

ract, it vanishes for some distance altogether in the rocky defile through which the river rushes down from Nubia.

Philæ—the Loretto of ancient Egypt—which stands just above the boundary thus reached, has been compared to an emerald set in gold; and this allusion to its luxuriant vegetation, as contrasting with the arid surface of the surrounding desert, is equally applicable to much of the Delta and to the whole of the valley between its apex and Assouan. The Nile is, indeed, everywhere an agreeable object, not so much owing to the majesty of the stream or the variety of its scenery, as to this strong contrast between the freshness and animation of its banks and the desolation that reigns beyond. Nor could any transition be more abrupt: for as sharply as the boundary lines on a surveyor's map, verdure and sand meet exactly where the area of irrigation ends, the highest fertility immediately joining the most desolate sterility in the world. Beyond the Libyan desert, stretches westward to the Fezzan and southwards into the unexplored wastes of central Africa,—a vast arid plain of gravel or fine drifting sand, with rare tufts of camel-thorn and the dwarf tamarisk for its only vegetation, but peopled nevertheless by several nomad tribes. Eastwards, in the great wilderness between the Nile and the Red Sea, which from the still larger number of its Bedoween population can hardly be called desert, the scene is less dreary, being broken by rugged mountains and numerous ravines, clothed for the most part with scanty verdure. This eastern desert has, besides, the advantage of several springs, and is crossed by caravan routes which in Upper Egypt are still traversed in exactly the same manner as when the “company of merchants” found Joseph in the pit. Mines of various metals and quarries of porphyry and other valuable stones are scattered among the mountainous tracts, and were in part

worked so lately as the reign of Mehemet Ali, when the cost of fuel and difficulty of transport led to their abandonment.* The aridity of the lowlands is extreme during nearly half the year, and the heat insupportable even by the Bedoween. Near the sea, a little below lat. 29° N., are the secluded Coptic convents of St. Anthony and St. Paul, from among the monks of the former of which the Patriarch of that sect is now invariably chosen.

Besides the river valley, the Fayoum, and the Delta, thus briefly described, cultivable Egypt includes a number of fertile tracts in the western desert, known as the Oases. In all, five of these

“ ——— tufted isles
That verdant rise amid the Libyan wilds ”

now acknowledge the sovereignty of the Khedive. But the desert that surrounds them offers such formidable difficulties that they have been but seldom visited by modern travellers. They present, however, many inter-

* Since this was written, Captain Burton, the distinguished traveller, has, at the request of the Khedive, and in company with M. Marie, an able mining engineer in the service of his Highness, partially explored the desert eastern coast of the Gulf of Akabah—the ancient land of Midian—and re-discovered extensive quarries of quartz and chlorite, abounding in rich veins of both gold and silver, with remains of Roman mining works on a large scale, and other traces of a busy population in a region which is, seemingly, still full of mineral wealth. From Makná, the capital of Midian, up to Akabah at the head of the Gulf, Captain Burton reports the country as auriferous, and he believes the district southwards, as far as Jebel Hassâni, to possess the same character. He also found tin and antimony, and washed gold dust out of the streams that run down through the gorges of the granite and porphyry hills which separate the coast from the interior. Should these impressions of Captain Burton be confirmed by the chemical reports on the numerous specimens of deposits he brought away with him, the discovery will be important as well as interesting. In the meantime, the Khedive, who is now fully alive to the fact that all schemes of development in his dominions must be subjected to commercial tests, awaits the result of these assays, and should they be favourable, will probably invite European capitalists to re-open and work this Arabian El Dorado—as Captain Burton confidently affirms it to be.

