death of Roudaire) was based on the following facts. The Gulf of Gabes is separated by a ridge 13 m. across and 150 ft. high from Shát-al Fejej, a depression which extends S.W. into the Shat Jerid, which in its turn is separated from the Shat Rharsa only by a still narrower ridge. Shat Garsa is succeeded westwards by a series of smaller depressions, and beyond them lies the Shat Melrir, whose N.W. end is not far from the town of Biskra.

Politically the Sahara belongs partly to Morocco (Tafilet, &c.), partly to the Turkish empire (Tripoli, Egypt, &c.), but principally to France. The French first acquired an interest in the Sahara by their conquest of Algiers (1830-45). They gradually extended their influence southward with the purpose of forming a junction with their possessions on the Senegal. The acquisition of Tunisia (1881) largely increased the hold of the French on the Sahara, and the work of French pioneers to the south of Algeria was recognized by the Anglo-French agreement of 1890, which assigned to France the whole central Sahara from Algeria to a line from Say on the Niger to Lake Chad. The southern limit of the territory was, however, not strictly defined until 1898, when a new agreement gave to France a rectangular block south of the line mentioned, including the important frontier town of Zinder. A further agreement in 1904 again modified the frontier in favour of France. To the north-east and east the boundary of the French sphere was extended, by an Anglo-French Declaration of March 1899, and defined as running south-east, from the intersection of the Tropic of Cancer with 16° E., until it meets the meridian of 24° E., following this south to the frontier of Darfur. French Sahara is thus connected with the French possessions in West Africa and with the Congo-Shari territories of France on the south-east. On the west, where Spain claimed the Sahara coast between Capes Blanco and Bojador, the inland frontier was defined by the Franco-Spanish agreement of 1900, whereby Spain was apportioned a *Hinterland*

with an average depth of 240 m. from the sea-shore.

It is impossible to ascertain the extent of the knowledge of the Sahara possessed by the ancients. The Egyptians penetrated the Libyan and Nubian deserts at points, and Carthaginians and Phoenicians were acquainted with the northern fringe of the desert in the west. European exploration dates from the beginning of the 19th century. In 1819 Captain G. F. Lyon and Joseph Ritchie penetrated from Tripoli to Murzuk, where Ritchie died. In 1822 came the great journey of Walter Oudney, Hugh Clapperton and Dixon Denham, from Tripoli to Lake Chad, and a year or two later Major A. G. Laing succeeded in reaching Timbuktu, also from Tripoli. In 1828 René Caillié crossed from Timbuktu to Morocco. Heinrich Barth in the course of his great journey (1849-1856), commenced from Tripoli under the leadership of James Richardson, traversed a considerable portion of the Sahara. Between 1859 and 1861 Henri Duveyrier explored parts of the Tuareg domain. Knowledge of the northern Sahara, from Morocco to Tripoli, was largely increased by the journeys of Gerhard Rohlfs, begun in 1861; Rohlfs subsequently crossing (1865) from Tripoli to Lake Chad by nearly the same route as that previously taken by Barth. In 1873-1874 Rohlfs visited the oases in the north of the Libyan desert and in 1878- 1879 reached the oasis of Kufra. In 1876-1877 another German traveller, Erwin von Bary, made his way to Ghat and Air, but was assassinated. A French expedition under Colonel Paul Flatters after penetrating far south of Algeria was massacred (1881) by Tuareg. Farther west success was attained in 1880 by a German explorer, Dr Oskar Lenz, who, starting from Morocco made his way, partly by a new route, to Timbuktu. In 1892 the Sahara was crossed from Lake Chad to Tripoli by the French

Colonel Monteil.

