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of  
Mesopotamia  
Vol. III*

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# A HANDBOOK OF MESOPOTAMIA

VOLUME III

CENTRAL MESOPOTAMIA

WITH SOUTHERN KURDISTAN AND THE  
SYRIAN DESERT

*Prepared on behalf of the Admiralty and  
the War Office*

ADMIRALTY WAR STAFF  
INTELLIGENCE DIVISION

(C.B. 295.)

JANUARY, 1917





## NOTE

*Mesopotamia* is treated in four volumes. The first volume contains matter of a general nature. The other volumes are devoted to the detailed description of the river and land routes. The second volume covers the regions of the Shatt el-'Arab and Kārūn, and of the Tigris and Euphrates up to Baghdad and Fellūjeh. To the third volume are assigned the Tigris and Euphrates from Baghdad and Fellūjeh to Mosul and Meskeneh, the Lesser Zab, the country East of the Tigris towards the Persian frontier, and the routes running westward from the Euphrates valley across the Syrian Desert. The fourth volume treats of the country North of the line joining Rowanduz, Mosul, Meskeneh, and Aleppo up to Van, Bitlis, Diarbekr, and Marash.

All estimates of mileage must be considered as approximate only. In most cases they are based on the rough calculations of travellers, or on the times given by travellers, or on sketch-maps or incomplete surveys. The question-marks placed beside some of the figures indicate that these are peculiarly doubtful: it is not implied that other figures may be regarded as exact.

It is necessary to emphasize the fact that in the circumstances the information given cannot be complete, and that conditions are constantly undergoing change. The Admiralty will be glad to receive corrections and additions.

Maps to accompany these volumes will be issued separately.

## ABBREVIATIONS

In the itineraries the following abbreviations and conventional signs may be noted :—

r. = right. l. = left.

h.w. = high water. l.w. = low water.

I. = Island.

T.L. = telegraph line.

T.O. = telegraph office.

P.O. = post office.

m. = miles.

The following signs are used to distinguish distance :—\* by river ;  
† by road or track ; √ crow-fly.

Distances are given throughout in statute miles.

Alt. = altitude, which is given in feet above sea-level unless otherwise stated.





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## INTRODUCTION

### THE ROUTE SYSTEM OF CENTRAL MESOPOTAMIA, WITH SOUTHERN KURDISTAN AND THE SYRIAN DESERT.

**General Remarks.** (a) *The Plains.*—The conditions of movement and transport in the country N. of Baghdad are on the whole very different from those prevailing in Lower Mesopotamia. The Tigris and the Euphrates are still important as affording main lines of advance, but as waterways they are far less useful, at least for up-stream navigation, than in Irak, owing to the more rapid current, shallower depths, and numerous rocks and small rapids which characterize their middle courses. On the other hand, the surface of the plains which extend from Syria on the W. to the hills of Kurdistan on the E. is much better suited to movement by land than that of the alluvial desert and marsh of Irak and Arabistan. There had indeed been hardly any road-making in these plains before the present war: a short stretch of the Baghdad—Aleppo caravan-route north of Deir ez-Zor seems to have been the only metalled carriage-road. But, in dry weather at least, tracks that need little or no improvement to make them passable for wheels can generally be found. In wet weather the region where the tracks suffer most is the alluvial plain N. and NE. of Baghdad. The clay that predominates in the plains E. of the Tigris and N. of Samarra also makes bad going after rain. The Southern Jezireh between the Euphrates and the Tigris, and the Syrian Desert W. of the Euphrates, consist for the most part of hard ground which is comparatively little affected by rain: though even here soft going may be found in patches of deep sand, or along streams like the Belikh and Khabūr and the brooks that water the plain under the Sinjar Hills. In the valleys of the Euphrates and Tigris are strips of alluvium.

The chief obstacles in the plains are, first, the two great rivers and their large tributaries (Diyāleh, 'Adheim, the two Zābs, Khabūr, and Belikh), and, secondly, the numerous wadis. These latter appear

to be generally passable for wheels or easily made so by a little ramping, &c. In winter and spring, however, some of them at times contain considerable torrents. Irrigation-cuts are not common except in the cultivated areas of the alluvial plain N. and NE. of Baghdad, where a good deal of bridging and ramping might be necessary here and there. South of the Sinjar the only important line of hills is the low but rugged *Jebel Hamrîn*. Broken hilly ground is also found along the edges of the desert-plateau overlooking the *Tigris* and *Euphrates*.

The principal and very serious difficulty attending movement in the plains is the prevailing lack of water and supplies. The effect of this on the direction of main routes, &c., will be discussed below.

