

have been published not long since by Italian investigators, who have shown the conclusions arrived at by myself and others were correct, that sound-waves travel faster than the coarser mechanical vibrations when traversing most rocks.

7, CHIATAMONE, NAPLES.

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THE TEMPLE OF JUPITER SERAPIS IN PUTEOLI (POZZUOLI).

SIR,—It is well known that the ruins of this Temple have been looked upon as the most striking example of subsidence in historic times. Although it has taken place within the Christian era, the date has been but vaguely known. Babbage, in his article, *Geological Transactions*, vol. iii. (1847), mentions an inscription of Alexander Severus on the Temple asserting it to have been adorned by his munificence. As Alexander Severus reigned from A.D. 222 to 235, at that time the Temple must still have been above sea-level. In *Lyell's Principles*, vol. ii. p. 173, there is a quotation from Loffrado which proves that in 1530 a great part of the site of modern Pozzuoli of ancient Puteoli, was under water. The city was captured by Alaric A.D. 410; then by Genserie 455; then by Votila 545 (E. H. Bunbury in *Smith's Dict. Geog. art. Puteoli*); but we have no information as to whether the Serapeum was then above or under water. The Temple of Serapis then was above water in 230 and below water 1530, and during the intervening 1300 years there seems no reliable information.

However, in the *Acta Reta et Pauli*, Greek forms, dating according to Lipsius from the fifth century, we have the following passage—I quote from Walker's Translation Ante-Nicene Library, vol. xvi. p. 258:—"And Paul being in Ponteole (Puteoli) and having heard that Dioscorus had been beheaded, being grieved with great grief gazing into the night of Heaven said 'Oh Lord Almighty . . . punish this city and bring out of it all who have believed in God and followed His word.' He said to them therefore 'follow me.' And going forth from Pontiole they came to a place called Baias (Baiae) and looking up with their eyes they all see that city Pontiole sink into sea-shore (*εις την ὄχθαν τῆς θαλάσσης*) about one fathom (*ὡσεὶ ὀργυρίαν μίαν*) and there it is until this day for a remembrance under the sea." It is evident that when the Greek of the *Acta Petri et Pauli* was written Pozzuoli was under water, as it was in the days of Loffredo (though perhaps not so deeply submerged), and had been so for so long that the memory of the subsidence and the circumstances attending it had been utterly lost. If we allow a century to have been sufficient to have caused this utter oblivion, we have then reduced the 1300 years to about 150. In other words somewhere between the middle of the third century and the middle of the fourth this event must have occurred. The phrase "into the sea-shore" (*εις την ὄχθαν τῆς θαλάσσης*) supports Babbage's theory that the Temple first sank in a lake of brackish water. This is confirmed by the assertion that the city sank a fathom (*ὡσεὶ ὀργυρίαν μίαν*).

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