

This article was downloaded by: [New York University]

On: 26 April 2015, At: 19:31

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered

Number: 1072954 Registered office: Mortimer House,

37-41 Mortimer Street, London W1T 3JH, UK



Royal United Services Institution. Journal

Publication details, including
instructions for authors and
subscription information:

[http://www.tandfonline.com/
loi/rusi19](http://www.tandfonline.com/loi/rusi19)

Railway Over the Sahára from Algeria to the Senegál, and the Destruction of Colonel Flatters

R. Cust Esq. ^a

^a Honorary Secretary Royal
Asiatic Society

Published online: 11 Sep 2009.

To cite this article: R. Cust Esq. (1884) Railway Over the Sahára from Algeria to the Senegál, and the Destruction of Colonel Flatters, Royal United Services Institution. Journal, 28:127, 839-856, DOI: [10.1080/03071848409424351](https://doi.org/10.1080/03071848409424351)

To link to this article: [http://
dx.doi.org/10.1080/03071848409424351](http://dx.doi.org/10.1080/03071848409424351)

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

The Journal

OF THE

Royal United Service Institution.

VOL. XXVIII.



No. CXXVII.

Friday, May 30, 1884.

SIR HENRY BARKLY, K.C.B., G.C.M.G., &c., &c., in the Chair.

24. 2. 85.

THE RAILWAY OVER THE SAHARA FROM ALGERIA TO THE SENEGAL, AND THE DESTRUCTION OF COLONEL FLATTERS.

By R. CUST, Esq., Honorary Secretary Royal Asiatic Society.

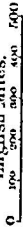
It is openly asserted by French publicists that the only chance for France maintaining her position as a Great Power in Europe is to found colonies in Asia and Africa, and the cherished desire of the French nation is to have a great African Empire. To give birth to great colonies such as Australia and Canada they are confessedly unequal, as owing to well-known domestic habits their population is stagnant, and has no annual surplus thousands to throw off. To govern great subject empires such as India they are not qualified, for they have not as a nation sufficient self-restraint to be content with the affairs of empire and to leave the property in land of the subject races absolutely unviolated. What they mean by a colony is a country like Algeria, in which French citizens are encouraged to settle on lands from which the ancient proprietors have been ousted, not, however, cultivating them entirely themselves, but by the agency of the indigenous races reduced to serfage. Their object again is to make such colonies the strictly guarded commercial preserves of the mother country, the raw products of the subject country being collected mainly for the advantage of the conquering race. The manufactured products of the mother country are to be poured into the subject country, all competition with other European countries being barred by protective duties: the *raison d'être* of a colony is to constitute an exclusive mart for the home manufacturer.

Even in the mode of acquisition of their so-called colonies the French nation has a method of its own. Neither the Russian nor the English nation can plead innocence in the matter of annexation, but, when each case is examined, it will be found that there has been no deliberate design conceived beforehand of seeking an entirely new

country for purposes of conquest. The uncontrollable force of circumstances has driven both these nations forward on the path of empire against the wishes of the ruler, and even their repeated prohibition. The French nation, however, usually selects the spot which seems suitable to their operations; an explorer is sent forward, and makes a Treaty which founds rights; the Treaty is of course broken by the Native Power, and it is naively admitted that it is meant to be broken, and invasion and annexation follow, unless some obstacle arises or catastrophe intervenes. The exploration of the Sahara is a notable instance of a deliberate attempt to appropriate a vast region without the consent of the inhabitants, and without the shadow of a complaint against them as bad neighbours. Their country was wanted for the purpose of opening up a new market; their country was being annexed by a railway line.

France has two colonies in Africa north of the Equator. Algeria with Tunisia, which fronts to the Mediterranean, is bounded on the east by the Turkish province of Tripoli, on the west by the independent Kingdom of Morocco. The jealousy of Italy as regards Tripoli, and of Spain as regards Morocco, prevents all hope of French extension on either flank without a rupture with a European Power. To the south Nature has apparently placed a boundary in the Great Desert, which extends from the Atlantic to the Nile. This desert is not entirely uninhabited, for one of the most ancient races in the world maintains in its midst a precarious nomad existence, known to their neighbours as the Tuwárik, and to themselves as the Imoshagh, or Amazirgh, or "Free." They are cognates of the settled inhabitants of Algeria, Tunisia, and Morocco, who are known under the general name of Berber. They have outlived all the conquerors of North Africa, Phenicians, Greeks, Romans, Vandals, Arabs, and Turks, maintaining their rude liberties, and perhaps are destined to outlive the French rule also.

This Great Desert extends over fourteen degrees of north latitude, from 32° to 18° , at which point it reaches the great bend of the River Niger, on the north bank of which is the town of Timbáktu, inhabited by a pure negro population. Fifteen degrees of west longitude, 1° to 16° , from Timbáktu, is the unimportant French Colony of St. Louis, on the River Senegál. The banks of the river are occupied by independent tribes, and the nearest potentate of importance is the Mahometan Sovereign who dwells at Segú, on the east bank of the Niger. No European Power has any interests or commerce within many hundred miles; the climate is deadly and the exports insignificant. Yet it is the openly expressed desire and intention of the French people to extend this petty colony up the basin of the River Senegál and one of its branches, to cross the watershed of the Rivers Senegál and Niger, and place gunboats on that river, by means of which they hope to dominate over all the tribes inhabiting that all but unknown region as far as Lake Tsad, and finally to connect these regions by a railroad, which is to find its way across the Sahara, in spite of the awful desert and the unconquerable Tuwárik, to the frontier of Algeria. The conception is magnificent. Time and



the sacrifice of a vast amount of treasure and lives will be required, and, whatever may be the motive, it will be a great gain to civilization to have connected by a permanent way the Sudán with the Mediterranean. The first attempt to carry out this design has met with a rude check in the total destruction of the exploring party by the attack of the Tuwárik, who felt that their liberties were at stake. The object of this paper is to describe the nature of this check, and it is necessary previously to describe briefly the physical features of

- I. Algeria with Tunisia,
- II. The Senegál Colony,
- III. The Sahára,

and then to narrate the history and the tragical end of the expedition, which took place in the last days of January or the first of February, 1881. No attempt has been made by the French Government to avenge their death or prosecute their undertaking.

