

consumed and dissipated its merely cartilaginous portions, such as the neural and hæmal processes, with the little pieces which form the sides of the neural arch, and left only the whitened bodies of the vertebræ, let him say whether the bony portion which remains does not present a more exact resemblance to the mammiferous tail — that of the dog, for example — than any thing else he ever saw. The Lamarckians may well deem it an unlucky circumstance, that one special portion of their theory should demand the depreciation of the heterocercal tail, seeing that it might be represented with excellent effect in another, as not merely a connecting link in the upward march of progression between the tail of the true fish and that of the true reptile, but as actually containing in itself — as the caterpillar contains the future pupa and butterfly — the elements of the reptilian and mammiferous tail. If there be any virtue in analogy, the heterocercal tail is, I repeat, of a decidedly higher type than the homocercal one. It furnishes the first example in the vertebrata of the coccygeal vertebræ diminishing to a point, which characterizes not only all the higher reptiles, but also all the higher mammals, and which we find represented by the *Os coccygis* in man himself. But to this special point I shall again refer.

With regard to that rudimentary state of the *occipital* framework of the Placoids to which the author of the “Vestiges” refers, it may be but necessary to say that, notwithstanding the simplicity of their box-like skulls, they bear in their character, as cases for the protection of the brain, at least as close an analogy to the skulls of the higher animals, as those of the osseous fishes, which consist usually of the extraordinary number of from sixty to eighty bones, — a mark — the author of the “Vestiges” himself being judge in the case — rather of inferiority than the reverse. “Ele-