length; and of the defensive spines of its two dorsals,—these spear-like thorns on the creature's back immediately in advance of the fins, which so frequently wound the fisher's hand,—the anterior and smaller measures, from base to point, an inch and a half, and the posterior and larger, two inches. I have also placed before me a specimen of *Cestracion Phillippi*, (the Port Jackson Shark,) a fish now recognized as the truest existing analogue of the Silurian Placoids. It measures twenty-two three fourth inches in length, and is furnished, like *Spinax*, with two dorsal spines, of which the anterior and larger measures from base to point one one half inch, and the posterior and smaller, one one fifth inch. But the defensive spine of the *Onchus Murchisoni*, as exhibited in one of the Ludlow specimens, measures, though mutilated at both ends, three inches and five eighth parts in length. Even though existing but as a fragment, it is as such nearly twice the length of the largest spine of the dog-fish, unmutilated and entire, and considerably *more* than twice the length of the largest spine of the Port Jackson Shark. The spines detected by Professor Phillips, in an inferior stratum of the same upper deposit, were, as has been shown, of microscopic minuteness; and when they seemed to rest on the extreme horizon of ichthyic existence as the most ancient remains of their kind, the author of the "Vestiges" availed himself of the fact. He regarded the little creatures to which they had belonged as the fœtal embryos of their class, or—to employ the language of the Edinburgh Reviewer—as "the tokens of Nature's first and half-abortive efforts to make fish out of the lower animals." From the latter editions of his work, the paragraph to which the Reviewer refers has, I find, been expunged; for the horizon has greatly extended, and what seemed to be its line of extreme distance has travelled into the