In October, 1882, accompanied by my wife, I visited the Province of Algeria with Tunisia, with the double object of observing the French mode of managing subject provinces, a duty with which I had been familiar in India, and to study on the spot this great problem of the Trans-Sahára railway. The story of the massacre was very fresh then in men's minds, and it was constantly alluded to in the public press. The idea of this railway had something of fascination even for an outsider. It was a delightful exercise of fancy to draw straight lines across several degrees of latitude without coming within a hundred miles of a single village or well of water the whole way. A service of balloons seemed more suitable for the conditions of the country.

I traversed the Province of Algeria with Tunisia from Oran, on the frontier of Morocco, to Tunis, the capital of the newly annexed Tunisia. The old Bey, who had become a mere puppet, died while I was there, but the French Consul promptly placed a new puppet into the vacant chair, who did quite as well as the deceased dummy, and there was no perceptible change. The French system of administration is strong and judicious. A civil Government has succeeded to the former military despotism. Although I looked with the eye of a critic into the details of management, I could find nothing to complain of. There was peace and order in the towns, and entire safety to person and property in the open country. Excellent roads and railroads extended over the whole province. In the Bazaar, which it was a pleasure to visit, commerce was active. Not a soldier was to be seen except in their proper cantonments or fortifications. There were schools and courts of justice, with too much of the French language and too little of the Native vernacular to please me, but it is the characteristic of the French nation to believe that culture and progress can only be expressed in French, and in a conquered country the rulers need not learn the language, as the people must be made to learn French. This is just the contrary of our system in India, where the vernacular is made the instrument of civilization and order.

The province consists of one long narrow strip of country, down which a trunk railway runs from Oran to Tunis (not entirely completed); from this branches run to the ports of the Mediterranean, and branches cross the Atlas ranges to the south. The longest branch is that which connects Constantine with Batna, an important fortified town in an elevated situation in the Aures Mountains. I was present when this line was opened in person by the Governor-General, and had an opportunity of witnessing the ceremony and hearing the speeches. They were highly characteristic of the nation. From Batna a diligence drawn by eight horses, four abreast, conveyed us in sixteen hours through the pass of Kantára, down into the Sahára, and to the Oasis of Biskra. I passed the engineers on the road, lining out the extension of the railway, which will no doubt soon be carried out. For all practical purposes Biskra may be deemed the northern terminus of the Trans-Sahára railway, as Timbáktu is the southern terminus.

From the Oasis of Biskra I drove across the desert to the small but beautiful Oasis of Sidi Okba, where the great Arab conqueror of North Africa is buried. Very few holiday travellers ever see more of the Sahára than can be seen in this trip. Forty years hence perhaps a visit to Algeria will be incomplete without a run across the Sahára to Timbáktu. However, a great deal of the novel and strange beauty of the desert can be realized by a trip to Sidi Okba. It is a wonderful sight to drive out, as it were, into a sea of sand, while the lofty mountains of the Aures Range seem to sink into the horizon, and at length nothing but a few palms here and there mark an oasis. The Oasis of Sidi Okba comes into sight as a green island, with clusters of palms and minarets. After visiting the tomb of the great conqueror the traveller is taken up to the circular gallery of the minaret, where the muezzin was calling to prayers when I ascended, and a view of the vast desert extending to Timbáktu can be enjoyed. It is worth while making the excursion to the Sahára to see the palms, and taste their fruit while it is fresh, hanging in luscious branches from the stem, quite a different article from the dried article of commerce. There are 100,000 palms in the Oasis of Biskra alone: this tree delights to have its feet in water and its head in the fire of the sun.

The Algerian Sahára consists of just so much of the region south of the Atlas and Aures Ranges as the French have found it convenient or possible to annex: a chain of military frontier stations extends from the Morocco frontier, which will be gradually connected by railways to the High Plateau and Tell; they are Geryville, Laghouat, Golea, Ghardaia, and Wargla. From Biskra to Tuggurt is the Wadi Rhili, which has a dark-coloured settled population, is a distance of 139 miles, and from the military station is about the same distance to Wargla, the extreme frontier. These tracts are in the real Sahára, but there will be no difficulty in constructing a railway thus far, though it has not yet advanced to the stage of practical politics.

In this Algerian frontier we have a fair specimen of the much talked about *scientific* frontier which some years ago proved such a delightful snare to the British public. The science, if any, consists

in a great European Power laying its hand upon as much territory, belonging to a weaker State, as it happens to want, or is able to hold. England, France, Russia, Austria, and Germany have given most instructive instances of this wolf-and-lamb policy; the strangest feature is that the countries which like France are most sore at having a portion of their own territory lopped off by a stronger Power, are the most ready to violate the frontier of weaker States, having a strong feeling for their own independence, but none at all for that of their African and Asiatic neighbours.

Biskra is 410 feet above the level of the sea; after sunset I found it exceedingly cold in the month of October, and this is one of the features of the Sahára. Just below Biskra the traveller comes upon the chain of inland marsh lakes, which stretch across Tunisia to the Mediterranean. They represent the estuary or drainage of the vast river courses of the Great Sahára which are now dry and choked with sand. They are known as the Shotts of Tunis; the three largest are Melghir, below the level of the sea; Jerid, which is higher; and Rharsa, which is lower. In ancient times they are said to have been an arm of the Mediterranean, known as Lake Tritonis. One of the magnificent conceptions of the French is by a cutting to let the Mediterranean into this basin, with the object of improving the climate and rendering the Great Desert accessible to steamers. M. Roudaire, backed by M. Lesseps, has placed his scheme before the public, which has been met by serious objections, the initial one being the certainty of an enormous expenditure with a very doubtful profit. All French colonies cost the mother country very much more than they can ever return. The budget of Algeria presents a serious deficit, and no wonder when it appears that an army of 60,000 men is required to control a population of less than two millions in Algeria, and an additional 30,000 for Tunisia. British India would not pay its way if the army had such a proportion to the population. At Tunis I asked the distinguished Consul-General of the German Empire what was the nature of his instructions, as far as they could with propriety be divulged. His reply was very frank, that the French were to be encouraged to annex as large a portion of Africa as they could possibly desire. Prince Bismarck foresees the advantage of a large proportion of the French Army being detained on foreign duty.

