

Half the features of its head are twisted to one side, and the other half to the other, while its wry mouth is in keeping with its squint eyes. One jaw is straight, and the other like a bow; and while one contains from *four* to *six* teeth, the other contains from *thirty* to *thirty-five*.

Aided by facts like these, an ingenious theorist might, as our author remarks, "get up as unexceptionable a theory of degradation as of development." But however this may be, the principle of degradation actually exists, and "the history of its progress in creation bears directly against the assumption that the earlier vertebrata were of a lower type than the vertebrata of the same Ichthyic class which exist now."

In his next and *tenth* chapter, our author controverts with his usual power the argument in favor of the development hypothesis, drawn from the predominance of the Brachiopods among the Silurian Molluscs. The existence of the highly organized Cephalopods, in the same formation, not only neutralizes this argument, but authorizes the conclusion that an animal of a very high order of organization existed in the earliest formation. It is of no consequence whether the Cephalopods, or the Brachiopods were most numerous. Had there been only one cuttle fish in the Silurian seas, and a million of Brachiopods, the fact would equally have overturned the development system.

In the same chapter, Mr. Miller treats of the geological history of the Fossil flora, which has been pressed into the service of the development hypothesis. On the authority of Adolphe Brongniart, it was maintained that, previous to the age of the Lias, "Nature had failed to achieve a tree — and that the rich vegetation of the Coal Measures had been exclusively composed of magnificent immaturities of the vegetable kingdom, of gigantic ferns and club mosses, that attained to the size of forest trees, and of thickets of the swamp-loving horse-tail family of plants." True exogenous trees, however, do exist of vast size, and in great numbers, in all the coal-fields of our own country, as has been proved by Mr. Miller. Nay, he himself discovered in the Old Red Sandstone, *Lignite*, which is proved to have formed part of a true gymnospermous tree, represented by the pines of Europe and America, or more probably, as Mr. Miller believes, by the Araucarians of Chili and New Zealand. This important discovery is pregnant with instruction. The ancient Conifer must have waved its green foliage over dry land, and it is not probable that it was the only tree in the primeval forest. "The ship