

Ad N. 4866/107.

831

REPORTS

259877

RESPECTING

COMMUNICATION WITH INDIA

THROUGH

TURKEY,

BY THE

Türkiye Diyanet Vakfı İslam Araştırmaları Merkezi Kütüphanesi	
Dem. No:	259877
Tas. No:	327-342 REP-R

EUPHRATES VALLEY ROUTE.

Presented to the House of Commons by Command of Her Majesty.
1872.

LONDON:

PRINTED BY HARRISON AND SONS.

[C.—534.] Price 3s. 6d.

LIST OF PAPERS.

No.	Page
CIRCULAR addressed to certain of Her Majesty's Consular Officers	August 25, 1871 1
<hr/>	
1. Vice-Consul Barker to Earl Granville	January 27, 1872 5
One Inclosure.	
2. Report from Consul Burton (not yet received).	
3. Consul-General Eldridge to Earl Granville	February 12, — 13
4. Vice-Consul Guarracino to Earl Granville	January 29, — 14
One Inclosure.	
5. Consul-General Herbert to Earl Granville	October 24, 1871 15
One Inclosure.	
6. Consul-General Herbert to Viscount Enfield	November 22, — 18
7. Consul Holmes to Earl Granville	September 20, — 19
One Inclosure.	
8. Consul Palgrave to Earl Granville	January 12, 1872 20
One Inclosure.	
9. Vice-Consul Rassam to Earl Granville	November 22, 1871 25
10. Consul Rogers to Earl Granville	January 12, 1872 26
One Inclosure.	
11. Consul Sandwith to Earl Granville	September 15, 1871 28
12. Vice-Consul Sankey to Earl Granville	November 20, — 29
One Inclosure.	
13. Consul Skene to Earl Granville	October 3, — 31
One Inclosure.	
14. Consul Skene to Earl Granville	November 30, — 34
Two Inclosures.	
15. Consul Skene to Earl Granville	January 17, 1872 38
One Inclosure.	
16. Consul Taylor to Earl Granville	January 8, — 39
One Inclosure.	
17. Consul White to Earl Granville	January 31, — 55
One Inclosure.	
18. Consul-General Wood to Earl Granville	January 15, — 58
Two Inclosures.	
19. Vice-Consul Wrench to Earl Granville	October 28, 1871 73
One Inclosure.	
20. Sir H. Elliot to Earl Granville	December 19, — 74

Circular addressed to certain of Her Majesty's Consular
Officers.

Sir,

Foreign Office, August 25, 1871.

I AM directed by Earl Granville to state to you that information is desired, for the use of a Committee of the House of Commons, on the subject of communication with India through Turkey, by the Euphrates Valley route; and that his Lordship is of opinion that certain of Her Majesty's Consuls, either from the locality of their present posts, or from having served in parts of Turkey which would be on or near to the line of communication, might be able to furnish valuable Reports on the subject.

I am accordingly to instruct you to forward to this Office, before the 1st of February next, as full a statement as you may be able to furnish on this question. You will endeavour to make your Report complete in itself, without unnecessary reference to other papers.

I am, &c.
(Signed) ENFIELD.



REPORTS IN ANSWER TO PRECEDING CIRCULAR.

M
s
a
t
d
g
a

Reports in answer to preceding Circular.

No. 1.

Vice-Consul Barker to Earl Granville.—(Received February 7.)

My Lord,

Theodosia, January 27, 1872.

I HAVE learnt indirectly that your Lordship has sent a Circular to some Consular officers requiring a Report on a route to India, to be laid before the Committee about to examine and report on this question; and as I have resided as Vice-Consul twenty-six years in North Syria, one of the proposed routes, I have thought it my duty to send in a statement which I hope will be found to contain some facts not generally known; and I have the honour to inclose the same herewith (Inclosure 1) and also a coloured sketch annexed to the same (Inclosure 2).

I have, &c.

(Signed) EDWARD B. B. BARKER.

Inclosure 1 in No. 1.

Report by Vice-Consul Barker.

I HAVE resided twenty-six years as Vice-Consul and as Acting Consul at Seleucia, Antioch, and Aleppo, and two years at Samsūn, on the Black Sea, and eight years at Theodosia, in the Crimea of Russia. I have travelled in Asia Minor, and know every mile of ground between the Taurus, Adana, Iskenderūn, and Lādakīa. I have explored the mountains and plains on that coast in my shooting excursions, at different times during twenty-six years, and my father and I have kept a meteorological register between Seleucia and Aleppo for sixteen years; I am therefore able to give any information required on this subject.

The following are some of the advantages and disadvantages of the two proposed routes:—

Black Sea, through Constantinople, Asia Minor, and Persia.

1. The northern coast of Asia Minor has no harbour, except Sinope, and there the high mountain range coming quite down to the sea, will not admit of any railway being made. This coast is subject to unceasing terrible stormy weather all the winter. Trebizond has no port, and the mountains there present the same difficulty increasing as one advances into the interior.

Mediterranean, through Syria and Mesopotamia.

1. The coast of Syria is also defective in respect of harbours, and the only one, Iskenderūn, is very bad in winter on account of the sudden hurricane, called there "raggiyya," which rushes down the side of the naked, rocky mountain, and knocks about the ships at anchor.

This natural defect can never be remedied.

But on the southern side of the Bay of Antioch, called "Kara-Bujak," a safe and commodious harbour could be made at a comparatively small expense, by running out a breakwater. The remains of one in the time of the Romans are still to be seen in very calm weather.

As competent engineers have surveyed this bay, I say no more on this head,

Black Sea, through Constantinople, Asia Minor, and Persia.

Mediterranean, through Syria and Mesopotamia.

2. This coast is also subject to the danger of collisions at sea from fogs, which are prevalent during four months of the year—from February to July. The passage of the Bosphorus is also fraught with great danger from collisions, owing to the immense movement of shipping, day and night, in the narrow channel between the Mediterranean, Constantinople, and the Black Sea, and *vice versa*.

3. Either at Sinöp or Trebizond a railway would have to meet the almost insurmountable obstacle of high mountains rising from the sea, and continuing to rise all through Asia Minor, and if practicable as far as Erzerüm into Persia, would have to contend against snow during six months of the year, for "Erzerüm" is proverbial in the East for cold weather.

4. The projected railway from Constantinople through Asia Minor (if ever rails could be laid down with success over so mountainous a country), would probably be more advantageous to a Company as a commercial speculation than one through North Syria.

It is not, however, generally known, except to the natives, that there is a small harbour of refuge in case of need within ten nautical miles of the mouth of the River Orontes, at a place called "Basit" (the ancient port of "Posidium"), where ships can lie safely till the weather abates.

The water is always smooth in this spot, because the only winds to be dreaded on this part of the coast are the W. and the W.S.W., and this little nook is sheltered by the point of land from these winds. This port could shelter ships bringing stores for the railway until a breakwater could be made at Kara-Bujäk.

2. There are no fogs on the coast of Syria, and no rocks nor shoals in the channel between it and Cyprus.

The danger from coral reefs in the Red Sea would be avoided by this route.

3. The break through the mountains by the River Orontes flowing into the sea at Seleucia forms a natural opening for a railway. This country has been very carefully surveyed from the sea to Aleppo, and has been found not to present any engineering difficulty. From Aleppo to the Persian Gulf the country presents a fine dry level surface, thoroughly described in General Chesney's work.

4. A railway through Mesopotamia as a route to India would not at first be productive of as much income to a Company from traffic, but in a few years (certainly before the railway be finished) the cultivation of grain would increase a hundred fold, and would go on increasing a thousand fold, and would attain to magnitude and an extension quite impossible to calculate, because bad harvests are almost unknown in those parts, for there is always plenty of rain and a certainty of a hot sun to ripen the corn. Populous villages would spring up all along the line, as there is abundance of sweet water everywhere. Cereals can be grown so cheaply there that no country at the same distance from England, say for instance Russia, could compete with it at all. And if Great Britain finds it necessary to rely more on the importation of foreign corn, where could a better field be found than the fertile plains of

Black Sea, through Constantinople, Asia Minor, and Persia.

5. In regard to the project of a railway going all through Europe, Asia Minor, and Persia (if practicable), as a quicker means of transit, there would be the fatigue of so long a land journey to be taken into consideration, and in winter the great cold to be experienced in such rapid locomotion, independent of the constant stoppages from snowstorms, avalanches, &c.

6. The natives all along the whole coast of the Black Sea, and all through Asia Minor, are much less civilized than those of Syria; the lowest class of workmen are in a much more degraded state; so much so, that the term "Bana bak" (which means "Look at me!") is synonymous for a labourer in those parts, that is to say, so stupid that it is necessary to attract his attention first by this phrase before addressing him.

Mediterranean, through Syria and Mesopotamia.

Mesopotamia, the cradle of mankind, which has all the advantages of climate, soil, sun, and water in its favour?

5. The Mediterranean and Syrian route would have the advantage of alternate rail and steam packet travelling which would diminish the fatigue of so long a route, which is sure to be very great, particularly for women and children.

Some people have imagined that the heat in summer would be a difficulty—not so great as in India, or by the Red Sea route in the suffocating atmosphere of the cabin of a steamer, except, perhaps, between Mosul and Basra, which might be passed in the night, infinitely better than stoppages by snow storms.

Also, that the heavy tropical rains would be an obstacle, but this would only slightly increase the cost per mile.

England ought to rejoice that there is a route open to her through Mesopotamia, 1,280 miles shorter than the Red Sea or any other route.

6. The Syrian population and all who speak the Arabic language have still the traditionary remains of an ancient high state of civilization, when Europe was plunged in the barbarism of the Dark Ages, and all the literature then in the world was in Arabic books.

The idle stories put forward of the obstacle in the way of the Euphrates line on account of barbarous Arab tribes are not worth the least consideration.

The Arabs are more intelligent and better informed, morally, than the same class in any part of Europe. They are open to certain conventional notions of honour, never break their troth, can be trusted implicitly when once it is given, and their Chiefs have complete control over the tribes. By moderation, tact, and truthfulness those who understand their train of thought can manage them without difficulty.

Besides it was proved by the Turkish authorities at Aleppo in 1857, during the war with the tribe of 'Anaza, on the Euphrates line of country, that the Arabs would never cross the line of pickets which had been hastily placed there, though at great distances and out of sight of one another, in the fear of losing their valuable mares by a rifle shot from an invisible pit. For the same reason they would never venture to cross the railroad, and also for fear of falling into an ambuscade, and being cut off from

*Black Sea, through Constantinople, Asia
Minor, and Persia.*

7. The Tigris route has been proposed in lieu of the Euphrates; but then the difficulty presents itself of how to get there? Hopeless chains of mountains stand in the way from every side, and the route through Persia, infinitely further, would have to pass through a ruined and very rocky country.

The one proposed through Amāsia, Sīwās, Tokat, &c., to the Tigris, would meet with no outlet through the Taurus, and would have to pass over that high range by the "Fell process," and that more than once, which would be very dilatory and cause frequently, in winter, long stoppages by snow-drifts, avalanches, &c.

Mediterranean, through Syria and Mesopotamia.

their encampments, which the speed of steam would give a facility for doing.

Besides, also, they would soon find it their interest to be on good terms with the Company, and be glad to avail of the increase of traffic which the railway would inaugurate, for all the tribes have need of exchanging their butter, sheep, camels, horses, asses, &c., for corn, coffee, rice, tobacco, clothes, &c.

7. The great trade of India, when neither the Cape nor the Red Sea routes were in existence, even at the beginning of this century, when my father sent and received the British mails for India and for England, came through Aleppo, and never by the Tigris; and the same route is still the caravan road, because it is the best.

This is the real highway between the East and the West. It was adopted by Alexander the Great and by the Roman legions of the Emperor Trajan, and after him those of the Emperor Julian. There are still to be seen between Antioch and Aleppo parts of the paved Roman road, which they made for carriages to run on from Seleucia to Bagdad, and at intervals other parts are still to be seen at other places on the Euphrates line.

200,000 tons of merchandize still pass annually through Aleppo by camels and mules. What a change in trade would a railway make in that country! Calculating only 150,000 tons of goods between Aleppo and the sea, there would be a revenue of 225,000*l.* sterling by charging 1*l.* 10*s.* sterling per ton instead of 3*l.* and 4*l.* sterling now paid for camel and mule carriage. Deducting half for the expenses there would be a net product of 11,2000*l.* sterling; that is, 8 per cent. on the capital of 1,400,000*l.* sterling, the cost of the first section between Seleucia and Aleppo, and this independent of passenger fares.

The following are some of the advantages and disadvantages of the two proposed routes—Alexandretta (Iskenderün), and Seleucia (Suwaydiyya):—

Alexandretta.

The height of ascent, and nature of the soil of the Beylān Mountains (Ghiaour Dāghi), are not the only difficulties to be overcome. After going over 2,000 ft. above the level of the sea, and going down again the six hours' ride to Khān-Karamürt, the railway cannot cross the Great Swamp and Lake (15 to 20 miles),

Seleucia.

This route has no engineering difficulty; the only objections brought against it have been the absence of a port, and the number of bridges which would be required over the Orontes should the railway be carried along the river.

The first objection could be easily

which have never less than 5 ft. water, but must take a northward direction, entirely out of the way for 9 or 10 miles, perhaps more, in order to go round the springs, which cause the River Nahr-Abyad running into the Orontes, and the Great Swamp and Lake. This is the route the caravans take from Iskenderün to Aleppo, passing, shortly after leaving the springs, called "Il Gholeh," through a marshy plain, where a bridge and causeway, Murad-Pacha, enables them to get across. (See coloured sketch annexed.)

But it happens that every eight or more years, sometimes oftener, the heavy rains swell the Swamp and Lake to such a degree that the whole plain, for twenty miles, as far as the hills, is under water, and then the caravans have to go still further north, through high hills of a clay nature by a circuitous route (see yellow dotted line), which makes a day's journey difference in the time, and in the winter and spring, two days.

2. An idea has prevailed that the marshes around the village and port of Iskenderün are the only cause of the pestilential nature of the fever there, and that drainage and filling up would render the place healthy. This is not the case. The marshes have been completely drained more than once, without having produced any good effect. The cause is this. During the months of June, July, August, and September, there is not a breath of wind in the port; the heat is intense, 80° and 90° Fahrenheit, day and night the same, without the possibility of any circulation of air to purify it during these four months, because the place is shut in by a very high mountain, without any break through it for a renewal of fresh air, which is heated by the rays of a burning sun all the summer; and this is why the atmosphere becomes unfit for the respiration of men and animals. Dogs die of the fever as well as human beings. No drainage in the world could remove this defect of insalubrity, as has been proved by experience, and to lean on the staff of a probable success by drainage and filling up the marshes, would be reckless in so important a step as the permanent establishment of a railway route to India.

The only opening for the wind is at Beylän, but that is some miles away; for the gorge or break there takes a westerly direction towards the village of Kara-Agach, about ten miles distant from the

removed, because a safe and commodious harbour can be made by running out a breakwater from the point of Kara-Bujäk, or by making docks and turning the course of the river into artificial basins, and then into the sea, so as to avoid the formation of a bar. The Turkish Government declared in 1857 they were willing to make a port here at its own expense.

The other objection of the number of bridges can be obviated by taking another route than the river one, which passes more to the north in the valley of the Orontes, through a spot known as Cosmo and Damian, and by this route three bridges, or at most four only would be required as far as Antioch.

2. The whole of the valley of the Orontes and of the country to Antioch is free from any thing injurious to health, because the whole valley is well ventilated.

There are fever and ague during the autumn in every part of Syria, even on the top of Lebanon (as in the Greek islands, Asia Minor, indeed, the East generally) owing to the checked perspiration, but they have no malignant character, and can easily be prevented taking precautionary measures. What gives a cold in England gives a fever in the East.

Alexandretta.

port and village of Iskenderün. (See coloured sketch annexed.)

An incontrovertible proof that my solution of the cause of Iskenderün fever is the true one, may be adduced from the fact that there are twenty times more marshes all around the neighbouring Lake of Antioch than at Iskenderün, and that we hear, some years, of there being fever and ague among the people living there; but no one has ever heard of these having a malignant character, or of their proving fatal.

Twice during my residence at Seleucia, Antioch, and Aleppo, I have known the master and the whole of the crew of a merchantman buried, with the exception, in one of the instances, of a cabin-boy, who escaped, and the vessels had to be worked down to Beyrüt by hands hired for the purpose.

Frequently it occurs that the master dies, and the vessel has to wait till a person is sent up from Beyrüt to take his place.

I have known in one month of August, eight English travellers who did not survive their having slept one or two nights in passing through Iskenderün to embark for Beyrüt, or on their way to Constantinople by land. One died at Adana (Christie), and another at Konia (Blanchard), and the remainder at Beyrüt (Champion, Gilchrist, Harvey, &c.), within the fortnight.

The archives of the British Consulate at Aleppo during the middle and the end of last century, when England had eighty mercantile establishments in that city, furnish fearful accounts of the deaths at this port, or "Factory," as it was called. Sometimes the death is recorded by letter of the person sent there to be "Factor," before the news of his arrival at Iskenderün is announced at Aleppo; and, on turning over another leaf or two, the death of the one sent to replace him is recorded; and so on.

Some Europeans of peculiar constitutions resist the first brunt of the fever, but only to keep it hanging about them until the next summer carries them off. Very few can stand more than two years without being obliged to leave for change of air, which is said, however, to be more dangerous than remaining, from the number who die on leaving, and no instance has ever been known of an European having resided there more than two years without his carrying the effects of the fever to the grave,

Seleucia.

Alexandretta.

however long he may live. The fluctuating native population, principally indigenous, of Iskenderün (which has never, within the last seventy years, exceeded 300 souls), resist the fever, but they all have running sores in their legs, which dry up from time to time, and then the fever breaks out afresh. The lungs of those born there resist the mortuary effect, but I have seen infants at the breast with open sores in their legs.

As every season is not so bad as others, people forget what it sometimes is, and "pooh, pooh!" the danger; many think their constitution proof against it, but they find out, when too late, their mistake.

Independent of the risk of catching the disorder on one's way to and from India, there would be the risk of arriving at Iskenderün to take the rail, and finding all or most of the railway officials either dead or laid up and incapacitated from doing duty. I know well, from my two years' experience at Samsün, a place nearly as unhealthy as Iskenderün, what it is to have my servants laid up with fever, sometimes at a moment when their services were indispensable. Twice my life was despaired of, and the fever is still in my bones, though eight years have elapsed since my residence there, and I shall probably never get over it entirely.

I must also mention that the port of Iskenderün is just as open to the sea as the offing at Seleucia, with this disadvantage, that the high wind, called there "raggiyya," comes down the naked mountain in sudden gusts, and knocks about the shipping at anchor, one against the other; and this occurs at times during all the winter. I remember the large flag-staff, ropes, and tackle of the British Vice-Consulate at Iskenderün having been carried away right over the whole village, and found the next morning stuck fast in a large tree!

The "ample accommodation for all England's marine" is no recommendation for the route to India, because the shipping of a company would not require so much room. "Ample space" will not counterbalance the want of a good port and safe anchorage, which the Port of Iskenderün is not.

The "holding ground" is also inferior to that at Seleucia, being sand and shingle.

Seleucia.

The high wind at Seleucia during the winter is almost always off the land, and then the sea is as calm as a lake. The only months for bad weather from the westward at Seleucia are half of November and December till the snow falls on the country in January, but at Iskenderün the "raggiyya" prevails all the winter.

Until such time as a breakwater can be made the offing at Seleucia offers no danger to shipping, for the "holding ground" is extremely good, as it always is near the mouth of rivers, which bring down and deposit much clay. I have seen all the fleet of line of battle ships of Ibrahim Pacha, the Egyptian, ride there in perfect safety during one of the most terrific storms we ever experienced, because they had good anchors and chain cables. This fact is noted down in my father's journal.

Timber for building purposes and for sleepers abounds in the forests nearer than at Iskenderün, and can be brought more easily, on account of the prevailing east wind; and stone quarries of every

*Alexandretta.**Seleucia.*

description are everywhere on the line of the Orontes, and not at Iskenderün.

In short, Seleucia has every advantage in its favour, otherwise General Chesney, who has spent more than thirty years in weighing the merits of the different routes, would not have fixed upon it in the first instance, and still thinks it the best.

Recapitulation.

It follows, from what has been said, that the obstacles to be encountered in the Iskenderün route are:— (See coloured sketch annexed.)

1. The six hours, or 20 miles, from Iskenderün to Khān-Karamürt, at a height of 2,000 or 2,500 ft., over a deep clay, loamy soil.

2. The slow travelling by the "Fell middle grip," and the certainty of meeting with stoppages from snow in winter.

3. From Khān-Karamürt, if the post road to Antioch be taken, and then on to Dana, where all the three routes meet, fourteen hours, or 46 miles to Antioch, instead of 20 miles by the Orontes from the sea to Antioch.

In this route there are three mountain torrents to cross, frequently impassable for several hours, and marshy ground for the last ten miles, almost to the bridge at Antioch.

4. From Khān-Karamürt, if the caravan road to Aleppo, and on to Dana (see red line), be taken, there will be twice the distance to be traversed, on account of going round the springs at Gholeh.

5. From Khān-Karamürt, if the Long Caravan Road to Aleppo, and on to Dana, be taken, round by the ruins of St. Simon's Convent, when the rains have laid the whole of the plains under water, there will be three times the distance to Dana, than by the Orontes line.

6. The only other alternative left, will be to cross the Lake and Great Swamp of 20 miles across, by a causeway, which would be immensely expensive, because the water, nearly everywhere, is never less than 5 ft. deep, and more frequently seven and eight.

All these obstacles are not impossible to railway enterprise; but then, for what prospective advantage would these difficulties (on choosing the Iskenderün route), have to be encountered? For an indifferent, if not bad port, in winter season, the only time on the Syrian coast when a port is wanted, and an irremediable pestilential atmosphere during four months of the year in summer!

On the other hand there are not any natural obstacles at Seleucia, and the two "difficulties"—the want of a port, and the number of bridges—can be got over with the greatest ease; but if there were the same or even greater than at Iskenderün, the important question of salubrity ought, I think, to weigh in the scale far more than any other, in laying down a railway destined to be the high road to our Indian possessions.

Theodosia, January 27, 1872.

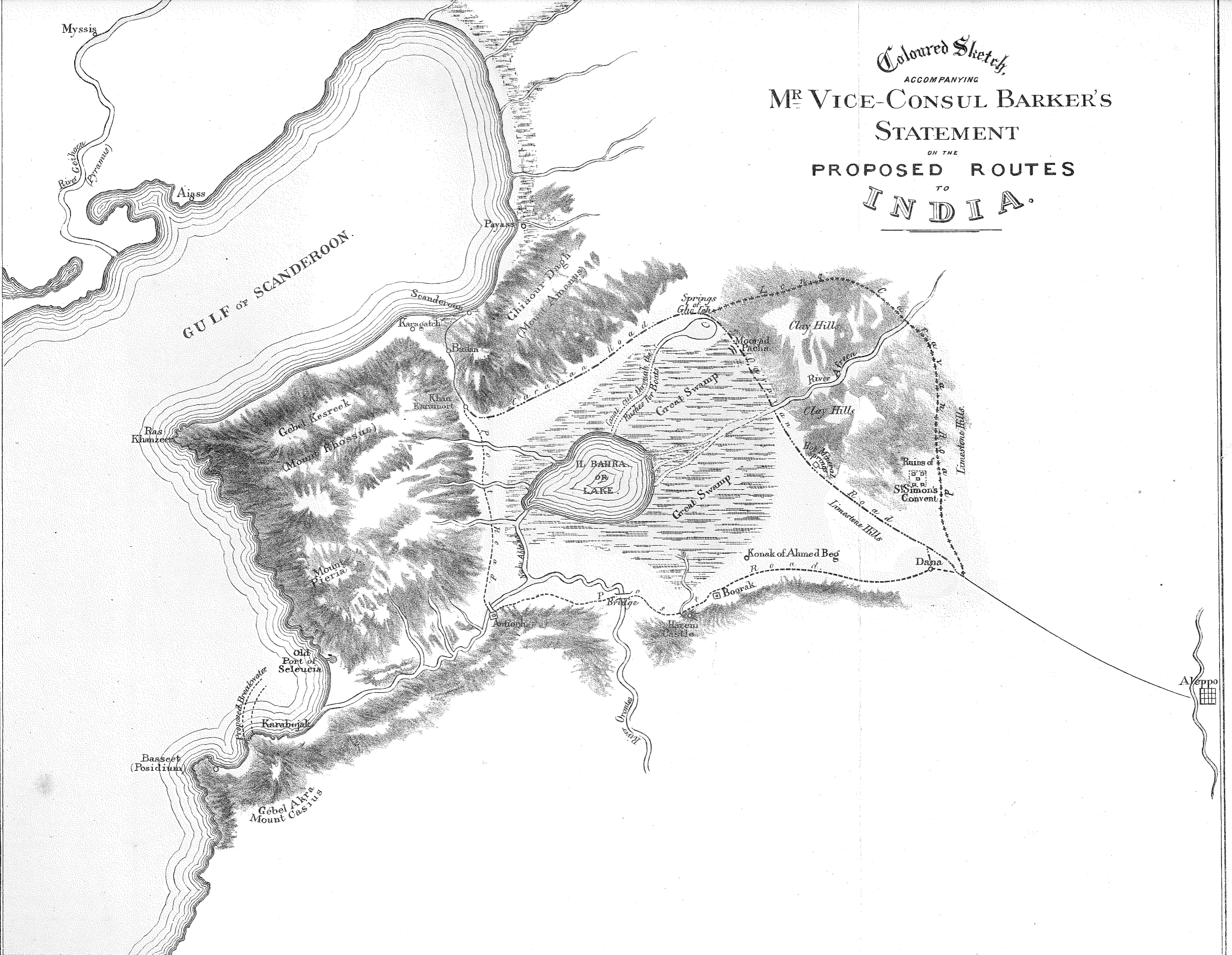
(Signed)

EDWARD B. B. BARKER.

No. 2.

[Report from Captain Burton not yet received.]

Coloured Sketch,
 ACCOMPANYING
 MR VICE-CONSUL BARKER'S
 STATEMENT
 ON THE
 PROPOSED ROUTES
 TO
 INDIA.



Consul-General Eldridge to Earl Granville.—(Received March 2.)

My Lord,

Beyrout, February 12, 1872.

IN reply to Lord Enfield's Circular of the 25th of August last, I have the honour to transmit, herewith, a short Report of the Euphrates Valley Railway, though I fear there is nothing new or original in my remarks, as the subject has already been so well ventilated. I send them, however, for what they may be worth, regretting that ill-health and pressure of work have not allowed me to attend to this matter before.

I have, &c.
(Signed) G. JACKSON ELDRIDGE.

Inclosure in No. 3.

Report by Consul Eldridge.

THE want of a quick and always reliable communication with India is now more felt than ever, and although a through route by way of the Suez Canal has been secured, yet that does not appear to meet all the requirements either in the way of rapidity or security, as accidents, such as the stranding of a large vessel, might render the Canal impassable for days and even weeks together.

The only way to obtain what is required appears to be by a line of railway connecting the Mediterranean with the Persian Gulf, carried down the Valley of the Euphrates.

I am entirely unacquainted, from personal observation, with the country through which the line would have to pass, nor do I possess sufficient technical knowledge to discuss the comparative facilities and difficulties offered by the Beylān Pass or the route by Antioch. I think, however, that either Alexandretta or Ayās ought to be selected as the Mediterranean terminus; (1) because they are the only natural harbours available; (2) should a line be brought down from the north through Asia Minor it could join on to that of the Euphrates Valley at either of these places without difficulty; (3) a line starting from a more southerly point on the coast of Syria would have to go northwards as far as Aleppo, whence it would again turn south, and so considerably increase the distance; or it would have to cross the Desert, where there is neither water nor population. Nor is there any safe port to serve as a terminus, although Tripoli, Sidon, Tyre, and Acre have been suggested, though at each of these places an artificial harbour would have to be constructed.

Were the development of Syria the principal object in view, no doubt the selection of one of these places would be the best means of attaining that object, but as a more rapid communication with India is sought, the most direct line must be the best.

The proposed line by the Euphrates Valley, passing, as it does, through the heart of Arabia, will act as a trunk line to open up the country, and it would be easy to connect it with light narrow-gauge lines with other places as necessity might arise.

The advantages that would accrue to the Ottoman Government through this line opening up so large a portion of its territory would be very great; but, as the primary and most important object would be the communication with India, I do not think it would be just to call upon the Ottoman Government to offer a guarantee greater in amount than as an equivalent to the advantages it would gain by the opening up of the country.

The Government might find it an advantage to offer a certain portion of the labour required by employing troops upon the works, as this kind of labour, which has been largely employed in the construction of the Russian railways, would be cheaper than any other; while, at the same time, a portion of the capital expended would go to the coffers of the State, and enable it, to a certain extent, to provide a reserve fund for the guarantee it might be required to pay.

(Signed) G. JACKSON ELDRIDGE.

Beyrout, February 12, 1872.

No. 4.

Vice-Consul Guarracino to Earl Granville.—(Received February 13.)

My Lord,

Constantinople, January 29, 1872.

IN compliance with your Lordship's desire, conveyed in Lord Enfield's Circular of the 25th August last, I now have the honour to send in my Report, with one annex to it, on the subject of communication with India by the Euphrates Valley route.

I have, &c.
(Signed) FREDK. GUARRACINO.

Inclosure in No. 4.

Report by Vice-Consul Guarracino.

ALTHOUGH I have not resided at or near the localities to be crossed by the line of railway under consideration, yet from the constant intercourse between Bagdad and other important towns of Mesopotamia with the coast of the Black Sea, where I was resident for upwards of 23 years, and from frequent visits to the interior, I have had many opportunities for obtaining information on the subject above referred to. I therefore propose, in obedience to Earl Granville's Instructions, to state the impressions I have always found to prevail, with the inhabitants and merchants of the country, with respect to the scheme for a through route to India by the Asiatic possessions of Turkey, closing this Report with some remarks suggested by 34 years' experience of this country, and my knowledge of its trade and requirements.

Commercially there cannot be two opinions as to the inestimable value to the country of the proposed line of railway through Asiatic Turkey. This is equally true whether the line be carried along the Euphrates or the Tigris Valleys. The vast undeveloped agricultural, mineral, and industrial resources of this region, would in a very short time be opened out in a measure impossible to calculate, and would not fail to give renewed life and vigour to the Turkish Empire.

It is generally felt that the line from the coast of the Mediterranean to the Euphrates and Basra, whether the starting-point be Alexandretta or any other seaport town on the Syrian seaboard, can only be of immediate and urgent importance to Indian and British interests, and would not repay any considerable charge to weigh upon Turkey, unless the trunk line through Asia Minor be established at the same time, as a complete network.

The want of internal means of transport would not allow any distant locality to use the Aleppo line, and although the advantages of even this are acknowledged, they are not generally thought to be of such primary importance for this Empire as those which would be derived from an Asiatic through line, of which the Aleppo transit branch might be an offshoot of the greatest importance to England, and for which then alone this country would consent to accept a share of the burden demanded from it.

The Turkish Government is now occupied with a bold attempt to carry out the scheme for a railway from Scutari opposite this capital, to Izmīd and the Interior, as far as it may find financial facility for so doing. This would seem to confirm the impression that the Sublime Porte would only give favourable hearing to a plan for making a railway across the territory, on to Bagdad and Basra, from the Gulf of Izmid. The Aleppo line being a secondary consideration, compared with the immediate importance attached to the main trunk line, for opening out the resources, and giving facilities to the trade of the Interior.

My opportunities for conversing with officials and private individuals on this subject, from my knowledge of their languages, have always left an impression on my mind, that the route considered most practical and easier, while at the same time that which would soonest give satisfactory returns both for the Government and the promoters, is that by the Euphrates Valley, to be reached by a line starting from the vicinity of this capital, and crossing the districts whose agricultural and mineral capabilities have as yet been untouched.

The question as to the hostility of the Arab tribes, Koords, or other nomade or native population, is not thought by the people of the country to be important, and the opinion prevails that the Arabs would be favourably disposed, provided the

mode of carrying out the project gave them the security that it is not intended to use the line as a means of oppressing them, or forcing them to give unrequited labour to it. Regular payment, kind treatment, and a reasonable respect for their prejudices and customs at the outset, would secure their assistance and good-will, and ultimately, it is thought, bring them to appreciate with that natural readiness and intelligence which is so strong a characteristic of the Arab nature, all the advantages of civilized habits and commercial intercourse.

