

or subsidence of land, if the walls are supported on the exterior and interior with a deposit, like that which surrounded and filled to the height of ten or twelve feet the Temple of Serapis at Puzzuoli.

Periods when the Temple of Serapis sank and rose. — The next subject of inquiry is the era when these remarkable changes took place in the Bay of Baiæ. It appears that, in the Atrium of the Temple of Serapis, inscriptions were found in which Septimius Severus and Marcus Aurelius record their labours in adorning it with precious marbles.* We may, therefore, conclude that it existed at least down to the third century of our era nearly in its original position; and it may have been built at the close of the second century. On the other hand, we have evidence that the marine deposit forming the flat land, called La Starza, was still covered by the sea in the year 1530, or just eight years anterior to the tremendous explosion of Monte Nuovo. Mr. Forbes has lately pointed out the distinct testimony of an old Italian writer, Loffredo, in confirmation of this important point.† Writing in 1580, Loffredo declares that fifty years previously, the sea washed the base of the hills which rise from the flat land before alluded to; and at that time, he expressly tells us, a person *might have fished* from the site of those ruins which are now called the Stadium. (See p. 489. fig. 67.) Hence it follows, that the subsidence of the ground happened at some period between the third century, when the temple was still standing, and the beginning of the sixteenth century, when its site was still submerged.

Now, in this interval, the only two events which are recorded in the imperfect annals of the dark ages are, the eruption of the Solfatara in 1198, and an earthquake in 1488, by which Puzzuoli was ruined. It is at least highly probable, that earthquakes, which preceded the eruption of the Solfatara, which is very near the temple (see Map, fig. 67. p. 489.) caused a subsidence, and the pumice and other matters ejected from that volcano might have fallen in heavy showers into the sea, and would thus immediately have covered up the lower part of the columns, and preserved them from the action of the sea and from lithodorous perforations. The waves might afterwards have thrown down many pillars, and formed strata of broken fragments of buildings, intermixed with volcanic ejections, and thus have caused those strata, containing works of art and shells, which extend for several miles along the coast. Mr. Babbage, after carefully examining several incrustations of carbonate of lime, such as the waters of the hot spring might have deposited, adhering to the walls and columns of the temple at different heights, as also the distinct marks of ancient lines of water-level, visible below the zone of lithophagous perforations, has come to the conclusion, and I think, proved, that the subsidence of the building was not sudden, or at one period only, but gradual, and by successive movements.‡

As to the re-elevation of the depressed tract, that may also have

* Brieslak, Voy. dans la Campanie, No. II. p. 281.
tom. ii. p. 167.

‡ Proceedings of Geol. Soc., No. 36.

† Ed. Journ. of Science, new series, March, 1834.