

the idea of a very singular little fish. The ventral fins front the space which occurs between the two dorsals, and the anal fin the space which intervenes between the posterior dorsal fin and the tail. The length of the *Osteolepis*, in my larger specimens, somewhat exceeds a foot; in the smaller, it falls short of six inches. There exist at least three species of this ichthyolite, distinguished chiefly, in two of the instances, by the smaller and larger size of their scales, compared with the bulk of their bodies, and by punctulated markings on the enamel in the case of the third. This last, however, is no specific difference, but common to the entire genus, and to several other genera besides. The names are, *Osteolepis macrolepidotus*, *O. microlepidotus*, and *O. arenatus*.\*

Next to the *Osteolepis* we may place the *Dipterus*, or double-wing, of the Lower Old Red Sandstone, an ichthyolite first introduced to the knowledge of geologists by Mr. Murchison, who, with his friend, Mr. Sedgwick, figured and described it in a masterly paper on the older sedimentary formations of the north of Scotland, which appeared in the *Transactions of the Geological Society of London* for 1828. The name, derived from its two dorsals, would suit equally well, like that of the *Osteolepis*, many of its more recently discovered contemporaries. From the latter ichthyolite it differed chiefly in the position of its fins, which were opposite, not alternate; the double dorsals exactly fronting the anal and ventral fins. (See Plate V., fig. 1.) The *Diplopterus* a nearly resembling ichthyolite of the same formation, also owes its name to the order and arrangement of its fins,

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\* To these there have since been added *Osteolepis major*, *O. intermedius*, and *O. nanus*; the two latter, however, Agassiz regards as doubtful.