It was not until 1899 that the central Sahara, from Algeria to Air, was traversed for the first time by Europeans. This was accomplished under the leadership of Fernand Foureau. This journey was undertaken in pursuance of the efforts of the French to obtain effective control of the Sahara. South of Algeria military posts had been gradually pushed into the desert, Golea being until 1900 the farthest point which acknowledged French rule. The great desideratum was the opening up of a route to the Niger countries which might in time divert the trade from Tripoli to Algeria, but all attempts long proved fruitless, owing to the opposition of the tribes inhabiting central Sahara. In 1886 Lieutenant Palat was murdered a little south of Gurara, and in 1889 the same fate befell Camille Douls in Tidikelt (Tuat) in his attempt to reach Timbuktu from the north. In 1890 Foureau —who in 1883 had undertaken a first journey of exploration

south of Wargla—reached the Tademayt plateau in 28° N., fixing the position of 35 places, and in 1892-1893 came the first of his long series of expeditions undertaken with a view of penetrating the country of the Azjer Tuareg, the powerful confederacy which lay on the route to Air and Lake Chad, never traversed in its entirety by a European. All efforts to obtain a passage were unavailing until in 1898-1899 Foureau, accom­panied by an escort of troops under Major Lamy, at last attained his object, finally reaching Zinder, the important trade centre on the borders of Nigeria, and midway between the river Niger and Lake Chad, on the 2nd of November 1899.

The important section of Foureau's route began at Ain El-Hajaj, in about 261/2° N., immediately beyond which the frowning *massif* of Tindesset had to be crossed by a most difficult route among a chaos of rocks and ravines, the geological formation being principally sandstone. After descending the southern escarpment of the “ Tasili,” the expedition crossed the mountainous region named Anaheí, composed of quartz and granite, through which the line of partition between the basins of the Mediterranean and Atlantic was found to run. Thence the route lay across the wide plain of quartz gravel, strewn with blocks of granite, known to the Tuareg as Tiniri, to the well of In-Azaua, beyond which a march of eleven days, with a water-supply at one point only, led to the first village of Air, where the Tuareg proved hostile. Agades, the capital of Air, was reached by a march through difficult mountains, with valleys which gradually opened into a wide plain. From Agades to Zinder the route lay, first, through the bare and arid district of Azauak; next, through the bush-covered Tagama, a district abound- ing in game; and, lastly, through the cultivated country of Damer- ghu. Zinder had only once before been reached by way of Air—by Barth’s expedition in 1850. It was now occupied by a French force which had advanced from the Niger (see Senegal: Colony).

Foureau's achievement was quickly followed by increased political activity of the French in the Sahara south of Algeria, where, in addition to the work of other explorers, surveys had been carried by French officers (especially Captains Germain and Laperrine in 1898) as far as the important centre of Insalah, the position of which had, as a result, been shifted some 25 m. E. of its former position on the maps, being found to lie in 2° 16' E., 20° 17' 30" N. Early in 1900 G. B. M. Flamand, who had been entrusted with a scientific mission to the Tuat oases, came into collision with the natives, and Insalah was occupied by the military escort which accompanied him. This was quickly followed by the occupation of Tuat, and Igli (see Tuat).

Simultaneously with these events, an attempt was made to pave the way for the establishment of French influence in western Sahara by the expedition of Paul Blanchet to Adrar, which had not been visited since the middle of the 19th century. It returned in September 1900, only partially successful, Blanchet and his companions having been detained for some time as virtual prisoners on the borders of Adrar. The leader almost immediately succumbed to fever. In 1903-1909 the country N. of the lower Senegal, including Adrar, was brought under French control and organized as the territory of Mauretania.

The most marked progress was, however, effected in the central Sahara, where the French posts were gradually pushed farther south under a military organization, which resulted in the complete pacification of the Tuareg countries. Travel was thus made possible from one border of the desert to the other, and a number of successful expeditions gathered a rich harvest of results respecting the mapping, geology, and other features of this part of the Sahara. Some of the best work was done by Laperrine, Arnaud, Cortier and Nieger on the military side, and, on the civilian, by Villatte, Gautier and Chudeau. Apart from these French enterprises, Hanns Vischer, a Swiss in the service of British Nigeria, in 1906 travelled from Tripoli to Bornu through Murzuk and Bilma. In 1910 Capt. A. H. Haywood traversed the Sahara, being the first Englishman to cross the desert from Gao to Insalah.

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