

LIFE'S MIRAGES.

To lure us onward Heaven has sent us dreams.

No other toils like the somnambulist.
He holds the round earth in his vigorous fist.

And stays the sun to claim his crowning beams.

Life were not life were it but what it seems
To eyes unclouded by the Eden mist,
Which broods o'er soil where hope's bright
bow has kissed

In full fruition his ethereal schemes.

When the simoom blows the fair vision by
And leaves the traveller faint upon time's
sands,

What comfort finds he in the brazen sky,
And in the clear outlook o'er barren lands,
He can but pray to dream again, or die
Or join base slaves driven by marauding
bands.

WILLIAM MCGILL.

AFRICA'S BEAUTY SPOT.

There is a fascinating interest in the study of that plain of desolation, about which so many weird and tragic narratives are told, the African Sahara. It is said that several trails across parts of the great waste are "blazed" with the bleaching bones of camels, horses, ponies, human beings; whilst here and there protrude the wrecks of desert waggons, sometimes whole caravans, abandoned because the traction animals had died of thirst, or their owners had been butchered by the nomads. What ghastly tales of suffering could those weltering human bones reveal!

Everybody has heard of it, but it will not be amiss here to say that Sahara is that great desert region stretching across the continent of Africa eastward from the Atlantic Ocean for an extended distance on each side of the Tropic of Cancer. This inhospitable section is generally distinguished by aridity of soil, lack of running water, dryness of atmosphere, and comparative scarcity of animal and vegetable life. Its physical limits are in some directions marked with precision. Thus in parts of Morocco and Algeria the southern edge of the Atlas mountain range overlooks what resembles a boundless sea of desert and forms what may be compared to a bold coast-line, whose sheltered bays and commanding promontories are decked with villages and towns—Laghouat, Tisgi, Figig, etc. Conventional, vague and disputed are the boundaries in other directions. Especially is this the case toward the south. Here the desert sometimes ends as abruptly as if it had been cut with a knife, and again merges irregularly and gradually into the well-watered and fertile lands of the Soudan. Toward the east the Valley of the Nile at first sight appears to give a natural frontier, but the characteristics of that section which is usually called the Nubian or Arabian desert are so identical in most respects with those of the Sahara proper that some authorities extend that name over the entire country to the shores of the Red Sea. Truly the desert does not finish in Africa; it is prolonged eastward through Arabia toward the Desert of Sind.

That desert country only west of the Nile Valley, defined as the Sahara proper, is itself estimated at an area of 3,565,565 square miles. This land supports a population of nearly 2,500,000—a small number, certainly, when the extent of territory is considered, but startling enough to all who have held the notion that the Sahara is an uninhabitable expanse of sand. That

sea-like aspect peculiar to certain portions of the Sahara has created much popular misconception, and has even affected the ideas and phraseology of scientific writers. Instead of being a boundless plain broken merely by billow-like mounds of sand, scarcely more stable and little less dangerous than the waves of the ocean, the Sahara is a region of varied surface and irregular relief. It ranges in altitude from one hundred feet below to about eight thousand feet above sea-level. Beside sand-dunes and oases it contains rocky plateaus, great tracts covered with boulders and pebbles, ranges of hills of most dissimilar types and valleys through which abundant waters must at one time have flowed.

In a recent work (1893) on the Sahara, which is well illustrated with views of typical Sahara scenery, Dr. Henri Schirmer sums up concisely what is known about that vast arid area of Africa. Messrs. Hachette, Paris, are the publishers. First the doctor goes into a discussion of the existing state of the Sahara's physical geography and of the causes which have induced such desolation on so wide a tract of country, then he considers the climatic effect of different sections of the desert on its inhabitants. His conclusions are arrived at after a careful examination of all the facts accumulated with reference to the Sahara by explorers and by geologists, or to be deduced from the writings of historians, so that this book may be deemed as accurate an exposition of the subject as can be compiled.