Let us turn our attention now to the Senegál colony. The prominent position occupied by this previously unimportant colony is entirely due to the energy and determination of a most distinguished military officer, General Faidherbe, now Grand Master of the Legion of Honour, but for twelve years, from 1855 to 1864, Governor of Senegál. I had the honour of an interview with him at the Palace of the Legion of Honour at Paris in 1882, and he is distinguished as a scholar as well as an administrator. I found him entirely a cripple, and he attributed his malady to the pestiferous climate of his province. It occurred to me that I and scores of other public servants had been twenty-five to thirty years in India, and that we were generally stronger than our contemporaries who had never left England; in fact, it is another feature of French colonization, that they are in-

duced to choose unhealthy localities, such as the Senegál, the Gabún, and Tonquin. General Faïdherbe presented me with a small pamphlet which he had just published with the interesting title of "*Le Sudán-Français*," giving an account of the experiences and aspirations of the colony. A great many other writers have published works much in the same strain. It is worthy of remark that the General thinks poorly of the Trans-Sahára Railway scheme, and would prefer to have the commerce of the interior brought by his railway from the Niger to the Senegál. He also in words repudiates the use of brutal force, as condemned by public opinion, and yet every step of the advance made by himself and his successors is based upon cannon, soldiers, and gunboats. It is not the quiet progress up-stream of the missionary or the merchant, but the deliberate advance of armed forces, storming towns, fighting battles, building forts, and annexing territory. And if this is not *force brutale*, it is difficult to translate the word. And the whole policy emanates from the Republican Ministry at Paris, and not from the insubordinate high-handedness of the local Governor.

Up to 1854 the French had only a few commercial establishments on the Senegál, St. Louis on the Atlantic coast, and Bakel and Senudébo were the furthest points in the interior on the Rivers Senegál and Faleme; on the north of the river the wild Berber tribes, known as Zénaga, had much their own way; to the south were several kingdoms, some Mahometan and others Pagan Negro. The island of Goree had also been occupied just south of Cape Vert. The position of the French traders was weak and humiliating, something like that of the English in Bengal before the battle of Plassy. Like Clive, Faïdherbe changed the position of affairs; he thoroughly thrashed and subdued the Berber tribes on the north; he extended the protectorate of France over the petty States on the coast to the south. He fortified Bakel, and drove off the invading army of a great Mahometan Sovereign, who from his capital on the Niger gave out his intention of subduing all the Negro kingdoms, and driving the French into the sea. He extended the French influence further up the Senegál, and fortified the post of Médina, which had to undergo a long and dangerous siege from the Mahometans. Faïdherbe in person relieved the garrison, and totally defeated the invading army, which never appeared again in the neighbourhood. During the years 1858, 1859, and 1860 Faïdherbe extended the influence of the French over all the Negro kingdoms north of the River Gambia, occupied the harbour of Dakar, sent embassies to the Berber Chief of Adrar, and the Mahometan Toucouleur Chief of Segu on the Niger, offering terms of peace, and by the year 1865, when he left, this able and resolute soldier-governor had not only placed French interests on a solid foundation, but he had sketched out plans of magnificent annexation, which stood over for eleven years in the bureau of the Marine Department at Paris.

In 1876 they were carried out. Bafulábe was suddenly occupied on the Senegál, which here unites the two branches of the Ba-oule and Ba-Fing: along a branch of the former, the Ba-Khoy, lay the path of victory. Gallieni was sent forward on an embassy to Segu,

where he made a Treaty, but had his camp attacked and plundered: after him came Desbordes, who, in 1880, 1881, and 1882, defeated the tribes right and left, founding a chain of garrisoned posts at Badumbe, Kita, Kundu, Niaggasola, and finally Bammaku on the Niger. This place is distant from St. Louis on the Senegál 1,600 kilometres, or 1,000 miles, and from Khayes, a little south of Medína, where the navigation of the Senegál is interrupted, 520 kilometres, or 325 miles. Over this last distance the construction of a railway has been sanctioned (1879) by the French Republic, and is actually under construction, and in the last Report is a photograph of large viaducts already made. Another railway has actually been constructed from the commodious harbour of Dakar to St. Louis, the access to which is difficult on account of river-bar. Thence steamers ply to Khayes: thence the railway will in a very short period run to Bammaku. On the Niger will be placed war steamers, which will run up and down the great stream, and domineer over the tribes of this great river, up-stream as far as the Kingdom of Tembo, and down-stream as far as Timbáktu and beyond. But Timbáktu is the southern terminus of the great Trans-Sahára railway, and that is the object of the above diversion. The Treaty with Ahmadu, the Mahometan Sovereign of Segou, secures the French protectorate, and the exclusion of any other European State or merchant whatever. Protection in every sense is the beginning and end of every French Commercial Treaty, but the outlay is such that it may be doubtful whether the game is worth the expense of the candle. We have yet to learn whether there is any commerce worth developing in these countries, where the inhabitants are in such a low state of culture, and the line of railway through a population exceedingly hostile, not held in subjection, as in India, by a strong Government, but only domineered over by a chain of posts, appear to be liable to conditions of which we have no experience in any part of the world. Commerce may be and is carried on at its own risks and in its own peaceful way in foreign territory, in caravans or river steamers, in many parts of Asia and Africa, or it may be carried on in a country entirely subdued like Algeria, or British India; but the state of affairs from Medína on the Senegál to Timbáktu on the Niger differs widely from either of the above conditions.

Duponchel, one of the earliest and most enthusiastic advocates of the scheme, formulates it thus: solidly established in fortified posts on the Niger, connected by rail with Algeria and the Senegál, is a climate relatively healthy, domineering over the Upper and Lower Niger from its source to the mouth, the French will be masters of the Sudán. The object is to get the exclusive monopoly of the products of Central Africa, by being the first to get at it. The writer dreamt of a vast Empire of one hundred millions. He laughed at the idea of other European nations attempting to do the same, as if it were robbing France of its prerogative to have a preponderating influence in Central Africa, as it was not only her right, but her duty to claim the exclusive privilege of civilizing the people, and the benevolent work of establishing an African India, to which France had a

much better right than England ever had, or could possibly have, to the East Indies.