It may safely be affirmed, that the numberless and various advantages with which this country is endowed by nature, position, and climate, are neutralized by the utter absence of facilities of internal communication, and that the falling off in trade in the East, in a general sense, remarkable, more particularly, in the districts it is proposed to cross, by the Asiatic railway of Turkey, is principally owing to the diversion given to traffic into other channels. All this is to the detriment of British export trade and commerce with the interior of Asiatic Turkey. The establishment of a through route to India, by central Asiatic Turkey, would give an immense impulse to this trade.

(Signed) FREDK. GUARRACINO.

Constantinople, January 25, 1872.

No. 5.

Consul-General Herbert to Earl Granville.—(Received November 27.)

My Lord,

Bagdad, October 24, 1871.

I HAVE the honour to acknowledge the receipt of Foreign Office Circular dated 25th August last, and in reply to forward the copy of a letter, No. 12, which I have addressed to the Secretary to Her Majesty's Government of India, Foreign Department, on the 13th August, 1870.

In this letter I have endeavoured to bring to notice the great importance of the proposed communication between England and India by railway through this country, and I deem there is little I can add without unnecessary prolixity.

It will probably be remarked that I do not enter into the financial bearings of the question, but this is unavoidable, inasmuch as I do not possess, nor is there available, sufficient data on which to form an estimate of the Returns that would eventually accrue from this undertaking.

There is constant communication and commercial intercourse between Bagdad and Basra, and between these towns and Mosul, Diyarbekir, Aleppo, and the North and West, and there can be no doubt that this would be infinitely increased.

But I am unable to supply reliable statistics of this trade.

Such information as is with much difficulty obtained from the Custom-house is not trustworthy, and would not convey a just idea of the value of the trade, and the business of the place is mostly divided in the hands of numerous petty merchants, each of whom strives to keep his dealings secret from others.

This system of secrecy in their dealings prevails even among the few leading merchants, and there is here no Chamber of Commerce nor body of mercantile men from whom valuable information can be sought.

Under these circumstances I deem it better to make no attempt to submit Returns on which I could not myself rely, and which would probably mislead.

I would venture to remark that the great importance of the Indian traffic to railways in Europe is unquestionable, and this has been demonstrated by the reported conduct of the Directors of Continental lines in reference to the completion of the communication with Brindisi by the Mont Cenis tunnel; and to observe that the greater part, if not the whole, of that traffic would naturally accrue to a railway through this country.

It is, however, on the political importance of the proposed scheme that I would lay the principal stress, believing that the acquisition by England of this rapid means of communication with India would prove to be well worth not only the amount of such guarantee as may be sought, but indeed the entire cost of the construction of the railway, whatever that may be.

This cost will not, I imagine, approach that entailed by the great insurrection in India in 1857, a terrible cost not only of money and property, but of the lives of men, women, and children; and one which could scarcely have been caused, and

certainly could never have attained the proportions to which it reached, had England possessed the means of sending troops and military stores to Delhi in the space of a fortnight.

I was in command of a regiment of native troops during the whole time of that rebellion, and well do I remember the intense interest with which was read the Shipping List to learn what vessels were bringing troops.

Had the proposed railway through this country then existed, these troops would have been thrown into the country in a few weeks—I may almost say days—the insurrection would have been at once put down, and the vast expenditure of life and property would have been saved.

The question now before the Committee of the House of Commons affords an opportunity of providing against future misfortunes of a similar nature, such as may arise from enemies either within or without our Indian possessions, and it would be a mistake to suppose that we are altogether safe from both or either of these.

The Suez Canal is of great importance with reference to this contingency, but it can never supply to England and India the place of this railway.

I have, &c.

(Signed) C. HERBERT.

Inclosure in No. 5.

Lieutenant-Colonel Herbert to the Secretary to the Government of India.

Sir,

Bagdad, August 13, 1870.

HAVING learnt from the public journals that on the 15th June last Sir G. Jenkinson gave notice in the House of Commons that, on an early occasion of going into Supply, he should call attention to the subject of the Euphrates Valley Railway, and show its great advantages for the conveyance of the mails, troops, and passengers between England and India, I imagine the time has arrived when I may have the honour to solicit the attention of his Excellency the Right Hon. the Viceroy and Governor-General in Council to the advantages, politically, commercially, and socially, of this very important undertaking.

2. In the many letters and papers Mr. W. P. Andrews, Chairman of the Delhi Railway, has written on this subject, he has laid down the following as the general features of the projected railway, viz. :—

That it would connect the Mediterranean with Basra, at the head of the Persian Gulf, between which place and Kurrachee and Bombay regular communication is now maintained by a line of steamers subsidized by the Indian Government.

Making Kurrachee the European port of India in place of Bombay, it would save about 1,000 miles in the distance between England and India, and would greatly reduce the time occupied on the journey. It would save the Government large sums in sudden emergencies by the facilities it would afford for the transport of troops and stores.

It would enable troops to be landed at Kurrachee in about fourteen days, and in two or three days more at Lahore, Peshawur, or Delhi, when the Indus Valley railway system is complete.

It would afford Persia a short, cheap, easy, and safe outlet on the Mediterranean for her trade with Europe, in place of the existing long, expensive, and difficult route by the Black Sea.

3. To these may be added the great advantage this safe and rapid route would offer for the transport of bullion, and of all the more valuable articles of commerce, such as silk, tea, indigo, &c., and the comfort of travellers, particularly invalids, who could, from time to time, interrupt their journey at interesting towns on their way, and obtain such rest as their case might render necessary or advisable, instead of their undergoing the severe trial of a voyage up the Red Sea, which has proved fatal to so many.

4. Mr. W. P. Andrews fixes the distance of the route he advocates by the Euphrates at about 850 miles from sea to sea; and the country not presenting any serious engineering difficulties, he estimates the cost of the entire line at from 8,000*l.* to 10,000*l.* per mile, making the necessary capital 8,500,000*l.* It may be estimated in round numbers at 10,000,000*l.*

5. The immense advantages offered to England and India, as thus laid down, are so evident and incontrovertible that it does not seem necessary to dwell upon them.

6. At present, the most direct communication between these two countries is through the Suez canal, a line which would be in the greatest danger of interruption in the case of England becoming engaged in war with any European Power, whereas the proposed line of railway through this country would be free from the probability of any such interruption, at the same time that it would reduce the distance between London and Kurrachee to within fourteen days.

7. I am, however, of opinion that the route he advocates may not, perhaps, be the best that could be chosen. The so-called Euphrates Valley route would, in its greater length, be unremunerative as regards local traffic, out of reach of towns that would form depôts of trade, and always liable to injury by tribes of wandering Arabs, who being, as a rule, extremely hostile to all changes, and very ignorant and suspicious, would no doubt regard the construction of a railway with distrust and aversion.

8. This feeling was strikingly illustrated only last year by the insurrection of the Arab tribes residing in the marshes near the Euphrates, one of the principal causes of their rising being stated by themselves to have been the closing of the entrance of a canal, through which the water of the river escaped, and flooded their marshes, with the view to the ultimate improvement of the navigation of that river.

9. The route I would recommend for consideration would be that surveyed some years ago by Mr. Geo. Latham, C.E., who is now at Calcutta in the service of the Government designing docks for the Hoogli, and who could give every information concerning it.

10. This line would pass from Alexandretta by Aleppo, Bira (Birejik), Orfa, Nisibin, Mosul, Kerkük, Bagdād, Kūtu-l-'Amāra, and Kurna to Basra, and would seem to offer no great engineering difficulties, while materials, stores, wood, &c., would be of comparatively easy acquisition through the whole route.

11. In the northern parts these would be found, so to speak, on the spot; through the southern portion brick would have to be used in the place of stone, and timber could be floated down the Tigris in raft.

12. It would pass through an inhabited country, and be of great utility in developing the resources of the country, whilst the local traffic would be profitable.

13. It would also in its greatest length be comparatively free from annoyance and injury on the part of Bedouin Arabs, while the agricultural Arabs, through whose country it would pass, would give the work every support, and would supply labour in large numbers.

14. The difference between this line, about 1,000 miles, and that of the Euphrates, as calculated by Mr. Andrews, 850 miles, would be only 150 miles, or six hours, at the rate of 25 miles an hour, and about half that time at the rate at which through mail trains would run.

15. I imagine the cost of construction per mile by this route would be less than the other, because there would be less expense in the transport of stock and materials and in labour, which would be found near at hand.

16. The present Governor-General, Midhat Pasha, who is a man of unusually liberal and advanced views, and of untiring energy, has been occupied, ever since his arrival here last year, in endeavouring to open communication with Europe, both by the Suez Canal and by the Euphrates.

17. He has many difficulties to overcome, and I have no doubt that he would cordially support a railway scheme which should benefit the country; in which the Ottoman Government should be permitted to occupy a prominent position, and where the responsibility should not fall with undue weight on the revenue.

18. The Ottoman Government has, from the first, favourably encouraged the scheme, and promised a convention, a guarantee, and every support; and, as I am informed, all that is sought from the British Government is a contingent guarantee which, if payment be ever required, would probably be more than repaid by the saving in the transport of troops, not to enlarge on the collateral advantage to commerce and general traffic.

19. This country produces wheat, barley, and cereals in great abundance; and a convenient outlet for the products of the soil, such as a railway would afford, would gradually bring immense tracts of land now lying waste, and teeming with intrinsic

richness, under cultivation, and enable it, in a course of time, to insure to England those supplies of grain for which she must always be dependent, to a certain extent, on foreign countries.

20. Under the present laws foreigners can hold land in the Ottoman dominions, and should it be possible to direct the attention of commercial and agricultural capitalists to the wide plains of this country, there can be no doubt that, with rapid and easy communication with west and east, large fortunes are to be made here.

21. Even now, under his Excellency Midhat Pasha's encouragement, the cultivation of cotton is being much extended, and there is every reason to believe that, with improved system of cultivation, the cotton and other fibres to be produced in this country may eventually compete with the same products from any other parts of the world.

22. The objections raised to European capitalists investing their money in land in Turkey is stated to be the imperfection and corruption of the Administration; but it is most probable that more intimate intercourse with Europe, and the settlement in the country of Europeans of substance and character, would do more for the reform of the Courts of Law and of the conduct of Government servants than can be hoped from any other means; as, though Consular officers would be unable to interfere directly on their behalf, malversation and oppression would become known and elicit remonstrances from the States of Europe interested in the well-being of their countrymen, and this would necessarily produce good effect, to great advantage of all concerned, the Government, the settlers, the natives of the country, and even of the officials themselves.

23. I conceive, therefore, that this projected railway, while conferring inestimable advantages on England and her Eastern possessions may become the means of renovating this long-neglected province of the Ottoman Empire, and making it the richest, as it is the largest, paying an enormous revenue into the coffers of the State, and thus draw closer the ties that unite England and Turkey.

24. It is to be hoped that this railway would soon be followed by one from Tehrān to the Shī'a shrines of Kerbelā and Nejef through Bagdād; indeed, the construction of that portion between the latter and Kerbelā is even now under contemplation of His Excellency Midhat Pasha, and this made, there will only remain the road between Bagdād and Tehrān to be completed.

25. The intercourse between the two countries would then become more intimate, and the increased communication would probably in a great measure have the same effect the improved means of communication have had among the States of Europe.

26. At the same time Persia would be brought nearer to Europe.

27. In conclusion, I would solicit the favourable consideration and support of his Excellency in Council to this projected but long-delayed railway scheme, of the importance of which to England and her Eastern possessions there can be no doubt. All Europe and the East would be more or less benefited by the construction of this great highway, of which the advantage has been, to a certain extent, already demonstrated by the opening and operation of the Suez Canal, than which this railway would be far less costly in construction and working, and of even greater importance, politically and commercially.

I have, &c.
(Signed) C. HERBERT.

No. 6.

Consul-General Herbert to Viscount Enfield.—(Received December 27.)

My Lord,

Bagdad, November 22, 1871.

SINCE writing my despatch, dated 24th October last, I have had an opportunity of reading the Report from the Select Committee on Euphrates Valley Railway, printed by order of the House of Commons, and I have the honour to beg that I may be permitted to correct an error that has by some accident arisen as to the route I propose in my letter to the Government of India, dated 13th August, 1870, a copy of which was inclosed in the above.

It is said that I propose carrying the line of railway viâ Diyārbekir, but such is by no means the case.

At one time I contemplated the possibility of this course, but, on inquiry, I

found it impracticable, and I altogether relinquished the idea, and in my letter above-mentioned I wrote, "This line would pass from Alexandretta by Aleppo, Bira, Orfa, Nisibin, Mosul, Kerkük, Bagdād, Kütu-l-'Amāra, and Kurna, to Basra."

This route would be below the Diyārbekir Hills, leaving that town a considerable distance to the north, though not so far as to prevent its becoming a feeder of the line, and proceed almost due east from Orfa, across the plain of Sinjār.

I recommended this route for consideration for the reasons given in my letter, but I have no intention of pressing its adoption if any other can be shown to offer superior advantages and facilities.

What I would, indeed, strongly advocate is the construction of a line of railway to connect the Mediterranean Sea and the Persian Gulf by whatever route inquiry may show to be best; and for this object I am desirous of exerting my best endeavours in the official position in which I am placed.

As regards the port in the Persian Gulf which should be made the terminus of the line, I fully agree with those who advocate the adoption of Kurayn, or, as it is here generally called, Kuwayt (Grane, Koweit, &c.).

The climate of this place is said to be extremely healthy, and the harbour, which has, I understand, been lately examined with reference to this project, is reported to be large, safe, and easily entered at all times, with deep water close up to the shore.

I have, &c.
(Signed) C. HERBERT.

No. 7.

Consul Holmes to Earl Granville.—(Received October 20.)

My Lord,

Bosna Serai, September 20, 1871.

I HAVE the honour to acknowledge the receipt of your Lordship's Circular of the 25th August, stating that information is required for the use of a Committee of the House of Commons, on the subject of communication with India through Turkey by the Euphrates Valley route, and instructing me to furnish what information I can give on the subject. I therefore inclose the required Report, which I regret to be unable to make more complete.

I have, &c.
(Signed) W. R. HOLMES.

Inclosure in No. 7.

Report by Consul Holmes.

I WAS formerly Her Majesty's Consul at Diyārbekir, and, though not very distant from the course of proposed line, yet, as I never had an opportunity of actually visiting the country through which it is proposed to carry it, I can give no opinion at all on the engineering question. With regard to the commercial question, however, it appears to me that if the line could be carried near or at Birejik, where it would cross the Euphrates, along the northern extremity of the Desert through Orfa, Mārdin, and thence down by Mosul and Bagdād to Basra, through the most populous and frequented districts practicable, it would be much more likely to pay its working expenses, independently of Indian traffic, than by the valley of the Euphrates.

The line I indicate passes through districts inhabited by a comparatively orderly and industrious population, furnishing wool, madder roots, gall nuts, and cereals in large quantities, in which there is an existing trade, capable of indefinite extension; while the Euphrates flows through a wild desert, sparsely inhabited by wandering Arabs, and destitute of commerce and produce, with the exception, perhaps, of wool. It would be a question for engineers whether it would not be possible to take the line from Orfa to Diyārbekir, and thence follow the valley of the Tigris to Bagdād, which would place it still more in contact with the productions I have mentioned than by the route through the Desert by Mārdin. The Tigris route would be, no doubt, somewhat longer than that by the Euphrates, but the former, I think, would give much more promise for eventual pecuniary advantage than the

latter. As for any statistics as to the actual amount of produce which can be relied on at the present moment I have none to give, and it would be almost impossible to obtain any exact accounts; but I should think that some approximate data might be obtained from Her Majesty's Consulate at Aleppo, through which place the greater part of the produce in question passes on its way to European markets. It is now more than ten years since I was stationed at Diyārbekir; produce and trade may have augmented since that time, but I think it scarcely probable that, without the impulse which would be given by road making or railway enterprise, any very great change has taken place.

(Signed) W. R. HOLMES.

Bosna Serai, September 20, 1871.

No. 8.

Consul Palgrave to Earl Granville.—(Received January 13.)

My Lord,

1, *Waterloo Place, Weymouth, January 12, 1872.*

I HAVE the honour to forward, as inclosure single, the Report on the subject of communication with India through Turkey by the Euphrates Valley route, required by your Lordship's Circular of August 25th, 1871.

I have put down what seemed to me most likely to be useful; but should your Lordship think desirable any further details that I might be able to supply, I shall be happy to furnish them, either before the Committee or otherwise.

I have, &c.

(Signed) W. GIFFORD PALGRAVE.

Inclosure in No. 8.

Report by Consul Palgrave.

Preliminary Remarks.

THE only papers to which I shall refer in the course of this Report will be, the "Report from the Select Committee on Euphrates Valley Railway, &c.," printed by order of the House of Commons, 27th July, 1871. This paper I assume for the methodical base of the subject, and the only authority which I shall cite will be my own personal observation and knowledge, having during sixteen years travelled through and resided in the countries referred to, Northern and Central Persia alone excepted; and having myself followed out on horseback, in their whole or greater part, every one of the lines now under consideration.

I.

In the evidence already laid before the Parliamentary Committee, nine routes have been mentioned, as follows:—

A. Three, leading from the shores of the Mediterranean to those of the Persian Gulf;

B. Three, from the coast of the Black Sea to the Persian Gulf; and

C. Three, from the Mediterranean to our own north-west Indian frontier and railway system.

I shall now briefly recapitulate these routes one after another; and dismissing from consideration those which appear to be intrinsically or at least circumstantially inadmissible, add a few special remarks on the only line which, under existing conditions, I think feasible.

II.

A, No. 1. This route would start from Scutari, opposite Constantinople; thence pass to Izmid, Kutahiyya, Kara-Hisār, Konia, and Kaysariyya, to Aleppo; and then down the valley of the Euphrates to Bagdād and Basra, and from Basra to the head of the Persian Gulf.

Remarks.—This route is inadmissible.

From Aleppo onwards this line would follow the Euphrates Valley. Now that valley is, with General Chesney's leave, so meagrely, indeed so wretchedly peopled, and so deficient in all actual resources, material as commercial, whatever it

may once have been, or might at a future time become under conditions wholly independent of railway lines, and of which there is no present symptom, that I at once, and for all the rest of this Report, exclude it from any reasonable plan of action.

A, No. 2. The "Andrews" line, which is the same at the lower portion of the route just described, the essential difference being that the western terminus is at Iskenderün, instead of being at Constantinople.

Remarks.—This line does not incur the first or political objection, but is doubly liable to the second, or commercial, which, for a railway, is equally fatal. Its feeders would be utterly disproportionate to the enormous cost of prime construction and maintenance. I, therefore, dismiss it also.

A, No. 3. Colonel Herbert's line. It would leave the Mediterranean at Iskenderün; would subsequently pass by Aleppo, across the Euphrates at Birejik to Orfa, and so on to Diyārbekir, Nisibīn, and Mosul; and then by the east bank of the Tigris to Bagdād; lower down it would recross the river to Basra, and to the Persian Gulf.

Remarks.—This line is open to neither of the foregoing objections, and possesses all the advantages specified by Sir Henry Rawlinson in his singularly clear, concise, and correct evidence. I shall consider it in detail further on.

B, No. 1. Mr. Child's route. It would leave the Black Sea at Tireboli, near Trebizond; cross the mountains to the valley of the Euphrates at Erzingyān; then take a steamer and pass down the Euphrates to a point nearest to Diyārbekir; then cross over to Diyārbekir, and follow the Tigris down to the sea by steamer.

Remarks.—This route is out of the question.

The Mont Cenis Railway had fewer engineering difficulties to contend with than this line would have between Tireboli and Erzingyān, not to mention the tract between Kebān-Ma'dani and Diyārbekir. As to the steamer between Erzingyān and Kebān-Ma'dani, a boat drawing nine inches of water could ill pass there. Lastly, the Tigris from Diyārbekir to its junction with the Zab, is, as Sir H. Rawlinson has noticed, barely navigable for three months in the year.

B, No. 2. This would leave the Black Sea at or near Samsūn, and follow the high road to Siwās; from Siwās it would follow a line by Malātiya to Diyārbekir; and from thence it would coincide with line A, No. 3.

Remarks.—In an engineering and in a commercial point of view, this line would, of all others, be perhaps the most eligible.

B, No. 3. From Trebizond, on the Black Sea, to Erzerüm, across the mountains, and from Erzerüm to Vān, and then down the Bitlis-Sūyu to the Tigris above Mosul, and from that point along the same line as the last route.

Remarks.—Between Trebizond and Erzerüm it would have to pass two mountain ranges, one at 6,600 feet, the other at 7,300 feet, nearly; while from Erzerüm to Diyārbekir the country is justly described by Sir H. Rawlinson as "cut up by a succession of precipitous ravines, mountain torrents, and impracticable defiles." This project must, therefore, be dismissed also.

C, No. 1. From Constantinople along the northern or high post road to Erzerüm; from Erzerüm it would cross the Persian frontier to Khoy and Tabriz, and so on to Tehrān, the capital of Persia; from Tehrān it would pass to Shāhrūd and Mashhed; then turn south-east to Herāt, and so on to Kandahār, and through the Bolan Pass to Shikarpoor and Sukkur, where it would join the Indus Valley base.

Remarks.—The country between Scutari and Erzerüm presents great engineering difficulties on a length of several hundred miles, without a sufficient compensation in traffic advantages.

The remainder of the line is good.

C, No. 2. From Constantinople by the "Telegraph Route," that is by Angora, Yūzgād, Siwās, and Diyārbekir, thence to Mosul and Kifri, then somewhat ascending to Kermānshāh, Hamadān, and Tehrān; after which place it would coincide with Route C, No. 1.

This presents fewer engineering difficulties, and passes through a much better peopled country, a securer one, too, than the former, to which it is, on the whole, as Sir H. Rawlinson remarks, to be preferred.

C, No. 3. From Constantinople to Basra, as in Route A, No. 1, then circling round the northern and eastern shores of the Persian Gulf, passing by Bushir and Bandar-'Abbās, and then following the sea-coast of Mekrān to Kurrachee.

The want of towns, and generally the scant population along an extent of

about 1,300 miles, would be the principal objection to the second part, that, namely, along the sea-coast from Bushir to Kurrachee. Altogether this line must also be regarded as ineligible.

Yet, comparing the lines which would have their eastern terminus on the Persian Gulf with those which would push that terminus forward to our own Indian territory, I fully concur with Sir H. Rawlinson's opinion, "that a through line would involve much larger and higher and more important interests, which, I think, might fairly be taken into consideration as against the mere difficulties of raising a larger sum of money; that is to say, it would be of immense importance to India to be in continuous railway communication with Europe: whereas it would be of very trifling importance merely to have the territory bridged over between the Mediterranean and the Persian Gulf by a railway while there was still a considerable sea voyage on either side."

Nothing can be truer, from a political and military point of view, while the commercial bearing of this judgment has been enhanced by the completion of the Suez Canal, the success of which would allow no rival, except a through railway route, any competitive chance.

Therefore, having rejected, for reasons above stated, the three proposed through routes, viz., C, Nos. 1, 2, and 3, I beg to suggest a fourth one, namely, coinciding with A, No. 3, as far as Basra, and with C, No. 3, from thence to Kurrachee. This route I will name D, and will consider it more in detail further on.

III.

A, No. 1 and No. 2, having been absolutely rejected, we will now more closely examine Route A, No. 3.

Its length, and its local circumstances in respect of engineering and of population, having been already pretty fully stated in the evidence before the Committee, a few further remarks on these topics may suffice:—

1. Iskenderün, or Alexandretta, not Suwaydiyya, should be the starting-point.
2. From Iskenderün to Aleppo no difficulty occurs but the so-called Pass of Beylän, one of 2,000 feet in height, and admitting easy gradients.
3. From Aleppo to Birejik, level ground and a firm substratum. No difficulty.
4. At Birejik a bridge will be required over the Euphrates; the river here is broad but shallow, and the bottom firm.
5. From Birejik to Orfa, no difficulty.
6. From Orfa to Diyärbekir, two low rocky ranges, easily passed, each at a rise of about 800 feet.
7. From Diyärbekir, south-east to Märdin, the line would pass by a hilly, but not difficult, district, for about forty miles. Thence to Mosul, all firm plain.
8. At Mosul, a bridge across the Tigris; here much as the Euphrates at Birejik.
9. From Mosul to Kerkük, ground firm, rather hilly. Two bridges required, one over the Greater Zäb, near the village of Kelek, one over the Lesser Zäb, at Altin-Kyupri. The violence and overflowings of the Greater Zäb in spring, will render the bridging it somewhat difficult, but the bottom is firm. There is a little marsh-land near Altin-Kyupri.
10. From Kerkük to Bagdäd, firm plain.
11. A little below Bagdäd the route had best cross the Tigris, which, here, is rather broad and deep, but would present no great difficulty for bridging, to the right bank, and then traverse the intervening district, which is marshy, but, as Mr. Lynch remarks, could be easily got over, to Hilla, on the Euphrates. Here it would cross that river on a bridge.
12. From Hilla to Basra the only difficulty would arise from marsh-land and the spring overflowings of the Euphrates; but a little management would bring the line safely through.
13. Below Basra the best point to strike the Persian Gulf would be, I think, Kuwayt, where there is an excellent harbour and landing-place. The distance is about fifty miles.
14. But if it was decided to make the terminus at Muhammara, as Captain Charlwood has suggested, the entire line from Bagdäd south-east should follow the left bank of the Tigris. It would, however, encounter much difficulty from the necessity of crossing many subsidiary rivers, some of them large ones, such as the Diyäla and the Kerkha, besides much marsh-land; while the country, being little inhabited, would offer few traffic advantages, at least on the line itself.

Approximative Distances.

	Miles.
Iskenderün to Aleppo	90
Aleppo to Birejik	80
Birejik to Orfa	50
Orfa to Diyärbekir	95
Diyärbekir to Märdin	50
Märdin to Mosul	120
Mosul to Kerkük	95
Kerkük to Bagdäd	200
Bagdäd to Hilla	70
Hilla to Basra	280
Basra to Kuwayt	110
Total	1,240

The route to Muhammara would be about 100 miles shorter.

General Remarks.

Of all routes that could be taken this one would traverse the most populous districts, and those with the greatest chances of a productive collateral traffic.

Again, along this route the population is entirely settled, partly commercial and industrial, mostly agricultural, in towns, villages, and hamlets, except on the right bank of the Shattu-l-'Arab, to the extreme south-east.

The inhabitants above alluded to, Turks, Turkomans, Koords, Arabs, and the rest, will be everywhere well disposed to the enterprise, ready to avail themselves of the advantages it would offer, and, if paid, to contribute their labour towards it. The contrary idea, which I have sometimes heard advanced, is a mere illusion.

As to the nomade or Bedouin population, with which the route would come in superficial contact where it nears the Euphrates, as Birejik, and Hilla, and along the Shatt, below Kurna, and in the environs of Kuwayt, I would remark two things.

Firstly, that their numbers and resources are both grossly exaggerated by the majority of travellers; and that the advantages which the line might derive from their immediate use of it would be very small.

But that also, secondly, no danger to the line and its traffic, or inconvenience of any sort, need be apprehended from them. If it should prove expedient to make use of their services, they can be hired; but in no case would a present or subsidy of any kind be needful. Bedouins are as submissive in the face of strength as impudent and exacting in the face of weakness.

Regarding Guarantees.

This point is, to my mind, the only real difficulty in the enterprise—who is to guarantee the line?

Not the Turkish Government. The necessary concession and the grant of a small strip of land, say from three to four miles in open country, and a few yards where the line traverses a town or a village, should be required, and, according to the evidence furnished by Sir George Jenkinson, might easily be granted.

Remains, that the British Imperial Government, or, if thought fitter, that section of it known as the Indian Government, should give the requisite guarantee. For the line, in its funds, its construction, its working, and its guarantee, should be wholly our own; as its uses and advantages, though to a certain extent local, and even in some respects cosmopolitan, would yet, in the main and in their chiefest results, be all our own.

The question as to the special budget classification of such a guarantee is, perhaps, more nominal than real, and might be treated accordingly.

IV.—*Through Line.*

I said before that, in spite of the increased expenditure, both constructional and working of a longer line, I entirely concur with Sir Henry Rawlinson that

it had far best be a through one, in every point of view, political, military, or commercial—in a word, a through line would, I think, ultimately pay the best.

But of all the through lines proposed, not excepting Mr. Lynch's route, which would, I think, be too much out of the ordinary lines of traffic, besides having to encounter considerable engineering difficulties in crossing the south-western tract of Persia—line D seems to me the most worthy consideration.

Line D.

So far as Basra or Muhammara it would coincide with line (A) No. 3 and, under that title, has here been sufficiently illustrated. It need only be added that it would be best to bring it round by Basra, and so on to Muhammara, about 25 miles distant; not to the latter place by the left bank.

From Muhammara the line would pass, keeping near the coast, to Abu-Shahr (Bushīr), distant about 250 miles. This part presents no engineering difficulties.

From Bushīr, passing by Chiro, Linja, and Bandar-'Abbās, to Jask, and keeping near the coast, the route offers no serious difficulty of any kind. Distance about 750 miles.

From Jask, it would follow the Mekrān coast to the frontier of Sind and Kurrachee. This coast is, indeed, thinly peopled, but not desert; it shows according to report, no material obstacle, such as mountains or great rivers, to the making of the line. Distance about 700 miles; total length of line, somewhat under 3,000 miles.

Remarks.—The nearness of this route, from Muhammara onwards to the sea-coast, is, for these regions a great advantage, because it ensures, under all present or probable conditions the security of the line in our own keeping, and our managing it in our own way. Besides, of all proposed through lines, this is the shortest. Lastly, the expense of the long stretch from Bushīr to Kurrachee would be much diminished by the facility with which all materials needful for constructing or working the line would be brought by sea.

Summing up: of all lines proposed this one is, in its first half the most remunerative, in its second half the safest.

In its whole, the shortest and the least expensive.

Outlay.

This subject is a vast one, and requires technical knowledge, which I do not possess.

Still, a few hints, based on the conditions and resources of these parts of the East may be useful.

The ordinary wages of a common day-labourer in the districts between Iskenderūn and Basra vary, from 6 to 4 piastres, *i.e.*, from 1s. to 8d. (English) per day.

The men are, in general, strong, work readily, and are amenable to discipline: Firmness, considerateness, and regular pay are all that are needed with them; but rough usage and bullying are inexpedient.

Skilled workmen earn more, even up to 12 or 14 piastres *i.e.*, 2s. to 2s. 4d. (English) a-day.

So far as Bagdād the climate is healthy and temperate, and would seldom put an obstacle to labour, even European; but from Bagdād onward European workmen must be careful about food, lodging, clothing, the hours of the day, and the seasons of the year; or sickness and death will much, and unnecessarily, increase the outlay.

As to fuel, coal would be, to judge from the surface of the strata, procurable at no great distance from Diyārbekir. Bitumen, of which use might be made, abounds near Hilla. Wood is to be had in many places, but not more than would suffice for constructive purposes. The main supplies of fuel would have to come from Europe by water. Now the line D, which is the same as A³ + the latter part of C³, would be advantageously placed in that respect, because never distant, for any considerable extent, from either a great river or from the sea. Abundance of water for working the engines is also to be had all the way from Iskenderūn to Muhammara, and again from Bushīr to Bandar-'Abbās. On the Mekrān shore I have never set foot; but as that coast is, though not populous, yet inhabited, it cannot be destitute of water. But from what I have seen of it near Jask I do not think

that coal will ever be found there, or, indeed, all along the northern shore of the Persian Gulf. But it can easily be brought by sea and placed in stores.

(Signed)

W. GIFFORD PALGRAVE.

1, Waterloo Place, Weymouth, Dorset,
January 11, 1872.

No. 9.

Vice-Consul Rassam to Earl Granville.—(Received December 30.)

My Lord,

Mosul, November 22, 1871.

I HAVE the honour to acknowledge the receipt of your Lordship's Circular of the 25th August, ordering me to supply a Report for the use of a Committee of the House of Commons on the subject of communication with India through Turkey by the Euphrates Valley route.

Having been myself with the late Euphrates expedition, under General Chesney, and travelled a great deal in those localities, I have knowledge of those countries between Suwaydiyya and Alexandretta to the Euphrates, as far as Bagdād. When I was in England, Mr. Andrews and other gentlemen patronised the Valley of the Euphrates, and therefore all their views turned to that direction.

There are two routes which should be taken into consideration—the Valley of the Euphrates, and another passing through Mesopotamia to Bagdād.

