

## INTRODUCTION.

The practicability of thus distinguishing so great a variety of materials in the earth, as successively terminate at the surface being admitted; and their courses delineated in a large map of the Strata just published; I may now confidently proceed with a general account of those organized Fossils, which I found imbedded in each Stratum, and which first enabled me more particularly to distinguish one Stratum from another.

Fossil Shells had long been known amongst the curious, collected with care, and preserved in their cabinets, along with other rarities of nature, without any apparent use. That to which I have applied them is new, and my attention was first drawn to them, by a previous discovery of regularity in the direction and dip of the various Strata in the hills around Bath; for it was the nice distinction which those similar rocks required, which led me to the discovery of organic remains peculiar to each Stratum. Their perfect state of preservation, and most tender structure, raised a doubt respecting their diluvian origin, and a close attention to the Gravel Fossils, clearly proved *two distinct operations of water*.

The Fossils of the former deposit being all finely preserved, while those of the latter, (which are chiefly superficial,) are all greatly rounded by attrition. Those of the first class are never found but in their respective sites in the Strata;—those of the latter, by their promiscuous mixture, superficial situation, and other circumstances, most strongly confirm the previous deposit, and complete induration of the Strata which contain the former. Conceiving, therefore, the Gravel Fossils to be the most indubitable effects of a great body of water passing over the surface of the earth, with violence sufficient to tear up fragments of the Strata, round them by attrition, and drive them many miles from their regular beds to the promiscuous situations which they now occupy. These have been called *alluvial Fossils*, and the Gravel which contains them being thus clearly distinguished from the regular Strata beneath, much of the mystery in which Fossil Shells, and other materials of the earth were involved, seemed to be removed by this distinction.

Thus far it may be necessary to apprise the reader of the meaning here attached to the word alluvial.

The organized Fossils which come under that head, being as various as the Strata from whence they have been dislodged, an account of them will most properly be given in the last number.

Under the same head, also, will be given, further particulars of the Frontispiece, or annexed Engraving of a singular Fossil Tooth, of some extinct monstrous unknown animal, which is opalized;---found in Norfolk.