to naturalists.* As a general rule, the composition of the infusoriæ of the Atlantic bed is chiefly calcareous; of the Pacific bed, principally siliceous. From the sea-water these animalcules extract the mineral matters—that is, the lime and silicic which form their shells; and when the organisms perish, their shells are deposited on the surface of the ocean-bed, where they accumulate in myriads upon myriads, covering the plains, and rising up in mountain-masses. It is thus, we may remark, that a great portion of our present continents was created in the geological period, consisting of horizontal strata formed of marine deposits—sedimentary earths, as they are called—among which an important place is occupied by the chalks and the calcareous beds of the Jurassic and Tertiary eras.

The *level of the seas* is, in general, everywhere uniform. It represents the spherical surface of our planet, and serves as a standard and basis for the computation of all terrestrial heights. However, the gulfs and mediterraneans opening eastward are exceptions to this rule; the accumulation of waters propelled into these receptacles by the general movement of the sea from east to west may determine a greater elevation of their level.

It was long supposed, on the faith of inaccurate measurements, that the level of the Red Sea was higher than that of the Mediterranean. It was also asserted that the level of the Pacific at Panama is 3¼ feet higher than the mean level of the Atlantic at Chagres, and that at the time of high water this difference rises to 13 feet, while at low water it is 6½ feet, and takes place inversely. The error has been satisfactorily demonstrated so far as concerns the levels of the Red Sea and the Mediterranean, and the approaching completion of the Suez Canal will furnish an incontestable proof. It is probable that a similar miscalculation has been made respecting the levels of the two great oceans.

The mean temperature of the ocean-surface differs but slightly from that of the atmosphere, so long as it remains unaffected by the disturbing influence of warm currents. In Tropical regions, it appears that the "liquid plain" is somewhat warmer than the ambient air.

[It has been ascertained, however, that below a certain limit of depth the temperature of the ocean remains constant at about 39° F. This depth varies under

* [Very interesting results may be expected from Dr. Carpenter's deep-sea soundings, which have, indeed, already made known some new forms of marine life.]