

projecting from its edges ; and when I subjected them to the scrutiny of the glass, unlike those mere chance resemblances which sometimes deceive for a moment the eye, the more distinct and unequivocal did their forms become. I laid open a second nodule. It contained a group of glittering rhomboidal scales, with a few cerebral plates, and a jaw bristling with teeth. A third nodule also supplied its organism, in a well-defined ichthyolite, covered with minute, finely-striated scales, and furnished with a sharp spine in the anterior edge of every fin. I eagerly wrought on, and disinterred, in the course of a single tide, specimens enough to cover a museum table ; and it was with intense delight that, as the ripple of the advancing tide was rising against the pebbles, and covering up the ichthyolitic beds, I carried them to the higher slopes of the beach, and, seated on a boulder, began carefully to examine them in detail, with a common botanist's microscope. But not a plate, spine, or scale could I detect among their organisms, identical with the ichthyic remains of the Lias. I had got amid the remains of an entirely different and incalculably more ancient creation. My new-found organisms represented, not the first, but merely the second age of vertebrate existence on our planet ; but as the remains of the earlier age exist as the mere detached teeth and spines of placoids, which, though they give full evidence of the *existence* of the fishes to which they belong, throw scarce any light on their structure, it is from the ganoids of the second age that the palæontologist can with certainty know under what peculiarities of form, and associated with varieties of mechanism, vertebral life existed in the earlier ages of the world. In my new-found deposit,—to which I soon added, however, within the limits of the parish, some six or eight deposits more, all charged with the same ichthyic remains,—I found I had work enough before me for the patient study of years.