I have thus described the two colonies of France, Algeria with Tunisia on the north, and the French Sudán and Senegambia on the south. Between them lies the Great Sahára. A few words on the political and physical features of that mighty region. On the east the posts of Ghadámes and Ghát are within the Pashalik of Tripoli, and are part of the Turkish Empire. An English Consul has from time to time resided at Ghadámes; a Turkish garrison has from time to time occupied Ghát. On the west Figuig, Gurára, Angeroudh, Tidikelt, and Ain-Salah, in the Túat Oasis, belong to Morocco. The more advanced class of French pamphleteers suggest as a step precedent, that the Empire of Morocco should be divided between Spain and France, or taken entirely by France, or at any rate Morocco should be asked to give up all the places above mentioned. Such an idea perhaps scarcely enters into serious politics, as the annexation of Morocco would mean war with England as well as Spain, yet still, when once a tiger tastes blood, he never can have enough. No doubt the long necklace of oases, 160 miles long, with 400,000 inhabitants, known as the Túat, are exceedingly tempting, and Ain-Salah and Ghát are the keys of the position. Ain-Salah is equidistant from Algiers, Timbáktu, Mogadore, and Tripoli: Yet France dares not violate either frontier. She must work a central line from Wargla to some point equidistant from Timbáktu, and Agades in the Oasis of Air, which is in constant commercial intercourse through Ghát with Tripoli, as indeed Timbáktu is with Sus in the Empire of Morocco. There indeed the shoe pinches. There used in former days to be a direct caravan route from the Niger to Algeria, but it consisted entirely of slaves, who carried themselves and the light articles of export, such as ostrich feathers and gold dust; but with the abolition of the slave trade and slavery, the intercourse with Algeria ceased, while it still continues in full force with the less scrupulous (in this particular) people of Morocco and Tripoli.

But right in the passage of the French to the Sudán, between the Morocco and Tripoli frontier, dwell the indomitable tribes known as Tuwárik or Amazirgh, citizens of a Republic freer than that of France. These children of the desert are divided into two classes, the nobles and the serfs; the latter are black in colour, probably the aborigines of the country, before the Berbers, under pressure of Arab invasion, retreated from the coast to the desert. The nobles are divided into four great hordes: 1, the Abaggar; 2, the Azjar; 3, the Kelowi; 4, the Awelimiden. Both nobles and serfs possess Negro slaves. The nobles are a remarkable race, preferring the desert and the tent to cities and fixed houses. They are monogamous, and allow their women full liberty in their action and choice of their husbands. The men wear veils, but the women have their faces exposed to view. Both sexes are tall, handsome, and intelligent, but as false as the Afghan, as addicted to rapine as the Turcoman, as quarrelsome among themselves in their tribes as the dogs of Constantinople. The inheritance of a man passes not to his son, but to

his sister's son, and a man's nobility is graded by the rank of his mother. These tribes never have known a master, and probably never will. They may be improved off the face of the earth, like the Red Indian, but they will not knuckle down as subjects. But there are other human factors to be dealt with in the Sahára besides the Tuwárik. Some are Berberized Arabs, like the Shamba, who reside near Wargla; some are Arabized Berbers. All are lax Mahometans, and still laxer in morals. Some formidable tribes are known as the "beni" or "aulád" of some particular person, like the sons of Diarmid, in the Scotch highlands. Such are the people.

Popular belief pictures the Sahára as an immense plain of moving sand, dotted here and there with fertile oases; it used to be deemed a flat ocean, devoid of all differences of level, vegetation, and water. Experience has taught us that it has a great variety of levels and characteristics, and it has its peculiar flora, and a certain, though limited, supply of water, which might be greatly increased by art, storage, and good government. There are lofty central mountains, as extensive as the range of the Alps. Barth, on his journey from Ghát to Agades, crossed a range at Egeri, by a pass of an altitude of 4,000 feet; the mountains are entered on the map as 5,000 feet; these are the Azjar highlands. The highlands of Ahaggar are still loftier; there is snow in these central ranges, and in all the narratives of travellers mention is made of the violent storms of rain, which carry all before them. Vast beds of rivers are traced through the whole region, and it is by them that the traveller finds his way, for they are entirely dry. The waters which flow southward from the southern slope of the Atlas, and northward from the central highlands, instead of flowing in these beds, sink into the sand, and take a subterranean course, known to the Tuwárik by covered reservoirs, to which he gets access, or by a well in some hollow, or they develop into an oasis. The French have largely introduced, and with great success, the use of artesian wells. The soil is good, if only water can be obtained. Palms spring up in hundreds round the newly discovered water, and under the shade of the palm other vegetation. The fatal desire of the Tuwárik to conceal these wells led to the destruction of many, and care has to be taken to keep new wells in repair, and prevent their being choked by the sand in motion.

The Wadi Igharghar and Wadi Mia are the two great roads by which access to the central watershed of the Sahára has been sought by the French, and never yet been effected. Guides are found with difficulty, but still they are found to show the way, and names have been assigned by tradition to numberless localities. The leading physical features are high rocky plateaux of hard gravel, which retain no mark of the camel's foot, vast dunes, the sand of the surface of which is raised by the winds. These dunes are grouped in lofty chains, extending in parallel lines north to south, and separated by stony defiles. Then there are isolated flat-topped cones, rounded off by the wearing away of the wind and rain; to all these features there is a distinct terminology; the horror of the scene can only faintly be

pourtrayed in the pictures with which the narratives of travellers are illustrated, and the intense fatigue and suffering, both of the man and the camel, cannot be described fully in words. The climate is indeed exceedingly healthy, but the heat intense; it is significantly recorded that no firewood or substitute for firewood being found, water and coffee were during the expedition boiled by powerful lenses attracting the rays of the sun to brass vessels, and in a few minutes boiling heat was attained. On the other hand the cold at night is intense, and such a sudden change of temperature must prove deleterious to health.

Commerce is put forward as the motive, but clearly conquest and glory are the chief attraction; there are no manufactured goods worth speaking of to be got from the Sudán, the raw produce consists of ivory, ostrich feathers, gold dust, ground nuts, and possibly cattle; on the other hand there are inexhaustible stores of salt in the desert, and no salt at all in the Sudán; the profit of the salt imported into the Sudán is fondly calculated upon as being likely to pay for the expense of the entire railway from Biskra to Timbáktu.

