

animals among us would be represented by but ten toe and ten finger nails, one set of teeth, a periwig, and a pair of whiskers. But so complete, on the other hand, was the development of the dermal skeleton among the fishes of the Old Red Sandstone, that, though in many instances no other parts of them survive, we find their outlines complete in the rock from head to tail. Dermal plates of enamelled bone represent the head; dermal scales, also of enamelled bone, lie ranged side by side, like tiles on a roof, in the lines in which they originally covered the body; and thickly-set enamelled rays of bone indicate the place and outline of the fins. As a set-off, however, against this great development of dermal skeleton in the ganoids of the Old Red Sandstone, their internal skeletons were exceedingly slight, and in whole families entirely cartilaginous.

The middle (*lower*) platform of the Old Red Sandstone has for its characteristic organism the Cephalaspis, or Buckler-head,—a curiously formed, bone-covered fish, with a thin triangular body, and crescent-shaped head, somewhat resembling in outline a shoemaker's cutting-knife. It had for its contemporaries several fishes armed with dorsal spines, of which only the spines remain, and of a gigantic Crustacean, akin, as shown by some of its plates, to our existing lobsters, but which in some specimens must have exceeded four feet in length.

It is, however, on the lower (*middle*) platform of the system that we find its organic remains at once most abundant and most characteristic. The flagstones of Caithness and Orkney, and the nodule-bearing beds of Ross, Cromarty, and Moray, contain more fossil fish than all the other formations of not only Scotland, but of Great Britain, from the Tertiary deposits down to the Mountain Limestone. There are strata in which they lie as thickly as herrings on our better fishing banks in autumn, when the fisherman's harvest is at its best; and, strange to say, not unfrequently do the fish of