vent opens between, or nearly between, those hinder limbs which the bases support. In the Rays, which, so far as is yet known, did not appear in creation until the Secondary ages had begun, the bases of the fore limbs, *i. e.* pectoral fins, are attached to the lower part of a huge cervical vertebra, nearly equal in length to *all* the trunk vertebræ united; and in the Chimeridæ, which also first appear in the Secondary division, they are attached, as in the osseous fishes, to the hinder part of the head. But in the representatives of all those Silurian Placoids yet known, of which the family can be determined, or any thing with safety predicated, the cervical division is found to occur as a series of vertebræ: they present in this, as in the hinder portion of their bodies, the homological symmetry of organization typical of that vertebral sub kingdom to which they belong.

In the second great period of ichthyic existence, — that of the Old Red Sandstone, — we find the first example, in the class of fishes, of "monstrosity through *displacement* of parts," and apparently also — in at least two genera, though the evidence on this head be not yet quite complete — of "monstrosity through *defect* of parts." In all the Ganoids of the period, with (so far as we can determine the point) only two exceptions, the scapular bases of the fore limbs are brought forward from their typical place opposite the base of the cervical vertebræ, and stuck on to the occipital plate. There occurs, in consequence, in one great order of the ichthyic class, such a departure from the symmetrical type as would take place in a monster example of the human family in whom the neck had been annihilated, and the arms stuck on to the back of the head. And in the genera *Coccosteus* and *Pterichthys* we find the first example of degradation through *defect*. In the *Pterichthys* the *hinder* limbs seem wanting;