The route through the Valley of the Euphrates, on either side of the river, runs through incessantly undulating country, and in every few miles the land forms a gap or wide ravine; and in the rainy season the waters are accumulated in the interior of both sides of the river, and form large torrents, which run through those ravines; consequently, this route will require constant viaducts. Moreover, as the river in flowing down does not keep straight, if the railway be constructed by the river, the route will be lengthened, and the expenses will be proportionate.

It is of high importance that the railway might find traffic in the country through which it passes. Now the countries on both sides of the river, from Birejik as far as Hilla, are thinly inhabited by poor Arab tribes, who cultivate the land sparingly; and the interior of the west side of the Euphrates is inhabited by numerous 'Anaza nomade tribes, who are much addicted to plunder. They continually cross the River Euphrates to plunder the Shamar Arabs, to whom they have an unabated enmity. The Shamar Arabs likewise reciprocate; and when they have a convenient time, they cross the Euphrates and attack the 'Anaza. And so both sides, by crossing the river in several places to and fro with their camels, might damage the line.

The route which I propose will be of great utility to the country where it runs, and profitable to the Company, as it will be shown by the following statements:—

The line commences from either station of Alexandretta or Suwaydiyya, crosses the River Orontes at Gyuzel-Burj, and passes through the plain of Al-'Amik, leaving the Hammām to the right, then passes through that plain, and crosses the 'Afrin River. From thence the line should keep on in that plain country, and leave the village Genderiz to the left, and Akhtarın to the right, about forty-five miles east of Aleppo, and run in that plain until it reaches Bālis.

Then the line crosses the River Euphrates below Bālis, and runs through the country of Balikh, south of Orfa; from thence it runs through the country of Ayyūbu-'tamr until it reaches Nisibin, about thirty-five miles south-east of Mārdin. From Nisibin the line goes on straight in that level country, until it reaches Mosul. The line then crosses the Tigris, and runs through that level country, and crosses the Rivers Khazir and Zāb about twenty miles west of Arbela, then passes through the level country of Shamamac, crosses the little Zāb west of Kerkūk, and passes through the level country of Bayat. From thence the line passes through the level country of Udaym or Uzaym, until it reaches Bagdād.

And if it is desirable that the railway should be extended to Kurna, the line will go on through the west side of the Tigris, and cross the River Diyāla, and from thence it will continue going on until it reaches the land of Benu-Lām, where there are some marshes which could be avoided by keeping the line towards the upland country for a short distance, until it reaches a village opposite Kurna.

The whole countries which I have described are either plain or level, and void of mountains and hills, and there are several commercial towns on the way; besides, there are numerous villages whose inhabitants are very industrious.

All the countries from the plain of Antioch to Bagdād are void of timber, either oak or fir, for sleepers for the construction of the rails. There are poplar-trees in some places, but they are very scanty. The oak-trees of these countries are stumpy and knotted, and unfit for sleepers; therefore the timbers must be transported on the railway from the sea.

There is a rich mine of iron in Berwari country, about seventy miles from Mosul, that could be worked for rails; and there is a very extensive forest near the mines.

There is no lack of labourers here. The Company could employ as many hands as they want, with moderate wages.

A great tract of the countries which I have described are waste. The soil is very rich; but, on account of want of security and encouragement, that fine soil has never been put to plough. If the railway is constructed in these plains, which are now considered as wildernesses, soon every yard shall be actively cultivated, and the production of wheat will be prodigious.

I have, &c.
(Signed) C. A. RASSAM.

No. 10.

Consul Rogers to Earl Granville.—(Received January 19.)

My Lord,

Cairo, January 12, 1872.

IN accordance with instructions conveyed to me in Lord Enfield's Circular despatch dated 25th August last, I have the honour to inclose herewith a few observations embodied in a Report on the proposed railway on the Euphrates Valley.

I have, &c.
(Signed) E. T. ROGERS.

Inclosure in No. 10.

Report by Consul Rogers.

IN reporting on the proposition to establish a railway to India, the political, physical, and pecuniary difficulties involved must be taken into consideration, and that line adopted in which these appear at their minimum.

Quickness of communication is doubtless a primary object, but the establishment of a line which would be least subject to interruption during political agitation is of still greater importance, for safety must not be sacrificed to speed.

Travelling by land being much more expeditious than by sea, it appears that a line through Europe and across Asia Minor and Persia would ensure the quickest route. But this would cost so enormous a sum of money, and would have to traverse parts of too many countries that too many possibly conflicting interests would be involved for such a project to be a probable and permanent success.

Sacrificing a portion of the time that would be gained by the land route, the next best plan is that by the Euphrates Valley from the Mediterranean. According to Colonel Chesney's comparative measurement, the route by the Euphrates to India is nearly 700 miles shorter than that by Suez and the Red Sea.

The difficulties to be overcome are, the want of a good harbour for ships on the coast of Syria, the rise to the level of the Euphrates, the scarcity of water in some parts, and the apprehended opposition of the nomadic tribes; and the question arises whether the local traffic would in any way compensate for the outlay.

There are many ways of reaching the Euphrates and the Persian Gulf from the Mediterranean, but we must look for that route in which there are fewest physical difficulties to overcome, and where, if possible, the expense of overcoming even those difficulties should be compensated by a probable return to the shareholders from through and local traffic.

A good port or harbour is doubtless of the utmost importance, for, as Syria is exposed to the west, it receives the heavy rolling swell from the whole length of the

Mediterranean, and vessels are often in considerable danger on the coast, even when there is very little wind.

The only harbours which could be adopted are those of Alexandretta and Lādakia (although these are far from being safe havens at some seasons of the year), and it would be necessary to incur a considerable expense in erecting a breakwater, quays, and wharves.

In adopting either of these harbours as the starting-point of the proposed railways, the line must be taken over or through mountain passes, which would entail much difficulty and expense.

The question then arises whether it would not be more advisable to select the most level part of the country between the Mediterranean and the Euphrates, irrespective of any existing harbour. Would it not be less expensive to excavate a new harbour, and to erect a suitable breakwater at any given spot on the coast, than to excavate and to tunnel through the mountain passes of Beylān or any other part of the mountain range in Northern Syria?

I am not able to give even approximate estimates of the probable cost, but I am of opinion that the preceding questions are to be answered in the affirmative.

I should therefore suggest that a new harbour be made at or near the mouth of the river north of Tripoli, called Nahru-'l-Kebir. From that part of the coast the land rises with a gentle gradient to the fertile plains of Hams and Hama, leaving the Lebanon range on the south, and the Nusayriyya Mountains, with Mount Cassius, &c., on the north.

The mouth of the 'Aāsi (Orontes) would not be quite so suitable as that of the Kebir, though I think that a safe haven for ships might be made at or near the mouth of either of these rivers, by dredging and building a breakwater.

From these parts of the coast the rise to the table-land is much more gradual than it is from either Lādakia or Alexandretta, where harbours already exist, and by following as nearly as practicable the course of the rivers, there would be no lack of fresh water.

Having arrived at the table-land by the easiest gradient, either from the Kebir or the 'Aāsi, the line should follow the course of the Euphrates to near its mouth at the head of the Persian Gulf.

I have the honour to inclose herewith a map of the Vilāyet of Aleppo, which was presented to me some time ago by a Turkish military officer of high rank. The map, which is the work of some of the engineers in the Turkish military school at Aleppo, is not to be thoroughly relied on for detailed accuracy; but it is on a larger scale than any that I can procure. On it the line I suggest can be easily traced.

The very large tract of country through which this railway would be necessarily carried is wonderfully fertile and productive, but it is overrun by hordes of wild nomadic Arabs. Thus, the Arabs of the Desert are, in consequence of maladministration, a bane, instead of being, as they might be, a useful element in the State. They pillage the villages, they rob caravans, they attack travellers, and, as the hands of the Turks are against them, they have turned their hands against every man.

Still, even these wild and uneducated people are capable of some honour and good feeling. They are generally faithful in the performance of a contract when it has been made, and when the other contracting party performs his part in good faith.

I think, therefore, that with good management, these Arabs might be brought to be of service to the railway instead of their opposing it. Some might be employed as labourers, others as guards, and their condition would be necessarily improved by their contact with the Europeans. They would acquire habits of industry, would appreciate the value of their wages regularly earned and paid, as contrasted with the precarious life they now lead, which is a constant fluctuation between semi-starvation and repletion. I am convinced that in a very few weeks, or months, the tribes would become of valuable assistance to the railway administration, instead of opposing it, as some have feared.

The plains are fertile, as I have said, but as there are no roads, and communication with the sea-coast is both precarious and expensive, the peasantry do not attempt to cultivate much more than that which suffices for local consumption.

The Arabs being subdued by employment and justice, the villagers would be able to increase their cultivation, the Turkish Government might be induced to extend its influence for the more efficient protection of the cultivated districts, and

the railway might reap the benefit of transporting to the sea-coast, and even eventually by branch lines to the principal towns of Northern Syria, the produce which it had been indirectly the means of creating.

It is impossible to calculate what may be the advantage of this railway to the north of Syria. Sometimes a demand causes a supply, and in other cases a supply induces a demand. The natives hardly foresee the value of the means of communication, but it is certain that a good road, giving the means of transport, will surely be supplied. It has a most civilizing influence on the population, and I consider that the establishment of this proposed railway, under British auspices, will be of infinite benefit to Syria, and therefore to the Turkish Government. Branch lines may be eventually made to Damascus and Aleppo, which will facilitate the operations of Government and of commerce.

But I conceive that to make the proposed railway really efficient, it should not stop at the head of the Persian Gulf. It should be eventually continued on through Persia and Beloochistan to Kurrachee and join the Indian Railways, for it is a mooted question whether the Persian Gulf is so much better in any respect than the Red Sea, as to render the change advisable at so large an outlay.

In conclusion, I consider that the physical difficulties of the undertaking, some of which I have endeavoured to explain, are not nearly so great as those which have been overcome in other countries. I believe that a railway from the Mediterranean to India would be of incalculable benefit to our country and to our Indian possessions, and it would also tend towards the civilization of the inhabitants of one of the most important, though at the present time the most neglected and uncared for district of one of our oldest allies, the integrity of whose empire is a subject of the solicitude of Her Majesty's Government; and finally, I believe, that if properly guaranteed and protected by the Turkish Governments the scheme would be very profitable to the company of shareholders.

(Signed) E. T. ROGERS.

Cairo, January 12, 1872.

No. 11.

Consul Sandwith to Earl Granville.—(Received October 3.)

My Lord,

Canea, Crete, September 15, 1871.

I HAVE the honour to acknowledge the receipt of Lord Enfield's Circular despatch of the 25th August, requesting a Report on the subject of communication with India by the Euphrates Valley route from such of Her Majesty's Consuls who, from previous or present residence near the line of communication, might be in a position to furnish the desired Report.

I regret that I am possessed of no data on the subject sufficiently exact to be thrown into the form of a valuable Report. When I was Vice-Consul in Hayfa, during the years 1861-5, the idea was started of making that town the Mediterranean terminus of such a line of railway, which would run in a pretty direct line to Bagdad, through the parallel of about 33° of north latitude. The climate of Hayfa is extremely healthy, and the advantage of such a route would consist the presence at that town of the safest roadstead on the Syrian coast, with the exception of Alexandretta, the projecting spur of Mount Carmel, which forms the southern point of the Bay of Acre, being capable, at a comparatively small expense, of being prolonged sufficiently to afford ample protection to shipping. The line would run to the north of Mount Carmel, through the small but fertile plain of Esdraelon, across the Jordan near the south of the Sea of Tiberias, and thence through the great corn-growing district of Hawran, after which, on its way to Bagdad, would have to face the Syrian Desert, as to the physical difficulties of which I am, of course, incapable of offering an opinion. From the Hawran a branch line could be laid to Damascus, or the main line might be carried direct to Damascus, and thence to Bagdad. The direct route would be the straightest line from the Mediterranean sea-board to Bagdad.

I have, &c.

(Signed) THOMAS B. SANDWITH.

No. 12.

Vice-Consul Sankey to Earl Granville.—(Received December 4.)

My Lord,

Kustendgi, November 20, 1871.

IN obedience to your Lordship's Circular, dated 25th August, I have the honour to inclose a Report containing information regarding communication with India through the Euphrates Valley.

I have, &c.
(Signed) H. SANKEY.

Inclosure in No. 12.

Report by Vice-Consul Sankey.

THE Gulf of Alexandretta is a safe, natural harbour for vessels of large burthen in all weathers, and is the only place on the coast where no other harbour-works, but a landing-pier, would have to be made. Advantages of Alexandretta as a starting-point.

The time and expense of constructing a harbour would be avoided.

The marsh at Alexandretta is caused chiefly by springs of water from the hills having no outlet into the sea; and this might be remedied at a moderate cost.

The Alexandretta fever has lost much of its former virulent character, which I attribute to gradual filling up of marsh and increase of vegetation, and is no longer fatal. The bad months are from June to October. Passengers, however, need not be detained at Alexandretta, but start at once for Beylān, where they would be in safety. During the fever months passengers should, if possible, arrive at Alexandretta after 10 A.M., and start before sunset. The morning and evening mist is dangerous.

The construction of a harbour and breakwater at Seleucia would be very costly, and the approach in bad weather dangerous. Disadvantages of Seleucia as a starting-point.

During one of the frequent Syrian gales blowing on shore, to attempt to make the mouth of a harbour would be very rash even for powerful steamers. Naval men always give that part of the coast a wide berth in bad weather.

All the coast from Seleucia to Adaliā is insalubrious, and all the natives suffer from intermittent fever, whatever may be said to the contrary by those interested in the Orontes Valley route.

From Alexandretta the line would have to be carried over the Beylān Pass, and this would require about seven miles to be constructed on the Fell system, or a sweep round the plain of Iskenderūn on a gradual incline. Engineers may judge whether the line could be profitably carried round the Ra's-Khinzir (Cape Pig) into the valley of the Orontes, to avoid the Beylān Pass. Alexandretta to Aleppo or Jebūl.

This Pass opens on the Al-'Amik plain; the direct route to Aleppo is across this plain and a considerable distance of rocky undulating ground. The other route is north-east of Antioch and south-east of Aleppo to Jebūl, on level ground.

After heavy rains the Al-'Amik plain is partially flooded. It is inhabited by Turcoman tribes, who used to be often in revolt, and rendered this route unsafe, but since my time (1857-8) they may have been brought under subjection.

As to Jebūl, I do not foresee any difficulty in carrying on the works regularly and peaceably; beyond that the line would pass through the 'Anaza and Shamar country, inhabited by Nomad Arabs, and might therefore require to be protected from their attacks.

The Arabs are ignorant and superstitious, they are not brave, and in their mode of fighting resemble the eastern village dogs. One of these dogs will rush round a stranger in circles working himself up to the biting point, but if you stoop to pick up a stone he retreats cowed; where there are two or more of these dogs it is a more serious affair, as whilst you face one, the other bites your heels. Character of Syrian Arabs.

It is the same with the Bedouins, they shout, yell, and gallop about, shaking their long useless lances, but if the adversary shows a bold and fearless front, they gradually retire, worn out with their violent exertions. Their warfare consists chiefly

in surprising small parties of adverse tribes and carrying off their cattle; in the great majority of cases without bloodshed.

It would be waste of time to attempt by reasoning to persuade them that no harm was intended, this must be left to time, and after a few months they would perceive that there was no wish to injure them.

The Arabs do not act together in large bodies, as their immense flocks and herds require to be spread over a large extent of country for pasture.

The power of the chief is nominal, and they could not always prevent their followers from attempting to injure the works.

Protection of the
line on the Desert.

The Khanâdis are a settled tribe in the suburbs of Aleppo and having a station at Jebûl, they are sometimes employed as irregular cavalry by the Turkish Government.

A body of these men could protect the works as far as Ja'ber Castle. I know them to be trustworthy and brave, having commanded some of them during the Russian war. Beyond Ja'ber, I can think of no better protection for the works than a truck carrying a small field piece on a pivot. The character of the Arabs being such as I have endeavoured to describe, a charge of blank powder would be sufficient to scatter any gathering, and when frightened they take a long time to recover their equanimity.

They have no fire-arms or iron implements, therefore it would be a matter of time and difficulty for them to stop a train or take up rails. Any serious attempt to stop or attack the engine would very likely cost some of them their lives, and I do not think they would make a second attempt.

All means, however, should be used to avoid bloodshed, which would only complicate matters. I think that after a few months they would gradually get accustomed to the line, and be persuaded to bring their wool for sale at the stations, instead of having it, as now, pass through several hands before selling in the towns.

All this wool would in time be carried to the coast by rail.

I have no belief in the policy or efficacy of subsidies, for, as I said before, the power of the chief is at best only nominal, and he has no power over small parties of his tribe who may be 100 miles distant. What I have before written applies to the Arabs of the Syrian desert between Aleppo and Bagdâd; of the tribes below the latter town I know nothing but from reading and hearsay.

Telegraph.

The telegraph wire would be useful as heel-ropes for horses, and therefore too great a temptation for the Bedouins; I would therefore suggest, that from Ja'ber Castle, a telegraph cable be laid in the bed of the Euphrates, or that the wires be carried under ground.

Beyond Ja'ber.

All I know about the country from some miles below Ja'ber to Bagdâd is from what I can remember having observed in a dromedary ride from Orfa to Bagdâd in as straight a line as possible to try in how short a time the journey could be made. I can therefore not offer any useful information on the subject, but the desert around Aleppo and Ja'ber I know well from having spent much time in the tents of the wandering tribes, in order to study their character and habits.

Water.

All along the proposed route water is to be found by digging a few yards below the surface.

Navigation of the
Upper Euphrates.

I do not think that steamers could ply on the Euphrates as far up as J'aber to any useful purpose. Under very favourable circumstances, small steamers might be navigated so far now and then, but I do not fancy that any regularity could be counted on.

Labourers.

Labourers may be had from Ghiaour-Dâghi, and Ain-Sûri mountains, and further on from Antioch and Aleppo.

Unless matters are much changed since my leaving the country, they ought to be obtained at a pay of from 2 to 3 piastres and their bread per diem.

Opposition of the
Caravandjis.

The caravan owners form an influential body, and do the whole carrying trade in the country. They might endeavour to oppose the construction of a railway, by trying to prevent labourers engaging, and exciting the Arabs to attack the works, fearing that the line would ruin their trade. This would not be the case, as caravans would be required in greater numbers to feed the line. But Eastern prejudice is difficult to overcome, and one must rather trust to time than persuasion or argument. I do not say for certain that this enmity will be shown, but that it is possible and not unlikely.

Treatment of
friendly Arabs.

Whenever an opportunity offers, kindness should be used towards the Arabs. A chief or some of his relatives will sometimes visit the tents of persons employed on the line, and on such occasions they should be dismissed with small presents of

tobacco, a cloth 'Abā to the chief, &c. This must not be done in a way to make it appear that they were necessary or feared, but merely to prove to them that no harm was intended.

The Arabs are averse to shedding blood, and this should be carefully avoided on the part of Englishmen, except in extreme cases of legitimate self-defence. The Arab is easily cowed by boldness or some loud unaccustomed noise, such as a large charge of blank powder, or the sight of firearms, for which they have a wholesome fear. I owed my safety to the belief that my revolver could go on shooting for

English navvies and railway workmen are apt to ill treat natives on small provocation, to offend their religious prejudices, and turn them to ridicule. Such conduct is likely to be productive of serious consequences, and therefore steady men should be chosen of good temper and conduct. N.B.—An Arab would rather be beaten than laughed at!

The railway would have the effect of bringing a broad strip of desert under cultivation, of which it is quite susceptible; and in course of time villages would be formed round the stations, and render further protection unnecessary.

I believe that the local passenger and goods traffic would be very considerable, but can give no statistics on the subject.

(Signed) H. SANKEY.

Kustendji, November 20, 1871.

No. 13.

Consul Skene to Earl Granville.—(Received October 23.)

My Lord,

Aleppo, October 3, 1871.

I HAVE the honour to inclose the Report on the Euphrates Valley Railway scheme, called for in Lord Enfield's Circular despatch of the 25th of August last.

I have, &c.

(Signed) J. H. SKENE.

Inclosure in No. 13.

Report by Consul Skene.

IT is now fourteen years since the question of a railway from the Mediterranean to the Persian Gulf was first taken into consideration. It may be examined under two different aspects—that of a conveyance for internal traffic, and that of a section of a future line connecting India with Europe.

To view it in the first light alone, one must enter into a full investigation of the actual state of North Syria, Mesopotamia, and Turkish Arabia, which would carry the discussion further than is required for the present purpose, while its second character stands in no need of exhaustive arguments to prove the expediency of constructing it. In what manner and to what degree this section of a great international railway would derive support from local circumstances may, therefore, suffice as a subject for elucidation in this Report.

The respective claims of Alexandretta and Suwaydiyya to become the western terminus of the section have been amply discussed. In a country like this it is hardly to be wondered at if a colour should have been given to such a question by the personal interests of those consulted; and it seems far from improbable that the conclusions adopted by the first inquirers may have received some bias of this kind. Suwaydiyya was then in favour; but it is now generally acknowledged that the advantages offered by Alexandretta are greater than those possessed by Suwaydiyya, and that the disadvantages of Suwaydiyya are more important than those of Alexandretta. Thus, Alexandretta has the best harbour on the coast of Syria—in fact, the only safe anchorage to be found in bad weather when the wind is from the south-west. It lies about ten miles nearer to Aleppo than Suwaydiyya does. There is already existing at Alexandretta a small town with its Custom-house, Health Office, Vice-Consulates, warehouses, and other appliances of trade; while there is

nothing but an open beach at Suwaydiyya. Caravans converge on Alexandretta from all the different parts of North Syria, Mesopotamia, Cilicia, and Caramania, which they could not do in the direction of Suwaydiyya on account of its being accessible only from the east, and of there being no road along the coast either from the north or from the south, and hardly any possibility of making one, so rugged are the crags at the foot of the lofty Mount Cassius, and so steep the declivities of Mount Rhossus. Forty miles of railway between the rival ports, with some precipitous cliffs to tunnel, would be saved by adopting the more northern of the two as the terminus for this section of a future line from Constantinople, the same argument being applicable *à fortiori* against the selection of Tripoli, which has also been contemplated as a shipping port for the Euphrates Valley Railway by some of those who have at various periods been engaged in the inquiry into the qualifications of the different towns on the coast. These are the advantages of Alexandretta over Suwaydiyya, and its disadvantages consist in a bad climate and a mountain Pass to traverse. The former can be remedied at an expense of about 2,000*l.* by simply draining the marshes; and the Baylān Pass has ceased to be regarded as a serious difficulty since the comparatively gigantic Mont Cenis and Indian Ghauts have been climbed by railways. The last survey effected has shown that no high gradient would be required in any part of this defile of Mount Amanus.

From the Beylān Pass to Aleppo about one-half of the distance is perfectly level, being on the plain of Antioch, and the remainder is composed of a rocky table land of no great height, with occasional ravines crossing it. These might be avoided, however, by taking the line a few miles either to the north or to the south, and crossing the plain of Kilis or the plain of Edlib. Thus far, local traffic would contribute in some measure towards the support of a railway. An average of 60,000 bales of goods is annually conveyed from Aleppo to Alexandretta, and *vice versa* on camels and mules, and caravans of passengers on the road may be reckoned at fifty persons each, twice a week to and fro, or 10,400 per annum. The railway charges for that amount of traffic would form an average income between Alexandretta and Aleppo to be enjoyed at once, with a fair chance of increase, as Aleppo is an emporium of trade for the surrounding provinces, and an improved means of transport would enhance the demand from them in proportion to the diminution of price that would be produced by a greater rapidity in renewing the stock.

A gently undulating plain lies between Aleppo and the Euphrates, along whose banks the line would meet with no obstacle excepting at 'Aāna and Hit, where there are steep hills pressing on the contracted and tortuous bed of the river. From Hit to Bagdād the country is level, as it is also from thence to Basra, when it follows the banks of the lower Tigris, and of the Shatu-'l-'Arab below the confluence of the Tigris with the Euphrates. The vexed question of the best mode of dealing with the unsettled state of the Syrian Desert, over which a considerable portion of the line passes, has been invested with a greater degree of importance than it really possesses. Railway works in every country must be attended to by a police force of some kind; let the strongest Bedouin tribe be kept in pay at a trifling rate, on condition of its preventing depredations on the part of the other tribes on each prescribed beat, and peace will never be disturbed anywhere on the line, nor a single tool stolen. The alleged difficulty of obtaining and conveying workmen and provisions during the construction of the railway, is now disposed of by the quasi-successful establishment of steam navigation on the Euphrates by the Turkish Governor-General of Bagdād. The average export and import trade of that city consists of 30,000 tons per annum. Now that the Suez Canal is open, the greater portion of these goods is conveyed to and from Basra by river steamers, of which several, both Turkish and English, find a profitable carrying business between those two towns. Formerly caravans of camels were employed to take the produce of Bagdād all the way to Alexandretta for shipment, and to return laden with European manufactured goods, maintaining thus a transit trade for Aleppo, and, were a railway constructed, this traffic would naturally return to the shorter route, supplying a considerable amount towards its support.

It has been argued that Bagdād and Basra could be reached in a more direct line from Constantinople through Kurdistān to the valley of the Tigris. The nature of the country, through which the Euphrates flows, is well known by the labours of General Chesney and his staff to be in the highest degree favourable for a railway, while Kurdistān has not been surveyed or minutely described by any one but Xenophon in his *Retreat of the Ten Thousand*, and he represents those Carduchian mountain ranges as of no easy passage even on foot. Another advantage, more-

over, of the Euphrates Valley line over that of the Tigris Valley, besides an almost continuous level from the Beylân Pass to Basra, is to be found in the fact of its having a sea access to the railway at Alexandretta, that is, nearly half way between Constantinople and the Persian Gulf, both for the facility of construction, and for the control over it which would thereby be possessed by a strong maritime Power. It has been thought that the Tigris Valley offers an advantage over the Euphrates Valley in a number of populous trading towns lying on the line from Diyârbekir to Bagdâd. This is a mistake, for, with the exception of Aleppo and Bagdâd, there is not a town between the Mediterranean and the Persian Gulf on either route, whose whole annual export and import trade would now suffice to load two railway trains, and all of whose passengers to and fro could not now be accommodated in a single railway carriage. No one, who has had opportunities of judging what difficulties arise at every step in all undertakings in this country, even without those of nature being enlisted against them, would hesitate for a moment in concluding that the best line, or rather the only one deserving of consideration, from Constantinople to Basra is by Izmid, Kutahiyya, Konia, Tarsus, Adana, Alexandretta, Aleppo, Deyr, 'Aâna, Hit, and Bagdâd. On this route the difficulty of crossing the Taurus range is avoided by entering the valley of Nigda and descending to the Cilician Plain through the Kyûlek Pass, which is the ancient Pylæ Ciliciæ, as the Beylân Pass is the ancient Pylæ Syriæ, the classical name of each being preserved in its present corrupted form, and both defiles being practicable enough to have afforded an easy passage for the armies of Cyrus and Alexander the Great. The writer of this Report, having held a Consular appointment at Kaysariyya in Asia Minor, whence he was able to explore the country in all directions, and twice to make the journey by land to Constantinople; and having been in the habit of visiting the whole of his present Consular District, comprising North Syria, Cilicia, and a considerable portion of Mesopotamia, knows well the greater part of the route on which he now ventures to express his decided and unbiassed opinion, that, by deviating from the obvious course traced above, in search of support from internal trade, a chimera would be pursued, leading only to inevitable disappointment; and a reality would be encountered, increasing to a ruinous extent the difficulty and expense of construction.

A railway would certainly in some degree facilitate the operations of local commerce, and also tend to develop the resources which the country undeniably possesses. A railway is a rapid and commodious means of transport for merchandise; but in Syria time is not money, and money is more than comfort. A week of delay and fatigue, at the slow pace of camels and mules, would still be preferred to a two hours' conveyance of goods and passengers over the same distance by railway, provided a few pence could be saved by it. That the caravan must always cost less than the railway is self-evident; and that the prevalent mode of viewing the subject would not be altered by the construction of a railway alone, will be readily admitted when the circumstances are explained. A narrow and parsimonious spirit, even in those who are not destitute, is the natural outcome of long-protracted hard times; and severe suffering from want has been for several years, and still is, endured by the labouring classes, with little apparent prospect of improvement. This country is essentially agricultural; manufactures being now inconsiderable, and quite unable to cope any longer with the competition of Europe, by means of the imitation and cheaper texture of stuffs previously woven only by the natives. What trade there is, depends therefore on the exportation of the produce of the soil, and on the importation of foreign goods. Cultivation has been progressively impeded by bad government to so great and almost incredible a degree that the cultivator has lost the means either of continuing, far less of extending, his agricultural operations, or of purchasing the imported wares he most requires. The only two existing sources of commerce are thus both running dry. The land tax of ten per cent. on the crop is farmed by hungry speculators, who exact much more than their due, and contrive a thousand ways of securing to themselves the lion's share. The peasant, robbed of his harvest, has recourse to greedy usurers at seed time. Before his grain is ripe, he is taken from his home and his labour to be cast into prison, and sells his team of oxen and his implements at half price, often to the detaining creditor, to free himself from a debt accumulated by exorbitant compound interest. These iniquitous transactions have been connived at from time immemorial by authorities bribed by both speculators and usurers; but the fertility of the soil, with the laboriousness and frugality of its cultivator, have enabled him to go on from year to year without falling into extreme

want. It is only now that the evil has culminated in utter ruin, on account of three successive bad seasons, which might have been tided over had the peasant not been kept prostrate under the nefarious system to which he is a victim. Impoverished and desperate, he abandons his fields, which fail to provide a livelihood for his family, and migrates in the hope of finding a more profitable occupation. In this he rarely succeeds, because the stagnation of trade keeps the lower orders unemployed everywhere, more or less. The country people, therefore, now augment the number of the idle and starving inhabitants of the towns, where there are no public institutions, nor any provision made by Government for the relief of the poor. The sight of deserted hamlets and homesteads, meeting the eye on the most fertile plains, strikingly illustrates the principle enunciated by Gibbon, that the rapid decline of a State has set in when its rural population flocks to its cities. The construction of a railway could do nothing towards accomplishing the return of absentee villagers, and not one additional acre of land would be brought under cultivation by it, unless the repression of existing abuses were to precede the introduction of improved means of transport. On the contrary, the immediate effect of the opening of railway works would be that many villagers, still remaining in their villages, would resort to those works for the maintenance of their families; and whether they would ever resume their tillage or not, is an open question, whose solution would be supplied by the realization of promised reforms, or the continuance of the actual condition of the people. As that condition stands at present, all sanguine calculations based on assistance to be derived by a railway from local traffic must prove fallacious, for the proposed line, be it carried along the valley of the Euphrates, or that of the Tigris, would be chiefly dependent on through traffic until that happy day shall dawn on these provinces when the peasant will be allowed to enjoy the fruits of his labour in peace and security. Then, and only then, would any railway projector be justified in swerving, even for a single mile, out of the most direct and level route that leads from one end of the country to the other. Such is the conclusion arrived at with all the diffidence of a conscious lack of technical knowledge, but after serious consideration, by one who has ample opportunities of observation, and abundant data to form an opinion on, if indeed he is warranted to form one at all on this subject, and thus freely to put forward his crude ideas, without being an engineer. Should his views prove erroneous, he would learn with much satisfaction that greater facilities than he was aware of had been found available for the construction and support of a railway which would benefit England, by a closer intercourse with her Indian Empire.

(Signed) J. H. SKENE.

British Consulate, Aleppo, October 3, 1871.

No. 14.

Consul Skene to Earl Granville.—(Received December 28.)

My Lord,

Aleppo, November 30, 1871.

I HAVE the honour to inclose a copy of my despatch to Sir Henry Elliot, covering a Report on the subject of railway communication with India through Turkey, from Mr. J. L. Haddan, a professional engineer of high standing.

I also beg leave to inclose to your Lordship a copy of that Report, in compliance with the spirit of Lord Enfield's Instruction of the 25th August last, as my own remarks on the same question, forwarded to the Foreign Office on the 3rd October, could not but be found deficient in technical information; and I hope that Mr. Haddan's more scientific views will supply that deficiency, if your Lordship should approve of their being laid before the Committee of the House of Commons.

I have, &c.

(Signed) J. H. SKENE.

Inclosure 1 in No. 14.

Consul Skene to Sir H. Elliot.

Sir,

Aleppo, November 30, 1871.

IN reply to Lord Enfield's Circular despatch of the 25th August last, calling for full statements on the question of communication with India through Turkey by the Euphrates Valley route, I submitted to the Foreign Office all the information relative to it that I possessed. Having since received the inclosed Report from Mr. J. L. Haddan, a very gifted and able engineer, who has had much experience of this country, I forward it also to the Foreign Office, as I think the shrewd and practical remarks contained in it can hardly fail to appear sufficiently interesting for transmission with the other Reports to the Committee of the House of Commons inquiring into the respective merits of the different routes.

