

earth's crust and surface was of comparatively recent commencement; otherwise the steep flanks of mountains would have ceased to crumble down, and wide oceans would have been filled with alluvial deposits.

Twelfthly. Among the thirty thousand species of animals and plants found in the rocks,¹ very few living species have been detected; and even these few occur in the most recent rocks, while in the secondary group, not less than six miles thick, not a single species now on the globe has been discovered. Hence the present races did not exist till after those in the secondary rocks had died. No human remains have been found below those alluvial deposits which are now forming by rivers, lakes, and the ocean. Hence geology infers that man was one of the latest animals that was placed on the globe.

Thirteenthly. The surface of the earth has undergone an enormous amount of erosion by the action of the ocean, the rivers, and the atmosphere. The ocean has worn away the solid rock, in some parts of the world, not less than ten thousand feet in depth, and rivers have cut channels through the hardest strata, hundreds of feet deep and several miles long; both of which effects demand periods inconceivably long.

Fourteenthly. At a comparatively recent date, northern and southern regions have been swept over and worn down by the joint action of ice and water, the force in general having been directed towards the equator. This is called the *drift* period.

Fifteenthly. Since the drift period, the ocean has stood some thousands of feet above its present level in many countries.

Sixteenthly. There is evidence, in regard to some parts of the world, that the continents are now experiencing slow vertical movements, some places sinking, and others rising. And hence a presumption is derived that, in early times, such changes may have been often repeated, and on a great scale.

Seventeenthly. Every successive change of importance on the earth's surface appears to have been an improvement of its condition, adapting it to beings of a higher organization, and to man at last, the most perfect of all.

¹ Two or three years since Professor Bronn described twenty-six thousand six hundred and seventy-eight species; and, upon an average, one thousand species are discovered every year. M. Alcide D'Orbigny, in 1850, stated the number of mollusks and radiated animals alone at seventeen thousand nine hundred and forty-seven species.