

*Coral reefs* are extensive deposits of carbonate of lime, etc., formed by myriads of coral animals in shallow water, in tropical seas. They form the habitations of these animals, and of course are organic in their structure.

*Silicious sinter, or tufa*, is a deposit of silica, made by water of thermal springs, which sometimes hold that earth in solution. Successive layers of sinter and clay frequently occur, and these are sometimes broken up and re-cemented so as to form a breccia.

*Silicious marl*, or the *fossil shields of microscopic plants and animals*. Beneath the beds of peat and mud in the primary regions of this country, a deposit often occurs from a few inches to several feet thick, which almost exactly resembles the calcareous marl that is found in the same situation. When pure, it is white and nearly as light as the carbonate of magnesia; but it is usually more or less mixed with clay. It is found by analysis to be nearly pure silica; and it turns out to be almost entirely composed of silicious shields, or skeletons, of those microscopic animals called *infusoria*, or of plants which have lived and died in countless numbers in the ponds at the bottom of which this substance has been deposited.

Some springs produce large quantities of *bitumen* in the form of naphtha and asphaltum.

Although *sulphate of lime* very generally exists in the waters of springs, yet it is rarely deposited. One or two examples only are mentioned, where a deposit of this salt has been made; as at the baths of San Philippo, in France.

*The Hydrated peroxide of iron or bog ore* is a common and abundant deposit from waters that are capable of holding it in solution; and it appears, also, that this ore is often made of the shields of infusoria, which are often ferruginous.

*Chloride of Sodium*, or rock salt, is sometimes deposited in inland seas or salt water lagoons. The salt is precipitated only when the water is completely saturated; or in small lagoons, the water might be evaporated, leaving the salt behind.

The waters of Lake Elton, in Asiatic Russia, and of other lakes adjoining the Caspian Sea, have deposited thick beds of rock salt at their bottom. The same is true of Lake Indersk, on the steppes of Siberia; of Lake Bakr Amal, in Ethiopia; in Patagonia; and in a lagoon adjoining Lake Oroomiah, in Persia. The bottom is covered by an incrustation of salt from three to five inches thick.

*Alluvial sandstone, conglomerate, and breccia*, are formed by the cementation of sand, rounded pebbles, or angular fragments, by iron, or carbonate of lime, which is infiltrated through the mass in a state of solution. They are not very common, nor on a very extended scale.

*Thickness of Strata.*—If all the stratified rocks have been