It is stated in the printed proceedings of that Committee that the Sultan is desirous of connecting the projected line of railway by the Euphrates Valley with another line traversing Asia-Minor by Kaysariyya and the Albustān Pass of Mount Taurus. I know that defile to be utterly impracticable for a railway without an enormous outlay of capital; but there are others less so: and, as the Taurus range is not far from here, I have taken occasion to suggest to the Governor-General that it might be opportune for him to send Mr. Haddan to survey the different passes over it before the inquiry shall have made further progress. Sureyyā Pasha said he would propose this measure to the Porte, and, in the event of your Excellency approving my suggestion, an expression of that approval would probably produce the effect of hastening the arrival here of the sanction applied for by the Governor-General, so that the survey might be completed before the 1st of February, when the Committee will re-assemble, and Lord Enfield's call for full statements on the subject would be effectually answered from this Consular district.

I have, &c.

(Signed) J. H. SKENE.

Inclosure 2 in No. 14.

*Report by Mr. Haddan, C.E.**Public Works Department, Aleppo, November 25, 1871.*

IN any business transactions between two parties the interests must be mutual or success is impossible. Thus, England and Turkey, in making arrangements for a railway to India, must make mutual concessions, and not expect the profit to be on one side and the outlay on the other. Mutual interests necessary.

It has been set forth that England, by endorsing Turkey's guarantee, enables Turkey to construct her railways at a lower rate. This is perfectly true, provided the line in question was selected by Turkish interests, and not by English, or provided this rule were applied to the whole system of Turkish railways. Joint guarantee.

No one can deny that the Euphrates Valley Railway from the Mediterranean to the Persian Gulf is essentially a British undertaking. In all the evidence given before the Committee of the House of Commons, no one has ventured to assert that it will be beneficial to the Turks beyond giving utterance to common-place observations as to civilization, &c., which remarks are much more applicable to other districts in Turkey, which are more populous and more in need of railways. Line beyond Alexandretta eastward essentially British.

England is to risk nothing,—to gain free transmission of the mails, passage to her armies at a low rate, and to have the capital (which will be essentially British) fully guaranteed. English advantages.

Turkey is to risk everything. The Customs duties of Alexandretta and Basra; the transit duty of 1 per cent., and to guarantee 4 per cent. on the capital: in return for which she will gain civilization and a greater facility in attacking the Bedouins and wasting her men and money in the attempt. Advantages to Turkey.

It is useless to conceal the fact that Turkey will have to pay the guarantee for many years to come. For long through traffic is not available for heavy goods. Transporting troops is never very remunerative. Purely local traffic would yield only about 1 per cent. The working expenses would cost at least 6 per cent. on the capital; and the mails (usually the most profitable of merchandize) is only to be a source of expense instead of revenue. Turkey will be called upon for the guarantee.

Turkish finance cannot support the burden of the concession.

That Turkey cannot afford to make such sacrifices, even to obtain and secure England's friendship, is well known, and therefore, though, at first, all might go well, difficulties will arise (which might have been avoided by a little liberality in the onset) of such gravity as will probably insure the failure of the undertaking and a heavy loss on both sides.

Were, however, the line to be undertaken on the same terms from Constantinople to Basra, instead of merely the British part from Alexandretta to Basra, both nations would then be gainers.

Turkish project impracticable.

The Turks have their own Asia-Minor project, which, however, from reliable sources, seems to be utterly impracticable, besides not fitting in with the English interest.

Convinced that Asia-Minor must be included.

That the Turks know their own interest is certain, and, judging from conversations held with influential persons both in Constantinople and elsewhere, as also from the well-known wishes of the Sultan, and the rapid progress being made on the Ismid line, I am morally certain that, by some means or other, the concession will never be granted, provided Asia-Minor be not included in the scheme, a demand which, in common fairness, should be anticipated.

Skene's project. "Cilician Gates."

We have plenty of general information as to Asia-Minor from Ainsworth, Hamilton, Kinneir, Tchihatcheff, Skene, and other travellers.

Skene's line alike suitable to both nations.

Mr. Skene suggests, with every appearance of possibility, that the Asia-Minor line should traverse the defile of the Taurus known as the "Cilician Gates," a route which would suit the Turks and chime in well with Mr. Andrews' project; which, without doubt, is superior to all the others.

Mr. Haddan purposes surveying Skene's route.

However, travellers' information not being sufficient for raising the requisite capital for such an undertaking, a survey from a railway point of view, is required. I am, therefore, waiting the requisite permission to examine, firstly, the Sultan's (Albustan) Pass of the Taurus, and prove its impracticability; and, secondly, to take trial levels on the line through the Cilician Gates, as proposed by Mr. Skene.

Reasons for undertaking the survey.

I shall also take photographs, on a large scale, of the various passes and places of interest, and the fullest information, both in a geological and geographical point of view, will be supplied to the Committee, so that, when the Asia-Minor extension proves to be the key-stone for granting the concession, as I do not doubt it will, ignorance of the existence of a practical route shall not prove an insuperable obstacle to the raising of the capital, &c.

I hope to receive the permission in time to give evidence at the next meeting of the Committee.

Local fuel scarce.

That the fuel requisite for working the line will be a very expensive item, is beyond all doubt; little, if any, wood is to be obtained locally, and only then at a prohibitive price. Bitumen I have found in large quantities in the Lebanon; and the Dead Sea, in Arabic, is often called the Asphalte Lake on account of the quantity of bitumen which abounds in that region; but, in this direction, I have not yet had time to search, though specimens of lignite of a very advanced class have been frequent, a fact, together with geological indications in the shape of fossils, which leads me to believe that coal may be found in this country.

Bitumen in the Lebanon.

Lignite has been met with.

About twenty miles from Beyrüt there still exists the rails, &c., of a coal-mine worked by Ibrahim Pacha in the time of the Egyptian occupation.

Near Beyrüt a coal mine exists.

N.B.—The coal has unfortunately a considerable admixture of sulphur.

Would troops be sent to India by rail?

I shall naturally also survey the country for coal. It seems generally to be supposed that troops going to India (in time of peace) would use the Euphrates Valley Railway. I think this quite a mistake, both in reality and politically.

Railway v. Sea travelling.

In reality, the gain of a few days (in peace time) over the Suez Canal is of no importance. The land journey is more fatiguing, provisions are scarce, water bad,* lodging difficult, and the heat in the environs of Bagdad quite as great, and possibly more pernicious, than the Red Sea, though this is a point of no consequence as, in peace time, the cool season would naturally be chosen. Troops also would scarcely be expected to run through without stopping (like the mails), and the gain in time would thus be very trifling, seeing that sea travelling is continuous, moreover more healthy, and in every way more comfortable and convenient.

Moral effect.

The moral effect produced by the existence of the railway would probably be the extent of its value in a military point of view in time of peace.

Gauge.

The question of gauge is a very important one, as, in the event of war or rebellion, an enormous amount of rolling stock would be suddenly required.

* Producing frightful boils, known as the Aleppo and Bagdad button.

If the gauge be Indian, as suggested in the able Report of Mr. Maxwell, not only is its first cost greater, but where is the extra rolling stock to be procured? Surely not from India, for under such circumstances, India would have none to spare. Indian gauge not admissible.

Were, however, the usual English and Continental 4·8½ gauge selected, and the line continued through to Constantinople, we could draw on the Turkish railways, or other Continental friends, for any amount of rolling stock. 4·8½ gauge advised.

To gain but a few hours by making the line the most direct route possible, is not to be balanced against security of the district traversed, and density of population. Most direct line immaterial.

Both strategically and commercially, it is better, in my opinion, to construct two single lines about 30 miles apart than to arrange them side by side. At the large towns they would all but touch again. Two single lines superior to one double line.

Strategically, because one line can always serve as a base for the other. Alternative passages would exist across all the rivers. Forage and provisions could be obtained with greater facility, the area being so much extended.

(Especially applicable to frontier lines like the Indus Valley).

Commercially. 1. Because a larger area of country can be accommodated—a most important item in a country where roads and wheel carriages do not exist, and camel and mule transport is very expensive. 2. Because, also, in the mountainous districts single lines are possible where in numerous instances double lines would be impracticable, especially in narrow ravines and on steep mountain sides.* Commercial advantages of the double-single system.

On sidelong ground it will be found that the cube for a double line of 30 feet in width works out, strangely enough, three times that of a single line of 18 feet wide, instead of less than twice, as would generally be supposed. It is, therefore, more economical in mountainous countries to construct two single lines instead of one double. The saving in retaining walls is great, two small ones being much more economical and less dangerous than one large one. Slips are less possible, and collisions impossible. On plains, the earthworks being less considerable, the two single lines would not cost much more than one double line. On sidelong ground two single lines more economical than one double line.

N.B.—The before-mentioned rule only applies to sloping ground.

The termini of the two single lines should be, say, one mile apart, so that the up and down traffic would be completely separated, and confusion resulting from export and import trade being crowded together would be avoided. Termini of up and down lines to be distinct.

Mr. T. Brassey's (M.P.) question as to the necessity of granting land on either side of the railway is, I believe, the key to the commercial success of the enterprise; but the great bar to its adaptation, and, in fact, the prosperity of the country generally, is the existence of a prohibitive export duty of 8 per cent. on all agricultural produce; this duty extends to export from province to province, so that the "fellahs" only cultivate sufficient for home consumption. Thus, extension of cultivation is impossible, the country is fast going to ruin, and the Government taxes, which are raised on the crops *in situ*, are daily diminishing. Mr. T. Brassey's land guarantee question. Prohibitive export duty.

As the whole return to the Turkish treasury from this source was only 100,000*l.* in an exceptional year of famine, I do not doubt that, if the matter were ably put before the Ottoman authorities, this suicidal duty would be abolished. It requires but little intelligence to perceive that the speculators have a splendid field for their operations at the expense of the poor "fellahin," all outside competition being impossible; and thus it happens in some provinces that the people are starving, and bread six times its usual price, while in others the crops are so abundant as to be utterly unsaleable. Importations of grain is also liable to the same duty. Reason of decline in cultivation. Speculators.

The Bedouins being remarkably fond of ready money, which, however, they see but rarely, will naturally flock to the line for work, and then Mr. Brassey's proposition can be brought into force in colonising the Bedouins; be assured, the only true method of subjugating these semi-barbarous nations. Bedouins.

No doubt, the greatest difficulty the scheme will have to encounter is the financial one. For when all has been said and done apropos of the resources, geography, races, &c., of the country traversed, probability, and not fact, has the best of it. So it is to be feared that capitalists will not be inclined to risk so much capital, even if backed by a 4 per cent. guarantee. Difficulty of raising capital.

* The details of the economical working of this double-single line system are all worked out, main line sidings, with all their attendant danger and expense (10 per cent.), are avoided; yet each line can accommodate both up and down traffic. They are, however, omitted in this Report for the sake of brevity.

Working expenses
very heavy.

The working expenses will be very heavy (at least 6 per cent. on the capital), as all the Staff will have to be imported down to lamp cleaners, for the natives abhor regularity and restraint, and are therefore not fitted for railway work.

Will it pay in the
future?

The average price put down for the Andrew line is about 9,000*l.* a mile, which, from Sir John MacNeil's statement, seems to be, for the most part, a single line. The question is, Will the possible traffic yield a profitable future return to the Turkish Government on such an enormous capital, or even prevent actual loss from the guarantee?

Haddan's Pioneer
Railway.

Everyone who knows the country must have more than doubts on the subject. Having been many years in this country engaged in conducting engineering works, and having seen more or less of the working of Turkish lines, I have endeavoured to meet the sterile wants of the country in devising an economical railway, the cost of a double line only averaging 1,000*l.* a mile.

Precursor of a
railway proper.

This "Pioneer" railway is, in my opinion, what is required as a precursor of a more gigantic scheme.

As a mere transporter of materials for its successor it would pay its expenses. The requisite capital, being less than 1,000,000*l.*, would not be so difficult to raise, and a few years' safe and profitable working of the line would pave the way for a railway proper, and provide reliable statistics as to traffic.

Constructible in
twelve months.

One year, instead of five, is requisite for its construction, thus saving interest of no mean interest.

Equal to Fell's, but
not one-twentieth
the expense.

For mails, passengers, and goods of 1 ton weight, it is all that can be desired, can mount the steepest gradients and traverse the sharpest curves, requires no earthworks of any kind, and is equally available for rocky as marshy lands, while its speed is certainly equal to the English narrow guage. The rolling stock is very simple, and the carriages for troops' transport can be made to shut up, and thus are easily shipped. The materials are very durable (stone and iron), and repairs almost reduced to nil. Only one rail is used. The "Pioneer" would be worked on the double-single line system before explained.

Maintenance very
trifling.

Alexandretta being a port at which Russian, French, Egyptian, and Austrian mail steamers touch, very frequent mails to India will be the result.

Light trams *v.*
heavy.

Consequently, light but frequent trains (like the "Pioneer") will be more suitable than the mammoth structures in vogue at home.

Alternative route
proved necessary.

That an alternative route to India is imperatively necessary, the following remarks on the Suez Canal render conclusive:

Were an ironclad aground, or a landslip to close the Suez Canal, how could our troops get beyond Suez?

Without by a miracle half the fleet most conveniently found itself in the Red Sea at the time of the accident, the old Cape route would have to be resorted to.

Models, &c.

Models and photographs are in preparation for the Committee. A copy of Mr. Haddan's Report on the Alexandretta marshes, and a copy of Mr. Hadden's observations on Turkish concessions, shall also be forwarded.

It is utterly impossible without being tedious to impart to others the varied information gained in a long residence in the country. I trust, however, that, in studying brevity, Ovid's remark

"Brevis fio obscurus sum"

is not applicable, as is often the case in attempting a description of subjects which, though of interest to others, are as every-day matters to a resident.

(Signed) J. L. HADDAN,
Directeur et Ingénieur-en-chef des Travaux Publics, Alep.

No. 15.

Consul Skene to Earl Granville.—(Received February 9.)

My Lord,

Aleppo, January 17, 1872.

WITH reference to my Report on the Euphrates Valley Railway scheme, forwarded to your Lordship on the 3rd October last, for the Committee of the House of Commons investigating the different routes proposed for railway communication with India, in which Report I stated that the draining of the marshes at Alexandretta would not be a serious obstacle to the adoption of that shipping port as a

terminus, I have now the honour to transmit, in further elucidation of my statement, an extract from a Report to the Turkish Government on the same subject, with a plan, which I have obtained from Mr. J. L. Haddan, engineer-in-chief of the province.

I have, &c.
(Signed) J. H. SKENE.

Inclosure in No. 15.

Extract from Mr. Haddan's Report on the Draining of the Alexandretta Marshes.

THE marshes of Alexandretta, judged, I suppose, by the fierceness of the fevers they cause every summer and autumn, have been generally regarded as beyond the remedy of man.

This idea is, however, perfectly erroneous, the drainage of the marshes being a very simple affair.

The greater part of the coast of Syria is fringed by mountain ranges, at the feet of which plains have been formed by the wasting action of ages.

These plains are generally sandy in the more exposed points, and covered with marshy vegetation where sheltered.

At Alexandretta (situated in a bay) the sea being more confined, has thrown up a bank of sand (coloured burnt sienna on the chart), and completely walled in and surrounded the marshes, so that the fresh waters too liberally supplied by the mountainous adjacent country cannot find an outlet. Hence the marshes.

The canal constructed by Ibrahim Pasha of Egypt, has for some years been choked up at its mouth; if kept constantly open, it would certainly drain a certain portion of the marsh, but its size and extent is not sufficient for draining the whole.

Therefore, similar canals are to be cut in the directions shown in the chart, so as to drain the marsh to several outlets.

These canals are also so arranged as to protect the town from inundations, the level of Alexandretta being only about two feet six above that of the sea.

The difficulty still remains, however, of devising a self-acting method of preventing the mouths of the various canals from becoming choked, for proper surveillance cannot be relied on.

The sketch cross section, shown on the chart, explains the system to be adopted.

It merely consists of a wrought-iron tube, tunnelling through the sand bank wall which surrounds the marsh.

The tube is raised at the sea end considerably above the sandy bottom, so as to prevent entrance of sand in stormy weather; and at the land extremity communicates with the fresh water drainage canals, and thus allows free passage in all weathers for the waters to whose presence only the marshes are due.

The works necessary for the complete drainage of the marsh are estimated at 2,200*l*.

N.B.—The sand-bank is used as a road.

(Signed) J. L. HADDAN.

Aleppo, May 1, 1871.

No. 16.

Consul Taylor to Earl Granville.—(Received February 17.)

My Lord,

Erzeroom, January 8, 1872.

I HAVE the honour to forward, as inclosure No. 1 to this despatch, the Report called for in Lord Enfield's Circular of August 25, 1871, relative to steam communication between England and India by the Euphrates Valley.

Your Lordship will, I trust, excuse me if my remarks have not entirely been confined to reporting on that line solely, as also, if some of them should be considered too free, as being beyond my competence and in a manner foreign to the subject upon which Her Majesty's Consuls have been called upon to report.

Although the Report is directed to be made as complete as possible without reference to extra inclosures, it occurred to me that a rough index map, illustrative of the different routes pointed on it, nearly all of which the liberality of Her

Majesty's Government have enabled me to visit and travel over, might be useful as directly explanatory.

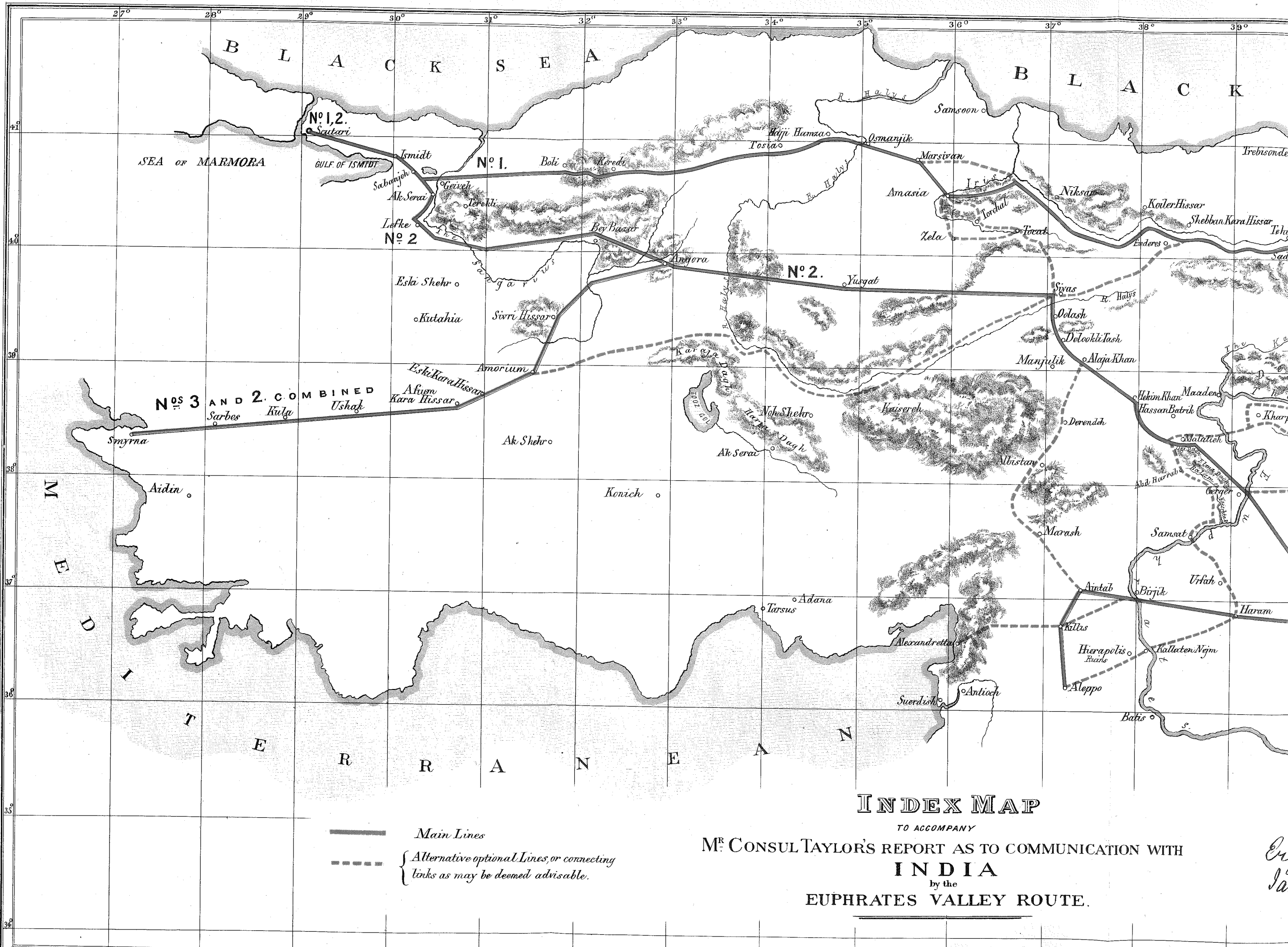
I therefore prepared one, and now forward it as inclosure No. 2. It is reduced from Kieppert's latest map on half the scale he has employed. I must state, however, that the map inclosed, though copied from my rough and therefore unpresentable sketch, is the work of Bedros Effendi Moomjian, an Armenian, the talented and able Turkish Agent for Foreign Affairs here, and, therefore, it would be some satisfaction to me if his co-operation in this matter was in some way acknowledged by your Lordship through Her Britannic Majesty's Embassy, or otherwise, to the Porte.

I have, &c.
(Signed) J. G. TAYLOR.

Inclosure in No. 16.

Report by Consul Taylor.

THE results of the Euphrates Expedition under General Chesney, and supplementary trials under Captain Lynch and others, to prove that river serviceable for a continuous steam navigation to shorten the time required to connect India with England having failed, seem to have first suggested the idea of a railroad to the Persian Gulf by the Euphrates Valley as a more expeditious and feasible alternative. It has been taken up and recommended in preference to all other lines by some gentlemen formerly employed on the steam-boat enterprise, and scientific men who, having their heart in the work, seem to have imbibed strong though narrow prejudices in its favour. Nor can it be denied that the nature of the country between Alexandretta on the Mediterranean and Kurayn on the Persian Gulf, or Kuwayt, as it is more generally called, assists most of the arguments urged as reasons for selecting this line, if only cheapness in construction and velocity in speed for the short distance it will traverse are concerned. But in other respects, the line proposed from Aleppo to Bâlis, then for some miles along the course of the Euphrates, and ultimately through the Jezira to the Persian Gulf, notwithstanding branches to Mosul and Bagdad, must prove a failure, as involving losses and difficulties which the accelerated cheap means of communication by that route will and can never contend against, if compared with others. The prime reasons for my assertions are based upon a personal experience of the extremely nude dry character of the country for nine months of the year, which will deter the majority of workmen proceeding there, and render it most difficult and expensive to maintain those few who may be willing to engage themselves; the obstructions likely to be met with from wandering or disaffected Bedouin or pastoral Arabs; and the double unloading and loading at the two termini, not including a long middle and final sea voyage from England to India. Both for passengers and goods the latter objections appears to be imperative, and the Suez Canal will have been dug in vain if this route, once carried out, is deemed preferable to that. It is plausible enough to expatiate on the natural richness of the country traversed, as far as richness can be construed from a prolific growth of rank grasses that disappear, however, before the summer blight, and is only an ephemeral vegetation of three spring months; but that luxuriousness can never materially benefit trade or traffic, however much it induces wandering Bedouins and Pastorals, who contribute little to trade, as their consumption of foreign goods is limited and variable, to frequent such tracts during certain periods of the year. Again, evidence is not wanting to prove that many ancient cities formerly existed in, and a redundant population, yielding a revenue of more than half a million sterling, once inhabited those now desolate regions, but who, so as to secure a sufficient degree of local traffic and a certain amount of safety, ying as they do so far east of the present extremest peopled limit beyond which security and agriculture are unknown, are to renovate them? Certainly not the Turks, Koords, and industrious Arabs, who have dwindled away, or I may say, disappeared from these and far more favoured localities, dispersed by Arab depredators and the weakness of Government, that licensed as it subsidised the robbers, to sea coast towns or interior capitals, where they could be sure of reaping some portion at least of the fruit of their labour. And for Europeans, under the present most unsatisfactory system of land tenure, corrupt administration of laws, justice, and Government any attempt at colonization would result in inevitable bankruptcy



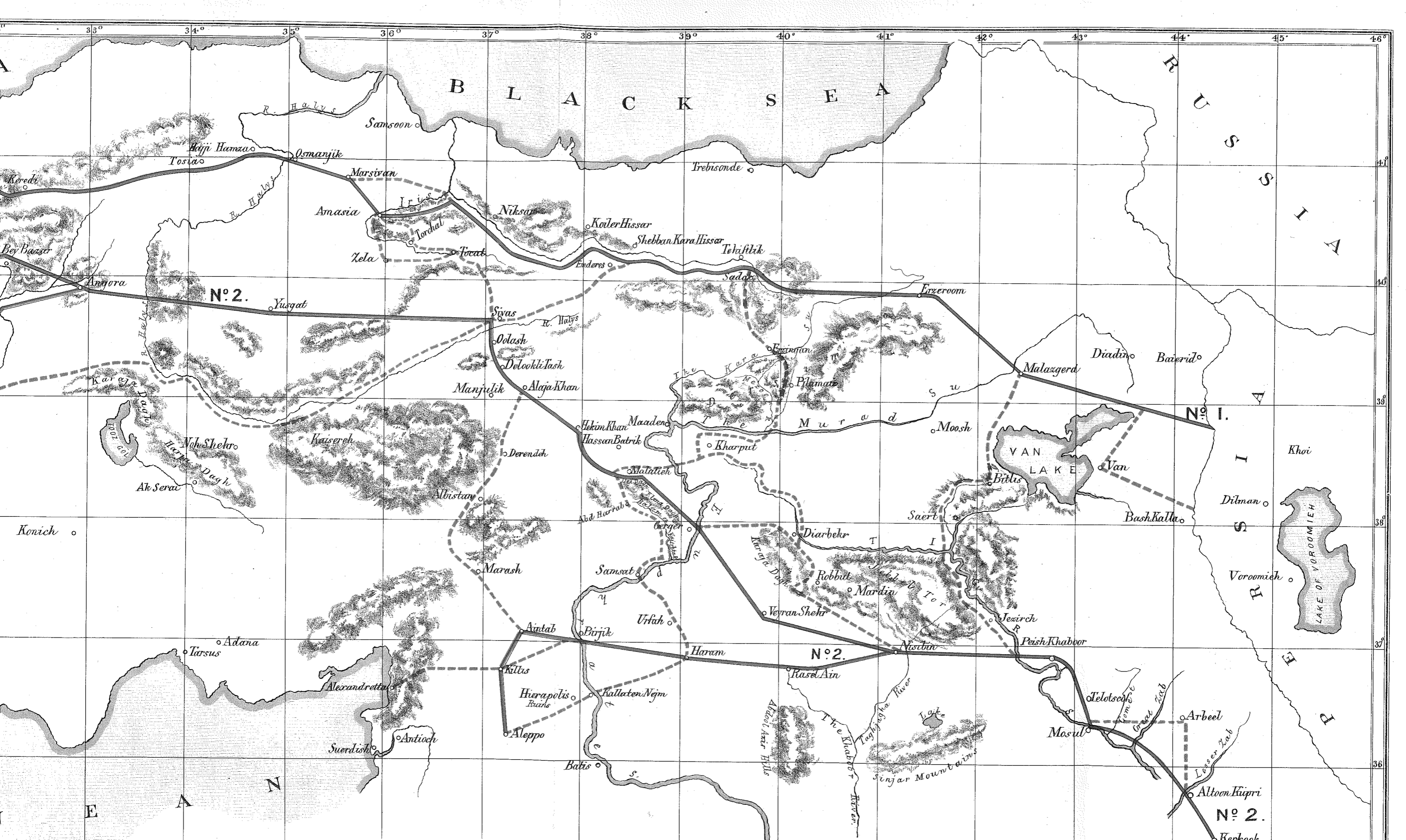
INDEX MAP

TO ACCOMPANY

MR CONSUL TAYLOR'S REPORT AS TO COMMUNICATION WITH
INDIA
 by the
EUPHRATES VALLEY ROUTE.

— Main Lines
 - - - - - { Alternative optional Lines, or connecting
 links as may be deemed advisable.

Evans



INDEX MAP

TO ACCOMPANY

MR CONSUL TAYLOR'S REPORT AS TO COMMUNICATION WITH
INDIA
 by the
EUPHRATES VALLEY ROUTE.

*Euzerom
 January 8, 1872
 Taylor*

and destitution, for none of those evils so fatal to progress, particularly colonization, in Turkey have as yet been removed or materially alleviated by the otherwise and in other countries civilizing effects of a railroad, judging by those already existing in other parts of Turkey.

Railway communication may civilize, may re-people barren districts in Europe and America, may render them as or more reproductive than formerly, but not so here; for justice or the want of it remains practically the same, the people continue now as ignorant and depraved as heretofore, so that lands once deserted are never by any chance re-peopled. The bitter experience of the long past holds out no hope for the future, even if there was an exuberant population, which there is not, willing to replace deserters, and ready to put up with the difficulties that have compelled the well-to-do, who here are the only classes worth attracting, to seek other asylums elsewhere. It will not be difficult to induce tribes of needy agriculturists, who would go anywhere with the prospect of obtaining borrowed bread, to settle upon the new sites, but the amount of capital necessary to utilize their labours, and render them valuable, permanent, and progressive, will never be hazarded by employers in such remote, exposed, waterless regions under the present Government, or as long as the immense fertile line of the Khābūr, Jagjaga and Upper Euphrates between Bālis and Samīsād, far more west, with their abundant means of artificial irrigation, are open to them. In the one case, success is not dependent upon chance, whereas in the other, if occasional rain falls, do in rare years nourish and mature crops, they are always at the mercy of Arabs, who must be either bought off or beat off, neither possesses agreeable desirable assurances for the capitalist to risk his money, or industrious peaceable foreign colonist or native agriculturist to sink their labour. Obstacles to the line arising from Arabs would not necessarily at once take the form of large offensive combinations permanently to destroy or injure the route itself; for, however willing Arabs are to plunder in security, they are extremely wary of unnecessarily exposing their lives without a chance of securing useful articles for themselves or other things easily disposed of at the bordering villages, to the hordes of receivers of stolen goods, mostly 'Aāna, Bagdād, and Aleppo Jews, who annually resort there for the purpose. They would confine their annoyance to desultory attacks on intermediary stations or settlements, and on the people who might have been tempted to resort thither for protection and employment, so effectually thwarting traffic or any local trade that, otherwise and in other countries, might reasonably be expected to follow in the wake of such civilizing undertakings. They are to be bribed or subsidized for forbearance, certainly; but who are you to commence with—where will you end? The Bedouins immediately roving over the country proposed to be traversed, namely the Shamar, Muntefik, Dhefīr, Ajmān, and their tributaries, would not be hard to deal with, although the expense would be great; for, even now, in addition to Government allowances and taxes under the name of "khuwwa" (price of brotherhood), they levy on all the villages and tribes under their influence, the Shamar extort, the custom tacitly admitted by the merchants and Government, has existed for ages; certain fixed dues called the Haml-Bagdād, Haml-Mosul, Haml-Nisibin, Haml-Sinjār, Haml-Orfa, Haml-Haleb, on every bale or traveller issuing from or arriving by the desert route at those towns. These dues having become, from ancient usage, the undisputed hereditary property of different Sheykhs, must be annually compounded for, or they would have a reasonable just claim to share in the traffic returns, in addition to the annual sums paid them for their friendship or "khuwwa." But, allowing the Shamar and other mentioned tribes to have been satisfied, that fact alone cannot assure the safety of the line; for other tribes, as the 'Anaza, sub-divided into many septa, all antagonistical to each other, although of one family; and Nejd Bedouins to the north-west, with Ajmān, Mekir, Kohtān, Murra, to the south-east, will be sure, deprived of their legalized plunder, to infest a road carrying so much wealth and passenger traffic along with it, in the hope of also sharing, if they fail in robbing, the subsidies allotted to the local nomades. By degrees, then, and perforce a kind of armed protectorate will become inevitable, but by whom to be exercised? It would be impossible or unpolitic, for England, too embarrassing and costly for Turkey, even did the means or real will exist to oppose marauders, she never yet has been able to make head against. Nor do I think, in other respects, would she use real exertion to protect a line that would have the effect of separating Syria and Turkish Arabia from the main portion of her Asiatic territory, and interfere with her own design of connecting Constantinople with Basra by Angora and Siwās.

