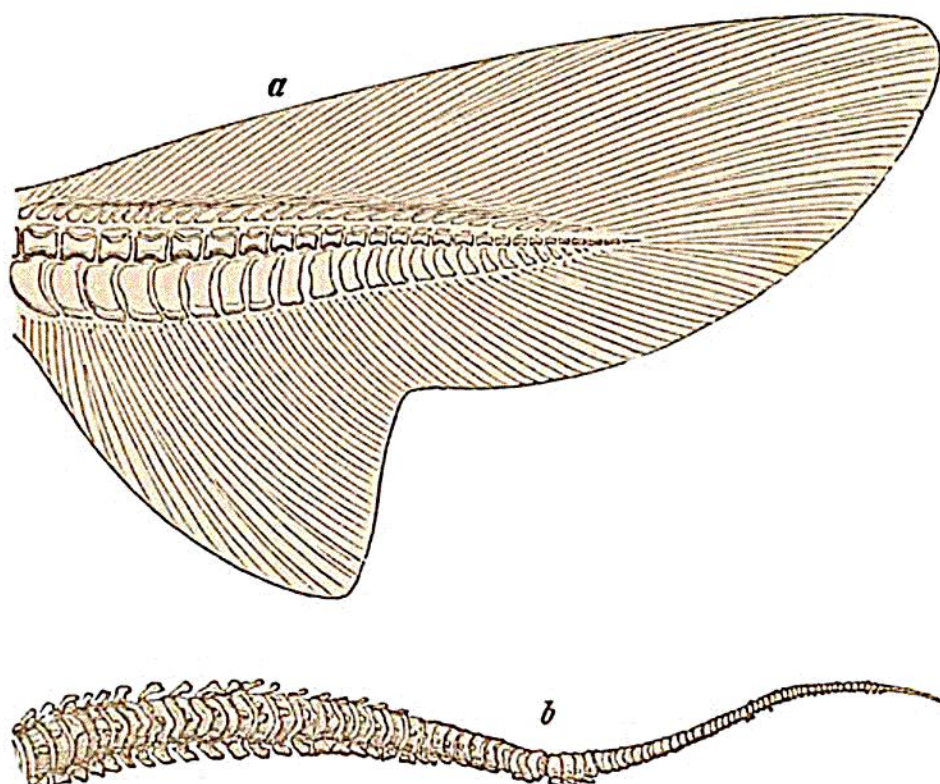


of the higher orders. Its abruptly terminating vertebral column, immensely developed posterior processes, and broadly expanded osseous rays, seem to be simply a few of the many marks of decline and degradation which fishes, the oldest of the vertebrata, exhibit in this late age of the world, and which, in at least the earlier geologic periods, when they were greatly younger as a class, they did not betray.

Fig. 48.



a. Tail of *Spinax Acanthias*.

b. Tail of *Ichthyosaurus Temuirostris*, (Buckland.)

In illustration of this view, I would fain recommend to the reader a simple experiment. Let him procure the tail of a common dog-fish, (fig. 48, a,) and cutting it across about half an inch above where the caudal fin begins, let him boil it smartly for about half an hour. He will first see it swell,