I now come to the last act, and the details of the tragedy. The Government of the French Republic were induced to make the experiment of a preparatory survey of the Sahára, and the greatest prudence was evinced in the selection of the means; it was to be a civil, not a military, enterprise, and was placed under the command of Colonel Flatters, an Officer of tried experience on the frontier at Laghouat, from which point he had well considered the question. I certainly gathered from the public press that he and his companions, though well versed in Arabic, were totally ignorant of the language of the Kabail, spoken by the Shamba, their guides, and the Tamáshek, spoken by the Tuwárik. This was a serious deficiency. They had with them one of the members of the religious fraternity of the Mahometan dervishes of the shrine of Temashin, near Tuggurt, which was believed to be a great assistance. Their guides were mainly of the tribe of Shamba, who were on friendly terms with the Azjar Tuwárik, but very hostile to the Ahaggar. Camels were purchased at a heavy price in large numbers. It was determined to follow the line of Wadi Igharghar, the Ghir of Ptolemy, the geographer, and leaving Ghát considerably on the east, to get to the south of the central highlands, whence there would be an open road to Timbáktu. The distance from Wargla to Timbáktu can be expressed either as 15 geographical degrees of latitude, or 1,800 kilometres, amounting to 1,100 miles.

The expedition left Wargla on March 5, 1880, and halting at many places, the chief of which were Feij Damran, Ain-Taibah, El Adhan, El Biodh, reached Temassinin on April 1, and Ain-al-Hajaj, April 6, where two Tuwárik emissaries came to the camp, and told them that the chiefs of the Azjar Tuwárik were at Ghát. This placed Colonel Flatters in the dilemma of either going to Ghát, to which he objected, or waiting for an unknown period the arrival of the chiefs. It is characteristic that, though on an expedition of a purely peaceful nature,

he regretted that he had not one hundred and fifty or two hundred of his soldiers to enable him to force his way. In his journal he tries to satisfy himself that such an organization would be quite as pacific, and much more independent, as the fear inspired would be more potent than the presents which he distributed. He gives us also his views of the political situation. In the check now offered to his progress he detected the influence of Turkey, which had lately occupied Ghát, under the pretence of putting a stop to the eternal quarrels of the Azjar and Ahaggar Tuwárik, and behind Turkey he detects the cloven foot of *perfidie Albion*, always ready to thwart the legitimate expansion of France. Such reasoning would read as the expression of the narrow and jaundiced mind of an imperfectly informed soldier bitterly disappointed; but General Faidherbe, in 1881, after the destruction of Colonel Flatters, allows himself to indulge in expressions about the ingratitude of England in thwarting France in her scheme to civilize Africa. It appears incredible that England should have anything whatever to do with the failure of Colonel Flatters' first expedition across the Sahára, or even any knowledge of the project.

On the 16th April the expedition had moved to Lake Menkough, which proved to be their final stage. Colonel Flatters tried in vain to get an interview with Ikhonúden, the aged Chief of the Azjar, who kept himself out of the way, but sent some of his subordinates to spin out delays, while he, through the Turkish Governor of Ghát, applied to Tripoli for the orders of the Sultan of Turkey. The Colonel dared not advance into the territory of the Ahaggar Tuwárik without some previous communication; he was therefore obliged to give up his hope of working his way through the territory of the Azjar to the Lake of Amadghór, which was the object of his journey; there was nothing for it but to retrace his steps to Wargla, and put off the expedition for another year. Colonel Flatters went himself to Paris, to report the diplomatic complications which had supervened. Thus ended without success, and yet without loss of life or disgrace, the first expedition.

On the 4th December of the same year Colonel Flatters found himself on his return from Paris again at the head of his expedition, slightly modified in details, but prepared to attempt the passage across the Sahára by another and more westerly route. Before he started he received a message from the French Consul at Tripoli, full of anxious and sinister meaning, when read by the light of the coming catastrophe. The Governor of Ghát had written to Tripoli that Ahitaghen, the Chief of the Ahaggar Tuwárik, had received the letter which Colonel Flatters had written to him from Lake Menkough intimating his intention to pay him a visit, and had himself visited Ikhonúden, the Chief of the Azjar Tuwárik, and reproached him bitterly for having encouraged the mission to return; this reproach was quite unjustifiable, but it indicated the hostility of Ahitaghen.

The second expedition took the line of Wadi Mia. No European lived to return, so their progress can only be traced by their letters despatched on their route. They were heard of at Hassi Inafel on December 17, 1880, at Hassi Messaguem January 6, 1881, at Amguid

on Wadi Igharghar January 16, 1881, at Inzelman Tikhsin on January 29, 1881. Beyond this we know nothing for certain. The fate of the expedition could only be collected from the confused narrative of a few natives who straggled back to Wargla on the 2nd of April. In this progress, Colonel Flatters had indeed avoided the Turkish influences at Ghát, but he had got within the sphere of Morocco influence at Ain-Salah, in the Túat Oasis. He recommends, in one of his last letters, that a mission be sent to Ain-Salah, strong enough to defend itself, but not having a military appearance, *but the name of France speaking loudly behind it*. He was clearly quite prepared to bring pressure upon Morocco, though not on Turkey. He came across a caravan working its way with merchandize from the Sudán to Ghadámes and Tripoli. The exports from the Sudán were ostriches' feathers, gold dust, henna, dates, some cotton manufactures, carpets of the Sudán, and some black slaves. He found that the return caravan from Tripoli would bring European cotton manufactures, brass vessels, tea, and sugar. He came to the conclusion that slaves were the most valuable article of commerce, and as slavery was forbidden in Algeria, it might be expedient to substitute caravans of negroes under engagements for service, which would be in fact slavery in all but name.

