

of the bodies of vertebræ, but merely of their spinous processes; from which it must be inferred that the body of the vertebra was cartilaginous, as it is in our Sturgeons.

479. Recurring to what has been stated on that point, in Chapter Twelfth, we thence conclude, that these ancient fishes were not so fully developed as most of our fishes, being, like the Sturgeon, arrested, as it were, in their development; since we have shown that the Sturgeon, in its organization, agrees, in many respects, with the Cod or Salmon at an early age.

480. Finally, there was, during the Palæozoic age, but little variety among the animals of the different regions of the globe; and this may be readily explained by the peculiar configuration of the earth at that epoch. Great mountains did not then exist; there were neither lofty elevations nor deep depressions. The sea covered the greater part, if not the whole, of the surface of the globe; and the animals which then existed, and whose remains have been preserved, were all, without exception, aquatic animals, breathing by gills. This wide distribution of the waters impressed a very uniform character upon the whole Animal Kingdom. Between the different zones and continents, no such strange contrasts of the different types existed as at the present epoch. The same genera, and often the same species, were found in the seas of America, Europe, Asia, Africa, and New Holland; from which we must conclude that the climate was much more uniform than at the present day. Among the aquatic population, no sound was heard. All creation was then silent.

481. THE SECONDARY AGE. *Reign of Reptiles.* — The Secondary age displays a greater variety of animals as well as plants. The fantastic forms of the Palæozoic age disappear, and in their place we see a greater symmetry of shape. The advance is particularly marked in the series of verte-