

be wished than hoped for — a circumstance within the bounds of the possible, but beyond those of the probable. Could the working-man of the north of Scotland have so much as dreamed that he was yet to enjoy an opportunity of comparing his observations with those of the naturalist of Neufchatel, and of having his inferences tested and confirmed ?

The opportunity did occur. The working-man did meet with Agassiz ; and many a query had he to put to him ; and never, surely, was inquirer more courteously entreated, or his doubts more satisfactorily resolved. The reply to almost my first question solved the enigma of nearly ten years' standing. And finely characteristic was that reply of the frankness and candor of a great mind, that can afford to make it no secret, that, in its onward advances on knowledge, it may know to-day what it did not know yesterday, and that it is content to "gain by degrees upon the darkness." "Had you asked me the question a fortnight ago," said Agassiz, "I could not have replied to it. Since then, however, I have examined an ichthyolite of the Old Red Sandstone in which the vertebral joints are fortunately impressed on the stone, though the joints themselves have disappeared, and which, exactly resembling the vertebræ of the shark, must have been cartilaginous." In a subsequent conversation, the writer was gratified by finding most of his other facts and inferences authenticated and confirmed by those of the naturalist. I shall attempt introducing to the reader the peculiarities, general and specific, of the ichthyolites to which these facts and observations mainly referred, by describing such of the families as are most abundant in the formation, and the points in which they either resemble or differ from the existing fish of our seas.

Of these ancient families the *Osteolepis*, or bony-scale