esting features, and, fiscally, are worth 10,000*l.* a year to the Cairo exchequer. They extend almost in a line with the hollow region of the desert, parallel to the general direction of the Nile valley, and within an average distance of about ninety miles from the river. The fertility of the whole is due to the lowness of their soil, which enables them to retain moisture; for they are in reality rather depressions below, than elevations above, the surrounding sand. The most southern is the Great Oasis, called from its chief town the Wah-el-Khârgéh, which lies nearly due west of Thebes (lat. 25° 43' N.), and has a length of about 200 miles by nearly twenty broad. Fifty miles west of the extremity of this lies the Wah-el-Dakhleh, twenty-four miles long by ten broad, whose first European visitor was Sir A. Edmonstone, in 1819. Seventy miles farther north is the small oasis of Faráfeh, famous in Egypt for its olives; and next beyond it, in the parallel of Minieh (lat. 28° 4' N.), rise the date groves of the Wah-el-Behnesa, or Little Oasis, a rock-bound valley twelve miles long by about six broad, of which the Wah-el-Hayz, a day's journey south, is regarded as a continuation. West of this latter is the Wah-el-Zeroora, or Oasis of the Blacks, which is, however, rather one of a series extending westwards, than properly a member of the Egyptian group. And lastly, away beyond the Fayoum, nearly 150 miles from the Nile, lies the Wah-el-Siwah, or Oasis of Ammon, historically famous as the site of the great Jovian temple and oracle whose priests proclaimed Alexander's sonship to the god, and foretold his mastery of the world. The ruins of the temple may still be traced, and the oasis, which is about nine miles long by three broad, is otherwise rich in archæological remains. Although tributary to Egypt, the inhabitants of this secluded spot are in language and manners wholly Libyan.

The region of the Oases terminates northwards in the Wady-Natroon, or desert of the Natron Lakes, so called from a series of eight rock-walled basins, whose banks and waters are covered with crystallisations consisting of muriate of soda or sea-salt, and of natron or sub-carbonate of soda, known in commerce under the name of *trona*. This desolate tract contains four Coptic monasteries, the remains of the once famous anchorite settlement of Nitria. Parallel to, and separated from it only by a line of slightly elevated ground, runs the Bahr-bela-ma,* or "waterless river," a long depression at several points below the level of the Nile, and which, having been traced from the Mediterranean, through the desert west of the Fayoum up to near the Wah-el-Dakhleh, is by some thought to be the dry bed of a branch of the river that once passed in this direction and entered the sea westwards of Alexandria. These Oases are, however, rather insular dependencies than integral parts of Egypt proper, although they lie well within the imaginary line of its western frontier.

About the Red Sea coast a word or two will suffice. From a little south of Suez down to near Massowah, a broken mountain chain flanks the shore at a nearly uniform distance of from ten to twelve miles, the chief passes through which are those leading from Cosseir to Kenneh and Coft, and from Souakim to Taka and Berber. In lat. 27° 24' N., Abou-sar-el-kibls, a small walled town, almost wholly without trade, occupies the site of Myos Hormos—in the time of Strabo the chief port of the Red Sea. Nearly a degree of latitude farther south stood old Cosseir, the Leucos Portus of Ptolemy, which has long since given place to the modern town of the same name, five miles lower down. At the top of a deep gulf behind Cape Benas, in the parallel of Philæ, are the ruins of Berenice.

* Called also the *Bahr-el-Fargh*.

which during the Roman occupation of Egypt eclipsed Myos Hormos and became the chief emporium of their eastern trade. Thence to Souakim, in lat. $19^{\circ} 48' N.$, no other practicable port occurs, nor below this again till Massowah is reached, in latitude $15^{\circ} 44'$. This, as yet, forms the most southern Egyptian station on the Red Sea, though sovereignty is claimed over the whole down to the Straits of Bab-el-Mandeb, outside which the ports of Zeyla and Berbera,* on the Indian Ocean, have been occupied, and foothold has thus been gained in the Galla and Somauli countries, of which the fine district of Harar, in the former, has already acknowledged the sovereignty of the Khedive. The Red Sea coast is at various points skirted by groups of islands, but these, like the belt of mainland between the mountains and the sea, are barren and for the most part uninhabited.

