portion of earthy matter in their bones; birds the largest. The mammalia, especially the active, predatory species, have more earth, or harder bones, than reptiles. In each class, however, there are differences in the density of bone among its several members. For example, in the fresh-water fishes, the bones are lighter, and retain more animal matter, than in those which swim in the denser sea. And in the *dolphin*, a warm-blooded marine animal, they differ little in this respect from those of the sea-fish." Such being the fact, it is surely but fair to inquire of the author of the "Vestiges," why he should determine the rank and standing of the *Delphinidæ* according to one set of principles, and the rank and standing of the Placoids according to another and entirely different set? If the *Delphinidæ* are to be placed high in the scale, notwithstanding the softness of their skeletons, simply because their brains are large, why are the Placoids to be placed low in the scale, notwithstanding the largeness of their brains, simply because their skeletons are soft? It is not too much to demand, that on the principle which he himself recognizes as just, he should either degrade the dolphin or elevate the Placoid. For it is altogether inadmissible that he should reason on one set of laws when the exigencies of his hypothesis require that creatures with soft skeletons should be raised in the scale, and on another and entirely different set when its necessities demand that they should be depressed.

But do the Placoids possess in reality a large development of brain? I have examined the brains of almost all the common fish of our coast, both osseous and cartilaginous, not, I fear, with the skill of a Tiedemann, but all the more intelligently in consequence of what Tiedemann had previously done and written; and so I can speak with some little con-