

or the cartilaginous, as a series, of the osseous. The arrangement is parallel, not consecutive; but the parallelism, if I may so express myself, seems to be that of a longer with a shorter line;—the cartilaginous fishes, though much less numerous in their orders and families than the other, stretch farther along the scale in opposite directions, at once rising higher and sinking lower than the osseous fishes. The cartilaginous order of the sturgeons,—a roe-depositing tribe, devoid alike of affection for their young, or of those attachments which give the wild beasts of the forest partners in their dens,—may be regarded as fully abreast of by much the greater part of the osseous fishes, in both their instincts and their organization. The family of the sharks, on the other hand, and some of the rays, rise higher, as if to connect the class of fish with the class immediately above it—that of reptiles. Many of them are viviparous, like the mammalia—attached, it is said, to their young, and fully equal even to birds in the strength of their connubial attachments. The male, in some instances, has been known to pine away and die when deprived of his female companion.* But then, on the other hand, the cartilaginous fishes, in some of their tribes, sink as low beneath the osseous as they rise above them in others. The suckers, for instance, a cartilaginous family, are the most imperfect of all vertebral animals; some of them want even

* Some of the osseous fishes are also viviparous—the “viviparous blenny,” for instance. The evidence from which the supposed affection of the higher fishes for their offspring has been inferred, is, I am afraid, of a somewhat equivocal character. The love of the sow for her litter hovers, at times, between that of the parent and that of the epicure; nor have we proof enough, in the present state of ichthyological knowledge, to conclude to which side the parental love of the fish inclines. The connubial affections of some of the higher