

G. Page 96.—OBSERVATIONS ON THE TEMPLE OF SERAPIS, AT PUZZUOLI, NEAR NAPLES; in a Letter to W. H. Fitton, M.D., from Charles Babbage, Esq.—This paper commences with a general description of the present state of the Temple of Serapis, and gives the measurement of the three marble columns which remain standing, and which, from the height of eleven feet to that of nineteen, are perforated on all sides by the *modiola lithophaga* (of Lamarck); the shells of that animal remaining in the holes formed by them in the columns. A description follows of the present state of twenty-seven portions of columns, and other fragments of marble, and also of the several incrustations formed on the walls and columns of the temple.

From these and other data, Mr. Babbage concludes:—

1. That the temple was originally built at, or nearly at the level of the sea, for the convenience of sea-baths, as well as for the use of the hot spring which still exists on the land side of the temple.

2. That, at a subsequent period, the ground on which the temple stood, subsided slowly and gradually; the salt water, entering through a channel which connected the temple with the sea, or by infiltration through the sand, mixed itself with the water of the hot spring containing carbonate of lime, and formed a lake of brackish water in the area of the temple, which, as the land subsided, became deeper, and formed a dark incrustation.

The proofs are, that sea-water alone does not produce a similar incrustation; and that the water of the hot spring alone produces an incrustation of a different kind; also, that serpulæ are found adhering to this dark incrustation; and that there are lines of water-level at various heights from 2.9 feet to 4.6 feet.

3. The area of the temple was now filled up to the height of about seven feet with ashes, tufa, or sand, which stopped up the channel by which sea-water had been admitted. The waters of the hot spring thus confined, converted the area of the temple into a lake, from which an incrustation of carbonate of lime was deposited on the columns and walls. The proofs are, that the lower boundary of this incrustation is irregular; whilst the upper is a line of water-level, and that there are many such lines at different heights;—that salt water has not been found to produce a similar incrus-