

whole, no less than forty species of placoid and ganoid fish have been already collected in Russia, some of the placoids being of enormous size, as before stated, p. 419.

Devonian Strata in the United States.

In no country hitherto explored is there so complete a series of strata intervening between the Carboniferous and Silurian as in the United States. This intermediate or Devonian group was first studied in all its details, and with due attention to its fossil remains, by the Government Surveyors of New York. In its geographical extent, that State, taken singly, is about equal in size to Great Britain; and the geologist has the advantage of finding the Devonian rocks there in a nearly horizontal and undisturbed condition, so that the relative position of each formation can be ascertained with certainty.

Subdivisions of the New York Devonian Strata, in the Reports of the Government Surveyors.

Names of Groups.	Thickness in Feet.
1. Catskill group or Old Red Sandstone	2000
2. Chemung group	1500
3. Portage }	1000
4. Genesee }	
5. Tully	15
6. Hamilton	1000
7. Marcellus	50
8. Corniferous }	50
9. Onondaga }	
10. Schoharie }	10
11. Cauda-Galli grit }	
12. Oriskany sandstone	6 to 30

These subdivisions are of very unequal value, whether we regard the thickness of the beds or the distinctness of their fossils; but they have each some mineral or organic character to distinguish them from the rest. Moreover, it has been found, on comparing the geology of other North American States with the New York standard, that some of the above-mentioned groups, such as Nos. 2 and 3, which are respectively 1500 and 1000 feet thick in New York, are very local and thin out when followed into adjoining States; whereas others, such as Nos. 8 and 9, the total thickness of which is scarcely 50 feet in New York, can be traced over an area nearly as large as Europe.

Respecting the upper limit of the above system, there has been very little difference of opinion, since the Red Sandstone No. 1 contains *Holoptychius nobilissimus* and other fish characteristic generically or specifically of the European Old Red. More doubt has been entertained in regard to the classification of Nos. 10, 11, and 12. M. de Verneuil proposed in 1847, after visiting the United States, to include the Oriskany sandstone in the Devonian; and Mr. D. Sharpe, after examining the fossils which I had collected in America in 1842, arrived independently at the