It is noticeable that no member of the Ahaggar tribe had met the expedition. A messenger had been sent to Ahitaghien, but as he had not returned they halted five days at Amguid. Colonel Flatters felt that he was deflecting too much to the east, but he dared not venture across the great and waterless plateau which obstructed his course southwards. Their guide knew no route, and none of the Ahaggar tribe had hitherto volunteered to show one. At length the messenger returned with a letter from Ahitaghien, intimating that his brother-in-law, Shikkat ben Hanfu, would meet him at a halting place further on, and would be his guide. The Colonel believed the message, and his last letters were written in the highest spirits, as he fancied that his passage to the Sudán was secured. He moved on to Inselman Tikhsin on the 29th January, and wrote his last letters full of hope and confidence to his wife, his friends, and the French Government.

Nothing was heard further of the expedition, till on the 2nd of April forty native followers reached Wargla, in a miserable plight, with the sad news that all the Europeans had been killed and the camp plundered. Several conflicting accounts of the details are given. Colonel Flatters and some of the chief of his assistants were induced to leave the camp, and were killed, the Colonel falling by the hand of a Shamba, Saghir ben Shaikh, who had accompanied him on both his expeditions. Twenty-nine persons perished in this first onslaught. Lieutenant Dianons, who commanded in the camp, beat a retreat, but he was followed. Some Tuwárik, pretending friendship, supplied them with food, which was poisoned. They then attacked the retreating party, sixty-three in number, and killed nearly all. A few took refuge in a cave, and held it, sending four men to Wargla to beg for help. When help came, twelve alone found their way to Wargla: all the rest were starved.

On the other hand, the following letter, which is published as authentic, was sent by Ahitaghen to the Governor of Ghadâmes: "You warned us to protect our land against the foreigner, and we have done so. Colonel Flatters came into our country, but the people have waged a holy war and massacred them all, and it is finished. Dear friend, let the news of these great actions be conveyed to Constantinople; let them know there what has happened, that the Tuwârik have waged a holy war against the Christians in an exemplary way, and that God has helped them to destroy them."

In another letter to a notable of Ghadâmes, Ahitaghen writes: "For what reason do these Christians come to travel in our country? We never in all our lives saw them passing through our country. It is an impossible thing; they are not Christians under the protection of Mahometans; they belong to those Christians who wage a sacred war against the Mahometans, and do you pretend, in the letter that you have written to us, that they will cause us no injury? All is to-day finished. They have come, and they are dead."

We must not forget that the object of this mission, under whatever form disguised, was to place these regions under the French protectorate. The railway would only be the thin end of the wedge; it would lead to collision, facilitate invasion, and guarantee subjection. The Tuwârik are among the few nations who have never submitted to a foreign yoke. They resisted the Phenicians, the Romans, the Vandals, and the Arabs, and they instinctively felt that the crisis of their liberty was approaching.

No one seriously proposed to send a French military force to avenge these men, though they fell actually in the service of the State. Perhaps it was felt that they had no business there, and that it would have been better not to have sent them. It is shocking, however, to read in the *Journal of the French Geographical Society*, of April of this year, an exulting letter from the brother of one of the killed Officers, announcing that the head of Hamm al Shikkat, who murdered Captain Masson, had just then been brought into Wargla. A Shamba had deliberately gone on an expedition of assassination, and brought back this head, which may or may not be the head of the brother-in-law of Ahitaghen, who betrayed the party. At any rate it is scarcely credible that a Christian should have expressed in a public journal a hope that M. Tirman, the Governor-General of Algiers, who happens to be on a tour at Wargla, would encourage and stimulate the Shamba in their hereditary hatred of the Ahaggar to such enterprises as the one which cost the Hamm al Shikkat his life, in order to insure the due punishment of the Tuwârik, and to avenge, at least to some extent, the massacre of the Flatters Mission. Such an introduction of revenge and assassination is hardly a good type of Christian civilization, which it is the asserted mission of the French to extend to Africa, and it sets a dangerous example to a conquered people, as any Arab or Berber might kill any Frenchman taking him unawares. This is a mode of revenge and punishment which no one would tolerate in British India.

Looking into the future, I fear that the next century must see the

extinction of the unruly liberty of the Tuvárik in the same manner as the present century has seen the tribes of the Caucasus and the Turcoman pass under the yoke of a Great Power. It is the law of progress, but it should be done gradually, and by extending the arts of peace. The Tuvárik depend for their existence on the commodities which they can only purchase of the settled inhabitants in the different Oases of Ghadámes, Ghát, Ain-Salah, Agades, and others. The oases must be conquered first, and well governed, and from them a repressive control exerted over the nomads. When the great Pasha of Egypt, Mahomed Ali, had failed in his attempt to occupy Nejd, in the Arabian Desert, he assembled his Officers at Cairo, placed an apple in the centre of a carpet, and bade each try to get at the apple without placing his feet on the carpet. One after the other tried and failed. His adopted son, Ibrahim Pasha, who was short and stout, asked leave, in spite of derision, to try, and sitting down at the edge of the carpet, he began to roll it up from its rim inwards, until the apple was got at without difficulty. Mahomed Ali understood the enigma, and gave Ibrahim the command, who, by a gradual pushing forward of frontier fortresses and posts, at length captured the city. The French must adopt the same quiet policy, and they will find that the Sabára will be more profitably conquered by the boring rod of the artesian well than by the sword and chassepôt of the soldier.

List of Books.

- Dureyrier: "Le Sahare."
 Bulletin de Soc. Géographique de Paris: "Exploration du Sahare." 1882.
 Largeau: "Le Sahare Algérie." Paris, 1881.
 Brosse: "Voyage de la Mission Flatters." Paris.
 Bernard: "Quatre Mois dans le Sahare." Paris.
 Gaffaret: "Explorations Françaises de 1870—1881." Paris, 1882.
 Ancelle: "Français au Sénégal." Paris, 1883.
 Bijemont: "La France en Afrique." Paris, 1883.
 "Sénégal et Niger." Ministre de la Marine et des Colonies. Paris, 1884.
 "Le Soudan Français." Général Faidherbe. Lille, 1881.
 "Le Trace Central du Chemin de Fer Trans-Saharienne." Par Général Colonier. Paris, 1880.
 "Le Chemin de Fer Trans-Saharienne." Duponchel. Paris, 1879.