(b) *The Kurdish Hills*.—The hill-country of Kurdistan S. of Rowanduz may be divided roughly into two zones which gradually merge into each other: the zone of the foot-hills and down-country, and the zone of the higher ranges.

In the first, movement is generally fairly easy. Open rolling downs, low ridges, and wide valleys of clay, gravel, sandstone, &c., form its principal features. Most of the tracks as far as *Salāhiyeh*, *Suleimāniyeh*, *Raniyeh*, and *Rowanduz*, where not already passable for wheels, could be improved fairly easily. The chief obstacles are the Greater and Lesser *Zāb* (both fordable here and there in the low-water season), and their principal affluents, which are for the most part easily fordable except when in spate from rain or melted snow. A certain amount of work may be needed to make the banks of some of the stream-beds and wadis passable for wheels. Water in this region is generally plentiful, there is good grazing in spring, and the country, though much under-cultivated, is sufficiently tilled and populated to support a number of small towns.

Eastwards the ranges become gradually higher and more rugged; the tracks through the hills more stony, steep, and narrow. The mountains enclose small fertile plains, but these are often damp and muddy. The higher passes are blocked with snow in winter. Stretches of road passable for wheeled transport become more and more rare, until by the time the Persian frontier is reached only mule-tracks ranging in quality from fair to bad may be found. Supplies are scanty, but water and fuel are plentiful, and there is a good deal of grazing.

*The Main Routes from Baghdad into Upper Mesopotamia*.—The desert character of most of the plain country has the effect of limiting to three the main lines of movement between Baghdad and Upper Mesopotamia: (a) the line of the *Euphrates*, towards *Aleppo*, &c.;





(b) the line of the Tigris to Mosul ; and (c) through the foot-hills of the Kurdish ranges *via* Salāhiyeh (Kufri), Kirkuk, and Altun Köprü to Mosul.

(a) *The Line of the Euphrates.*—The Baghdad—Aleppo caravan-route runs from Baghdad westward to the Euphrates at Fellūjeh, with a Decauville railway to Ridhwāniyeh to S. of it. It then follows the r. (western) side of the river to Meskeneh, where it turns W. to Aleppo. This road is passable for vehicles in all weathers, though before the war it was unmetalled except for a few miles N. of Deir ez-Zor, and was therefore liable after rain to become soft and heavy for wheeled vehicles. A good many wadis, some of which are rather difficult, have to be crossed. There was a fair amount of wheeled traffic passing over it at all seasons, and the journey between Baghdad and Aleppo had been occasionally made by motors before 1914. Water is plentiful, chiefly from the river. Supplies are limited, though there is some cultivation along the valley. There is good grazing in the neighbourhood of the river during spring. Fuel is very scarce in some parts ; in others it is supplied by tamarisk, &c. Whether transport could be obtained would depend on the attitude of the neighbouring nomads and semi-nomads. (See further, *Route 46.*)

On the l. bank there is no regular route, but from the reports of the few travellers who have ridden over parts of this side of the Euphrates the country appears to be generally open and easy, with the usual wadis, patches of soft sand and alluvium, &c. The Belikh and Khabūr tributaries are the chief obstacles on the E. side of the river. (See *Route 47.*)

As a water-way, the middle Euphrates has been much used for down-stream traffic. Above Hit it cannot be ascended by sailing-craft owing to the rapidity of the current. It has been occasionally navigated up-stream by steamers and motor-boats ; but even for these it would be very difficult if not impossible to ascend the river when it was at its highest or lowest. Blasting, &c., might improve some of the places where rocks have formed rapids. (See further, *Routes IV F, G, H.*)

(b) *The Line of the Tigris.*—The section of the Baghdad Railway between Baghdad and Mosul will follow the r. (western) side of the Tigris Valley. At present only the part of the line between Baghdad and Samarra appears to have been completed.

From Samarra to Tekrit and from Tekrit to Mosul the land route on the r. bank goes through very sparsely inhabited country where





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supplies are almost wholly lacking. Moreover, where the Tigris breaks through the Jebel Hamrîn, the route has to turn aside from the river and runs some 38 m. through desert very scantily supplied with water. There is grazing on the route in spring, but fuel is very scarce. The Jebel Hamrîn, which is crossed SE. of Qal'ah Sherghat, is broken and rugged, and there are stretches of broken ground elsewhere, e.g. near Tekrit. Nevertheless, before the war the route had been traversed by light wheeled vehicles occasionally, and once even by a motor. On the l. bank there was no regular route over the whole distance from Baghdad to Mosul, though caravans travelled sometimes on that side of the river between Baghdad and Samarra, between Samarra and Dûr, and between the Great Zâb near its mouth and Mosul. The chief disadvantage of the l. bank as a line for a through route from Baghdad to Mosul appears to be the necessity of crossing near their mouths the three large tributaries of the Tigris, the 'Adheim, and the two Zâbs. The Tigris was bridged before the war at Baghdad, Samarra, and Mosul.

