

shown that man was an inhabitant of that part of the globe, while the materials composing the present hills and plains of Campania were still in the progress of deposition at the bottom of the sea; whereas we know that for nearly 3000 years, or from the times of the earliest Greek colonists, no material revolution in the physical geography of that part of Italy has occurred.

In Ischia, a small island near Naples, composed in like manner of marine and volcanic formations, Dr. Philippi collected in the stratified tuff and clay ninety-two species of shells of existing species. In the centre of Ischia, the lofty hill called Epomeo, or San Nicola, is composed of greenish indurated tuff, of a prodigious thickness, interstratified in some parts with marl, and here and there with great beds of solid lava. Visconti ascertained by trigonometrical measurement that this mountain was 2605 feet above the level of the sea. Not far from its summit, at the height of about 2000 feet, as also near Moropano, a village only 100 feet lower, on the southern declivity of the mountain, I collected, in 1828, many shells of species now inhabiting the neighboring gulf. It is clear, therefore, that the great mass of Epomeo was not only raised to its present height, but was also *formed* beneath the waters, within the post-pliocene period.

It is a fact, however, of no small interest, that the fossil shells from these modern tuffs of the volcanic regions surrounding the Bay of Baiæ, although none of them extinct, indicate a slight want of correspondence between the ancient fauna and that now inhabiting the Mediterranean. Philippi informs us that when he and M. Scacchi had collected ninety-nine species of them, he found that only one, *Pecten medius*, now living in the Red Sea, was absent from the Mediterranean. Notwithstanding this, he adds, "the condition of the sea when the tufaceous beds were deposited must have been considerably different from its present state; for *Tellina striata* was then common, and is now rare; *Lucina spinosa* was both more abundant and grew to a larger size; *Lucina fragilis*, now rare, and hardly measuring 6 lines, then attained the enormous dimensions of 14 lines, and was extremely abundant; and *Ostrea lamellosa*, Broc., no longer met with near Naples, existed at that time, and attained a size so large that one lower valve has been known to measure 5 inches 9 lines in length, 4 inches in breadth, 1½ inch in thickness, and weighed 26½ ounces."\*

There are other parts of Europe where no volcanic action manifests itself at the surface, as at Naples, whether by the eruption of lava or by earthquakes, and yet where the land and bed of the adjoining sea are undergoing upheaval. The motion is so gradual as to be insensible to the inhabitants, being only ascertainable by careful scientific measurements compared after long intervals. Such an upward movement has been proved to be in progress in Norway and Sweden throughout an area about 1000 miles N. and S., and for an unknown distance E and

\* Geol. Quart. Journ. vol. ii. Memoirs, p. 15.