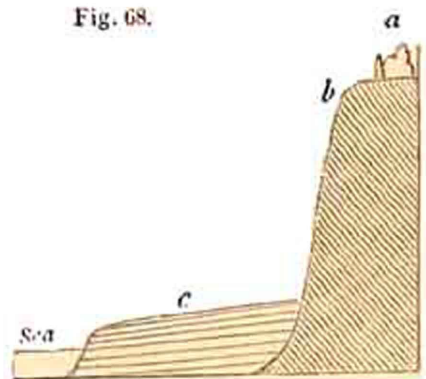


was covered with barnacles (*Balanus sulcatus*, Lamk.), and drilled by boring testacea. Some of the hollows of the lithodomi contained the shells; while others were filled with the valves of a species of

Fig. 68.



a, Antiquities on hill S.E. of Puzzuoli.  
b, Ancient cliff now inland.  
c, Terrace composed of recent submarine deposit.

Arca.\* Nearer to Puzzuoli, the inland cliff is eighty feet high, and as perpendicular as if it was still undermined by the waves. At its base, a new deposit constituting the fertile tract above alluded to, attains a height of about twenty feet above the sea; and, since it is composed of regular sedimentary deposits, containing marine shells, its position proves that, subsequently to its formation, there has been a change of more than twenty feet in the relative level of land and sea.

The sea encroaches on these new incoherent strata; and as the soil is valuable, a wall has been built for its protection; but when I visited the spot in 1828, the waves had swept away part of this rampart, and exposed to view a regular series of strata of tuff, more or less argillaceous, alternating with beds of pumice and lapilli, and containing great abundance of marine shells, of species now common on this coast, and amongst them *Cardium rusticum*, *Ostrea edulis*, *Donax trunculus*, Lamk., and others. The strata vary from about a foot to a foot and a half in thickness, and one of them contains abundantly remains of works of art, tiles, squares of mosaic pavement of different colours, and small sculptured ornaments, perfectly uninjured. Intermixed with these I collected some teeth of the pig and ox. These fragments of building occur below as well as above strata containing marine shells. Puzzuoli itself stands chiefly on a promontory of the older tufaceous formation, which cuts off the new deposit, although I detected a small patch of the latter in a garden under the town.

From the town the ruins of a mole, called Caligula's Bridge, run out into the sea. This mole consists of a number of piers and arches; and Mr. Babbage found, on the sixth pier, perforations of lithodomi four feet above the level of the sea; and near the termination of the mole, on the last pier but one, marks of the same ten feet above the level of the sea, together with great numbers of balani and flustra.

*Coast north of Puzzuoli.* — If we then pass to the north of Puzzuoli, and examine the coast between that town and Monte Nuovo, we find a repetition of analogous phenomena. The sloping sides of Monte Barbaro slant down within a short distance of the coast, and terminate in an inland cliff of moderate elevation, to which the geologist perceives at once that the sea must, at some former period, have extended. Between this cliff and the sea is a low plain or terrace, called La

\* Mr. Babbage examined this spot in company with Sir Edmund Head in June, 1828, and has shown me numerous specimens of the shells collected here, and in the Temple of Serapis.