While the country outside the river valley and the Delta is thus diversified, three distinct geological regions occur between Philæ and the Mediterranean. The most southern of these is *granite*, which extends from the sacred island through the cataract to Assouan, and affords also *syenite* and some other crystalline primitive rocks, remarkable for their durability and capability of polish. From these rocks were quarried the colossal statues, pil-

* Zeyla was obtained a couple of years ago by cession from the Porte, which claimed a shadowy sovereignty over the local chief, and Berbera by the simple and less expensive process of landing a small force on the spot. This latter station is the scene of a great annual fair, held between October and April, for the caravans from the interior, and during half the year carries on a considerable trade—mostly in the hands of the Banyan merchants—with the opposite coast. Hitherto, the want of water has been the great obstacle to the permanent occupation and development and growth of this settlement, but in 1876 a complete service of iron pipes was carried from the town to some fine springs six or seven miles off in the hills, and the water-supply is now abundant. There are said to be extensive coal beds near Zeyla, but both it and Berbera are chiefly valuable as *points de départ* for further annexations.

lars, and other monoliths which figure prominently among the monumental wonders of Egypt. Next to this comes the *sandstone* region, extending from Assouan to Esneh, and yielding a stone which, though soft and easily worked, is also very durable, as may be seen from the still magnificent sphinx-avenues and palace-temples of Thebes, which are built chiefly of this stone. From Esneh northwards the formation is *limestone*, the chief material of the Pyramids, which below Cairo disappears in the deep alluvium of the Delta, to crop up again in a ridge on the coast, extending from Alexandria to near Aboukir. The soil both of the Delta and the entire Nile Valley is the direct creation of the river, whose mud deposit has in the course of unmeasured ages reclaimed the valley from the desert, and the Delta from the sea; and as the operation still goes on, the result is the continuing elevation of both the river-bed and the land on either side as far as the annual overflow extends. This increase of soil is estimated to proceed in Upper Egypt at the rate of about five inches in a century; but in the Delta, where the flooded area is greater, it takes place more slowly. The scientific staff which accompanied the French expedition of 1798, and collected the materials for the magnificent *Description de l'Egypte* since published by the French Government, made numerous experiments to ascertain the depth of the alluvial matter thus deposited. By sinking pits at various intervals, both on the banks of the river and on the outer edge of the stratum, they found (1) that the surface of the soil declines from the margin of the stream towards the foot of the hills; (2) that the thickness of the deposit averages ten feet near the river, and decreases gradually as it recedes; and (3) that beneath the mud there is a bed of sand analogous to the substance brought down by the river when in flood. An analysis of the soil thus formed

gives nearly one-half of argillaceous earth, with about one-quarter of carbonate of lime, the remainder consisting of water, oxide of iron, and carbonate of magnesia. On the very river banks the slime is mixed with much sand, which it loses in proportion as it is carried further from the river, until at a certain distance it becomes nearly a pure marl, which, besides being employed largely in the manufacture of bricks, pottery ware, and pipes, serves as a sufficient manure for the adjoining land beyond the actual limit of the annual flood.*

Such are the main divisions and chief natural features of Egypt proper. With the boundary line of the First Cataract a distinct country, or rather series of countries, begins. Of this, the first long link from Philæ to Dongola still retains its old name of NUBIA, and, like the lower valley, consists of little more than the narrow margin of arable land watered by the river, which nowhere exceeds four miles, and at several points disappears

* It may be worth while here to quote the lively and still faithful picture of rural Egypt up to this point, given by Amrou, its Saracen conqueror, in his answer to the Caliph Omar, as recorded by Gibbon:—"O Commander of the Faithful, Egypt is a compound of black earth and green plants, between a pulverised mountain and a red sand. The distance from Syene to the sea is a month's journey for a horseman. Along the valley descends a river, on which the blessing of the Most High reposes both in the evening and morning, and which rises and falls with the revolutions of the sun and moon. When the annual dispensation of Providence unlocks the springs and fountains that nourish the earth, the Nile rolls his swelling and sounding waters through the realm of Egypt; the fields are overspread by the salutary flood, and the villages communicate with each other in their painted barks. The retreat of the inundation deposits a fertilising mud for the reception of the various seeds; the crowds of husbandmen who blacken the land may be compared to a swarm of industrious ants, and their native indolence is quickened by the lash of the taskmaster, and the promise of the flowers and fruits of a plentiful increase. Their hope is seldom deceived; but the riches which they extract from the wheat, the barley, and the rice, the legumes, the fruit-trees, and the cattle, are unequally shared between those who labour and those who possess. According to the vicissitudes of the seasons, the face of the country is adorned with a silver wave, a verdant emerald, and the deep yellow of a golden harvest."

