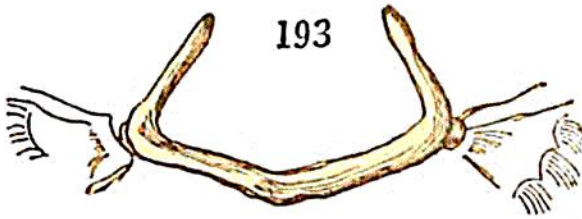


farther corroboration of the analogy which the cranial bones have to vertebræ.

In the ray and the shark tribes, both the anterior and posterior



extremities are supported by arches of bones, forming a sort of belt. This structure is an approach to that which obtains in many

reptiles, and indicates a farther step in the regular progress of development. This belt in the ray is shown in Fig. 193.

In examining that part of the skeleton of fishes which corresponds to the posterior extremity, we observe the total absence of both femur and tibia; but the bones of the toes are attached to a set of small bones, which appear to act the part of a pelvis, but which, in consequence of their not being connected with the spine, have no determinate situation, and are found at various distances from the head in different fishes. They appear emancipated from the restraints to which they would have been subjected had they been fixed to a sacrum, or to any particular part of the spine: we find them, accordingly, often placed considerably forwards; and in some instances, as in the *Subbrachiæni*, even anteriorly to the pectoral fins, which are the true arms of the animal. But in one whole order of fishes, the *Apodes*, there is not even a vestige of ventral fins, nor are any pelvic bones provided for their support. This is the case with the *Eel*, the *Gymnotus*, &c. In a few species there is also a total absence of pectoral as well as ventral fins.

The dorsal fins are supported by a series of slender bones (D, Fig. 184,) which are joined to the spinous processes of the vertebræ, and are formed from distinct centres of ossification. These *rays*, as they are called, are sometimes destined to grow to so considerable a length, as to require being subdivided into many pieces, in order to lessen the danger of fracture, to which a very long filament of bone would have been exposed, and also to allow of a greater degree of flexibility. These rays assume branched forms from