

genera, and even whole families, have been called into existence, and again totally annihilated, at various and successive periods, during the progress of the construction of the crust of our globe.

The history of Chambered Shells tends further to throw light upon a point of importance in physiology, and shows that it is not always by a regular gradation from lower to higher degrees of organization, that the progress of life has advanced, during the early epochs of which geology takes cognizance. We find that many of the more simple forms have maintained their primeval simplicity, through all the varied changes the surface of the earth has undergone; whilst, in other cases, organizations of a higher order preceded many of the lower forms of animal life; some of the latter appearing, for the first time, after the total annihilation of many species and genera of a more complex character.*

* The introduction, in the Tertiary periods, of a class of animals of lower organization, viz. the carnivorous Trachelipods, (See Chap. XV. Section 1,) to fill the place which, during the Secondary periods, had been occupied by a higher order, namely, the carnivorous Cephalopods, affords an example of *Retrocession* which seems fatal to that doctrine of *regular Progression*, which is most insisted on by those who are unwilling to admit the repeated interferences of Creative power, in adjusting the successive changes that animal life has undergone.

It will appear, on examination of the shells of fossil Nautili, that they have retained, through strata of all ages, their abori-