This extreme south-eastern line, then, would seem an unappropriate an

injudicious one to adopt, being financially unpaying and politically useless, as incomplete. It would be a reckless, rash expenditure, so much capital prematurely misplaced; for, viewing it in its best light, no more favourable result is arrived at than a connection, simply, between the Mediterranean and the wrong side of the Persian Gulf only, not between England and India, which must some day take place, or, rather, between England and a point from whence the work might, if necessary, be subsequently prolonged to a useful permanent terminus, for future extension to England.

If, however, Alexandretta is after all decided upon as a starting-point, the most advantageous main and alternative lines would be those I now proceed to describe and indicate, with others, on the Index Map accompanying this Report. They all lie, it will be seen, far more west than the one proposed, and, therefore, although not altogether free from Bedouin influence, as being better peopled, and further from their general haunts, enjoy easier and cheaper means of guarding and securing them. They traverse, too, a decidedly better country, very fertile and well watered, in the immediate neighbourhood of several wealthy, important, commercial and agricultural trading marts and depôts. All of them, being west of Sinjar and the Khābūr, enjoy, in addition, a far more temperate climate than any place east of those positions; while, at the same time, they are now, since the military establishments recently organized at Ra'su-l-'Ayn and Deyr—the new Mutasarriflik of the Zūr—more completely covered than heretofore, from Bedouin depredations.

MAIN LINE FROM ALEXANDRETTA.

	Miles.	Population.	Remarks.
Aleppo.	91	110,000	
'Ayntāb	70	27,000	Near Kellis and Mar'ash.
Birejik.	35	15,000	Cross Euphrates here.
Harrān.	65	600	Through Serū and Battān.
Ra'su-l-'Ayn	60	12,000	Site of a Tchetchen Colony and military station.
Nisībīn	73	2,000	An important depôt for Arab trade.
Peysh Khābūr	70	1,500	Cross Tigris here into Turkish Arabia. River narrow.
Mosul.	90	30,000	By Tell-Iskuf.
Bagdād	250	90,000	Crossing the Hamrina Hills and the Gomel, Greater Zāb, Lesser Zāb, Kifri and Khalis streams. Passing Arbela, Kerkūk (25,000 inhabitants), Kifri, &c.
Muhammara	360	6,000	By Bedra, Beni-Lām, Hudd, and Hawayza. Crossing Diyāla, Hudd, Suwayb, and Kerkha rivers.
Total	1,164	294,100	

It is unnecessary to dilate upon the well-known country between the sea and Birejik, where the line would cross the Euphrates, but it will be useful to state that great commercial activity exists at 'Ayntāb, in close and important commercial communication with Mar'ash, a town of 18,000 souls, a few miles north of it, with an export and import trade of 70,000%. The commerce of 'Ayntāb consists in English imports, value about 60,000%, and exports of wheat, castor oil seed, yellow berries, gall nuts, scammony, tobacco, and wax, to the amount of 18,000%. There would be some difficulty in crossing the stream here, from its great breadth; but, at the same time, during the summer and autumn months, it is shallow, and easily forded, when tubular iron pillars to support the way might be put in position without much expense from that cause. The town of Birejik contains 15,000 inhabitants, and has an active carrying trade between Orfa, Diyārbekir, and Mārdīn. The line from Birejik to Harrān passes through the level, well-watered district of Sarūj, containing 360 villages, renowned in ancient times for amazing fertility and agricultural development. It has amply preserved its old reputation, as its varied agricultural resources are only bounded by limit and want of capital. Yet still, during Hafiz Pasha's campaign, its rice, for which it is famous, besides being largely exported elsewhere, served to nourish the whole of his numerous army. Battān, now ruined, in Sarūj, was formerly an important depôt and yearly fair for Arab merchants, and Phœnicians, long before them, trading between Serica, China, and Seleucia. Harrān, at the verge of Sarūj, the scene of Crassus's defeat by the Parthians, on one of the old routes of the Antonine Itinerary, was, from the remotest period up to Sultan Selim's conquest of the country, a most important connecting link and commercial site

between Susa, Babylonia, and Syria, by Battān. It is renowned, *par excellence*, in history, as the capital of the heathen gods, the metropolis of Sabeian worship, and the favourite resort of those active pioneers of commerce from Chaldea. Its position, relative to Orfa, thirty miles north only from it, is important, and would swell the traffic, for that town has a population of 30,000 souls, and a mixed trade in grain, wool, sesame, seed, silk, cotton, wax, sulphur, and butter, with sundries, which she exports, to the amount of 300,000*l.*, besides large soap factories, and an import of European manufactured goods for local use, exceeding 170,000*l.* The road to Ra'su-'l-'Ayn is equally level and free from obstacles as the first part, and is tenanted by wandering, though local, tribes of Bakkara, Jeys, and Sharābiyūn, who own a great deal of sheep and cattle: they pasture on the well-watered plains between these two sites. Ra'su-'l-'Ayn itself, by some reputed, though doubtfully, to be the Resen of Holy Writ, and the Resina of Byzantine authors, from its former splendour, wealth, and magnificence, sunk into ruin, soon after its capture and plunder by Tamerlane. It now shows some sign of recovery, as it has for some years past been occupied by the Tchetchen—immigrants from Russia, 20,000 in number, which bad management, climate, and desertion have reduced to 12,000. The Turkish Government has built numerous well-constructed though small houses for their accommodation, buildings for the administrative civil officers, and barracks for the 1,000 Nizām which always garrison the spot.

Ra'su-'l-'Ayn, it is needless to say, is at the head of the Khābūr River, that is directly formed there by the flooding of numerous large natural reservoirs into one deep, narrow bed. The soil within the long influence of its waters is most fertile, yielding as much as 200 per cent., and this fertility extends all along its banks to Circesium or Abū-Serā, where it joins the Euphrates, south-west, and to Nisibīn, along the Jagjaga, one of its tributaries, north-east. The river, immediately on its formation in the centre of the new town, is navigable by good-sized steamers to the Euphrates.

In addition to the Tchetchen colonists, the industrious agricultural Jabūr tribe cultivate both banks of the river as far as its junction. Many populous villages exist throughout its course, all whose produce, conveyed upwards by boats, would feed the main line, and constitute a most important local trade. As adjuncts to this trade, must be reckoned the yields of the flocks and herds of the Sharābiyūn and others, who, though not cultivators, possess, as stated before, a large amount of sheep and cattle, affording butter, cheese, wool and skins, all available for export.

The 'Abdu-'l-'Azīz hills, close to the right bank of the Khābūr, are abundantly favoured by the spontaneous gifts of nature in forests of wild button trees (*pistachio terebinthus*), bearing a nut yielding a rich greenish oil, extensively used in manufacturing soap, eagerly sought after at Orfa, Aleppo, and Diyārbekir. The conservation and reproduction of those valuable trees would be easy and remunerative; for, as an article of foreign export to serve the same or analogous purposes, it would be most valuable and profitable.

It was not without reason the ancients selected Ra'su-'l-'Ayn for the site of a city, as, independently of the great fertility of its neighbourhood, and natural, commercial, and political importance, if taken in conjunction with Nisibīn, Harrān, and Jaziratu-'bni-'Umar (Bezabde), it formed, and still will form—always supposing their resuscitation—an impenetrable barrier to the Scenite Arabs (Bedouins), east, and assured the safety of the trade that then passed along this route.

From Ra'su-'l-'Ayn to Nisibīn is equally a rich well-watered plain, if the line be carried as near as possible to the banks of the Jagjaga. Twelve hours from Nisibīn itself, without any pedantic praise of its ancient importance, is at present the great depôt or mart where Arabs dispose of their produce and lay in their supplies. It is crowded during the spring season by Mārdīn, Diyārbekir, and Orfa traders in home and foreign cotton and woollen manufactures in demand amongst the Arabs; at the same time, agents from Aleppo, Diyārbekir, Mosul, Bagdād, and Kaysariyya houses attend, to purchase wool, butter, skins, horses, sheep, and camels for export to the above places; the latter for Kaysariyya only. Locally, it is important as a rich rice-producing, agricultural, and grazing district. Here the Jagjaga is crossed by a delapidated stone bridge, though the river for nine months of the year is fordable by men and even children. The basalt formation, some people seem to think, will interfere with the road, has no existence along this route, as it lies some distance west of Harrān and Ra'su-'l-'Ayn, while between the last site and Nisibīn, as far as Deyrūna beyond the latter, there is no trace of it. From Nisibīn to Peysh-Khābūr, the line, as it passes far more west, avoids the basaltic flood between

Aznāwūr, Deyrūna, and Jazīra, although it would skirt those rich agricultural districts, together with Rūmeylah, along again, as before, a perfectly level country.

Peysh-Khābūr is a large village, inhabited solely by rich Christian agriculturists, on the left bank of the Tigris, crossed here in summer by fording, in late autumn, winter, and spring, by a ferry. The river is narrow, and offers no obstruction whatever to the construction of a bridge; the materials, in the shape of finely cut stone, exist in the ruins of two former similar structures at and below Jazīrah, some twenty miles further up the stream. Always navigated and navigable by large rafts downwards from Būbtān, Sa'irt, and Diyārbekir, this easy water branch communication would enable Koorish produce, as galls, oil, cotton, Mohair wool, and grain to be exported from those places, the Jebel-Tūr and Jazīrah, so increasing traffic and local trade, as the districts mentioned are already in cheap connection with the rail proposed.

Between this last station and Mosul the whole country is level, well cultivated, and populous. Beyond Mosul, following the Bagdād post road, on the left bank of the Tigris by Arbela, Altin-Kyupri, Kerkūk, Tūz-Khūrmatī, to Kifri, each one of them rich, agricultural, and grazing districts; and Kerkūk, an important commercial town, is an equally favourable tract; although between Kifri and Deli-'Abbās by Kara-Teppa, pursuing, as from Mosul, the post road, two low ranges of hills intersecting a comparatively barren country, but offering no engineering obstacles, have to be crossed.

The rivers intersecting the line between Mosul and Bagdād are the Gomel, the two Zābs, the Kifri river, the Narin, and, finally, the Khalis. Excepting the three first, which alone would create some expense but not the slightest difficulty, the others could be easily and cheaply bridged. From Bagdād the line over the Diyāla River, would go, by Bedra, Jesān, through the Benū-Lām territory—affording quantities of sheep, wool, cattle, grain, and buffalo skins—past the new town, containing 6,000 inhabitants, on the Hudd River, the emporium of those parts, and then, crossing the Suwayb and Kerkha streams, by Huwayza, a very rich, well-watered, corn-growing, grazing, and cattle district, exporting several hundred bales of wool annually—to Muhammara, from whence, at any time, it could be prolonged along the Persian Mekrān coast to Kurrachee, Hyderabad, and India.

Muhammara is a free port in Persian territory, situated on the Hafar, an ancient canal communicating with the Kārūn, and only a mile from the junction of the former with the Shattu-'l-'Arab. Its foreign trade is developed and highly important, as natural circumstances incidental to its locality have constituted it the depôt for the whole of Southern Persia at this side. For, in immediate communication by water with Shuster and Dizfūl, two large towns some days distance inland, further on by caravan with Khurramābād, Burujird, and the whole of Lūristān, towns and districts having no other outlet for their produce or market to supply their demands, its trade, at first forced, has become permanent and progressive. Its local produce consists of dates, wool, and wheat, the latter of a very superior quality, and eagerly sought after. Opium, too, is raised to a considerable extent, and clandestinely forwarded to India. In past times the sugar-cane was cultivated and sugar manufactured there, about Huwayza, Ahwāz, and Susa close to, and formed at that time a valuable item of export to Syria and the North. Commercially it is more important, and would become infinitely more so than Basra or Kuwayt, while as a strategic terminus it is incomparably a better site than either of those towns; for, at the latter place, large vessels cannot approach the town, and the former must be reached by threading a narrow channel, only practicable at high water, a little above Muhammara, which often occasions great delay and detention to vessels of large tonnage by their grounding on the sand-banks, that have nearly choked up, so necessitating a partial discharge of cargo into lighters before proceeding further up the river. Two other most important facts in connection with this subject, and favouring Muhammara as a terminus, must not be omitted, namely, the far greater salubrity of the air and delicious purity of its water, as compared with Basra or Kuwayt. The terrible climate of Basra is too well known to require description. Always from the remotest periods noted for febrile pestilences, the character of the climate is now more aggravated by the vast marshes surrounding it constantly pouring their foul discharges full of decayed vegetable and animal matter into the Shattu-'l-'Arab, whose depths even they poison by their contact; so much so that the well-to-do residents keep water-tanks in boats, which, at ebb, proceed down the river and are filled up at flood with the water coming up from Muhammara, simply

to ensure a tolerably healthy necessary beverage. During my seven years' residence I was repeatedly attacked by fever. During the same time, of seven Governors and three Acting Governors, five of the former and two of the latter left their bones there, and the two Englishmen who succeeded me as Vice-Consul, both strong young men, fell victims to the chronic pestilence. During seasons of epidemics the mortality is fearful, and whenever they visit the town, or if the generally-prevailing fever is particularly severe, all who can afford it seek a remedy or convalescence in Muhammara.

In fact, as compared with Basra, Alexandretta, although in the highest degree unhealthy, would be considered as a salubrious sanitary station. At Kuwayt, on the other hand, there is absolutely no potable water whatever that a stranger could use for any time with a chance of preserving health, it being highly brackish, limited, and only obtainable at deep wells some distance from the town, from whence it is brought by carriers and sold at so much per skin. No vegetables, grain, or fruit, are raised at all, not only from the want of water, but also from the heat, which, for nine months in the year, is most oppressive and dangerous for new arrivals, heightened as it is by the rocky, pebbly soil surrounding it, unrelieved by any kind of vegetation, natural shade or artificial irrigation. Its pretensions as a good sea-harbour for large vessels are, notwithstanding positive evidence that has been given on the subject, very doubtful; for, although the native craft, from their peculiar construction and light draught of water, come close in land, large vessels are obliged to lie a long distance off, and never attempt a close approach to the town. Such was the case during the late Persian war with a French frigate, not a large one by any means, under Captain Maisonneuve, who, with his officers, were of opinion that it never could be made use of effectively by large vessels during bad weather.

Such, then, is a cursive though true picture of the main line I would advocate from the Mediterranean at Alexandretta to Muhammara on the Kārūn, only a few miles separated from the head of the Persian Gulf, as also of the greater advantages Muhammara possesses over Kuwayt or Basra as a terminus.

Throwing Bālis, as too far south-east, altogether out of the discussion, as also a combined rail and river steam navigation as impracticable, and unsuited to the purposes required, there are two other alternatives worthy of some consideration, either as feeders to the main line, or to constitute, whichever seems preferable, main lines themselves.

The first (A) is as follows:—

	Miles.	
From Alexandretta, avoiding Aleppo, to Kilis ..	90	a branch to Aleppo, 18,000 population.
Birejik	55	15,000 ditto across Euphrates.
	<hr/>	
Then former main as far as Nisibin	145	
	198	
	<hr/>	
Then on as before to Mosul, Bagdād, to Muhammara ..	343	
	770	
	<hr/>	
Total	1,113	

Or (B):—

Alexandretta to Aleppo	91	
Kal'ata-'n-Najm (Mambuj, Hierapolis)	65	across Euphrates.
Harrān.. .. .	55	
	<hr/>	
Then as main line described to Muhammara	211	
	903	
	<hr/>	
Total	1,114	

The contiguity of all three lines to the Būhtān, Tūr, and Hakkāra, will attract thousands of the hardy Christians, inhabitants of those districts, at about a shilling a-day, who will prove invaluable workmen, far preferable to Koords, still more so than Arabs, not only from their greatly superior physical strength, docility, and perseverance, but from their untiring industry; their services, however, could not be reckoned on to the same extent, or on the same terms, were the rail carried by the Bālis-Kurayn route, a circumstance of sufficient importance to be taken into serious account, in connection with other objections, by its advocates. The first

route described is fifty miles longer than the other two, but all preserve the same characteristic level, enjoy nearly the same commercial importance.

By route B, which is the most preferable of the three, the line passes old Hierapolis through a fine country to Kal'atu-'n-Najm, one of the Zeugmas or fords of the ancients. The remains of an old bridge, but probably those of a later period, Mahommedan (Zengide), mark the spot. It was by this route and ford Julian crossed the Euphrates with his army, on his road to Harrān, after resisting Hierapolis.

Statistics of all kinds, and those appertaining to local inland trade especially, are so little to be depended upon in Turkey, that it is with some hesitation I give the estimate of what, I presume, from personal experience, to be the total value of the trade in the towns along the lines pointed out, at little short of 4,000,000*l.* sterling per annum, including the side traffic from Diyārbekir, Mārdīn, and Jazīra. Of this, probably, 3,500,000*l.* are absorbed by heavy goods, the balance being made up by pearls, jewels, shawls, and Indian and native silk manufactures. Sheep, cattle, horses, and camels, are not included, nor has any sum been allowed for intermediate local trade. The sedentary town populations, immediately on the line of the same route, not including villages, pastorals, and Bedouins, or branch towns, amount, in round numbers, to 300,000. The line proposed by Colonel Herbert from Aleppo, viā Birejik, Orfa, and Diyārbekir, and so down to Nisibīn, has nothing, not even greater security, to recommend it, particularly as all those towns will be, as before shown, within a short, easy distance of the routes described. At the same time, the engineering difficulties, as compared with any probable profit to be derived from the trade attaching to them, are far greater than is supposed, and would be too costly to compensate for the extra outlay the détour would occasion. For, instead of a level plain, as in the other routes, between Orfa and Suverek you have hilly country, and between the latter and Kara-Baghcha at the southern foot of the Karaja-Dāgh—thirty miles—the tract, though a nearly perfect level, crosses a tremendous basalt stream, rendered still more difficult to traverse by water oozing out between the blocks, so creating a morass, in which the stones seem to float—if I can use such an expression—as, when the horse's foot touches them, they sink with the animal up to his knees. The name of the place is, indeed, sufficiently indicative of its character—it is called "Kāynak," or bog, the whole surface of which, when travelled over, has a tremulous motion, comparable to the agitation produced by boiling water. Arrived at Kara-Baghcha, there is the Karaja-Dāgh to be crossed before entering into the Diyārbekir plain. That mountain has always been a difficult one to travel over during winter, from the vast accumulation of snow encumbering its summit and flanks, and so detaining posts and caravans, occasionally for many days together, while its passage, before a beaten track, has been trodden out by caravans or men hired for the purpose, or during storms, frequently resulted, during my residence at Diyārbekir, in loss of human life and of animals.

Although Lord Enfield's Circular of August 25th, 1871, invites a Report simply on communication with India by the routes I have already dwelt upon, yet, still, as the Committee of the House of Commons appears to have taken into consideration other projects to connect India with England through Turkey, I may be excused if I allude to alternative lines traversing more distant districts, of which I have some experience. I am more induced to intrude my crude ideas and information as one of the many great advantages insisted upon for the Alexandretta, Aleppo, and Kurayn line, is the fancied strategical importance attaching to its possessing an open sea port on the eastern side which, it is imagined, cannot be so advantageously found anywhere else on the Turkish Mediterranean seaboard, than at Alexandretta. Whether as regards the tenor of the evidence or the questions addressed by members of the Committee, all seem, however erroneous, to favour this idea, and convey an impression that there is no choice between Alexandretta or some one of the Turkish harbours on the Black Sea, any one of which, however favourable to Turkey, must, for obvious reasons, be entirely unsuitable to England. There is another consideration, too, which I believe—wrongly, probably—is not unworthy of consideration. The adoption of this so-called Euphrates Valley route appears more like a selfish, narrow undertaking, beneficial to England only, than one based on generous, broad views, embracing universal international interests, whose conciliation can alone render a railroad communication between India and England politically and commercially remunerative, more worthy of the age we live in, the doctrines it professes to inculcate, than the partial line proposed.

A through line, in creating a combination of interests, would accommodate all, satisfy all, and, to quote the words of the eminent gentleman examined, whose evidence is entitled to the most weight, "would involve much higher, larger and more important interests, which might fairly be taken into consideration, as against the mere difficulties of raising a large sum of money; that is to say, it would be of immense importance to India,"—may it not be added to entire Europe, Turkey, and Persia too?—"to be in continuous railway communication with Europe, whereas," as I have shown, "it would be of very trifling importance merely to have the territory bridged over between the Mediterranean and Persian Gulf by a railway, while there was still a long sea voyage, or a considerable sea voyage, on either side of the Euphrates Valley Railway." The question treated in this light, and this is the sound, true one to regard it in, is not simply how we shall get quickest to India—although in that respect any one of the lines to be mentioned hereafter will effect that object far better, less liable to interruption than the former routes alluded to—how shall our trade and interests be best nourished and secured? for we are not the only nations concerned, as France, Belgium, the North German Confederation, Austria, Turkey, and Persia have every thing to gain commercially from a large view of the question resulting in a through line, nothing to expect from the cramped one that confines it to a section. By consulting and amalgamating all their separate interests the common weal and our own private advantage will be best served. Turkey in particular, in whom we have so large a stake, with whose destinies as regards India our own are so intimately connected, has declared herself unmistakeably in favour of a through line, from the support she has given to the Roumelian scheme, now in active construction, to connect Constantinople, by Adrianople, Philippopoli, and Belgrade with the Austrian main line. Further, to indorse this opinion, she has commenced a line herself without foreign capital, that shall eventually, by Izmīd, Angora, Siwās, Diyārbekir and Bagdad, connect the furthest western with the most distant eastern portion of her Empire.

With a full knowledge of this, independent of the fact that really it is the true, proper, connecting link between England India, the only one that will permanently benefit us, neither politically or commercially would it be advisable to divert such spontaneous energies from a route she insists upon as the best adapted to her wants, to another that must comparatively be of little use to her.

The main lines I am about to describe, generally independent of each other, are designated mains No. 1, No. 2, No. 3, the alternative modification in each being marked alphabetically.

Main No. 1 starting from Scutari follows the old northern post road by Izmīd, Boli, Niksār, to Erzerūm, then by Malazgerd to the Persian, frontier north-east of Vān, being a total length, with détours, of 1,037 miles, and to Tabriz by Dilmān another 100 miles.

The two alternative modifications A and B, both of them better than the main line, are respectively 1,141 and 1,091 miles in length, to be lengthened for Tabriz by another additional 100 miles, as in the main. The latter is, perhaps, taking all circumstances of trade and greater comparative facility of route into consideration, the more preferable one of the three, but the first-mentioned main, having for the centuries prior to steam navigation been the invariable passage adopted between the capital of Turkey and Persia, shall be first considered. But it is well at the outset to state that they all present very considerable engineering difficulties from Niksār East—not insurmountable difficulties, but such as, while considerably diminishing the speed, may be deemed, from the corresponding extra waste of time and money in their construction, sufficient bars to the adoption of any one of them.

Starting from Scutari, it is taken for granted that towns will be in continuous connection by steam-flying bridge, or applicable ferry with the Roumelian-Austrian line. The different stages would be to—

	Miles.	Population.	
Izmīd	72	30,000	The road from Izmīd to Amāsia calls for no remarks as far as great engineering difficulties are concerned. It is rich, well-peopled, and fertile.
Sabanja	24	2,500	
Khandek	36	1,000	
Boli	36	10,000	
Boli	36	1,500	
Kereydi (Garda?)	84	1,000	
Koch-Hisāri	24	20,000	
Tosia	36	3,000	
Hajji-Hamza	36	1,500	
Osmanjik	24	1,500	
Osmanjik	42	12,000	
Marsivan (Merzifūn)	12	20,000	
Amāsia	54	12,000	
Niksār			
Then by the Valley of the Lycus to near Kara-Hisāri-Shābīn	112	..	From Niksār, passing Koplū-Hisār, population 5,000; to near Kara-Hisār, population 20,000; road difficult. Rich mineral deposits between Niksār and Kara-Hisār. The road to be carried along the bank of the Lycus. Along the Lycus, or Galgit-Sūyu, as from Niksār. From Chiftlik to Kara-Kulak mountainous rest to Erzerūm level. Hilly and level.
Chiftlik	80	..	
Kara-Kulāk	36	600	
Ashkala	48	700	
Erzerūm	30	50,000	
Malazgerd	131	2,000	
Persian frontier	120	..	
Total miles	1,037		

From Scutari to Amāsia the road, passing through a fertile and in some places thickly-wooded country, is by no means of a nature to afford many difficulties, but, from the latter town to the point it would approach nearest Shābīn-Kara-Hisāri, following from Niksār the valley of the Lycus, Galgit-Sūyu, as the mountainous nature of the country renders any other line impossible, the obstacles to be overcome are serious. Not that the banks of the river are blocked up so much by the mountain chain it perforates, but because their nature favours land slips, always difficult to protect the road against. From Shābīn-Kara-Hisāri to Chiftlik the valley of the river offers no obstacles as far as Sudāk (the ancient Satala), some miles beyond it; but between Sudāk and Kara-Kulāk there are ten miles of high mountain land, not actually impracticable, yet still sufficiently elevated to occasion heavy and extra expense. From Kara-Kulāk to Ashkala on the Kara-Sū and Erzerūm is level. To avoid the precipitous mountains immediately backing Erzerūm, and upon whose slope the town is built, the road would cross the low spur of the Deva-Boyuni, into the fine, fertile plain of the Lower Passin north, till, striking the Aras River, whose right bank, crossing to it here, would be followed up south-east towards its sources as far as Kulli, from whence it would go east by Kosli to Malazgerd, ancient town north of the Vān Lake, on an affluent of the Murād-Sūyu, crossed about two miles from it by a stone bridge, now delapidated, though easily put into repair. The nature of the country between Kosli and Malazgerd is generally favourable for the work; but between Kulli and Kosli a mountain pass has to be crossed, whose ascent and descent, however, are easy and gradual.

Between Malazgerd to the Persian frontier the country is alternate, undulating, and plain, but the whole of it most valuable for grazing, and, in consequence, favourite resorts for Koord pastorals, whose flocks and herds cover it for eight months of the year, heavy snow falls during the other four, in themselves considerable drawbacks to the route from Niksār onwards, from their volume and the avalanches they occasion, oblige them to keep their animals under shelter for that period.

By the alternative détour A the line as far as Siwās would be by main No. 2, that is:—

	Miles.	Population.
By the Scutari-Angora-Yüzgat line	618	..
Then to Enderes	78	2,000
By Zāra and the old Necropolis of Pompey to near Shābīn-Kara-Hisāri; then as before by Lycus Valley to Chiftlik to—		
Erzerūm	194	..
Persian frontier	251	..
Total miles.. .. .	1,141	

This line avoids the very difficult country between Amāsia and Shābīn-Kara-Hisāri, and passes through a more fertile region to the same point on the Lycus. Modified route B goes by main No. 1, already described as far as Amāsia.

	Miles.	Population.	
Scutari to Amāsia..	101,500	
to Zīla	30	10,000	Annual fair.
Tokat	32	27,000	By winter road past Kinniz and Yeni Khan.]
Siwās	80	40,000	
	586		
Then as by (A) to—			
Enderes	78	2,000	
Erzerūm	194	50,000	
Persian frontier	251		
Total length	1,091		

The advantages of carrying the line round by this longer route consist in its avoiding the difficult tract between Amāsia and Tokat and its passing the two very important trading sites of Zīla and Tokat, over a more fertile country, as far as the latter town.

At Zīla a fair is held in autumn, resorted to by traders from Northern Syria, Diyārbekir, Kharput, 'Ayntāb, and other places, for the sale or exchange, against other wares, of the native silk and cotton goods they manufacture, and from Yüzgāt and other places west. At Tokat is the Refinery for the copper produced and smelted at Argana-Ma'dani, near Kharput. After having gone through the different processes required, it is sent to Constantinople, to the amount of 800 or 900 tons annually. In its neighbourhood are extensive saltworks, farmed by Government to contractors for 27,000*l.* per annum, not to mention other industries, whose produce would tend to swell the local traffic of the line to a considerable extent. Between Tokat and Siwās indisputable engineering, offered by the abrupt ascents of the Kara and Chemlek mountains, first present themselves, but in following the winter road past Kiniz and Yeni, they may be materially reduced.

The trade, as it now exists, feeding this line, including the Persian transit—the latter alone now employing 80,000 pack animals between Tabriz and Trebizond—is not less than 3,000,000*l.* sterling; and if native produce, grain, cattle, passenger traffic, and Indian trade were added, fully demonstrates its value, considered simply as a through commercial route in direct communication with Persia, which it would bisect, to India.

In adopting a line that can at the same time assist our ends, and, by passing through her centre, alone virtually improve Persia, another route far more south of Erzerūm and the Lake of Urūmiyya would have to be adopted. Such a one is just practicable, diverging from Main No. 1 at Sudāk to Erzingyān, and then by Pilamir, in the Kūzichan district, through Wardo, south of the Bin-Gyeu-Dāghī, to Mūsh and Bitlis. The two large rivers, Murād and Kara-Sū, intersecting the Mūsh Plain, are crossed, at present, by stone bridges. From Bitlis, crossing the gentle acclivities of the Ordosh Mountain spurs, that run at right angles to the Vān Lake, it would debouch near Vastān, where the Khosh, Abor, Mahmudiyya rivers join the lake. Pursuing the course of the river upwards till reaching the Hakkāree district of Albek, it would there cross the frontier somewhere near Bashkalah, but north of it, then go by an easy country past Orūmiyya and Mehremetabad, north of Saūch-Bulāk to Sultāniyya, Isfahān, Kirmān, and Beloochistan, to Kurrachi or Hyderabad. But great engineering obstacles exist

between Pilamir, the Mūsh Plain, and along the southern shores of the Vān Lake. They would not perhaps daunt an experienced enterprising engineer, but their nature is sufficient to render such a line unpopular to capitalists furnishing the funds. The distance would be about the same as the former line described main 1, viā Erzerūm, to the frontier of Persia.

Main No. 2, to be connected by the Roumelian line in progress from Constantinople, opposite Scutari, with the Austrian net-work, seems of all others the real one to take in hand.

The only serious sea interruption lies between England and France; for, from Constantinople to Scutari, the passage of the Bosphorus is so short that any well-organized ferry system will be sufficient to obviate difficulties on that score; and, although Scutari is not an open Mediterranean port, it is far more serviceable than any other on that sea. If also in selecting a line any importance be attached to considerations suggested by favourable natural features, this is the only one nature has so endowed in giving it an almost uninterrupted land route between the West and the East; while it must not be forgotten that Turkey, next to us the chief State interested, has shown an undoubted bias for it by the marked interest, apart from home consideration, she shows in the Roumelian scheme, and by herself, as stated before commencing an extension between Izmid and Eski-Shehr, south of Lefka, that shall eventually be prolonged to Angora, Siwās, and Bagdād. The line I have indicated on the index map, without going so far south as Eski-Shehr, goes to Lefka, Angora, Siwās, &c., and so to Bagdād.

The mere physical geographical difficulties urged, or that may be urged, against its adoption, and that undoubtedly present themselves till entering Mesopotamia, involving as they would serious, even enormous, outlay, cannot for a moment be considered in comparison with the immense commercial and political advantages, not invaluable to us alone, but common to all the nations whose countries it would intersect. Nor do I think that the vast combined genius, enterprize, and capital that produced the engineering wonders on the Semering, and Mont Cenis, in the Tyrol, and Suez Isthmus, will now, from the mere facts of difficulty and expense alone, be so backward or timid to prevent an equally strong combination of energy, money, and mutual interest carrying out a far more useful lucrative work, what must prove the crowning, most civilising, wonder of the age, possessing, from its international character, peculiar claims to universal patronage and support.

The different principal stages, with their town populations, along main No. 2, commencing at Scutari, would be:—

	Miles.	Population.	
Izmid	72	30,000	
Sabanja	24	2,500	
Lefka	55	2,000	
Angora	181	54,000	
Yūsgāt	146	18,000	
Siwās	140	40,000	
Malātia	111	12,000	
Gerger	75	2,000	Cross Euphrates into Mesopotamia to the left bank.
	70	300	
Nisibīn	90	2,000	
Peysh-Khābūr	70	1,500	Cross Tigris to left bank into Turkish Arabia.
Mosul	90	30,000	
	1,124		
Bagdād	250	90,000	
Muhammara	360	6,000	
Total miles	1,734		

From Scutari to Sabanja the line proposed forms part of the old post road. From the latter village it should pursue the course of the Sangarius south to Lefka, then diverge east by Bey-Bazāri to Angora. The Turkish plan is to go on to Eski-Shehr from Lefka, and then by Sivri-Hisār to Angora. The country by this latter round is certainly more favourable, but not so much so as to compensate for the additional distance involved by its adoption. Between Angora, Yūzgāt, and Siwās the country traversed by the Indian telegraph is by no means difficult; although about the first-named town there are rude hilly obstacles, and before

reaching Sīwās,—close to it—rather a high ascent to the highland plain in which it is situated. The main engineering difficulties, following the route of the Antonine Itinerary to Gerger (Barsalium of the Tables, and Juliopolis of Ptolemy), commence here, and do not end till crossing the Euphrates below Gerger, a distance of 186 miles.

