the reception of eyes, and with perforations for the passage of optic nerves, although the cases are rare, in which any part of the eye itself has been preserved. The influence of light is also so necessary to the growth of existing vegetables, that we cannot but infer, that it was equally essential to the development of the numerous fossil species of the vegetable kingdom, which are coextensive and coeval with the remains of fossil animals.