altogether. Eastwards this fertile strip is bounded by the desert to the Red Sea at Souakim, its only practicable port, and westwards by a continuation of the same Libyan wilderness that flanks Egypt proper lower down. A difference of language and tribal population divides it into two parts—the Wady Kenoos and the Wady Nouba, the first of which extends from Assouan to Leboua, and the second thence to Dongola; but the physical aspect of the two districts is nearly identical. In both the river valley is lined for the greater part by sandstone and granite hills, which here, as below, at several points closely approach the stream, and nowhere up to Wady Halfa (lat. 22° N.) does cultivation range much beyond the river banks. At this point the Second Cataract begins and extends through the Dar-el-Hadjar in a series of swift rapids for nearly one hundred miles, to Sukkoot, where the valley widens and the prevailing sterility of the lower basin disappears. Fine fertile plains stretch out on both sides of the river, which here also encloses islands of considerable extent, and for the most part well cultivated. Owing to the height of its banks, the Nile in this region seldom or never overflows, and artificial irrigation is almost everywhere necessary. This now, as before Candace, is still effected by means of the old cumbrous *sakkias*, or Persian water-wheels, which throughout Nubia do the work of the pole-and-bucket *shadoof* more generally employed by the Egyptian fellaheen. Up through the district of Mahass to above the Third Cataract the range of cultivation continues wide, but it contracts again above the long and beautiful island of Argo, a few miles south of which, at Ordee, or New Dongola, in lat. 18° N., Nubia proper terminates and the *Beled-es-Soudan*, or Country of the Blacks, begins.

In a separate chapter some description will be given of

this latter group of countries, and of the administrative revolution which is now being carried out in them by Gordon Pasha. It need only, therefore, be here said that, as the official geography of Cairo now claims, they extend a thousand miles farther south, eastwards to the Red Sea and the Indian Ocean, and westwards beyond Darfour. Excluding, for the present, Abyssinia and the Galla and Somauli countries, which are already overlapped by these successive annexations, the "Greater Egypt" thus formed comprises the vast slice of eastern Africa from the Mediterranean to the Victoria Nyanza, and thence along the Equator to the frontier of Zanzibar—a territory more than five times larger than that ruled by the Pharaohs, the Ptolemies, the Antonines, and the Caliphs. For the present, however, the southern limit of the Khedive's domain may, as before remarked, be struck for all administrative purposes, at Gondokoro, in the parallel of Fazoglou. From this point to the Mediterranean stretch more than twenty-three degrees of latitude, which, with an average width of 350 miles, cover a surface more than twice that of France, or even of Austria. Three-fourths of this may be desert, but there still remains an aggregate of cultivable areas larger than united Italy. The French survey of 1798 computed the total surface of Egypt proper to be 20,000 square leagues, or 115,200 square miles, but of this only 9,582 square miles (including the Nile bed and the islands within it, together representing 294,217 acres) were then watered by the river. Since then, however, improved irrigation has extended the cultivable face of the country below Assouan to 11,351 square miles—equal to 7,264,640 acres—of which 4,625,000 are now actually under tillage. No similar survey has been made of Nubia and the Soudan, but their total cultivable surface may be roughly estimated at above 150,000 square miles; or, in round

numbers, from the Mediterranean to the latitude of Fazoglou more than 160,000 square miles of arable soil, abundantly peopled, and needing only good government and industrial development to be welded into a homogeneous and powerful State.