Latterly, a cart road has been projected by the Turkish Government, to connect the rich copper mines of Argana-Ma'dani with Gerger on the Euphrates, and by that river by raft with Birejik; in which manner the ore will be delivered at Alexandretta on the sea, *vid* Aleppo, at a much cheaper rate than now at Tokat, from whence it has still a long land and sea journey to Constantinople by Samsūn.

Fortunately, the difficulties I have alluded to are not continuous, consisting, as they do, in the Taurus branches, none of them very high, excepting between Sīwās and Delikli-Tash, crossing the road at intervals. Between them, however, as far as Malātia, are extensive fertile plains, the latter the most fertile, the most extensive, yielding, as of old, an enormous amount of animal and agricultural produce. From Malātia to Gerger, 75 miles, past old Claudias (Kollodua of Abū-'l Faraj—now Klodi), the nature of the tract is certainly unfavourable. A rugged confusion of hilly heaps, forming part of the Taurus chain, press down on the Euphrates, that in this neighbourhood has forced a passage through it. When, however, I travelled over this district in December some few years back, although snow was pretty heavy on the peaks, it did not appear to me to present any very extraordinary drawbacks to easy intersection.

From Gerger to Virān-Shehr (the old Tela, Constantina, and Tel Moezzilat of the Syrians), is a level; in some places consisting of basaltic formations, crossed by natural ducts called "Jarājib," falling into the Khābūr, that drain the upper country between Masius and the Khābūr, which would have to be bridged. From Virān-Shehr on to Nisibin, where the line would follow the Aleppo-Muhammara one already described, the plain is like a smooth bowling green, broken only by one "Jurjūb," and a branch of the Jagjaga river, where the ruins of ancient bridges and towns mark the importance of this old line of communication.

The natural, industrial, agricultural, and commercial richness of this route cannot be in the least over-estimated. It passes through a more populated country than any other similar one; which, from Bey-Bāzari to Muhammara is a vast nursery for horned cattle, sheep, mohair goats, horses, camels, and their produce. Close on the route, or not far distant from it, particularly near Sīwās, Malātia and Gerger, are varied rich mineral deposits, such as copper, silver, tin, salt, and saltpetre. The great importance of all these and other north-western feeders to this part of the line as far as Sīwās, can be judged from a perusal of the full, detailed, and very able Commercial Report of Mr. Consul Palgrave, of Trebizond, in the Blue Book of Consular Commercial Reports for 1868; Part 2.

More though close east, the fertile Argawān plain, the silver mine of Kebān-Ma'dani, and the vast timber growing district of the mountainous Dersim—abounding also in mineral wealth—must be taken into account. This last is in easy communication by raft close up to Malatia, along the Mezūr and Murād-Sūyu rivers, that united, fall into the Euphrates near the silver mine. By that comprehensive water-line of inner Anatolia, an immense quantity of fine timber, charcoal, valonia, and galls could be conveyed to a proper depôt, and rendered available either for home use or foreign export; whereas now, these rich productions either lie rotting on the ground, or are entirely neglected from the want of a proper conveyance to a profitable destination.

All these facts, hitherto almost without weight, in the absence of proper communications, must and will produce, in conjunction with the rail, rich progressive returns, that, without reference whatever to the Indian and Persian trade, are so many infallible securities for its success. But on this line, as also on all others through Turkey, there is a great want of proper fuel on the spot. As far as Sīwās, probably, the Eregli coal mines would be available; the forests on its line also, together with those in the Dersim, supply large quantities of wood, but, from that town to Muhammara, there is absolutely nothing to vitalise an engine for any length of time, and therefore fuel would have to be procured from places some distance from the route, or from termini touching upon the sea.

There are four alternative modifications of this main line from Scutari to Muhammara, A, B, C, and D, respectively 1,750, 1,795, 1,795, and 1,724 miles in length. The first, A, is a very good one, but the latter, D, is probably the best suited to constitute the main.

This opinion is based, not on map study, but on personal experience during many years of travel over the country in all the directions indicated. Therefore, although there is another, a 5th modification to be considered last of all, it is not designated by any particular mark whatever, any knowledge of it being confined to hearsay and reading only.

Modified route A follows main 2 from Scutari, as far as—

(A.)

			Miles.	
Malātia			729	Then by Bolam river-pass to Kyakhta, then following Euphrates. Cross it at Samisāt.
Samisāt			65	
Orfa			25	
Harrān			30	
			849	
Muhammara			901	Then along the line already described as the Alexandretta Muhammara one.
Total miles			1,750	

From Malātia the road by the Bolam Pass to Kyakhta lies more south than the Gerger one. The first twelve miles pursuing the course upwards of the Deyma or Deyr-Mesih stream to the foot of the Sū-Batan Mountain is good; then, however, its ascent and descent into the marshy 'Abdu-'l-Kharāb plain, a distance of eleven miles, is rugged, but not to any serious extent, as the Turkish Government has been able in a short time to run a rude military road round the side of the hill, which rises gradually, and debouches as gradually into the plain. To avoid its marshes, the rail should follow the foot of the mountain for four miles till entering the Bolam Valley, then crossing it near some old silver mines to the Kyakhta River. This stream runs in a deep mountain gorge as far as the town of the same name; but there is ample room on either bank to construct a solid broad way as far as its junction with the Euphrates—a distance of twenty-four miles. From there to Samisāt, fourteen miles, following the right bank of the Euphrates, is level. The line would cross either here or at a narrower point lower down—on its further course to Orfa and Harrān—over, for all engineering purposes, a rich, fertile, populous level. At Harrān it would merge into the Aleppo-Muhammara line first described.

Modified route B, diverging at Gerger, would take in Diyārbekir, then, going south to Nisibīn, join the main there. The following are the stages:—

(B.)

			Miles.	Population.
Scutari to Gerger			804	..
Diyārbekir			99	20,000
Ribāt			50	..
Nisibīn			72	..
			1,025	..
Muhammara			770	..
Total miles			1,795	..

From Gerger, the line, crossing the river some little way below it, would go nearly west, rounding the north-west end of the Karaja-Dāgh, over a nearly dead level to Diyārbekir, so bisecting its fertile plain. From thence, in a direct line, by Chinār-Tepesi to the vast ruined fort of Ribāt (probably the Rhabdium of Procopius), then across the country and join, at Nisibīn, the main line so often alluded to.

Between Diyārbekir and for some distance beyond Chinār, about twenty-four miles, a great accumulation of small basalt blocks encumbers the soil, which, however, is otherwise level. I cannot easily conceive that this circumstance can occasion any engineering difficulty, as they rest flat on the ground, on a stiff clayey soil, and are easily removed. Ten miles beyond Ribāt these obstacles, if they may be deemed so, occur for another thirty miles, in the direction of Nisibīn, after which all is again smooth.

There are not many villages at present on this route, but the remains of several are sufficient to denote that at one time the whole tract was densely populated and well cultivated. In the neighbourhood of Ribāt particularly, close south-east of it, are two or three old sites where, from the presence of Byzantine Greek inscriptions, it seems probable here was the famous fertile Ager Romanorum.

Modified route (C) I must confess from its engineering difficulties—to a scientific man, however, they may not appear at all important—seems to me expensive, as compared with the others, though a most desirable one, from the valuable results its adoption would ensure in developing the rich resources of Kharput, so creating a large local trade and re-establishing the former vast income derived from the copper mines at Ma'dan. Its stages by main No. 2 are the same as far as Malātia, then to

	Miles.	Population.	
Kamar-Khāni	24	1,500	Cross Euphrates with Mezrā.
Kharput	36	30,000	
From Scutari to Malātia	729	..	
From Scutari to Kharput	789		Here are rich copper mines. Cross Dibena-Sūyu to the left bank of the Tigris. Cross Tigris to right bank.
Argana-Ma'dani	42	10,000	
Amana	42	..	
Diyārbekir	30	..	
Then by (B) to Nisibīn	903	..	
Muhammara, as before	122	..	
	770	..	
Total	1,795		

From Malātia to Kamar-Khāni and Kharput there is really no engineering obstacle whatever, the road from the former to Kamar-Khāni consisting only of gentle undulations; after crossing the river at the latter point it would enter the Chalgān Valley, traversed by the Parchikan or Kamar-Sūyu, close up to Kharput, or rather Mezra, a suburb of the former, which is situated on a high mountain peak, the latter being, on the contrary, in the plain and the seat of Government. From Kharput—I use the name of this town, as it is, for all purposes, identical with Mezra—to the Gyeuljik Lake and sources of the Tigris is also an even level, but 10 miles beyond the latter the mountains pressing down upon the stream renders the construction of a road following its banks the only feasible one, difficult and expensive as far as Amana, a distance of 60 miles; for the road there would have to be carried along the edge of the hills, previously scooped out for the purpose. Any attempts to pass over the Deva-Boyuni and Mihrāb Mountains direct to Argana, in preference to the river line, and so at once into the Dyārbekir plain, would, I conceive, be next to impracticable, although a military road has been carried across it.

The line I have pointed out, as following the Tigris to Amana, does not present equal difficulties throughout the whole of that distance; in particular parts only, as the present road to Argana occasionally follows, and might be entirely constructed on its banks, the distance being short, but from the Argana-Ma'dani Copper Mines to Egil, close to Amana, the high mountain cliffs offer greater opposition. Still, after having seen and travelled along the carriage road from Baziasch to below the Iron Gates on the Danube, the difficulties attending this line would not, I think, deter any engineer carrying it out successfully and at no very great cost, as compared with the Danube road. At Amana the line must be carried over the Dibena river just before its junction with the Tigris, then, following the left bank, through a rich country, it would cross the latter at Diyārbekir, and so go further on by (B) to Nisibīn and Muhammara.

The advantages attending this route are, as stated before, those attaching to the rich extra returns to be derived from its passing by Kharput (formerly the head-quarters of the 4th Army Corps, now removed to Erzerūm), and the Argana-Ma'dani Copper Mines. In some of my Commercial Reports the Kharput district has been affirmed to be perhaps the only one in Asia Minor that can boast of an exuberant population, so forcing many members to emigration for a living to foreign countries or different Turkish provincial capitals, although its rich plains, were they all carefully cultivated to their full extent, are capable of supporting ten times the number. Extended agriculture, however, now would be ruinous, its inland position

and want of roads rendering the export of surplus grain stocks impossible. There is also in and about the place a very important manufacturing industry, producing yearly large quantities of silk and cotton, and dyed cotton goods by the piece and yard, that find a universal consumption throughout the Empire. Its foreign European export and import trade amounts to 200,000% annually.

The copper mines at Argana-Ma'dani furnished an export of that metal to Mosul, Bagdād, and India alone in—

	Tons
1780	6,400
1819	3,000
1836	1,000
1866	1,150

This enormous decline in their yield is owing simply to the want of proper communication preventing the importation of the necessary fuel at a cheap rate, all having formerly been supplied from neighbouring forests, now exhausted, or too distant to be at present available, and the introduction of proper machinery to drain the water, that has rendered the most valuable shafts useless. In consequence, sixty are now closed and only six active. There is no reason whatever, according to the late opinion of scientific men who visited the place and tested the ore, why the yield of 1780 should not be doubled or tripled, were the works only in practicable connection with places from whence the material necessary for smelting, and engines indispensable for their revival, could be constantly and readily procured. Any way, if the whole of the modified route this way to Diyārbekir is not followed, a branch from Malātia as far as the mines would afford important and rich feeders to the main without any very great extra cost for construction, with the exception of bridging the Euphrates at Kamar-Khāni.

Route D, I have before noted as being, perhaps, the most desirable, is the same as A up to Samīsāt; its subsequent stages are to

	Miles.
Virān-Shehr	70
Nisibīn	90
Scutari to Samīsāt	160
	794
	954
Nisibīn to Muhammara by main 2	770
Total	1,724

It combines the same advantages as all the others, but is shorter and easier constructed. The only difficulties, if they can be called so, exist in the basaltic country about Virān-Shehr in a perfect level, and Jurjūbs to be crossed, already described further back.

The admirable position of Virān-Shehr, on the old commercial road between Nisibīn, Harrān, and Seleucia, must have been at once recognized in the earliest periods of commerce. The Turkish Government, convinced of its value, has made some attempts to renovate it by inducing agriculturalists to resort there, on condition of exemption from certain taxes and services, and building barracks for the troops who were to protect them; but nothing has come out of them, and it is still a mass of ruined stone forts, bazaars, palaces, and cathedrals. Any traveller visiting it, while appalled at the vast series of calamities that occasioned the total devastation of such magnificent buildings, can easily form an idea of the immense amount of wealth once accumulated there; the great exuberance of the population who then inhabited it, both due to the active trade formerly attracted to it from its position.

Another route to connect Alaja-Khān, on main No. 2, with Aleppo, and so on with Muhammara, is by Derenda, Albustān, Mar'ash and 'Ayntāb, but not having any experience of it, my remarks thereon must be valueless. It appears, however, though longer than the rest, a desirable modification for consideration. The distance would be about 1,900 miles.

Of main No. 3, starting from Smyrna and falling into main 2 either at Angora or Siwās, my personal knowledge is limited for so much of the country to Siwās, but as being more serviceable to Turkey and England too, than the simple Aleppo line, coupled with the fact that some part of it, as far as Kasaba, has been

completed with English capital and an extension proposed up to Afyūn-Kara-Hisāri: this Report would be incomplete without some allusion to it, more particularly as its Mediterranean terminal harbour is commercially and strategically far superior to Alexandretta, from its affording, as it does, more abundant supplies, a finer climate, at the same time that it is approachable close in shore at all seasons, in all weathers, by our fleets, which is certainly not the case, from my own personal experience, with Alexandretta.

Main No. 3.

	Miles.	Population.	
Smyrna to Sardis	60	..	By Kasaba
Kula	45	10,000	
Ushak	50	25,000	
Afyūn-Kara-Hisāri	70	20,000	
Eski-Kara-Hisār	20		
Amorium (ruins).	45		
Sivri-Hisār	50	3,000	
Angora	85	54,000	
	425		
Then by No. 2 main to Siwās, Malātia, Mosul, Bagdād, and Muhammara	1,402		
Total miles	1,827		

Or Modified Route (A) from Smyrna to

	Miles.
Afyūn-Kara-Hisāri, as above, by main 3	225
Then round the Karaja-Dāgh, and following the course of the Halys to Siwās, say	500
	725
Then by No. 2 main to Muhammara	1,116
Total	1,841

It is unnecessary to dwell upon the political importance of Smyrna as a desirable Mediterranean sea terminus, or upon its great commercial activity. Other sites on this line, as Kula, Ushak, and Afyūn-Kara-Hisāri, are well noted either for their great manufacturing or agricultural industries, at present scarcely at all developed from want of proper communication.

By the modified route A the line would pass close to Kaysariyya, population 22,000, a large trading centre, having extensive commercial relations with Bagdād, Diyārbekir, Aleppo, Erzerūm, and Constantinople, close to it a new Circassian colony of 60,000 souls, and a vast saltpetre refinery whose produce is sent to the capital.

(Signed) J. G. TAYLOR.

Erzeroom, January 28, 1872.

No. 17.

Consul White to Earl Granville.—(Received February 12.)

My Lord,

Tangier, January 31, 1872.

I HAVE the honour to transmit herewith a Report which I have drawn up on the subject of communication with India through Turkey by the Euphrates Valley Railway, as directed in Lord Enfield's Circular despatch of the 25th August last.

I have, &c.

(Signed) HORACE P. WHITE.

Inclosure in No. 17.

Report by Consul White.

IN reporting on the subject of communication with India through Turkey by the Euphrates Valley route, I wish to premise that it is now more than ten years since I ceased to reside in Syria, and even when residing there I at no time visited the Valley of the Euphrates, my acquaintance with the country through which it has

been proposed that such a route should pass being limited to Syria Proper, and not extending beyond fifty to ninety miles beyond the coast line. Any Report, therefore, that I may attempt to draw up on the subject must necessarily be very imperfect.

In the observations I now propose to offer I shall not advert at any length to the commercial importance and value such a route would most undoubtedly possess. The country which it would traverse has been celebrated from ancient times for its almost unrivalled fertility; and though it may now be in great part deserted and withdrawn from cultivation, it is easy to foresee that, by the facilities which it would afford for the transport of produce, the establishment of a railway cannot fail to exercise such a vivifying influence, and give such an impulse to agriculture and industry, as would lead to the resurrection of the country and its restoration to more than its pristine prosperity.

The people by whom this portion of the Turkish Empire is occupied are always keenly alive to their own self-interest. Cupidity and the love of gain is one of the most marked features of their character, if not the very mainspring of all their actions. When it is discovered that the cultivation of the soil will bring wealth to those who occupy it, they will not be slow to seek to take every advantage that may be in their power of this means of enriching themselves. The Arab is not the apathetic and indolent being his neighbour, the Turk, is. If he sees no profit in tilling the soil to a greater extent than may be necessary for the subsistence of himself and his family, he will not put himself to the trouble of doing so. But when once he perceives that a ready and profitable market is offered for his produce, by which he may hope to amass money, his natural cupidity will be a sufficient stimulus to urge him to exert himself with the view to gaining that object.

It may be likewise confidently anticipated that, in the event of Bagdād and Basra being united to the Mediterranean by means of the Euphrates Valley route, the greater part of the trade of Persia will be diverted into that channel, and thus Great Britain would profit by a trade which is now almost the exclusive monopoly of Russia.

There is, I believe, no conflict of opinion as to the direction the proposed route should take when it once strikes the Euphrates, but there has been a divergence of opinion regarding the point of the Mediterranean from which it should start. The ports of Alexandretta and Suwadyiyya appear, however, by general consent, to be regarded as the points which offer the greatest facilities for that purpose. The Port of Tripoli, and even the ports further south of Sayda (Sidon), and Sūr (Tyre), have indeed been suggested as suitable starting-points, and each of these ports may possibly offer some advantages that are not possessed by the two former. The route from Tripoli would pass in a north-easterly direction to Kal'atu-l'-Hisn, and proceed thence to Hams without offering any great engineering difficulties. The routes that have been suggested to start from Sayda or Sūr would strike the Laytāni River, and crossing the Bik'a and plain of Ba'lbek in a northward direction would also enter Hams, and thence by Tadmūr (Palmyra), reach the Euphrates at Hit. This route would be longer than that by Tripoli, and I should judge from the nature of the country it would traverse between the sea-ports and Hams (though I have no accurate knowledge of the route), that it would be more difficult, and consequently more costly.

A somewhat longer route than that by the Euphrates Valley, but one which would have the advantage of passing through a part of the country that is more thickly inhabited, and has a more settled population, has been proposed to start from Alexandretta, and proceed by Aleppo to Birejik, where it would cross the Euphrates, and, passing by Urfa, reach Diyārbekir, and thence in a southerly direction to Mārdīn, Nisibīn, and Mosul, and descend by the banks of the Tigris to Bagdād and Basra. Such a route would of course possess the advantage of connecting, by direct communication with each other and with the coast, cities which would rapidly become centres of trade of considerable importance, and would therefore, commercially speaking, be preferable to the more southern route, which, following the course of the Euphrates, would pass by no large populous cities.

My remaining remarks will be confined to the consideration of the comparative advantages of Alexandretta and Suwaydiyya, as termini for any railway that may be constructed with the view to connecting the Mediterranean and the Persian Gulf.

Alexandretta possesses a natural and capacious harbour, in which vessels of the largest size can find shelter and lie in safety during the greater part of the year. It is, however, exposed in winter to a strong wind which comes down with great violence from the mountains, the effects of which are sometimes severely felt by the

shipping at anchor in the harbour. The greatest drawback to Alexandretta is its climate, which, during the summer months, is most insalubrious, and in some years even deadly. It would frequently happen that from June to September the whole Staff of the railway officials might be prostrate with fever, and quite incapable of performing efficiently their duties. Passengers likewise would be exposed to the deleterious effects of the malaria, which are felt much more readily by those who are unacclimatized. Cases have been known of persons who have fallen victims to the Alexandretta fever, although they have only landed there for a few hours, and consequently been exposed for a very brief time to its malaria.

It is true that it has been stated, that by the mere draining of its marsh, Alexandretta might be rendered healthy. This, I think, is very doubtful, or true only to a certain extent. That the climate would be greatly improved by drainage of the marsh admits of no question, especially if the work of drainage be thoroughly executed. Very sensible improvement was experienced even after the partial and imperfect draining executed by order of Ibrahim Pasha, and once again at a later period. But it is doubtful how far any system of draining would be entirely successful, owing to the fact that the marsh is lower than the sea-level, and the canals, which must be opened to carry off the waters from the marsh, would be frequently filling up, as has already happened, and constant expense would be required to keep them open.

The malaria produced by the marsh of Alexandretta is, however, not the only cause of the insalubrity of that port. During the hottest season there is a total stagnation of the atmosphere, well known to residents. All circulation of the air appears to cease, and the effect thus produced on the human system is very trying, causing great lassitude and prostration, with a feeling of listlessness, want of energy, and inaptness for work of any kind. This stillness of the atmosphere is attributable to the fact, that the mountains rise immediately behind the village of Alexandretta, and intercept the summer breezes, which pass over it, although they are felt by the shipping in the harbour.

A further objection which may be urged against Alexandretta as the terminus of the route under consideration, is the mountainous character of the country through which a railway would have to be carried before it entered the plain. In the present perfection to which the art of engineering has been brought, every obstacle of this kind can of course be surmounted; but the cost of carrying a railway over the Beylân mountains, or of tunnelling through it, must be necessarily very great.

Attention should be directed to the fact, which is perhaps not sufficiently known, that there are years in which the whole plain near Murâd-Pasha, which the railway would enter after quitting the Beylân mountain, is completely inundated, owing to heavy and frequent rains; and when this occurred communication would necessarily be interrupted. To avoid this inconvenience, a considerable détour must be made, the route being carried among the Kurd hills to the north.

Should the Bay of Antioch be selected as the starting-point of the proposed railway, the difficulties to be contended with would be comparatively few. It presents the only natural opening in the hilly country of that part of the coast of Syria. A commodious and safe port could be constructed with little difficulty at its south-eastern point, under the shelter of Mount Casius, which would afford sufficient room and protection for the shipping that would frequent it.* The climate of Suwaydiyya is good; it is free from all malaria, and as healthy as any spot to be found on the coast of Syria. It is inhabited by a remarkably quiet and industrious population, chiefly composed of Christians, who are devoted to agriculture, rearing the silkworm, and the production of raw silk. The soil is of great fertility, and the country most picturesque and beautiful. If opened to commerce by the formation of a harbour, and the construction of a railway, Suwaydiyya would rapidly become again, what it was in former times, an important and flourishing seaport. The only objection that can be urged against its selection as the terminus of the Euphrates Valley route, is the cost of carrying the railway through the gorge of the Orontes River to Antioch. This gorge is in some parts exceedingly narrow, and the course of the river winding; and a large number of bridges would be required to be constructed, to carry the railway through it, and on to the town of Antioch, and Jisru'l-Hadîd, about twelve miles further on. The cost, however, of bridging the Orontes would probably be insignificant, compared with that of

* During winter, except in the months of December and March, the wind blows chiefly from the east, that is, from the land, and the sea is therefore calm.

tunnelling the mountain, which separates Alexandretta from the plain, or of carrying a railway over its height. The difficulty presented by the Orontes might probably be obviated by taking the railway in another direction, rounding the hills, which now presents the difficulties of the mountains behind Alexandretta.

In conclusion I would observe that the advantages possessed by Suwaydiyya appear to me so greatly to exceed those possessed by Alexandretta, that I should deprecate strongly the preference being given to the latter port. The objections against Alexandretta, as I have pointed out, are most serious: a deadly climate, which can never be rendered healthy, the engineering difficulties offered by the Beylân mountain, and the occasional flooding of the plains beyond it. On the other hand, the single difficulty with regard to Suwaydiyya is that presented by the River Orontes, over which several bridges must be thrown, unless another route be chosen which would avoid that river. The port of Alexandretta is larger, but not more secure, than that which, at an inconsiderable expense, might be made at Suwaydiyya. I know of no other compensating superiority which Alexandretta possesses over Suwaydiyya.

(Signed) HORACE P. WHITE.

Tangier, January 31, 1872.

No. 18.

Consul-General Wood to Earl Granville.—(Received January 23.)

My Lord,

Tunis, January 15, 1872.

I HAVE the honour to acknowledge the receipt of your Lordship's Circular despatch of the 25th of August, 1871, acquainting me that information being desired for the use of a Committee of the House of Commons on the subject of communication with India through Turkey by the Euphrates Valley route, your Lordship is of opinion that certain of Her Majesty's Consuls, having served in parts of Turkey which would be on or near the line of communication, might be able to furnish valuable Reports on the subject.

Having had occasion, in the execution of directions from the late Lord Ponsonby, Her Majesty's Ambassador at Constantinople, to travel more than once through Asia Minor, the Valley of the Euphrates, and that of the River Tigris to Bagdad, I venture to submit as full a Report as I am able, in obedience to your Lordship's instructions, comprising:—

1. An itinerary of the several routes which I followed; the distances in hours; the population approximatively of each locality; its products, manufactures, and local traffic; the nature of the soil, as well as a general aspect of the country.

2. A map or sketch of the different routes by which I travelled; and—

Although I did not fail in my journeys to note whatever appeared of interest, yet I may be permitted to state that as at that period a railway communication with the British dependencies in the East was not in contemplation, my observations were less minute than they would otherwise have been; and I therefore crave indulgence for whatever might be found defective in my statement on the subject.

I have, &c.

(Signed) RICHARD WOOD.

Inclosure 1 in No. 18.

Report by Consul-General Wood.

IN the execution of Instructions from Her Majesty's Representative at the Sublime Porte I had on two occasions to return by land to my post through Asia Minor, as well as to travel from Aleppo to Bagdad by the Valley of the Tigris. I beg, therefore, to inclose extracts from my journals, showing the routes I followed in my several journeys, and indicating approximatively the distances in hours between the different towns and villages, the population, their commercial relations, their products and manufactures, as well as the general physical aspect of the country. But I may be permitted to observe that, although at the time I travelled through these regions I did not fail to note whatever appeared of interest, yet, as at that early period the construction of a railroad was not in contemplation, I was less minute in my observations than I should otherwise have been.

There appear to be three projects for connecting by railway the Mediterranean with the Persian Gulf, namely:—

1. The Turkish project, from Constantinople through Asia Minor to Aleppo, and by the Valley of the Euphrates to Bagdād and the Persian Gulf.

2. From Suwaydiyya (Seleucia) by the Orontes to Antioch, or from Alexandretta to Aleppo and the Euphrates. And

3. From the Bay of Alexandretta to Aleppo, Orfa (Edessa), and the Valley of the Tigris to Bagdād.

The first project, which is certainly an enterprise worthy of the present century, would be, in a commercial and, so far as Turkey is directly concerned, in a political and administrative point of view, of incalculable benefit to the people occupying the territory through which the line would have to pass. A few mountains occur, but the route is for the most part through valleys and rich plains of great extent, well watered and capable of producing any amount of cereals, cotton, linseed, opium, flax, and silk. The towns of Kutahiyya and Konia are places of trade, as well as the intermediate smaller towns. Each pashalik or district comprises a great number of villages, inhabited by Mussulmans and Christians; and the ancient opulence of these towns and places may be adduced in proof of the richness of the soil and of its productive power. As, however, statements have been made with regard to the present unfavourable condition of Asia Minor, Mesopotamia, and Irāk, it may not be uninteresting to mention summarily the causes that have led to it, particularly as they are rapidly disappearing by the establishment of a new and a happier order of things.

Among the principal causes may be enumerated the system of dera-beys or military vassals, among whom this vast country was divided, and to the lack of centralization in the Government, which enabled those feudal chiefs to gradually assume a quasi-independence. They oppressed the people by arbitrary taxation; they destroyed personal security and security of property; they depopulated the country by their improvidence and their civil feuds; and they impeded trade by their exactions, robberies, and the pillage of the caravans which traversed their respective districts. Another cause equally as prejudicial to the prosperity of the country was the system adopted by the Porte for the collection of the taxes. Owing to then irregular communications, the revenues of the provinces were farmed out to Pashas for a fixed amount, who were free to extort enormous sums of money over and above the amount they were obliged to pay into the Treasury, not only to meet the ordinary expenses of the Administration, but also to enrich themselves to the impoverishment of the population. To escape from these annual exactions, as well as from the disbursements which the peasantry on the high roads were compelled to make for the entertainment of Tartars (Government Couriers), for providing them with horses, and for extending the rights of hospitality to strangers, they generally abandoned their villages and took refuge either in sequestered spots or in the mountains. Hence the apparent lack of population and cultivation on the most frequented thoroughfares, from which travellers conclude that Asia Minor, which has a population of 13,000,000, is sparsely peopled. This state of things, however, is rapidly disappearing. The dera-beys have ceased to exist since the reign of the late Sultan Mahmūd. The Porte has progressively substituted its authority for that of the semi-independent rebellious chiefs. With the extension of its authority the provinces are governed by salaried officials, who are bound to administer them in conformity with the laws and regulations prescribed by the "Tanzimāt." They are no longer invested with the power of life and death, and are constrained to regularly communicate with, and to receive their instructions from, the central Government, for which purpose posts and telegraphs have been established. Undoubtedly there yet remains much to be done; but with the return of security there is every reason to suppose that the people will re-occupy the abandoned fertile plains, that cultivation and trade will be developed, and that these rich territories—some of the finest in the world, with immense resources—will again present their former aspect of opulence and prosperity. The construction of a railroad would greatly accelerate this result; and there is, therefore, every prospect that, in a short time, the local traffic would render this long line a remunerative one.

The greatest engineering obstacle to be overcome on this line is the Pass of the Taurus called "Kyulek-Boghāzi." Although I am incompetent to give an opinion on the subject, I may nevertheless suggest that, as the River Sayhūn flows through this range of the Taurus, it is not improbable that, by a thorough and minute survey by experienced engineers, valleys may be discovered by which the most difficult defiles and ravines may be turned.

The distance from Constantinople to this part of the Taurus is 162 hours or about 528 miles, calculating about $3\frac{1}{4}$ miles per hour.

Second Route.—The second line either from Suwaydiyya or from Alexandretta to Aleppo and by the Euphrates to Bagdād offers, so far as the physical difficulties of the countries are concerned, by far less obstacles than the preceding line.

Whatever might have been the importance of the harbour of Seleucia in ancient times, it must be always borne in mind that it was constructed for the reception of galleys, a very different class of vessels in point of draught and tonnage to the magnificent ships that are now employed. If the present ruins called Lepse, a little above the village of Suwaydiyya, and about a mile from the sea at the foot of a rocky mountain, represent the harbour of Seleucia, its restoration will require a very large outlay. It is at present choked, and the water being shallow, piers of considerable length will have to be constructed; but even with this protection it is doubtful whether it would offer sufficient shelter against the south-westerly winds, whereas the galleys entered a basin through a narrow canal cut into the solid rock, where they were protected.

On the other hand, the Bay of Alexandretta forms a magnificent natural harbour, capable of containing any number of ships. The bay is from 40 to 45 miles in length by 20 in breadth. The water being very deep vessels anchor near the shore; and it would only require a pier to render it the most eligible terminus on the Mediterranean Sea. Having been detained at Alexandretta for several weeks at a time, I had occasion to observe both the number of vessels that visited it, as well as the excellence of the anchorage-ground.

The sole drawback to Alexandretta is the unhealthiness of its climate during a part of the summer months, caused by the marshy nature of the soil; but its drainage can be easily effected at a small expense. Ibrahim Pasha had indeed drained it, and the sole work that is requisite to allow the water to flow freely into the sea is the construction of a short mole to prevent the accumulation of the sand at the mouth of the canal.

The principal engineering difficulty on this route to Aleppo is the passage of the Beylān mountain, which is perhaps from 2,000 to 2,500 feet above the level of the sea; but whatever those obstacles might be, they fall short of those that had to be overcome in the Mont Cenis railroad and even in that of the Semering.