Old theories bearing on the origin of the desert are proved in the doctor's work to be incorrect by present knowledge of the variety of Saharan geological formations and of the contour of the sandy plains. Certainly the true explanation is to be found in the government of the winds, though not in the manner formerly supposed. With a regular influx of air-currents during summer and divergent winds and calms in winter, the Sahara is undoubtedly a monsoon region. In the former the greater contrast of temperature between the Mediterranean in the north and the Soudan in the south causes a preponderance of the northern monsoon. Although this blows from the sea, by its very direction it must be a dry wind. Dryness results as a matter of course during the calms of winter. There are some secondary causes which add their effect, for example the barrier formed by the Atlas range of mountains.

Mountainous regions in the desert, however, such as Aixaye Tibesti, are watered with regular summer rains; whilst in other parts occasional storms arise from upward currents by which the lower strata of the atmosphere are cooled. Intense evaporation produces a progressive diminution and concentration of surface waters, creating the chotts and sebkhas, or pockets for soakage, so common in the desert. The original relief of the ground, due to running water, has been modified by additional agents, notably the atmospheric disintegration of rocks and the erosion and transport of detritus or other material by the swift air-currents. Vast accumulations of sand-dunes and chaotic forms of surface have resulted, by which the ancient hydrographic systems are often completely hidden. Water which falls in the mountains travels for long stretches subterraneously, and the positions of artesian springs are determined by the structure of the ground always. Thus a traveller, once he knows this, can decide in which direction to turn in search of water. Much moisture is often found

caused hesitating to provoke them. Besides, the aphorism of Napoleon holds good: "War tactics must change every ten years." And of late, the periodical transformations have been numerous. After the last war, the Gras and Manser rifles were substituted for the Chassepot and Dreyse; now, the former, without ever being really battle tried, have been replaced by the Lebel and Mannlicher, and how long will these rule? And now the "craze of numbers" has set in, without any positive proof as to how the millions can be handled. In presence of smokeless powder, long range and repeating rifles, merciless artillery that sweep all battle fields, we are profoundly ignorant how far these material destructives may influence the morale of the soldiers. If the latter start with the conviction that they go, not to fight, but to be slaughtered, adieu courage, farewell heroism. Except in the case of the Chili and Dahomey fights, military art has no other positive grounds on which to build its conclusions, and the premises do not apply to a European war. After all, autumn manoeuvres supply only a weak image of real war. General Nigate, an excellent authority, states the next wars will open by great shocks between opposing cavalry; but if the cavalry on one side be sheltered by a wood, its protecting infantry can mow down the enemy's horse as they arrive, reducing them to helplessness. To bring the foe into the open, that is the question; if he has to be dug out of woods, trenches and forts, woe betide the assailant.

The monarchical journals are not safe guides as counsellors for the Republic, so their recommendation to elect, not one, but three Presidents next November, is not likely to catch on. A representative of the army, navy and military service would be a droll *tria juncta in uno* without even the redeeming part features of a Hindoo triad. It is quite on the cards that M. Carnot will be re-elected, without ever seeking re-election. The likely candidates cannot be spared from their present functions. M. Dupuy is too valuable as Speaker of the Chamber of Deputies, and M. Casimir-Perier cannot be taken from his important task, that of extinguishing the reign of the Little Bethels, the side sects and tadpole coteries, and to form a national party, determined to proceed with legislative work, and resolved not to be turned aside by wind programmes and political bluster. He is just the man for the present situation of France; a stern upholder of the law, the zealous defender of his country's rights and dignity, and never led aside by *ex parte* statements, or explaining the unknown by the incomprehensible. He has no serious difficulties to contend with, save the balancing of the budget. Every day appears to bring forth a new solution. Clearly, the project of an income tax is being whittled down, and the financial deficit will in the end be met by a heavier tax on alcohol, and an augmented rating on residences. Anything but the hated income tax, say those who abhor its inquisitorial machinery. The next imperative duty of the Cabinet must be to rescue France from the commercial isolation into which she has drifted by the short-sightedness of questionable patriots, who flattered themselves that France could exist by keeping out the foreigners' commerce, while compelling them to accept her own; the foreigner still gains admission, but France has boycotted herself in the markets of the world.