

## LECTURE SECOND.

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### THE PALÆONTOLOGICAL HISTORY OF ANIMALS.

AMID the unceasing change and endless variety of nature there occur certain great radical ideas, that, while they form, if I may so express myself, the groundwork of the change,—the basis of the variety,—admit in themselves of no change or variety whatever. They constitute the aye-enduring tissue on which the ever-changing patterns of creation are inscribed: the patterns are ever varying; the tissue which exhibits them for ever remains the same. In the animal kingdom, for instance, the prominent ideas have always been uniform. However much the faunas of the various geologic periods may have differed from each other, or from the fauna which now exists, in their general aspect and character, they were all, if I may so speak, equally underlaid by the great leading ideas which still constitute the master types of animal life. And these leading ideas are four in number. *First*, there is the *star-like* type of life,—life embodied in a form that, as in the corals, the sea-anemones, the sea-urchins, and the star-fishes, radiates outwards from a centre; *second*,