

those of the most ancient deposits have, in general, preserved only the apophyses of their vertebræ, whilst the vertebræ themselves are wanting. Were the Sturgeons of the American rivers to become petrified, they would be found in a similar state of preservation. As the apophyses are the only bony portions of the vertebral column, they alone would be preserved. Indeed, fossil Sturgeons are known, which are in precisely this condition.

395. From the fact above stated, we may conclude that the oldest fossil fishes did not pass through all the metamorphoses which our osseous fishes undergo ; and, consequently, that they were inferior to analogous species of the present epoch which have bony vertebræ. Similar considerations apply to the fossil crustacea and to the fossil Echinoderms, when compared with living ones, and will, probably, be true of all classes of the Animal Kingdom, when fully studied as to their geological succession.