The CHAIRMAN: I am sure we all feel much obliged to Mr. Cust for the interesting account he has just given us of the tour he made in the North African Colonies of France in the autumn of 1882, and we are especially indebted to him for the light which he has thrown, which I am afraid is all the light that ever will be thrown, on the sad fate of Colonel Flatters and his expedition in the preceding year. It struck me that Mr. Cust was a little severe in his criticism of the motives of the French Government in sending out that expedition. No doubt they were of a mixed character—they embraced the extension of political influence and the dis-

covery of new trade routes; but I almost doubt if Great Britain is the country to throw the first stone in a case of that kind, although of course during the last few years we all know that we have been on our good behaviour. But if France really indulges in the magnificent dream—not to call it chimera—of a Trans-Sahára Railway, I should be very much disposed to think with Prince Bismarck that it was all in the interests of civilization, and if she should, in doing so, interfere with the liberty and independence of the marauding Tuwárik, I really do not think after the picture that has been drawn by Mr. Cust of these interesting children of the desert, and their manners and customs, that we need waste a great deal of our sympathy upon them. However, that is neither here nor there. I believe myself, from what has fallen from Mr. Cust, that the destruction of Colonel Flatters and his party was due to the commencement of that great wave of Mohammedan fanaticism which has been sweeping over the continent of North Africa during the last few years, and to the force of which, no doubt, France may have contributed by the occupation of Tunis; although its origin must be due to causes of much longer duration and much more deep seated. It is by no means my intention, however, to keep you from the discussion of this very interesting paper, and therefore with these few prefatory remarks I will ask any gentlemen who are disposed to speak upon it to favour us with their observations.

Mr. E. BUNBURY: I really have no remarks to offer except to express the very great interest with which I have listened to Mr. Cust's paper. I agree very much indeed with his views with regard to the probability of this railway, but really I have no more means of forming a judgment than any one else. My knowledge of the Sahára is precisely coextensive with Mr. Cust's, for I have only been as far as Sibi Okba, but even a journey of that very short distance gave us an impression of the desert which will never be forgotten. The view of the desert as one approaches it from the north can hardly be better characterized than was done by the French troops under Marshal Bugeaud, when they came to the brow of the hill. The portion of Algeria north of Biskra is a great undulating high land, and you come to the brow of a hill from which you suddenly see the desert stretching out in front. On arriving here the troops shouted at once, "La mer! La mer!"—they thought they had got to the sea again, and were delighted. I believe there has been a project mooted, and I believe M. Lesseps has given some currency to it, for rendering that in some degree a reality by creating a sort of island sea, where those salt lakes now exist. I confess myself that the whole thing appears to be an illusion, or at least that its effect will be infinitesimally small, and I perceive that in the last official investigation on the subject, they came to the same conclusion. If any one likes to try the experiment, and embark in it as a speculation, I shall be very willing to see them do so; but I should be very sorry to see any of my friends embarking their money in such a project.

Colonel RHODES: The chief point in Mr. Cust's interesting lecture is Timbáktu—that is the central point you have to arrive at—and my object in rising is to bring forward Donald Mackenzie's scheme for "Flooding the Sahára." The point he selected was Cape Juby, 28° N. latitude, and he proposed to flood the Sahára down to Timbáktu. The depression of the Sahára goes round to within 50 miles of Timbáktu, and starts about 15 or 20 miles from Cape Juby. The distance across the desert is about 800 miles. The inhabitants on the south side of the Atlas range are pastoral, and the Morocco Government has very little control over them. They can hardly collect any taxes from them, on account of the high range of mountains which prevents the troops passing over on account of the extreme cold. The length of the depression, to which I have referred, is 500 miles, and its breadth 120 miles; it begins close to the French territory, and if the water were let into the Sahára, the French would have the benefit of the inland sea, instead of having to construct a railway. Diodorus Seculus records by tradition that this depression was suddenly dried up; in A.D. 681 it was an inland sea, but since A.D. 1200 the water has gradually disappeared. This vast plain, or depression, called "El Juf" (12 miles from the Atlantic Ocean), is a sterile region, but shells and pebbles are to be found all over it, the same as exist in the Atlantic Ocean. The salt mines, to which Mr. Cust referred, have been worked for about 500 years; they go a considerable depth into the soil, and the value of the salt when it is brought to Timbáktu is 17.

per cwt. ; 20,000 camel loads of salt are extracted from those mines annually.¹ At the old entrance (Boca-Grandé) from the sea, at Cape Juby, there are perpendicular rocks rising 200 feet at each side, with a sand bar across, about 30 feet high at the sea end, and 10 feet high at the northern end, and it is that sand bar which keeps the Atlantic from coming into the depression of the Western Sahárah. This perpendicular channel of high rocks extends inland towards the Sahárah nearly 15 miles, and then opens into the "El Juf," its banks rise about 500 feet, and the bed of the channel varies to about 200 feet below the sea level. There is a port called St. Bartholomew, a little to the south of Cape Juby, at which Donald Mackenzie has established a trading station : that part is about 80 miles from the Canary Islands, and it is about 1,600 miles, or nine days' sail, from Cape Juby, to England. The ordinary caravan route from Algeria, Tunis, and Tripoli to Timbáktu is about 2,000 miles ; whereas the distance from Port Juby to Timbáktu is only 800 miles. The present trade of Timbáktu is about four millions sterling annually, and Donald Mackenzie thought that if the Sahárah was inundated, instead of four millions it would be about twelve millions. At present goods leaving England have to go down to Sierra Leone, to the entrance of the Niger, then to go up the Niger, and altogether they have to pass through five hands before they are delivered at Timbáktu, thus five people have to receive a profit ; whereas, if they went from Cape Juby, they might go direct by steamers from Liverpool through the Canal right up to within 50 miles of Timbáktu, and land their goods there. A canal could also be constructed between the Niger (at Port Kabara) and this inland sea, so that there would be direct communication from Liverpool, with small steamers, without transshipment. If such a flooding of the Sahárah were not to take place there, Mr. Mackenzie proposes to follow the Wadan trading route from Cape Juby to Timbáktu (about 800 miles), just skirting the western side of the depression of the Sahárah. The Wadan route from Cape Juby to the interior has forty-two stations on the road, with abundance of water. I would therefore suggest that a railway should be constructed on this Wadan route to Timbáktu, by our mercantile princes of Manchester, so that they could deliver their goods at Timbáktu, the capital of the Western Soudan, which contains by estimation about thirty-eight millions of inhabitants, so that the trading facilities opened up by such a railway would be very great. I should therefore be glad to hear the question of constructing a railway from Port Juby to Timbáktu discussed at this meeting in conjunction with Donald Mackenzie's plan of "Flooding the Western Sahárah Desert."

