occurred at different periods, since earthquakes are not unfrequent in this country. Jorio cites two authentic documents in illustration of this point. The first dated Oct. 1503, is a deed written in Italian, by which Ferdinand and Isabella grant to the University of Puzzuoli a portion of land, "where the sea is drying up" (che va seccando el mare); the second, a document in Latin, dated May 23. 1511, or nearly eight years after, by which Ferdinand grants to the city a certain territory around Puzzuoli, where the ground is dried up from the sea (desiccatum).*

It is perfectly evident, however, from Loffredo's statement, that the principal elevation of the low tract called La Starza took place after the year 1530, and some time before the year 1580; and from this alone we might have suspected that the change happened in the year 1538; when Monte Nuovo was formed. But, fortunately, we are not left in the slightest doubt that such was the date of this remarkable event; for in the descriptions before cited (p. 352.) of Falconi and Giacomo di Toledo of the convulsion of 1538, of which they were eye-witnesses, we find an express statement of the sea having abandoned a considerable tract of the shore, so that fish were taken by the inhabitants; and among other things Falconi mentions that he saw two springs in the newly discovered ruins.

Encroachments of the sea in the Bay of Baiæ. - The flat land, when first upraised, must have been more extensive than now, for the sea encroaches somewhat rapidly, both to the north and southeast of Puzzuoli. The coast had, of late years, or when I examined it in 1828, given way more than a foot in a twelvemonth; and I was assured, by fishermen in the bay, that it has lost ground near Puzzuoli, to the extent of thirty feet, within their memory. By this gradual encroachment, the whole of the low land near the temple may perhaps, in the course of time, be carried away, unless some new upheaval of the country shall take place, before the waves reach the ancient coast-line; but the removal of this narrow tract will by no means restore the country to its former state, for the old tufaceous hills, and the interstratified current of trachytic lava which has flowed from the Solfatara, must have participated in the movement of 1538; and these will remain upraised, even though the sea may regain its ancient limits.

It appears, however, from the memoir of Niccolini, published in 1838, that since the beginning of the 19th century, the Temple of Serapis has subsided more than two feet. That learned architect visited the ruins frequently, for the sake of making drawings, in the beginning of the year 1807, and was in the habit of remaining there throughout the day, yet never saw the pavement overflowed by the sea, except occasionally when the south wind blew violently. On his return, sixteen years after, to superintend some excavations ordered by the King of Naples, he found the pavement covered by sea-water twice every day at high tide, so that he was obliged to place there a line of stones to stand upon. This induced him to make a series of

^{*} Sul Tempio di Serap. chap. viii.