

the character of some of the most remarkable families of fossil Fishes.

It appears that the character of fossil Fishes does not change *insensibly* from one formation to another, as in the case of many Zoophytes and Testacea; nor do the same genera; or even the same families, pervade successive series of great formations; but their changes take place *abruptly*, at certain definite points in the vertical succession of the strata, like the sudden changes that occur in fossil Reptiles and Mammalia.* Not a single species of fossil Fishes has yet been found that is common to any two great geological formations; or living in our present seas.†

One important geological result has already attended the researches of M. Agassiz, viz. that the age and place of several formations hitherto unexplained by any other character, have been made clear by a knowledge of the fossil Fishes which they contain.‡

* M. Agassiz observes that fossil Fishes in the same formation present greater variations of species at distant localities, than we find in the species of shells and Zoophytes, in corresponding parts of the same formation; and that this circumstance is readily explained by the greater locomotive powers of this higher class of animals.

† The nodules of clay stone on the coast of Greenland, containing fishes of a species now living in the adjacent seas, (*Mallotus Villosus*) are probably modern concretions.

‡ Thus the slate of Engi, in the canton of Glaris, in Swit-