Colonel BAYLIS : I should like to ask whether the same occurrence might not again take place, namely, that if the water were let in, it might find an outlet as before. May not the same cause still exist which led to the drying of the desert, so that if the water were let in it might be absorbed again ?

Colonel RHODES : According to the traditions of the Arabs the water commenced to dry up in 681, and it took from 681 until the year 1200 for it to gradually disappear.

Colonel BAYLIS : By penetration ?

Colonel RHODES : I think by absorption. If such a scheme as this were carried out, it would change the climate of the Sahárah and produce excellent vegetation, and we should also get our goods from Liverpool or Manchester delivered at Timbáktu without going up the Niger, a geographical distance of 12½° of inland navigation—or nearly 800 miles.

Major GRIMSTONE : I should like to ask the Colonel whether there is any population in this depression in the Sahárah, because, if so, you would flood that population.

Colonel RHODES : The whole of the depression is perfectly arid and sterile, and all the villages near it are above the line of high watermark—where the sea is supposed to have been. The shells and other produce of the sea are still found in

¹ This salt region is situated at the small village of Taudeny, on the Tawat caravan route, on the eastern border of El Juf, 23½° N. latitude. The Sheikh lets out plots of land to diggers at a ground rent. The whole of El Juf is a series of salt basins similar to Taudeny. (Vide "The Flooding of the Sahárah," by Donald Mackenzie, 1 vol., 8vo., 1877.—Sampson Low and Co.)

the depression, but the villages are all above that line; therefore if the water was let in, it would not interfere with any villages at all.

Major GRIMSTONE: Mr. Cust has stated that there is one of these lakes that he refers to that is above the sea level. In his project of an inland lake in Tunisia, what arrangements would M. Lesseps make with regard to that lake?

Mr. CUST: He must answer for his own scheme; it is not my scheme. The sea would find its own level; I cannot understand it at all.

Captain JOHNSTONE, R.N.: With regard to the railway the French propose to make, I think I understood Mr. Cust to say the country is not completely desert. It would be interesting to know if, where this line of railway comes, there is any vegetation to speak of, if there are any wells, and how the railway would be kept up. Of course there would have to be stations, and then comes the point whether, if there is any population, the railway might not be destroyed. It seems to me to be a very important point to consider, when the railway has once been established, what possible means there will be of keeping it up. If there were any hostile tribes near, naturally the railway would not exist long when they once found out that by moving the rails it could be put an end to. Of course if there is no water in the place (as it is quite clear that the trains would not be able to carry water enough for themselves), they would not be able to run.

Mr. CUST: There again I am not the engineer, but I have read all the papers. The French draw very much upon the Bank of Hope; they think that they can sink artesian wells for the whole distance. There really is reason to believe that there is a current of water flowing from the highlands under the soil, and that they can get access at certain places to subterranean lakes of fresh water: I think there is no question that, wherever an artesian well is bored, the water flows up in a magnificent supply. The idea is to find a line along which there is a subterranean course of water, and to get their water there. Who is to protect the line between the stations they do not attempt to state, nor how passengers will be able to go through the intense heat of the day and the intense cold of the night, nor how they will get supplies of provisions: all these points have hardly come as yet into the question of practical engineering. Remember that the French Government has only sent out an expedition to survey; there is no contract made for the construction of the railway. A railway will no doubt be made as far as Wargla, and owing to the quantity of artesian wells that the French have sunk, causing palm trees to spring up by hundreds and thousands, there will be no difficulty about making that railway. But beyond it is entirely a vague and abstract scheme, which none but the most sanguine people would entertain for a moment. I should like to ask Mr. Bunbury if he can tell us anything about the expedition made by the ancient Romans across the desert in the time of Augustus.

Mr. BUNBURY: The Roman expedition in the time of Augustus went but a little way. They only penetrated as far as Fezzan, while Ghadamès was the farthest point retained by them as a permanent outpost. There is in Ptolemy's geography an account of two expeditions that took place at a later period, in the time of the Antonines, just before his own time, carried out by two Generals who separately marched with an army from Tripoli to Fezzan and from thence to the south, until they came to a latitude which, according to Ptolemy's geography, brings them down far below the equator. There is no doubt that they did not make any such march as that. The geography of this march is entirely based upon the fact that because they occupied a certain number of months on the expedition altogether, by converting that into days' marches, assuming that they were always on the march and always marching the same distance, they would have got that enormous distance to the south. Although these marches must be looked upon as perfectly fabulous, still there is no doubt that they actually did penetrate far into the interior, but I should think they certainly did not go to Bornu, because if they had done so they would hardly have failed to mention the lakes.

Mr. CUST: Where do you place the River Ghir which Ptolemy mentions?

Mr. BUNBURY: Ptolemy's ideas of the geography of this part of Africa were perfectly confused. He got hold of names without knowing anything of their position, so that it is really idle to attempt to identify them.

Major GRIMSTONE: When Colonel Rhodes spoke of this water running into the

desert, you must recollect that that is salt water, and then he talks about it being connected with the Niger, the Niger being fresh water. Thus you either render the Niger salt, or the Niger would send its fresh water into the desert; but surely it would be better to let the fresh water into the desert instead of the salt.

Colonel RHODES: That is what I mean. There would have to be a canal from the Niger to the depression of the Sahara, so that at a certain time of the year, when the Niger floods as the Nile does, a quantity of fresh water would be supplied to this south end of the depression, and would help to feed the inland sea.

General Sir BEAUCHAMP WALKER: I think before we break up, as Sir Henry Barkly is not a member of this Institution, it is only due to him that we should return him our thanks for having done us the honour of taking our chair.

Lord CHELMSFORD: There is also another important part of our duty, which is to give a hearty vote of thanks to the lecturer. I am sure we all feel extremely indebted to him. I have listened with the greatest interest and attention to what he has said; and although I know nothing of the country he has spoken of, still it must be always of great interest to us, and we thank him very sincerely for his lecture.