The line from Aleppo along the right bank of the Euphrates to Bagdād cannot present any engineering difficulties, the country being comparatively level. No doubt a railroad by this route would be the cheapest and perhaps the shortest if the great bendings of the river are avoided; but in that case the line will have to cross a deserted region, as the villages or small towns are on its banks. The most important of these villages are Kal'atu-'n-Nejm, Ja'ber, Dayr, Aāna, and Hit, but there is no reason to believe that the sedentary population of these places exceeds 12,000 or 15,000 souls. The other town which occurs on the Euphrates is Hilla, containing about 10,000 inhabitants; but being below the point from which the line will strike Bagdād, it will not be reached by the railroad. The rest of the population is migratory, and only visits these parts in spring for the sake of the pasture.

The dromedary post from Bagdād to Damascus generally struck the Euphrates at Hit, from thence it reached Palmyra; but its safety mainly depended upon its not meeting with any Arabs during the whole distance. The insecurity of this route is such that even caravans, unless they can muster 200 matchlocks to repel attack, prefer taking the much longer road by the Tigris to Aleppo instead of venturing into the Desert. From these two facts may be inferred both the scarcity of the population as well as the insecurity of the country, which is only periodically visited by the Arabs of the tribes of the 'Anaza and Shamar. The first inhabit Syria; and as their chief, Muhammadu-'d-Dūhī, maintains friendly relations with the British Consulate at Damascus, it would be easy, if necessary, to come to an arrangement with him for the protection of the line. The Shamar, however, occupy the left bank of the river, which they cross for marauding purposes. But besides these two tribes, other Arabs infest these regions; and it is problematical whether the plan of subsidizing them would not entail inconvenience instead of securing protection. It would probably excite the cupidity and jealousy of the other tribes, which would molest the railroad unless they were also paid. It must not be forgotten that even the Arabs of Yemen and Hejāz push at times their incursions, in flying columns on dromedaries, to the vicinity of the Euphrates whenever there is any prospect of booty; and it is, therefore, questionable whether the subsidized Arabs would be strong enough to protect the line from attack or willing to commence a feud of blood, which, according to their code of honour, is transmitted from generation to generation.

These impediments to the Euphrates route cannot be easily overcome, inasmuch as it is impossible to change the habits and character of the Arabs. Being a migratory people, roving over the vast regions or wastes of Arabia from the Euphrates to Yemen, levying black mail upon the settled population, they are under no control whatsoever. They only recognize the authority of their principal Sheykhs, and that only in a very imperfect manner, since the most important tribes in number are divided into sections, wandering at some distance from each other under subordinate Sheykhs, whose influence over them depends upon their reputation for daring in their predatory excursions. It will be inferred from the foregoing that even the existence of migratory Arabs, in any number along the Euphrates, would constitute a real danger instead of an advantage.

With respect to the local traffic, that is, the traffic between the few small towns or villages on the river, it may be regarded as null so far as a railroad could derive any profit from it. The wants of the sedentary or agricultural Arabs are very limited indeed; they mostly manufacture their own coarse garments; they consume no Colonial articles except a little coffee. Sugar is even a luxury among them, and they only raise sufficient wheat and barley for their own use and for that of the Arabs, who receive a portion of it in the shape of black mail.

Third Route.—The third route from Aleppo across the Euphrates at Birejik to Orfa, and from thence to Diyārbekir on the Tigris, Mārdīn, Nissibin, Mosul, and along the Tigris to Bagdād, would have to make a *détour* of about 136 miles (forty-two hours), and would be consequently longer than the Euphrates line. The compensation and immediate advantages would, however, far surpass the extra expense it would involve.

This line would connect the important towns of Aleppo, Orfa, Diyārbekir, Mārdīn, Mosul, Kerkūk, and Bagdād, besides the intermediate towns, such as Birejik, Arbela, and Kifri. It would traverse a much more secure country, where the Turkish authority is more firmly established and respected, and consequently where it possesses more efficient means to protect it.

Beyond Orfa there is an overflow of basalt, but so far as my memory will assist me, the thickly strewed stones are only from 10 to 18 inches in height, and would form, instead of an obstacle, a good foundation for the road.

With respect to the population, no comparison can be drawn between the relatively populous districts in the vicinity of the Tigris, to the almost deserted Valley of the Euphrates.

Admitting even that the soil is equally rich and capable of producing grain and cotton, its fertility ceases to be of any benefit in the absence of hands to render it productive, since the migratory Arabs, howsoever numerous they may be, are a pastoral and not an agricultural people. The cultivation of the valley is, therefore, confined to the few villages or towns on the banks of the river, which, as mentioned before, do not contain, in the aggregate, more than 12,000 or 15,000 sedentary Arabs.

It may be objected that in some parts of Irāk (the territory from Mārdīn to the Persian Gulf) the population is scarce. This is true in regard to portions of the high road, from the immediate vicinity of which the population has withdrawn for the causes already enumerated; but the neighbouring mountains of Tūr, Karaja, and Kurdistān contain—the former, 7,000 families of Jacobites, besides a Kurdish population probably exceeding that of the Christians; and the latter, a dense population of Kurds and Nestorian Christians. All inhabit prosperous villages, more likely to exchange their grain, cotton, raisins, and gall-nuts, against British cotton, manufactured goods, and colonials, than the wandering Arabs of the Euphrates.

What has been stated with regard to the superior number of the sedentary population on the left bank of the Tigris, as compared with that of the Euphrates Valley, may be likewise positively asserted with reference to the traffic, which on the latter line is confined to the villages previously mentioned; whereas on the former route the local traffic would be immeasurably greater, seeing that the population of Orfa is computed at 25,000; that of Diyārbekir at 50,000; of Mārdīn at 15,000; of Mosul at 50,000; Kerkūk at 16,000, and Arbela at 5,000. A very considerable trade is already carried on between these towns and between them as centres of commerce, and the smaller towns and numerous villages in the several sandjaks or districts. The facilities of communication afforded by a railroad would rapidly develop, perhaps to an incalculable degree, the existing trade, and this result may be looked upon as certain.

Either the Euphrates Valley or the Tigris line, by connecting Bagdād with

Aleppo and the Mediterranean, would tend to the augmentation of the traffic between the southern portion of Persia with Mesopotamia, Syria, and Europe.

This trade is at present carried on by means of caravans, each caravan being composed of from 300 to 600 camels. Besides this commerce, a great number of Persian pilgrims repair annually, *viâ* Mesopotamia, to the rendezvous at Damascus; and it is evident that the accommodation and rapidity of travelling by rail would considerably increase the number of Persian, Kurdish, and Turkish pilgrims.

Should, however, the objections to the Euphrates Valley be deemed surmountable,—and the object is to select the shortest and most economical alternative line between the Mediterranean and the Persian Gulf,—in that case the route from Saydâ (Sidon) on the coast of Syria to Damascus, Palmyra and Bagdâd would not be unworthy of consideration. The physical difficulties on this route would be the construction of a harbour at Saydâ and the passage of the Lebanon. Although this part of the mountain has considerably less elevation than in the vicinity of Beyrût, yet I have no record of the valleys through which the road lies to the Bik'a (Cælo-Syria), from which plain it skirts Mount Hermon to Damascus through a country which does not present many obstacles; and it is almost a level region from Damascus to Palmyra, Hit, and Bagdâd.

Through routes.—Besides the foregoing three alternative routes, it would appear that other through routes have been suggested through Upper or Lower Asia Minor, Persia and Kurrachee.

Not having visited the country between Bagdâd and the Persian Gulf, I am unable to give a description of it; but in conclusion I may be permitted to give it as my humble opinion that the alternative route from Alexandretta by Aleppo to Orfa, Diyârbekir and the Tigris, offers, with reference to local traffic, settled population and security, greater advantages than the projected route by the Valley of the Euphrates, where labour, to the extent required for so long a line over a scantily inhabited region, will be obtained with difficulty.

(Signed)

RICHARD WOOD.

Tunis, January 15, 1872.

Inclosure 2 in No. 18.

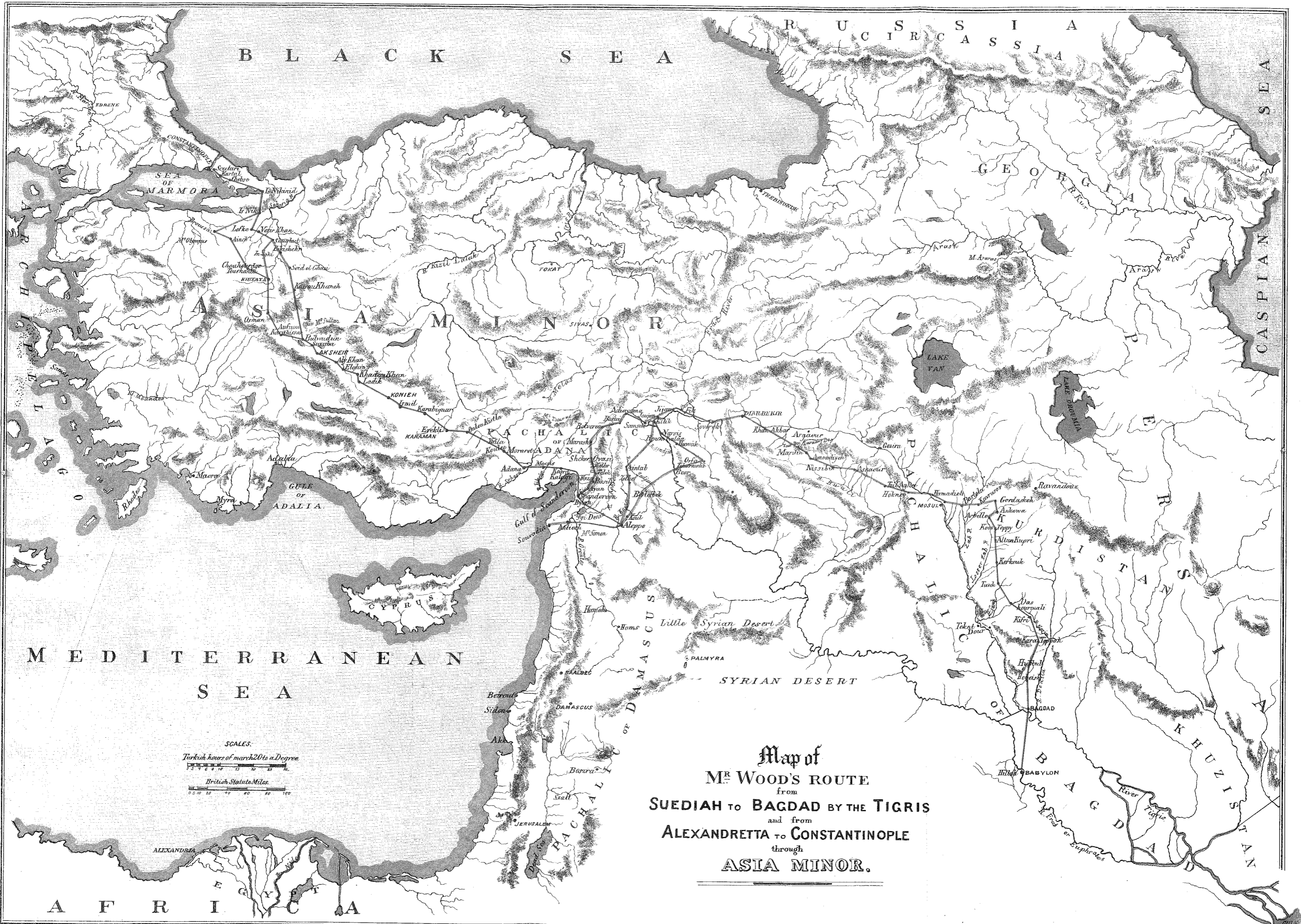
Route from Suwaydiyya to Aleppo, the Euphrates, Orfa, and Iskenderûn; from Iskenderûn viâ Mar'ash to Diyârbekir, Mosul and Bagdâd; from Bagdâd to Aleppo by the valley of the Tigris; and from Iskenderûn to Constantinople by the direct route viâ Konya, as well as by Kutahiyya and Brûsa.

THE village of Suwaydiyya (Seleucia), five hours from Antioch, consists of unconnected cottages scattered over a plain between Jebâ'il-Akrâd (Mount Cassius) and the Amanus, through which flows the Orontes. The plain is well cultivated, having many gardens and mulberry plantations.

The town of Antioch, which was destroyed by an earthquake in 1822, contains about 4,000 inhabitants. It is the chief mart of the neighbouring villages, which produce cotton, grapes, or raisins, and wine, and has also many tan-yards on the banks of the Orontes.

The distance from Antioch to Aleppo is twenty-two hours. The road east is over a fertile plain, but partially cultivated, and crosses the Orontes at the Bridge of Jisr-Hadîd, to the south of the Lake of Aji-Deniz, leaving Mount Simon to the north. On this mountain are many villages inhabited by Kurds. A low range of hills intervened to the valley of the Afrîn River, which flows through the valley to Sansarin, situated at the base of a barren chain of hills containing the ruins of ancient villages. The pass, which is about a couple of hours in length, leads to the plain and village of Dana, which is well cultivated by Arabs inhabiting small villages. From this point the road continues over undulating ground to the plain and village of Terib, which is six-and-a-half hours from Khân-Tumân, distant four hours from Aleppo. The country from Antioch to Aleppo, about sixty-six miles, is for the most part extremely fertile; and, although at present but thinly peopled, yet it is evident, from the numerous ruins both of ancient and modern villages, that it must have formerly contained a very large population. Its present inhabitants till portions of the plains and valleys, but possess large flocks of sheep and goats that find plenty of pasture in the plain, or in the rocky hills that intersect them.

Route from
Suwaydiyya to
Aleppo viâ
Antioch.



Map of
 MR WOOD'S ROUTE
 from
 SUEZIAH TO BAGDAD BY THE TIGRIS
 and from
 ALEXANDRETTA TO CONSTANTINOPLE
 through
 ASIA MINOR.

SCALES:
 Turkish hours of march 20 to a Degree
 British Statute Miles

Notwithstanding the vicissitudes which the city of Aleppo has undergone it still continues to be one of the chief emporiums of commerce in Turkey. It is well built, and has a population of upwards of 80,000, composed of Mussulmans, Armenians, Maronites, and Israelites. It carries on an extensive trade with Diyārbekir, Kurdistān, Armenia Proper, Mosul, Bagdād, Basra, and Persia, as well as with Damascus; from which places large caravans arrive. Its imports of cotton goods and colonials, average annually from 1,500,000*l.* to 2,000,000*l.* sterling.

It manufactures silk, cotton, gold and silver stuffs and threads, as well as cloth and soap, and has large dye-works. Formerly there was an important British factory, which carried on commercial operations with India by the Persian Gulf. The Pashalic of Aleppo was one of the most populous provinces in Asiatic Turkey, having upwards of 3,000 villages, now reduced to less than 400; but the fertility of the soil, and its resources, may be estimated from the above fact. It has still many opulent inhabitants and merchants. The climate is salubrious, and the natives, from their long intercourse with Europeans, have attained a certain degree of civilization. Altogether it may be stated that Aleppo is a thriving city, with a foreign and home trade of importance, and susceptible of greater development.

The prosperous Kurdish village of Koul is three hours from Aleppo, and nine hours further on is Beylerbeyi. From this point, Bīr or Birejik, on the Euphrates, is reached in twelve hours. The soil all the way from Aleppo to the river is extremely rich and light, and villages occur at short distances from each other.

The River Sajūr is midway between Beylerbeyi and Bīr; and the River Kergin, three hours from the former village, which is crossed by a good stone bridge. This portion of the Pashalic is not only beautiful but highly productive.

The fortified town of Bīr, apparently of Saracenic construction, is situate on the opposite bank of the Euphrates, which, being here deep and rapid, is crossed by a ferry. It is built on chalky cliffs. It has a well-provided market, and contains, besides four mosques, three caravanseries for the accommodation of travellers from Aleppo to Orfa.

The road, over an uninteresting and but indifferently cultivated country, to the village of Ctzarmelik, is ten hours. The village consists in a few huts of sun-burnt bricks, surmounted by conical cupolas, without any apertures except very low doors to admit the light; but it has a very spacious caravansary.

The road continues over the same undulating and rocky ground for eight hours to Orfa. The descent in this direction to the town, situated to the right of the hills, is extremely long and even dangerous for horses, owing to the smoothness of the rocks, notwithstanding that they have been cut in places to render the descent less precipitous.

Orfa, with its extensive mouldering walls and half-ruined castle, is a busy town of about 25,000 inhabitants, half Mussulmans and half Armenians. It has several mosques, a college of Dervishes, some baths and churches. The bazaars are well-stocked with coarse articles and goods, and its market is abundantly supplied from the neighbouring gardens. It is the residence of a Pasha, and is garrisoned by regular troops.

The village of Hawak is nine hours from Orfa; and six hours further on is Narsis, which village, as well as that of Harab, are on the banks of the Euphrates, known here as Murād-Sūyu. An hour and a-half beyond Harab is Kilik, likewise on the river. From the many roads that intersect the main line of communication which is extremely bad, there must be a great number of villages in the valleys formed by the long range of hills.

From Kilik to Rūm-Kal'a is six hours. The scenery which presents itself from the summit of the mountains is of the wildest description. The Euphrates meanders several hundred feet below their almost perpendicular sides, which are covered with forests. Rūm-Kal'a, or the Castle of the Christians, with its dismantled towers and irregular walls, is a small town prettily situated on the steep banks of the River Sinja, which runs into the Euphrates, and which is here crossed by a single ferry to the large village of Casaba. The descent to the river is steep and difficult, and the ascent to the castle is equally rapid and rugged. The rocks are full of perforations that must have served for tombs in ancient times. The castle has five gates, and its present ruinous state is attributed to the earthquake in 1822. It contains nothing remarkable except a very deep well cut in the rock communicating with the river, having also a winding staircase of 300 steps. On the summit of the mountain there is a ruin called kanīsa or church, built of large hewn stones.

'Ayntāb.

From Casaba to 'Ayntāb is thirteen hours. The road is over hilly ground partly cultivated and partly covered with underwood, and the town is situated in a valley close to the River Sājūr. It has a mixed population of between 20,000 and 30,000 of Mahommedans, Armenians, and Greeks, who have a church. Its chief trade consists in coarse stamped calicoes and various coloured woollen stuffs. It has also many tanneries, and it produces red and yellow morocco leather, which is exported to Aleppo and Mar'ash. The district of 'Ayntāb comprises several villages, inhabited by Arab agriculturists, who cultivate oil, grain, and rice.

The distance from 'Ayntāb to Zi-'l-keff is six hours, over some uneven and undulating ground. From thence to Aleppo, after crossing the River Kuwayk, is twelve hours, the road following the plain through which it flows, which is well cultivated by the peasants of neighbouring villages.

The direct road from Aleppo to Iskenderūn lies to the north of the road from Aleppo to Antioch, which it joins at Khān-Karamūrt, at the foot of the mountains of Beylān. Owing to the marshy nature of the ground, it is carried along a causeway, and is intersected by the Rivers 'Afrīn, Yagra, and Aswad, which flow into the Lake of Aji-Deniz. The former river is spanned by the Bridge of Murād-Pasha, consisting of twenty-four arches.

Beylān Pass.

The ascent of the Beylān Pass commences from a bridge near Khān-Karamūrt, and it takes three hours to reach the small town of the same name. To the west, in a deep ravine, is the village of Bakrās, which has a curiously-constructed fort on the summit of a conical and isolated hill. The small town of Beylān is picturesquely situated on either side of a deep and narrow gorge. Previous to the earthquake of 1822 it contained 800 houses, which are at present reduced to 300, inhabited by Turcomans and Armenians. The former have two mosques and a bath, and possess lands in the plain of Alexandretta; and the latter are artizans and small traders. It is the residence of the Europeans of Alexandretta during the summer months on account of the salubrity of its climate.

From Beylān to Alexandretta is three hours. The descent, which occupies two hours and a half, is not steep, and the sides of the mountain are clothed with lofty pines. From the base of the hills to Alexandretta is three quarters of an hour.

Alexandretta.

The village of Alexandretta is small, and inhabited mostly by Greeks. It is unhealthy, owing to the water, which accumulates in the plain from the surrounding mountains, but it could be easily drained at a small expense. The magnificent bay of Alexandretta, the port of Aleppo, has a very secure anchorage. Its waters are deep, and vessels can lie near the shore to discharge their cargoes. It can contain any number of ships of the largest tonnage.

Route to Diyārbekir
viā Mar'ash.

The village of 'Ayān is two hours from Alexandretta. The road lies in an easterly direction, ascending the mountain of Ghiaour-Dāghi, which is steep at the commencement until it reaches the summit, when it runs along the ridge of the mountains, which are thickly covered with wood. When Ibrahim Pasha was in possession of Syria, many thousand trees were felled for the use of the Egyptian Arsenal. For three hours from 'Ayān the road continues to ascend and descend among the mountains, at the end of which period it traverses a more open country, extensively cultivated, and watered by a great number of streams. The village of Fasili, partly inhabited by Christians, is three hours further on, but there are, in the intervening region, two or three other villages, likewise inhabited by Christians, who, notwithstanding the insubordination of the Kurdish Aghas, who live in these mountains, enjoy the same privileges as the Mussulmans. They are dressed and armed like them, and they, perhaps, owe their freedom to the vicinity of the mountains of Zeytūn, which is inhabited by a warlike community of Armenian miners, who extract the iron ore found in abundance in these mountains.

From Fasili to the village of Telek is three hours. It is the residence of a Kurdish Aga, and contains about 250 houses, occupied by a mixed population of Christians and Kurds. It is situated on either side of a deep ravine, through which flows a rapid torrent that partly inundates the plain below. The descent of Ghiaour-Dāghi, the scenery of which is extremely wild, is rather difficult, from the rocky nature of the road.

The ruins of Abas-Tzai are one hour and a half from Telek, in a plain, which, from the numerous streams that water it, is one continuous meadow, affording rich pasturage to numerous flocks, until the road enters a forest of oaks. It crosses the River Coptgoun before it again emerges into the plain, and, after traversing another wood, the Kurdish village of Keller is reached in eight hours.

Sheker-Ovasi (the Meadow of Sugar), a considerable Kurdish village, in a

deep glen, is eight hours from Keller. The road runs at the foot of the mountains, from which extends a magnificent plain to the east, covered with cattle on account of the richness of the pasture.

Mar'ash is nine hours distant from this point. The road is through a deep valley to the north of the River 'Avret-Deresi. This and the other streams from Ghiaour-Dāghi and Kurd-Dāghi render the tract of country between the two mountains marshy. The waters form the large lake of Ghiaour-Ghyeuli, which abounds in fish and water fowl, with which the markets of 'Ayntāb and Mar'ash are supplied. The plain is occupied by nomad Turcomans, who rear a great number of cattle and sheep. At the end of six hours and half the road crosses the River of Ak-sū a branch of the Jeyhūn, over a bridge of six arches.

The town of Mar'ash, the residence of the Pasha of the Pashalic, and which is enclosed by the Pashalics of Adana, Siwās, Aleppo, and Diyārbekir, is advantageously situated in an open country at the foot of Akhir-Dāghi, a branch of the Taurus. It contains 3,000 houses, built of sun-burnt bricks and uncut stones; with a population of about 17,000, consisting, in nearly equal proportion, of Mussulmans and Armenians. The former have twelve mosques, and the latter seven churches. It trades with 'Ayntāb and Aleppo, from whence it draws native manufactures of silk stuffs, printed calicoes, carpets, salt, English cotton goods, and colonial articles, with which it supplies Malātia. It holds a weekly fair, to which the peasants and Turcomans resort; and it produces grain and rice of good quality for the consumption of Adana, Siwās, and Syria. Its population is mainly employed in dyeing blue coarse linen, making hair bags, mats, nails in blacksmith's work, and in making clothes for the numerous nomadic Turcoman tribes. The iron mines in the mountains of Zeytūn are ten hours from the town, and are in possession of, and are worked by, a community of hardy Armenians, comprising 1,000 houses.

The village of Bel-Veran is thirteen hours from Mar'ash. The road, which is here good, takes at first an easterly direction, and runs afterwards east south-east, over a fertile plain with some underwood. After crossing the Ak-Sū river, it follows its circuitous course for a considerable distance, and ascends the hill at the back of a conical mountain, having the castle of Baldin (Baldwin?) on its summit. Up to this point the river continues to be broad, and the village Nagar is situated on the hills to the north of the road. The country in the vicinity of the village is rocky and barren, but its inhabitants obtain their livelihood by cutting and preparing flints for fire-arms.

The town of Bihisni is six hours from Bel-Veran. The road is over the mountains, parts of which are barren, but the valleys are well cultivated by the peasants of the adjoining villages, the principal of which are Ongou, Koja-Kyeuyi, and Ihtichusban. The scenery before reaching Bihisni is wild and romantic.

The town, containing about 2,500 well-built houses, constructed in a very deep bason or crater, formed by the mountains, on the sides of a stupendous rock that has the appearance of having been precipitated from the mountains by some convulsion of nature. It is surrounded by gardens and vineyards, and its inhabitants consist of Turks, Kurds, and Christians, who have ten mosques, and upwards of twenty small chapels, with three baths. Its market is superior to that of Mar'ash, but the bazars are indifferently supplied. It trades with Siwās, Malātia, and Ma'dan, from which it receives wool, cloth, and coarse stuffs; ready-made clothes from Kaysariyya; raw and wrought iron from Mar'ash; from Aleppo, European and native goods and cutlery, and grain from Albustān and Samisāt. Its chief products are cotton, which it manufactures, a small quantity of inferior wheat, and the juice of grapes, called "Petmez," a species of molasses, which is exported to Siwās, Kaysariyya, and at times to Aleppo. With the exception of those who exercise trades, the majority of the inhabitants, being the partners of the peasants of the adjacent country, derive their income from agriculture.

The small town of Adi-Yamān is eight hours from Bihisni. The country the whole of the distance is extremely beautiful and highly cultivated, the chalky nature of the soil being highly favourable to the growth of the vine. The view to the east is only bounded by the Ak-Dāgh (the Mont Blanc of Turkey), capped with snow. In the hills and valleys there are fourteen villages, the largest of which is Tek. From thence the road descends the valley of Ak-Dervent, through which flows the river of the same name, which here runs in three rapid but fordable streams. The principal villages on this route are Atmak-Kyeuyi, Sham-Beyādi; containing about 200 houses, in the midst of a grove of poplars, kouk, and keskudge.

Adi-Yamān consists of 1,000 houses, 180 of which are inhabited by Armenians, Adi-Yamān.

who are mostly masons and blacksmiths; the remainder are occupied by Turks and Kurds, who pay little attention to cultivation, since it only produces cotton and grain sufficient for its own consumption. Its bazaars are miserable, and indifferently provided with foreign and native coarse manufactures. It is the residence of an Agha, who has jurisdiction over 80 villages belonging to the district, which supply conscripts for the Nizām and militia.

The road from this place to Samīsāt, seven hours, runs across a level region of excellent soil, left uncultivated, although it is watered by three rivers that flow into the Euphrates. This wretched and small village on the banks of the Euphrates, is built at the foot of a hillock, on the summit of which are the remains of a Turkish fort.

The village of Jūjān is three hours from Samīsāt, and that of Jījān three hours further on. The road follows the course of the Euphrates, which is here very broad, flowing in two streams, and is crossed by a ferry. On the chalky hills, which form its banks, are several villages.

The road, east-north-east, ascends for three hours to the village of Orshin, from which the Kurdish village of Fik is reached in two hours, and the town of Suverek in five hours more. The road between the two latter places is good, and lies under undulating ground, cultivated by Arabs, who live under tents, and by peasants of the village of Erdiyān.

Suverek.

Suverek, though the residence of an Agha, scarcely deserves the name of a town, having only 700 houses, built of sun-burnt bricks, with superstructures of uncut stones. The Armenians have a church and the Turks a mosque. The bazaars and shops are in keeping with the town, which is besides ill-provided with water. Scarcely a tree is visible in the large extent of country which bears few traces of cultivation.

It is sixteen hours from Suverek to Diyārbekir. The intervening country is for the most part level, of a light soil. The road passes by the village of Kara-Baghcha and one or two other small villages, apparently inhabited by Kurds, who cultivate small patches of ground, but possess a great number of cattle.

Diyārbekir.

Diyārbekir, on the Tigris, is a town of considerable importance, as it is the chief mart in Mesopotamia and Kurdistan. Being on the high road from Bagdād to Constantinople and Syria, it is visited by caravans from all parts of Asia Minor, Aleppo and Damascus. It is encompassed by a substantial lofty wall flanked with towers, and has a strong castle. It contains 10,000 well-built houses, 5,300 of which are inhabited by Armenians, who possess, besides other churches, a handsome cathedral. Its bazaars are extensive, and are well supplied with rich merchandize. It has 1,500 looms employed in the manufacture of silk and cotton stuffs, 500 printers of cotton, and 300 tanneries, which produce morocco leather. It is in regular communication with Aleppo, from which it receives European goods, and it draws from Bagdād fine muslins, Persian shawls, spices, and drugs. It provides the surrounding districts with wrought iron and copper, with saddlery, and with articles of domestic use; and its markets are supplied with provisions, which are cheap and abundant.

From Diyārbekir to the village of Khān-Akbar is six hours. The Tigris is crossed by a bridge of ten arches, three-quarters of an hour below the town. Not far from this bridge occurs another of eight arches, and further on one of five arches, over rivers that run into the Tigris. The country presents the same uniform aspect as the rest of Mesopotamia, except that there are a great number of villages and gardens, and the rich soil is more generally cultivated. The road passes by the Kurdish village of Avghyāwūr situated in a narrow but well cultivated valley, containing three or four villages. It continues through this derwent or valley, at the end of which it descends a rugged hill, and ascends an equally steep declivity covered with vineyards and orchards, to the town of Mārdīn, five hours from Avghyāwūr.

Mārdīn.

Mārdīn stands on a very elevated rock of limestone, commanding an extensive view, and enjoys a salubrious and cool climate. Its population may be computed at 3,000 families, 800 of which are Christians. It is the seat of the Jacobite Patriarch; and the Armenian and Syrian Catholics have likewise Bishops residing in the neighbouring monasteries. It has large and well constructed bazaars, some good khans, and the various trades and professions are arranged and carried on in separate departments. It supplies with native and foreign goods the villagers of the adjacent country, and, as they are numerous, its trade with them is considerable.

From Mārdīn to Nisībīn is twelve hours passing by the village of 'Amūdiyya as well as by two or three other small villages. After descending the hill upon which Mārdīn stands, the road takes an easterly direction at the foot of Tūr-Dāghī over a vast plain or waste, with a few ruined villages built upon what appears to be artificial mounds, constructed probably by the Romans for their watch-towers. The plain is bounded on the south-east by the mountains of Sinjār, inhabited by Yezīdis, and which terminate in the Desert. The hills and valleys are well watered and fertile, producing a very large quantity of small figs. On the north and east by the mountains of Tūr and Karaja-Dāgh, a continuation of the Taurus, and it is irrigated by streams from the mountains in their course to the Euphrates. Nisībīn (Nisibis) is now a small village in the midst of a country of great fertility, watered by the river Jagjaga, which is now fordable, but which had formerly a bridge of twelve arches, apparently of Roman construction. It is at present a Turkish military station. Nisībīn.

From the ruins of Nisībīn to the village of Tell-Aznāwū is five hours; to Tzil-Agha, eight hours; to Hokna, eight hours; to the bridge of Abū-Meyra-Kyeuprusi of three arches, that crosses the river Hualī, four hours; to Hamadiyya, a large village on the Tigris, seven hours; and from thence to Mosul, five hours. If this extensive plain, called a sterile waste, is but thinly peopled, it is not on account of the badness of the soil, which is good and was once cultivated, but owing to the insecurity caused by the ravages of the Yezīdis, the Arabs, and the late Kurdish Bey of Rawandiz. In the region watered by the little streams running towards the Euphrates between Nisībīn and the mountains of Sinjār and Tūr there are forty-four villages, twenty-seven of which are inhabited by Jacobite Syrians.

The Jacobite population alone living in the mountain of Tūr is computed at 30,000, besides 6,000 in the hills in the immediate neighbourhood of Mārdīn; and the Yezīdis in the Sinjār are estimated at 15,000. If security was re-established, the inhabitants would speedily return from the mountains to re-occupy their now deserted villages, and the plain of the Sinjār would be repopled and cultivated as it was in former days.