There was much down-stream raft-traffic on the Middle Tigris before the war, but sailing vessels did not as a rule go up-stream to Samarra. The possibilities of steamer navigation between Samarra and Mosul are very uncertain. The conditions appear to be more unfavourable than those on the Euphrates above Hît. (See *Route III E.*)

(c) *The Salahiyeh—Kirkuk Line.*—The disadvantages of the Tigris line mentioned above, and also the former insecurity of the Tigris Valley, have brought into existence a caravan-route from Baghdad to Mosul along the foot-hills of the Kurdish mountains, where there are a few towns (Salahiyeh, Kirkuk, Altun Kôprü, Erbil, besides a number of large villages) and a certain amount of cultivation, so that sufficient supplies are generally obtainable in normal times for fair-sized parties of troops or travellers. Before the present war this road apparently needed only slight improvements here and there, and some bridging (particularly at the Great Zâb) to make it passable throughout for guns and carts. In spring, troops might be held up by floods on a number of streams which at other times would be easily fordable. Water is apparently abundant in spring and sufficient at other seasons. There is good grazing on the route in spring. (See *Route 25 a.*)

**Lateral Communications** between the main routes from Baghdad into Upper Mesopotamia may be summarized as follows:—

(a) *Communications across Lower Jezireh.*—These include the routes





between the Middle Euphrates and the Tigris valleys. In general it may be said that the difficulties of communication across the Jezreh are due not to the ground but to lack of water and supplies. North of the Baghdad—Fellūjeh line which is traversed by the Baghdad—Aleppo caravan-route the southern part of the Lower Jezreh is a very arid desert, hardly passable except by camel-caravans, small parties of horsemen, or motor-cars. The going seems to be firm and easy except at occasional wadis. Very little is known of the tracks across this region used by the Arabs. For a desert route from Anah to Baghdad, see *Route 48*. It is possible that the line of the Wādi Tartar would be found useful in traversing the Lower Jezreh from SW. to NE. or *vice versa* (e.g. between Hit and Qalāh Sherghat or Mosul). There seems to be water (brackish?) even in the lower (southern) part of the Wādi Tartar for at least most of the year.

— Nearer the Sinjar Hills conditions improve, and a number of fairly well frequented routes over open easy country connect Mosul with Deir ez-Zor. The chief obstacle is the River Khabūr, which seems, however, to be fordable here and there in the low-water season. Water is less scarce than in the southern part of Lower Jezreh. It is always to be found in abundance in the Khabūr River, and a number of small streams run down from the Sinjar Hills into the plain, but these may dry up in summer. There are also a fair number of springs in the desert. The water in some of the streams and springs is rather brackish or sulphurous, though usually drinkable. Good grazing may be found in this region in spring. Fuel is obtainable in the Sinjar Hills. The lines preferred by guides in crossing this country vary with the season, the condition of wells, &c. The route from Mosul to Deir *via* 'Ain el-Ghazal and Tel es-Sawwār is certainly passable for wheels, but it is reported that infantry would not be able to use the route in summer owing to scarcity of water. (See *Route 49 a.*) The more northerly route (*49 b*) lies under the Sinjar Hills, passing through Beled Sinjar and Sekenik. This appears to be passable for vehicles, though the track may become heavy after rain and would perhaps need improvement at wadis. The direct routes between Sekenik and the Khabūr at Shedādi or Tel 'Arabān (see *Routes 49 c, d*) appear to suffer from lack of water. A circuitous way from Sekenik to the Khabūr which crosses between the Jebel Sinjar and the Jebel Jereibeh by the Shillo Pass and then turns W. along the northern side of the hills, may be better provided with water, but the quality of the supply seems to be poor. The Shillo Pass is the main passage across the hills, and, though stony, seems to need little improvement for wheels. There are other tracks over the Sinjar range, but they are said to be difficult. The Sinjar Mountains

are fairly well populated: the inhabitants (Yezidis) are said to have been raiding the Deir—Mosul route since the outbreak of the war. The direct lines across the desert from Tel es-Sawwār or Shedādi on the Khabūr to Deir ez-Zor seem to be poorly supplied with water, and it might therefore be preferable to make a *détour* to the S., descending the Khabūr to its junction with the Euphrates, and thence ascending the Euphrates Valley.

(b) *Communication between the Tigris Valley and the Baghdad—Kirkuk—Mosul Route.*—North of the partially cultivated area that lies between the Tigris and the Lower Diyaleh, there stretches between the Tigris and the hills an open plain of clay and gravel traversed successively by the 'Adheim, the Hamrīn Hills, the Lesser Zab, and the Great Zab.

