(in some places under 1500 feet in height) winds on the whole south-eastwards in the direction of Cape Passaro. With the exception of the Simeto, the principal perennial streams—the Salso, the Platani, and the Belici—enter the sea on the south coast.

Of the sedimentary rocks of Sicily none are earlier than the Secondary period, and of the older Secondary rocks there are only comparatively small patches of Triassic and Jurassic age—most abundant in the west but also occurring on the flanks of the mountains in the north-east. Cretaceous rocks are very sparingly represented (in the south-east), and by far the greater part of the island is occupied by Tertiary (mainly Eocene and Miocene) lime­stones. The Nebrodian Mountains are mainly composed of com­pact limestones of Oligocene date, but are flanked by Eocene rocks including the nummulitic limestone. Quaternary deposits border many of the bays, and the plain of Catania is wholly covered with recent alluvium. Basalts and basaltic tufas border this plain on the south, as the ancient and modern lavas of Etna do on the north.

The climate of Sicily resembles that of the other lands in the extreme south of Europe. As regards temperature, it has the warm and equable character which belongs to most of the Mediterranean region. At Palermo (where continuous observations have been made since 1791) the range of temperature between the mean of the coldest and that of the hottest month is little greater than at Greenwich. The mean temperature of January (511/2° Fahr.) is nearly as high as that of October in the south of England, that of July (77° Fahr.) about 13° warmer than the corresponding month at Greenwich. During the whole period for which observations have been made the thermometer has never been observed to sink at Palermo below the freezing-point; still frost does occur in the island even on the low grounds, though never for more than a few hours. On the coast snow is seldom seen, but it does fall occasion­ally. On the Madonie it lies till June, on Etna till July. The annual rainfall except on the higher mountains does not reach 30 inches, and, as in other parts of the extreme south of Europe, it occurs chiefly in the winter months, while the three summer months (June, July, and August) are almost quite dry. During these months the whole rainfall does not exceed 2 inches, except on the slopes of the mountains in the north-east. Hence most of the streams dry up in summer. The chief scourge is the sirocco, which is experienced in its most characteristic form on the north coast, as an oppressive, parching, hot, dry wind, blowing strongly and steadily from the south, the atmosphere remaining through the whole period of its duration leaden-coloured and hazy in conse­quence of the presence of immense quantities of reddish dust. It occurs most frequently in April, and then in May and September, but no month is entirely free from it. Three days are the longest period for which it lasts. The same name is sometimes applied to a moist and not very hot, but yet oppressive, south-east wind which blows from time to time on the east coast. Locally the salubrity of the climate is seriously affected by the occurrence of malaria, regarding which important evidence was furnished to a Government commission of inquiry by officials of the Sicilian rail­ways. From this it appears that the whole of the north-east coast from Catania to Messina is perfectly free from malaria, and so also is the line on the north coast from Palermo to Termini; and, singularly enough, while these parts of the low ground are free, malarial regions are entered upon in certain places as soon as the railway begins to ascend to higher levels. Such is the case with the line which crosses the island from Termini to Girgenti; and on the line which ascends from Catania to Castrogiovanni it is found that the stations become more and more unhealthy as the line ascends to Leonforte, and at that station so unhealthy are the nights that it is necessary to convey the employés by a special train every evening to Castrogiovanni (at the height of more than 3000 feet), and to bring them back by another train in the morning.

The flora of Sicily is remarkable for its wealth of species; but, comparing Sicily with other islands that have been long separated from the mainland, the number of endemic species is not great. The orders most abundantly represented are the *Compositæ, Crueiferæ, Labiatæ, Caryophyllaceæ,* and *Scrophulariaceæ.* The *Rosaceæ* are also abundantly represented, and among them are numerous species of the rose. The general aspect of the vegetation of Sicily, however, has been greatly affected, as in other parts of the Mediterranean, by the introduction of plants within historical times. Being more densely populated than any other large Mediterranean island, and having its population dependent chiefly on the products of the soil, it is necessarily more extensively cultivated than any other of the larger islands referred to, and many of the objects of cultivation are not originally natives of the island. Not to mention the olive, which must have been introduced at a remote period, all the members of the orange tribe, the agave, and the prickly pear, as well as other plants highly characteristic of Sicilian scenery, have been introduced since the beginning of the Christian era. With respect to vegetation and cultivation three zones may be distinguished. The first reaches to about 1600 feet above sea-level, the upper limit of the

