

the *Acanthodes*, an elongated, spined, small-scaled genus, formed in the proportions of the ling or conger eel. On the other hand, the seas of the period, abundant also in ganoids, were tenanted by numerous and obsolete families of sharks, amply furnished both with razor-like teeth in their jaws for cutting, and millstone-like teeth on their palates for crushing,—furnished, some of them, with barbed stings, like the sting-rays,—and whose dorsal fins were armed with elaborately carved spines. The only representative of any of these genera of marine placoids which still exists is the Cestracion or Port-Jackson shark, a placoid of the southern hemisphere.

We know that over the rivers and lakes inhabited by the ganoidal fishes of this period there fluttered several species of insects mounted on gauze wings, like the Ephemeridæ of the present day. At least one of their number must have been of considerable size ;—a single wing preserved in ironstone, though not quite complete, is longer than the anterior wing of one of our largest dragon-flies, and about twice as broad ; and, as its longitudinal nervures are crossed at nearly right angles by transverse ones, it must have resembled, when attached to the living animal, a piece of delicate network. In the woods, and among the decaying trunks, there harboured at the same time several species of snouted beetles, somewhat akin to the diamond beetles of the tropics ; and with these, large many-eyed scorpions. The marshes abounded in minute crustaceans, of, however, a low order, that bore their gills attached to their feet, and breathed the more freely the more merrily they danced ; and the seas contained the last of the trilobites. I have already referred incidentally to the shells. The fresh waters contained various forms of *Unio*, somewhat similar to the pearl mussels of our rivers ; the profounder depths of the sea had their brachiopods,—*Spirifers* and *Producta* ; while molluscs of a higher order,—*Orthoceratites*, some of them of gigantic