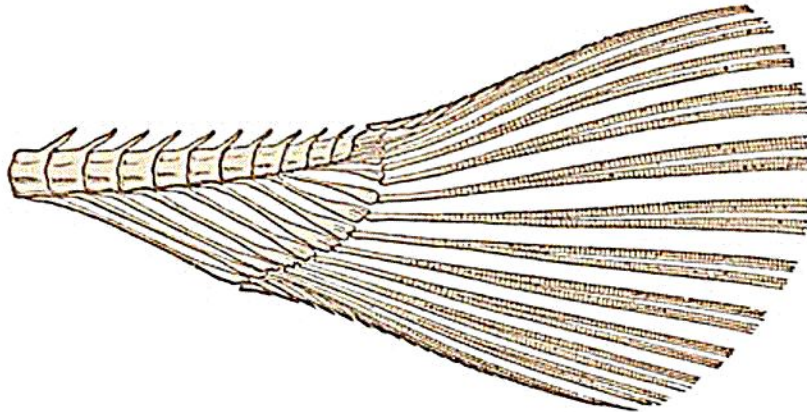


internal angle of the tail of the sturgeon: the lozenge-shaped scales run in acutely angular patches through their upper lobes; but such is their extreme flatness, as shown by the disposition of the enamelled covering, that it appears exceedingly doubtful whether any vertebral column ran beneath;— they seem but to have covered greatly diminished prolongations of the spinal cord. In the base of the Secondary division, — another long stage towards the existing state of things, — we find, with the homocercal tail, which now appears for the first time, numerous tails like that of the *Lepidosteus*, (fig. 51,) of an intermediate type;— they are rather

Fig. 51.



TAIL OF LEPIDOSTEUS OSSEUS.

tails set on awry than truly heterocercal. The diminished cord has disappeared from among the fin rays. In the numerous Lepidoid genus, and the genera *Semionotus* and *Tetragonolepis*, — all ganoid fishes of the Secondary period — this intermediate style is very marked; while in their contemporaries of the genera *Uræus*, *Microdon*, and *Pycnodus*, we find the earliest examples of true homocercal tails. And in the Ctenoids and Cycloids of the Chalk the homocercal tail receives its fullest development. It finds bases for its rays in broad non-homological processes, that spread out