

product. The tertiary deposits contain remains of whales of extinct species, also of the elephant, rhinoceros, hippopotamus, &c.; and fossil animal remains of the same description occur more abundantly in the diluvium. Tertiary and diluvial deposits also extend from Ancona along the coast of the Adriatic, with but little interruption, to the extremity of the Peninsula.

Italian Islands.—Islands of Procida and Ischia. These islands are situated a short distance from Naples, and are entirely of volcanic formation. Procida consists of an alternation of beds of tuffa and of slaggy lava. Ischia is composed for the most part of a rock which seems to consist of finely comminuted pumice, re-aggregated so as to form a tuffa.

Lipari Islands. The Lipari Islands, between Naples and Sicily, are also composed of volcanic rocks. The island of *Stromboli* consists of a single conical mountain, having on one side of it several small craters, one of which is in a state of activity, the rest extinct. This volcano is remarkable, not for the intensity of its action, but for the circumstance of rarely enjoying periods of repose, no cessation in its operations having been observed from a period antecedent to the Christian era. Its action consists in ejections, repeated at very short intervals, of stones, scorias, and ashes, which either fall back within the crater, or are carried in another direction, according to the drift of the wind. The island abounds in volcanic tuffa, which is traversed by dikes of slaggy lava. The island of *Lipari* is remarkable for its splendid displays of the beautiful volcanic glass named *obsidian*; and for a profusion of pumice. The pumice of commerce is principally obtained in that island. Another isle of the Lipari group is *Volcano*, which appears, prior to the Christian era, to have been in a state of activity at least equal to that of *Stromboli*, and which still emits gaseous exhalations from the interior, as well as from several parts of the external surface of a crater situated in the highest part of the island. These vapours, acting upon the rock they penetrate, decompose it, and form with its constituents large quantities of *alum*, and other sulphuric salts. This island also affords a very rare substance, viz. the *boracic acid*, which lines the sides of the cavities in beautiful white silky crystals, and combined, it is said, with ammonia. *Sal ammonia* also occurs in this curious spot; and in a mixture of this salt with sulphur the substance named *selenium* has been detected. Close to *Volcano* is an isolated rock called *Volcanello*, which, though without a crater, emits from its crevices sulphureous vapours.

Corsica. The mountains of this island are principally primitive and transition, the rocks being granitic and ophiolitic. Their limit, ranging nearly from S. to N., passes near to, and to the west of the town of Corte. All that is to the west of this line is in general granitic, with subordinate rocks of porphyry, gneiss, mica slate, and limestone or marble. To the east of the same line, all the N. E. of the island is principally formed of talc slate, containing numerous subordinate beds of marble, euphotide, slate, &c. Jura limestone appears at the bottom of the Gulf of Saint Florent, and on the east coast, to the north of the Gulf of Porto Vecchio. No volcanoes occur in this island; and the ancient lavas mentioned by some authors are beds of euphotide. Hot springs, however, occur in Corsica; the principal ones being those of *Orezza*, *St. Antonio di Guagno*, and *Fium' Orbo*. The only mines are those of iron, copper, and antimony; and argentiferous galena is also met with, but in small quantity. Considerable deposits of diluvium occur in different parts of the island; and these, like other formations, are more or less deeply covered with alluvium.

Sardinia. The predominating formations in this island are primitive and transition; the rocks being granite, mica slate, clay slate, and limestone. On the north-western part of the island there is a considerable deposit of tertiary limestone, and one of much greater dimensions in the southern division. Trachyte and other volcanic rocks appear in connection with the tertiary deposits; and Mr. de la Marnora observed extinct volcanoes on various points, and principally in the chain of mountains which extends across from the canton of Marghine from *Milis* to *Bollotana*. All these districts, of igneous origin, exhale pestilential vapours, which may assist in explaining the remarkable unhealthiness of this island. Caves occur in the limestone; and these, with the rents that traverse it, contain, generally embedded in a kind of breccia, bones of various kinds of quadrupeds, some of living species, but the greater number of these animals appear to be extinct. Metals are rare; there are but feeble traces of silver, copper, and mercury. Many mines, however, of lead and iron occur.

Sicily. In this remarkable island the predominating rocks are tertiary, secondary, and volcanic; the older ones, or those of the primitive class, being less abundant. The primitive rocks are found at the north-east corner of the island, near *Messina*, where the prevailing kind appears to be gneiss. The transition constitute a chain of hills extending obliquely from *Melazzo* on the north coast, to *Taormina* on the east. They consist chiefly of mica slate, clay slate, with beds of glance coal, quartz rock, greywacke, sandstone, and limestone. Nearer than these is a great deposit of sandstone, with a few subordinate beds of marl and limestone, which occupies a great part of the central chain of the island, and extends along part of the northern coast. It first occurs to the east of *Palermo*, near the river *Pilato*, a few miles from *Cefalu*. It is older than the Jura or Apennine limestone. Resting apparently upon this sandstone is a formation of limestone and dolomite, composing the north-western part of the island, and which appears as the equivalent of the Jura c-