Although Mosul has lost its ancient importance, it still continues to be a considerable town. It contains, within its extensive walls, a population of about 50,000. It continues to manufacture muslin (mosuline), for which it was formerly famous, but in very small quantities. Its artificers in silver are numerous, and it maintains its reputation for its blue dye. It imports galls, dried fruit, and cotton, from 'Imādiyya, but its principal trade is with Bagdād. It produces grain, and some coarse cotton stuffs. Its bazaars and markets are mean and small. It has numerous mosques, and the Syrians, Chaldeans, and Jacobites, have eight churches. It has also several baths, some of which are superior to those of Bagdād. Mosul.

Having descended the Tigris on a raft to Bagdād, it is only necessary to describe the return route to Mosul. It may be observed, however, that with the exception of Tekrīt (Bertha), no other villages were visible on the banks, which were occupied at intervals by Arab encampments.

Bagdād, the famous capital and emporium of Irāk, is too well known to require a detailed description; and it will suffice to state, that it is again rapidly rising in importance after its severe reverses caused by war, inundations, the plague, and partial famine, during the government of the rebel Dāwud Pasha. Bagdād.

The Pashalic of Bagdād, comprising twenty-six districts, extends from Mārdīn to the Persian Gulf, a territory of 700 miles, with a medium breadth of 200 miles. Its revenue, in 1836, did not exceed 217,000*l.*, as only twelve districts paid taxes, the remainder being occupied by nomad Arabs and Kurds, in a state of insubordination. It was calculated, however, that were this vast region to be brought under proper subjection, it would yield an annual revenue of 1,300,000*l.*, owing to its unlimited resources, and the richness of the soil.

The Arab town of Hilla, on the Euphrates, is twelve hours from Bagdād, across the plain of Babylonia. After passing the Tigris on a bridge of boats, the road lies west through extensive plantations of date-trees. The canals and khans of Mes'ūd and El-Har are reached in two hours. From this point, owing to a bend in the river, the route takes a south-east direction to the Khān of Chekwa, four hours. At short intervals, of about two hours from each other, occur the Khāns of Zad, Biru'l-Moufs, Iskenderiyya, a commodious building, Hajji Sulamān on the banks of a canal crossed by a bridge, and Muhawil. Most of these buildings are in ruins, and have attached to them a few miserable huts occupied by Arabs; but they attest to the active traffic that was formerly carried on between Bagdād and Hilla. Hilla.

The town of Hilla, built in the tenth century, on the two banks of the Euphrates, and united by a bridge of twenty-eight boats, is wholly constructed of bricks bearing cuneiform inscriptions, procured from the ruins of Babylon. Each division has its bazaar and market, to which the Arabs, occupying the adjacent territory, resort to purchase clothing made of native manufactured stuffs, saddlery, shoes, and female ornaments. It was formerly a depôt for grain, with which it supplied both Bagdād and the Arabs. It carries on an active trade by means of small vessels and boats, with the villages and Arabs on the Euphrates and Basra. The population, which was decimated during the plague, may be computed at 10,000; but there are only mosques, and a few mesjids or chapels. The streets are narrow, unpaved, and extremely dirty.

From Bagdād to the village of Hubeysh is six hours. The road lies in a northerly direction, passing by Khān-Jedīda. Three hours further on is the village of Hubhūb, in the midst of date groves, irrigated by a canal that receives its waters from the river Diyāla. From the latter village, in a north-east direction to the ruined Khan of 'Ali-'Abbās, is five and a-half hours. Two canals intervene between those two points, the latter being crossed by a bridge. Kara-Tapa is six hours beyond 'Ali-'Abbās. Midway are the Hamrūn Hills, of an easy ascent, which occupies about an hour. The River Udhaym runs at the foot of these hills, which has a good bridge of six arches.

The distance from Kara-Tapa to the little town of Kifri, on the north side of the Hamrūn Hills, is four hours. It is situated at the base of some hills, from which extends a vast plain, now called a desert, occupied by Arab shepherds, who pasture innumerable flocks of sheep. The great number of canals intersecting each other, the work of former days, sufficiently attest to the once populousness of the region and to the extent of its cultivation.

From Kifri the road takes a north-westerly direction for six hours, to the large village of Tūz-Khurmati, so called from the large number of its date plantations. The country in its neighbourhood bears traces of cultivation; and the dry beds of two deep canals, which formerly communicated with the Tigris, are not far from it.

The once celebrated, but now nearly deserted, village of Tawuk (Dakūk), is six hours from Tūz-Khurmati. The road runs along the foot of the hills of Kashki or Khurmati-Dāghi; and the River Tawuk-Chayi, which here flows in four or five streams during the winter season, is about three hours to the south of Tawuk.

The town of Kerkūk is nine and a-half hours from Tawuk. It is partly built on a mound upwards of 100 feet high, and is surrounded by a wall. It has a population of 16,000 souls, and the peasants of the adjacent villages resort to toil bazaars to supply their wants. The road passes by the village of Tāza-Khurmati and Teshin. This place (1836), is partly in ruins; its bazaars were deserted, and most of the houses were uninhabited. It has a castle, but the dwellings within its walls, like those in the town, were mostly unoccupied. Not far from Kerkūk there are some naphtha wells, and a little beyond, sulphureous hot springs.

From Kerkūk to Altin-Kyeupru is twelve hours. The road crosses the hills of Kerkūk-Dāghi, in the midst of which is an excellent khan built by Dāwud Pasha. The rapid River Kajar is between Kerkūk and Altin-Kyeupru, and Ghyeuk-Tapa is nine miles beyond the river towards Altin-Kyeupru or the Golden Bridge, situated on an island in the Lesser Zāb, and so called from the two bridges, each formed of one arch of great height. It has few inhabitants, some of whom reside within the fortress.

Four miles further on, on a high mound, is the village and fort of Kush-Tapa-Kal'asi, from whence Arbela is reached in four hours. The road lies over a plain, and passes at the foot of another mound, having a village and a mud tower on its summit, called Kara-Chanak.

The town of Erbil (Arbela) stands on a round, flat-topped, artificial mound 150 feet high. The mud walls extend, to the east, far beyond the area occupied by about 1,100 houses, some mosques and baths. Its bazaars and khans are at the foot of the hill, as well as from 400 to 500 houses, occupied by the lower classes. The fertile plain towards the north-east is covered with villages, and is extensively cultivated.

From Erbil to the large Christian village of Ankowa is one hour. The road north-east lies over the same plain, which is also here well cultivated. It is bounded on the south by a range of hills containing some Kurdish villages. Three hours from Ankowa is the fort and village of Gerdashek, on an artificial mound; and four hours

Return route from Bagdād to Mosul by the valley of the Tigris.

Kifri.

Kerkūk.

Erbil.

from thence is the Great Zāb, or Lycus, a rapid stream from 300 to 400 feet broad, and sufficiently deep to float large rafts of wood. It is crossed on rafts of inflated goat-skins bound together and floored with reeds. On the opposite bank is another considerable village, with a fort.

The village of Kavrasor is half-an-hour from the Zāb, and two hours beyond is another river, which takes its rise in the mountains of Aker, and flows into it. There are many villages in this region, which is likewise well cultivated.

From Kavrasor to the Chaldean village of Bar-Tela is five and a-half hours. Bar-Tela.
This village or small town has an aspect of opulence. The streets are paved, and the houses are solidly constructed. Besides their agricultural pursuits, the inhabitants weave linen for shirting, and when dyed is also used for upper garments. All the Christian villages in the environs of Mosul, such as Al-Kūsh, the seat of the Syrian Patriarch, Tell-Uskuf, &c., are little towns, having from 500 to 1,000 houses. They are well-built, large, and commodious; and their inhabitants are better dressed, are at their ease, and their domestic arrangements have an appearance of comfort.

From Bar-Tela to Mosul is three and a-half hours. The road passes by the supposed site of Ancient Nineveh, between two mounds, on the summit of one of which stands the village of Nebi-Yūnus (Jonah), whose tomb is in a mosque, to which Mussulman, Christian, and Israelite pilgrims repair.

From Alexandretta to Bayās is about four and a-half hours, over a plain along the coast of the Bay of Alexandretta and Ghiaour-Dāghi. The town is almost deserted, but a very handsome bazaar still exists, as well as a handsome mosque and a castle. All the buildings and courts are in good order and might be easily availed of for other purposes. Owing to the rebellious proceedings of no less than twelve native Beys of Bayās, appertaining to the family of Kuchuk Ali, who kept possession of this Pass and robbed travellers and caravans, it was destroyed by the Porte and its name erased from the public registers. The inhabitants repaired and resided in a little village in the interior, but at the time I visited it they were gradually returning to Bayās, which has also a small port. Routes from Alexandretta to Constantinople.
Bayās.

The road for seven and a-half hours follows for the greater part the coast to Kours-Koulac before reaching which it crosses some hills. The village consists of some wretched huts, notwithstanding that the soil the whole distance is extremely fertile. The Turcomans in the neighbourhood being migratory, no traces of cultivation or habitations were visible. Kours-Koulac.

Mesīs is three and a-half hours from Kours-Koulac, situated in a plain to the north of the River Jayhūn. This luxuriant plain, the soil of which appears to be of extraordinary richness, extends on the west to Adana, and on the north, as far as could be ascertained, to Mar'ash. Mesīs.

The distance from Mesīs to Adana is about five hours. The town is on the north side of the River Sayhūn, and it is reached over a very good bridge of fifteen arches, said to have been constructed by the Genoese. The town, which is badly built, is inhabited by Turks and Armenians. Being the entrepôt of merchandize for the surrounding country, it carries on a considerable traffic. It receives goods from the port of Mersin, viâ Tarsus. Adana.

The Pashalic of Adana formed, according to Cicero, the most fertile province of the Romans. The large and rapid rivers of Jayhūn and Sayhūn, with their rise in the Taurus, irrigate its vast plains, which are, however, depopulated, and only partially cultivated with cotton and grain. Nevertheless, there are some wealthy inhabitants in Adana.

As the Pass of Kyulek-Boghāzi over the Taurus will offer the greatest engineering difficulties to be overcome, it requires a detailed description. Pass of Kyulek Bogāzi.

The road from Adana follows for nine hours the course of the Sayhūn in a north-westerly direction towards the mountain of Manamanji-Dāghi, between hills and declivities extremely narrow and even dangerous for horses. Under the first spur of the mountain is Minārat, an old ruined caravansary with a mosque. From this point the route continues for two more hours among the valleys of the lower declivities of the mountain, still along the River Sayhūn, which has one of its sources in the vicinity. Although the ascent from the caravansary is rather rapid, yet the road is excellent for the greater part until it reaches the Kyulek-Boghāzi. This stupendous gorge appears to have been produced by some extraordinary convulsion of nature. The mountain is rent in two only a few yards asunder, the bare rocks rising on either side almost perpendicularly to the height of several hundred feet, but the gorge itself is only ten minutes in length. From this Pass the road continues among ravines for seven hours to the Khan of Yāyla, from whence it still continues

to wind through an endless valley, which does not exceed 200 yards in breadth. The mountains are covered with forests of different sorts of trees to almost their summits which, in winter and spring, are capped with snow. The Turcomans rear here numerous flocks of cattle, owing to the profusion and excellence of the pasture. The descent from this valley, in the midst of barren mountains called Bulgār-Dāghi, is steep and long. At the bottom of the range runs another branch of the Sayhūn, with a good bridge. This river is crossed by bridges no less than fifteen times from Adana to Ulu-Kishla, which is thirteen hours from Yāyla.

Ulu-Kishla. From Ulu-Kishla to Eregli or Elevri (Cybistra) is eight hours, the road still following a valley formed by Bulgār-Dāghi and some hills.

Although in a direct line the distance from Adana to Eregli cannot exceed ninety-five miles, yet owing to the circuitous route through valleys, ravines, and defiles, it takes no less thirty-nine hours to traverse the above distance.

Eregli. The town of Eregli is pleasantly situated on the western slopes of the Taurus, and is surrounded by well-cultivated fruit gardens and forest trees. Besides the population of the town, a great number of Turcomans live in tents in the adjacent mountains, where they rear a very large stock of animals, the wool of which they sell in the market of Eregli.

Kara-Bunār. The distance from this town to Kara-Bunār (Baratha) is nine hours, over a sandy and uncultivated plain. The town is built of mud, and its inhabitants till the soil in the immediate neighbourhood of their wretched habitations. But its chief industry is carried on by the women, who make coarse woollen stockings, which are extensively used by the people of this mountainous region.

Konia. Konia (Iconium) is seven and a-half hours from Kara-Bunār. The road passes over a fertile plain of nearly forty miles in extent, but it is only cultivated near the village of Izmil (Corna), which is about an equal distance between the two places. It is watered by the River Kizil-Irmak (Halys), which, rising in that portion of the Taurus called Sultān-Dāghi, traverses the whole of northern Asia Minor, and empties itself into the Black Sea to the north of the Gulf of Samsūn (not so shown on our maps).

Konia, once the capital of the Seljūki Sultans, stands in a plain at the base of the hills of Fudhūl-Babā. It has a well-preserved wall of two miles and a-half in circumference, and has a population of about 30,000 souls, but its trade is limited. It receives goods from Smyrna in exchange for wool, cotton, hides, and carpets, which are manufactured in the town. It is the residence of a Pasha and of a Greek Metropolitan Bishop, whose diocese extends over the whole Greek community in the Pashalic. Konia is famous for its numerous mosques (some of which are handsome but are falling into decay), as well as for its medresas or colleges. It has seven khans for the accommodation of travellers and merchants, four baths, and the Greeks possess two churches. The adjacent territory produces grain and flax, but it is only partially cultivated. The slopes of Fudhūl-Babā are, however, covered with gardens and fields, irrigated by a small stream which runs near the town.

Lādik. The large but wretched looking Turkish village of Lādik is eight hours from Konia. The road crosses the plain of Konia, which is the most extensive in this part of Asia Minor. At its western extremity it passes over some hills of easy ascent, at the base of which is Lādik, containing about 500 inhabitants, whose principal industry consists in the manufacture of excellent carpets. From the numerous sculptured stones and inscriptions observed in every direction, Lādik must occupy the site of some ancient place of note. (Laodicea Combusta.)

Kadin-Khanè and Ilgun. Two hours further on is the small town of Kadin-Khanè, containing about 900 houses; and six hours further on is the town of Ilgun (Tyriæum), composed of mud houses inhabited by Turks, Greeks, and Armenians. The former are the most numerous, and they derive their livelihood from the cultivation of opium and grain. The Christians are small traders and artizans. Sheep, goats, cows, and buffaloes are reared in vast numbers, which produce a large quantity of cheese and butter, with which the surrounding towns are supplied.

'Ali-Khāni. Three hours beyond is the village of 'Ali-Khāni, situated in the midst of hills, with well-cultivated gardens and orchards. The route lies over a small stream with a bridge of two arches, and it continues among uneven ground until it descends by a gentle slope into the plain of Ak-Shehr (Philomelium), one of the best cultivated in these parts. It has numerous villages surrounded by orchards and fields of poppy, from which opium is extracted. The cultivation of this plant requires a great number of hands during the season of its extraction, and as this only occupies two months in

the year, and is besides a rich produce, its cultivation suits the indolent dispositions of the Turkish peasants, who send it to Smyrna, where it is sold to the European merchants.

It is six hours from 'Ali-Khāni to Ak-Shehr, situated at the base of Sultān-Dāghi. Ak Shehr. It comprises 1,400 houses, but its inhabitants have suffered greatly during the war between the Porte and Mehemed Aly Pasha of Egypt. Besides the very heavy contributions they had to pay to the latter, the contending parties on their advance and retreat quartered their troops upon the inhabitants, who ill-treated them and despoiled them of all they possessed. It is, however, a place of pilgrimage, as it contains the tomb of Nūru-'d-Din Khoja, a saint much venerated by Mussulmans. A great quantity of opium is likewise grown here.

The distance from Ak-Shehr to the village of Saraba (near Thymbrium) is five Saraba. hours. The route traverses a highly cultivated region, full of orchards, in the midst of which no less than ten villages are visible, copiously watered by streams from Sultān-Dāghi, which flow into the Lake Naklu. Notwithstanding that Saraba is an inconsiderable and a dirty village, it holds a weekly fair on account of its central position, to which traders repair from all parts to sell their goods, or to barter them against the produce of the numerous villages dispersed in the magnificent and extensive plain, bounded on the north by the mountains of Emīr-Dāghi (Mount Adoreus), and on the south by those of Sultān-Dāghi.

From Saraba to Buliwādin is six hours. Buliwādin is a considerable town, Buliwādin. standing in a large plain; but with the exception of some good houses and mosques, the habitations are miserable in the extreme. There are, however, several villages in the plain, which is well cultivated.

There are three routes from Buliwādin to Constantinople. The most direct lies through Eski-Shehr (Darylœum); the second through Kutahiyya (Cotyæum) and Eski-Shehr; and the third through Kutahiyya and Brūsa (Prusa).

The first day's stage from Buliwādin to Khosrev-Khāni is thirteen hours, the Direct road by Eski-Shehr, Khosrev-Khāni. road crossing some unimportant hills. From thence to Seyyidi-Ghazi is seven hours; but with the exception of the little plain and village of Doghanlu, the country is hilly, covered with forests of pine-trees, and being thinly peopled is uncultivated.

Seyyidi-Ghazi is a half-ruined village, inhabited by Turks, who raise a little Seyyidi-Ghazi. grain, but possess flocks of sheep and cattle.

Nine hours brings the traveller to the town of Eski-Shehr, which stands at the Eski-Shehr. foot of some hills on the River Porsuk-Sūyu (Thymbris), which traverses the Plain of Doryleum. This plain is from thirty to forty miles in extent, and has but few villages. The town, previous to the plague in 1834, contained 10,000 inhabitants; it is badly built, but is famous for its hot mineral springs and baths.

The stage from Eski-Shehr to Suyut (Esdissus?) is ten hours. The road lies Suyut. over a level country for the first eight hours, at the end of which it passes over some hills covered with trees. Suyut was formerly a considerable town, now reduced to about 800 houses, the occupants of which cultivate a considerable number of mulberry plantations, which give a large quantity of silk. Their trade is mostly with Brusa, from whence they receive the few foreign articles they require.

It is eight hours from Suyut to the small town of Vezīr-Khāni (Ayrillium?), Vezīr-Khāni. the country between them being hilly and barren. It is built on the north-western slope of this range of hills at the head of a plain, which conducts to Lefka (Leucœ), four hours distant.

The plain, through which flows the River Sakaria (Sangarius), is highly Lefka. cultivated. It has many mulberry plantations, gardens, and vineyards, which are neatly cultivated, be it by the inhabitants of Vezīr-Khāni and Lefka, or be it by the peasants of the villages that are scattered over one of the most fertile regions in this part of Asia Minor.

This valley extends a little beyond Lefka, and the road, after crossing a substantial stone bridge, leads over a range of mountains, a prolongation of Mount Olympus, to Iznik (Nicœa), which is reached in seven hours. Iznik is situated in a narrow vale on the north-west side of the mountains and south-eastern extremity of the Lake Ascanias. Whatever might have been the ancient magnificence of Nicœa, as attested by the still existing old walls and the numerous fragments of ruins of columns, capitals, and inscriptions, it is now but a small village of about 100 mud-huts, inhabited by Turks and a few Greeks, who till the soil on the sides of the lake. The mountains here are also covered with wood and evergreens.

From Iznik to Izmīd (Nicomedia) is six hours through a well-cultivated country Izmīd (Nicomedia). bounded on the east by a continuation of the mountains from Nicœa. It stands

at the head of the Gulf of Nicomedia, which enables it to carry on by sea a constant communication with Constantinople, to which circumstance it owes its prosper it. It contains about 800 houses, 200 of which are inhabited by Greeks and Armenians, and is, besides, the seat of the Government of the district of Kojā-Ili.

Gheybuza.

Gheybuza (Lybissus) is a Turkish town about nine hours from Izmīd. The road takes a westerly direction, partly along the Gulf of Nicomedia.

Kartāl and Scutari.

The village of Kartāl is five hours from Gheybuza, and four hours beyond is the large and populous town of Scutari, opposite Constantinople, the road following the coast of the Sea of Marmora.

Second route from Buliwādin to Constantinople viā Kutahya.

From Buliwādin to Afyūn-Kara-Hisāri (Synnada), is about eight hours, passing through the villages of Chay-Kyeuyi and Choban-Kyeuyi, the former as proverbial for its inhospitality as the other is for its kindness to travellers. Choban-Kyeuyi is of some extent in a barren plain, little cultivated for want of water. No villages appear to exist in the neighbourhood, and the country is deserted.

Afyūn-Kara-Hisari.

Kara-Hisār, which stands in a recess at the foot of the mountains of Sultān-Dāghi, is a considerable town, containing upwards of 10,000 families, who cultivate and carry on an important trade in opium. They likewise manufacture felt and carpets. Although the town is smaller than Konia, its bazaars are larger, better constructed, and better furnished with goods.

Osman-Kyeuyi.

From Kara-Hisār to Osmān-Kyeuyi (Lonni ?) is eight hours. The road traverses, for the first five hours, a beautiful region inclosed as it were between Sultān-Dāghi and the first declivities of Akhir-Dāghi, which it afterwards crosses. This fertile plain is well cultivated by the peasants of no less than fourteen villages.

Kutāhiyya is nine and a-half hours from Osmān-Kyeuyi. The road passes through the village of Tatār-Ahmed, in a narrow vale between the barren hills of Akhir and the mountains of Murād-Dāghi. There are several villages not distant from each other in this neighbourhood. From this point it gradually ascends the latter mountain, which is covered with stunted trees.

Kutāhiyya.

The town of Kutāhiyya is partly built at the base, and partly on the slopes, of Porsuk-Dāghi. It is the residence of a Pashā, and has a population of upwards of 50,000 souls, including 14,000 Armenians and Greeks. It is a place of considerable commercial activity. It receives caravans from Brusa and Smyrna, as well as from the towns in the north of Asia-Minor; and it supplies the villages in the adjacent territory with native and foreign coarse goods, and with colonial articles. Its castle is in ruins; but it possesses some handsome fountains, from 40 to 50 mosques, 30 baths, 20 caravanseries or khans, and the Christians have 5 churches.

In-Onghi.

The village of In-Onghi is twelve hours from Kutāhiyya. The route, which follows for some distance the River Porsuk-Sūyu, is good, and the intervening level region is fairly tilled.

The road from this latter place to Constantinople having been already described, it will only be necessary to give that from Kutāhiyya to Brūsa viā Iznik.

From Kutāhiyya to the village of Chukurja is nine hours, passing by the town of Tawshanli. The road lies over the mountain of Domān-Dāghi (Olympus), which is covered with large forests of magnificent trees. It takes about three hours to ascend the mountain, and, after following its summit for some time, the descent occupies about four hours more. The village of Ayna-Ghyeul is two hours beyond, and from thence to Brūsa nine hours. The route, for the most part, lies between wooded valleys until within six or seven miles from Brūsa, where the country expands into a magnificent plain.

Nothing can exceed the beauty of the scenery in approaching Brūsa, which stands at the south-east end of a plain about seven leagues in length and two in breadth, covered with groves, meadows, and well-cultivated fields. It is one of the most flourishing emporiums of the Ottoman dominions. Its silk manufactures are celebrated in the East, and it exports a large quantity of the raw material to Europe, from which it receives in exchange a variety of goods, cloth, cotton stuffs, colonial articles, earthenware, cutlery, &c. The population is computed at 60,000 souls, 7,000 of whom are Armenians, between 3,000 and 4,000 Greeks, and about 2,000 Israelites. Owing to the active trade carried on, and the number of silk-looms employed, the inhabitants are in easy circumstances, and some of them are even very wealthy, occupying large and comfortable houses. This populous and flourishing city has extensive bazaars, very well provided with native and foreign merchandize. It has a great number of khans, and it is said that it possesses between 200 and 300 mosques, but it is more particularly celebrated for its thermal

baths, which are constructed with commodious apartments, and supplied by hot and cold springs.

The distance from Brūsa to Iznik or Nicœa is two days' journey, or about sixteen hours. The route, a few miles from Brūsa, crosses some hills, but the surrounding country is fertile, well-watered, and contains some thriving villages. The remainder of the road from Nicœa to Constantinople has been already described.

(Signed) RICHARD WOOD.

Tunis, January 15, 1872.

No. 19.

Vice-Consul Wrench to Earl Granville.—(Received November 30.)

My Lord,

Dardanelles, October 28, 1871.

I HAVE had the honour to receive Lord Enfield's Circular despatch of the 25th of August last, instructing me to forward to the Foreign Office a statement on the subject of communication with India through Turkey.

The posts I have hitherto occupied in the East have not been so situated as to give me any special facilities for acquiring information on this important subject; but in obedience to the instructions contained in the Circular under acknowledgment, I have prepared a short statement, which I have the honour herewith to transmit.

I have, &c.

(Signed) WILLIAM H. WRENCH.

Inclosure in No. 19.

Report by Vice-Consul Wrench.

DURING a residence of eight years in Syria, principally at Damascus and Beyrūt, I never personally visited that northern portion of the country which is generally considered as best adapted for the proposed line of railway. From my knowledge of the interior from Baalbeck to Jerusalem and of the sea coast from Tripoli as far southwards as Jaffa, I should be disposed to agree with those who condemn a south Syrian route; but as this route has, I believe, received no support from practical persons I need not enter into the disadvantages it presents.

Alexandretta possesses the only port on the Syrian coast, the natural harbour is a most commodious and safe one, notwithstanding that it is occasionally visited by strong gusts of wind resembling the Trieste "Borsa." The climate of the town, rendered unhealthy by the miasma arising from an extensive marsh, could be improved without any great difficulty; indeed, were Alexandretta selected as the Asiatic terminus, the draining of the marsh would doubtless prove a profitable undertaking to an association of capitalists.

Suwaydiyya is at the present time considered as one of the most dangerous of the Syrian roadsteads, and the works necessary to make a harbour would involve so considerable an outlay, that the cost of a line from thence to Aleppo would probably exceed that of one from Alexandretta, taking into consideration the difficulties of the Beylān Pass.

Much has been said as to the opposition to be apprehended from the nomade tribes both to the construction and to the working of the portion of the line from Aleppo through the Euphrates Valley. From the experience I have gained in Syria of the Arab character I imagine that the danger has been over-estimated. No doubt subsidies would have to be paid to the Bedouin until such time as the Turkish Government could make their authority respected in the Desert, but provided these subsidies are paid to the proper Chiefs, are forthcoming exactly at the time and place agreed upon, and that faith is invariably and scrupulously kept with the Arabs on all occasions of intercourse with them, not only by the immediate officers of the railway itself but also by everyone, Turk or European, in any way connected with the enterprise, I am of opinion that no enmity need be apprehended. I have found that the Arabs will keep faith with those who keep faith with them, but so many of their Chiefs have been decoyed to their ruin by false promises made to them by Turkish

functionaries, that it will be a matter of some tact to gain their confidence in the first instance and remove any unfavourable impressions they may have preconceived.

It is admitted that the substitution of Salonica for Brindisi as the European point of departure will effect a saving of some fourteen hours; but I think, if a Syrian port is to be reached, it would be found in practice that the economy of time would not be so great as anticipated, on account of the caution that would be necessary, especially in winter, for navigating among the numerous Islands of the Sporades that lie on the direct course. Could Smyrna be selected as the Asiatic terminus the sea passage could be materially reduced, the navigation free of obstructions, and advantage might be taken of the existing railroad to Aydın which, might be extended *viâ* Adalia and Tarsus to Aleppo.

But whichever of the ports I have mentioned may now be chosen as the European or Asiatic terminus of the proposed railway, an intermediate sea passage, and the consequent transshipments are involved, and I fully anticipate that sooner or later such a route would be abandoned in favour of one by which these inconveniences would be avoided and time economised.

Constantinople appears the natural point at which Europe should be connected with Asia by railway communication. It is on the direct line between England and India. The Bosphorus forms so insignificant an interspace between the continents that ferry-boats could transport a train from Europe to Asia without a bale being displaced or a passenger changing his carriage. The economical advantages of passing through a city of such importance are incontestible, and whether the line was run through Kutâhiyya and Adalia, by Angora and Adana, a vast extent of country, now shut out to European commerce, but fertile and abounding with mineral wealth, would be opened up. Such a route would possess the further advantage of a greater amount of support and favour on the part of the Ottoman Government than would be accorded to any other line.

(Signed)

WILLIAM H. WRENCH.

Dardanelles, October 28, 1871.

No. 20.

Sir H. Elliot to Earl Granville.—(Received December 30.)

(Extract.)

Therapia, December 19, 1871.

MR. SKENE has recently forwarded to your Lordship a most able Report by Mr. J. L. Haddan upon the subject of railway communication with India by the Euphrates Valley. The purely scientific portions of the Report will receive the attention of the distinguished persons who are now examining the subject; and who are qualified to give a competent opinion upon them, which I could not pretend to do.

I therefore pass without comment all that relates to the width of gauge, the pioneer system, and the practicability of the different routes proposed &c.; but your Lordship will allow me to express an entire concurrence in the greater part of the remarks with which Mr. Haddan prefaces his Report, although I believe him to be in error in assuming the Turkish Government to hold to any particular route rather than another for connecting Asia Minor with a Mesopotamian line of railway.

Some pass over the mountain may have been pointed out to them as being the most practicable, but they will show no aversion to adopt any other that might be shown to be easier.

I may also add, that the conviction which has been lately expressed by some of Her Majesty's Consular Agents, that the hostility of the Porte to an Indian line of railway would always prevent its accomplishment, betrays entire ignorance of the policy and sentiments prevailing at Constantinople.

During the time of the late Aali Pasha he frequently asked me if it would not be possible to obtain the direct aid of Her Majesty's Government in carrying out a scheme which he regarded as of the highest importance to the Empire, both materially and politically.

No change has taken place since his death, excepting that the wish to see the project executed has become still stronger, and is especially favoured by the Sovereign.

At the same time, I must remind your Lordship that I have never withheld the opinion that, in order to secure the effective co-operation of the Porte, the line from Basra must be continued through Asia Minor to the capital; the southern

portion of it being so much regarded as rather of British than of Turkish interest that the Sultan's Government will hesitate in incurring for it alone the heavy charge which it would entail.

Mr. Haddan states this so clearly that your Lordship will permit me to extract his words. He says:—

“In any business transactions between two parties the interest must be mutual, or success is impossible. Thus, England and Turkey in making arrangements for a railway to India, must make mutual concessions, and not expect the profit to be on one side and the outlay on the other.

“It has been set forth that England, by endorsing Turkey's guarantee, enables Turkey to construct her railways at a lower rate. This is perfectly true provided the line in question was selected by Turkish interests, and not by English, or provided this rule were applied to the whole system of Turkish railways.

“No one can deny that the Euphrates Valley Railway, from the Mediterranean to the Persian Gulf, is essentially a British undertaking. In all the evidence given before the Committee of the House of Commons, no one has ventured to assert that it will be beneficial to the Turks, beyond giving utterance to commonplace observations as to civilisation.

“England is to risk nothing. To gain free transmission of the mails, passage to her armies at a low rate, and to have the capital (which will be essentially British) fully guaranteed.

“Turkey is to risk everything. The Custom duties of Alexandretta and Basra, the transit duty of one per cent., and to guarantee four per cent. on the capital.

“It is useless to conceal the fact that Turkey will have to pay the guarantee for many years to come.

“That Turkey cannot afford to make such sacrifices, even to obtain and secure England's friendship, is well known; and, therefore, though at first all might go well, difficulties will arise which might have been avoided by a little liberality in the onset, of such gravity as will probably ensure the failure of the undertaking, and a heavy loss on both sides.

“Were, however, the line to be undertaken on the same terms from Constantinople to Basra, instead of merely the British part from Alexandretta to Basra, both nations would then be gainers.

“That the Turks know their own interests is certain, and judging from conversations held with influential persons, both in Constantinople and elsewhere, as also from the well-known wishes of the Sultan, and the rapid progress being made on the Ismid line, I am morally certain that, by some means or other, the concession will never be granted provided Asia Minor be not included in the scheme, a demand which, in common fairness, should be anticipated.”

The views thus clearly expressed by Mr. Haddan are those of an intelligent man, who clearly understands the position, and they ought not to be lost sight of by those who are working for the great undertaking.

I have recommended to the Porte that Surayyā Pasha's proposal of sending Mr. Haddan to survey the pass of the Taurus, indicated by Mr. Skene, should be acceded to.

REPORTS respecting Communication with
India through Turkey, by the Euphrates
Valley Route.

*Presented to the House of Commons by Command
of Her Majesty. 1872.*

LONDON :
PRINTED BY HARRISON AND SONS.