cates the number of extinct genera and species of the family of Sharks, that occupied the waters throughout these early periods of time. Not less varied are the forms of palate bones and teeth, in the same formations that contain these spines; but as the cartilaginous skeletons to which they belonged have usually perished, and the teeth and spines are generally dispersed, it is chiefly by the aid of anatomical analogies, or from occasional juxtaposition in the same stratum, that their respective species can be ascertained.

Fossil Rays.

The Rays form the fourth family in the order Placoidians. Genera of this family abound among living fishes; but they have not been found fossil in any stratum older than the Lias; they occur also in the Jurassic limestone.

Throughout the tertiary formation they are very abundant; of one genus, Myliobates, there are seven known species; from these have been derived the palates that are so frequent in the London clay and crag. (See Pl. 27[d], B. Fig. 14.) The genus Trygon, and Torpedo, occur also in the Tertiary formations.

attached to strong muscles; but articulate with a bone beneath them. The Spine of Balistes also is kept erect by a second spine behind its base, acting like a bolt or wedge, which is simultaneously inserted, or withdrawn, by the same muscular motion that raises or depresses the spine.