members of the orange tribe; the second ascends to about 3300 feet, the limit of the growth of wheat, the vine, and the hardier ever­greens; and the third, that of forests, reaches from about 3300 feet upwards. But it is not merely height that determines the general character of the vegetation. The cultivated trees of Sicily mostly demand such an amount of moisture as can be obtained only on the mountain slopes, and it is worthy of notice that the structure of the mountains is peculiarly favourable to the supply of this want. The limestones of which they are mostly composed act like a sponge, absorbing the rain-water through their innumerable pores and fissures, and thus storing it up in the interior, afterwards to allow it to well forth in springs at various elevations lower down. In this way the irrigation which is absolutely indispensable for the members of the orange tribe during the dry season is greatly facilitated, and even those trees for which irrigation is not so indispensable receive a more ample supply of moisture during the rainy season. Hence it is that, while the plain of Catania is almost treeless and tree-cultivation is comparatively limited in the west and south, where the extent of land under 1600 feet is consider­able, the whole of the north and north-east coast from the Bay of Castellamare round to Catania is an endless succession of orchards, in which oranges, citrons, and lemons alternate with olives, almonds, pomegranates, figs, carob trees, pistachios, mulberries, and vines. Oranges are specially important as an export crop, and the value of this product has enormously increased since steamers began to traverse the Mediterranean. Olives are even more extensively cultivated, but more for home consumption. The limit in height of the olive is about 2700 feet, and that of the vine about 3500. A considerable silk production depends on the cultivation of the mulberry in the neighbourhood of Messina and Catania. One of the most striking features in the commerce of the island is the very large proportion of southern fruits sent to the United States, whence petroleum is chiefly imported. Among other trees and shrubs of importance may be mentioned the deep-rooted sumach, which is adapted to the driest regions, the manna ash (*Fraxinus ornus*)*,* the American *Opuntia vulgaris* or prickly pear and the agave—the former of which yields a favourite article of diet with the natives, and both of which thrive on the driest soil—the date-palm, the plantain, various bamboos, cycads, and the dwarf-palm, the last of which grows in some parts of Sicily more profusely than anywhere else, and in the desolate region in the south-west yields almost the only vegetable product of importance. The *Arundo Donax,* the tallest of European grasses, is largely grown for vine-stakes. The forests on the higher slopes of the mountains are chiefly of oak, with which are associated large numbers of the fruit-trees of central Europe, and on Etna and the Madonie chestnuts.

Outside of the tree region wheat is by far the most important product. At the present day Sicily is still a rich granary, as it was in ancient times when Greek colonies flourished in the south and east, and later under the supremacy of Rome. In all three- fourths of the cultivated surface are estimated to be covered with cereals, and it is the cultivation of wheat more particularly which determines in most places the character of the Sicilian landscape throughout the year. The *maquis,* or thick-leaved stunted ever­greens, which on the other Mediterranean islands withstand this summer drought, have been almost banished from Sicily by the extent of the wheat cultivation. Oats and barley are also grown, but maize scarcely at all, for, being a summer crop, it is almost entirely excluded from cultivation by the extreme drought of that season. Beans form in spring the chief food of the entire popula­tion. Flax is grown for its seed (linseed), and the *Crocus sativus* for the production of saffron. On the plain of Catania cotton is grown along with wheat, and among other sub - tropical products sugar (probably introduced by the Arabs about the 10th century) and tobacco are still of some importance; but the cultivation of rice has greatly declined, in consequence of its tendency to produce malaria.

The native fauna of Sicily is similar to that of Southern Italy. Among domestic animals mules and asses are very important as beasts of burden. At the enumeration of 10th January 1876 mules numbered in Sicily 112,115 out of a total of 293,868 belong­ing to the kingdom of Italy; the number of asses at the same date was 82,702 out of a total of 674,246 in the kingdom. The horses, sheep, and cattle are all of indifferent quality. Tunny and sardine fisheries are carried on round the coasts.

Manufacturing industry is little developed in the island, and besides agriculture mining is the only important occupation of the people. The chief mineral is sulphur, Sicilian sulphur being indeed the most valuable mineral product of Italy. There are about 300 mines in operation in the provinces of Girgenti, Caltanissetta, Catania, and Palermo, employing about 27,000 people. The sulphur is found in a particular formation of the Upper Miocene, and is separated from the ore by fusion in a primitive kind of furnace called *calcaroni,* in most of which part of the sulphur is used as fuel. With the exception of a small quantity, which is used in the island for the vineyards, all the sulphur is exported, chiefly to England, France, Belgium, and the United States, and the produc­tion goes on increasing, notwithstanding the lowering of the price,