separate areas at one and the same time, is too often repeated to be accidental. Hence palæontologists, in endeavouring to establish evolution, have been obliged to assume periods of exceptional activity in the introduction of species, alternating with others of stagnation, a doctrine differing very little from that of special creation, as held by the older geologists.

The attempt has lately been made to account for these breaks by the assumption that the geological record relates only to periods of submergence, and gives no information as to those of elevation. This is manifestly untrue. In so far as marine life is concerned, the periods of submergence are those in which new forms abound for very obvious reasons, already hinted ; but the periods of new forms of land and fresh-water life are those of elevation, and these have their own records and monuments, often very rich and ample, as, for example, the swamps of the Carboniferous, the transition from the great Cretaceous subsidence, when so much of the land of the Northern Hemisphere was submerged, to the new continents of the Tertiary, the Tertiary lake-basins of Western America, the Terraces and raised beaches of the Pleistocene. Had I time to refer in detail to the breaks in the continuity of life which cannot be explained by the imperfection of the record, I could show at least that nature in this case does advance *per saltum*—by leaps, rather than by a slow continuous process. Many able reasoners, as Le Conte, in America, and Mivart and Collard in England, hold this view.

Here, as elsewhere, a vast amount of steady conscientious work is required to enable us to solve the problems of the history of life. But if so, the more the hope for the patient student and investigator. I know nothing more chilling to research, or unfavourable to progress, than the promulgation of a dogmatic decision that there is nothing to be learned but a merely fortuitous and uncaused succession, amenable to no law, and only to be covered, in order to hide its shapeless and