upper lobe of the fin, and terminates in a point, (see fig. 50,) it must have dossessed the gradually diminishing vertebræ, or

Fig. 50.

tail or osteolepis.
a diminishing spinal cord, their analogue; but the rays, fairly set, as their state of keeping in the rocks certify, exist as narrow oblong plates of solid bone ; and their anterior edges are strengthened by a line of osseous defences, that pass from scales into rays. And in harmonious accompaniment with this fairly stereotyped edition of the ichthyic tail, we find, in the fishes in which it appears, the first instance of displacement of limb, - the bases of the pectorals being removed from their original position, and stuck on to the nape of the neck. It may be remarked, in passing, that in the tails of two ganoidal genera of this period, - the Coccostens and Pterichthys, the analogies traceable lie rather in the direction of the tails of the Rays than in those of the Sharks; and that one of these, the Coccosteus, seems, as has been already intimated, to have had no pectorals, while it is doubtful whether in the Pterichtli,s the pectorals were not attached to the shoulder, instead o: the head. In the Carboniferous and Permian systems there occur, especially among the numerous species of the genus Palaoniscus, tails of the type exemplified by the