As far as the Lesser Zab this plain is apparently inhabited only by a very sparse nomadic population, who may practise a little desultory cultivation here and there on the banks of the rivers or where there are rain-water wells and springs. There is grazing in this region in spring, but in summer both water and grass are probably very scarce. The road between Salāhiyeh (Kufri) and Kirkuk might perhaps be reached by following the 'Adheim towards the point where it emerges from the hills and then striking NW. or W. across the Jebel Hamrīn: but there is no evidence as to this as a possible route. For a slight account of a route from Tekrit to Kirkuk, see *Route 26*.

Probably the easiest line would be along the course of the Lesser Zab from the neighbourhood of Qal'ah Sherghat to Altun Kōprū. Here water could always be obtained from the river and the country on both banks appears to be open and easy. There is a down-stream raft traffic on the Lower Zab, but whether steamers could ascend the river to Altun Kōprū even in fairly high water seems very doubtful. (See *Route III F*.)

North of the Lesser Zab the population, though at first semi-nomadic, seems to become more numerous. Thus in 1903 Sykes saw numerous villages on the plain between Qal'ah Sherghat and Makhmūr, though these were then (temporarily?) deserted owing to drought and locusts. For the route from Qal'ah Sherghat to Altun Kōprū *via* Makhmūr, see *Route 27*.

The plain S. and SW. of Erbil appears to be fairly well cultivated (grain is exported thence to Baghdad) and between the Great Zab and Mosul there are numerous villages, Moslem, Christian, and Yezidi. Here over the open country are numerous tracks, and communication between the Tigris and the Erbil—Mosul road should be easy.



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**Lateral Communications** between the main routes from Baghdad into Upper Mesopotamia may be summarized as follows:—

(a) *Communications across Lower Jezirch.*—These include the routes





between the Middle Euphrates and the Tigris valleys. In general it may be said that the difficulties of communication across the Jezireh are due not to the ground but to lack of water and supplies. North of the Baghdad—Fellūjeh line which is traversed by the Baghdad—Aleppo caravan-route the southern part of the Lower Jezireh is a very arid desert, hardly passable except by camel-caravans, small parties of horsemen, or motor-cars. The going seems to be firm and easy except at occasional wadis. Very little is known of the tracks across this region used by the Arabs. For a desert route from Anah to Baghdad, see *Route 48*. It is possible that the line of the Wādi Tartar would be found useful in traversing the Lower Jezireh from SW. to NE. or *vice versa* (e.g. between Hit and Qal'ah Sherghat or Mosul). There seems to be water (brackish?) even in the lower (southern) part of the Wādi Tartar for at least most of the year.

— Nearer the Sinjar Hills conditions improve, and a number of fairly well frequented routes over open easy country connect Mosul with Deir ez-Zor. The chief obstacle is the River Khabūr, which seems, however, to be fordable here and there in the low-water season. Water is less scarce than in the southern part of Lower Jezireh. It is always to be found in abundance in the Khabūr River, and a number of small streams run down from the Sinjar Hills into the plain, but these may dry up in summer. There are also a fair number of springs in the desert. The water in some of the streams and springs is rather brackish or sulphurous, though usually drinkable. Good grazing may be found in this region in spring. Fuel is obtainable in the Sinjar Hills. The lines preferred by guides in crossing this country vary with the season, the condition of wells, &c. The route from Mosul to Deir *via* 'Ain el-Ghazal and Tel es-Sawwār is certainly passable for wheels, but it is reported that infantry would not be able to use the route in summer owing to scarcity of water. (See *Route 49 a.*) The more northerly route (*49 b*) lies under the Sinjar Hills, passing through Beled Sinjar and Sekenik. This appears to be passable for vehicles, though the track may become heavy after rain and would perhaps need improvement at wadis. The direct routes between Sekenik and the Khabūr at Shedādi or Tel 'Arabān (see *Routes 49 c, d*) appear to suffer from lack of water. A circuitous way from Sekenik to the Khabūr which crosses between the Jebel Sinjar and the Jebel Jereibeh by the Shillo Pass and then turns W. along the northern side of the hills, may be better provided with water, but the quality of the supply seems to be poor. The Shillo Pass is the main passage across the hills, and, though stony, seems to need little improvement for wheels. There are other tracks over the Sinjar range, but they are said to be difficult. The Sinjar Mountains

are fairly well populated: the inhabitants (Yezidis) are said to have been raiding the Deir—Mosul route since the outbreak of the war. The direct lines across the desert from Tel es-Sawwār or Shedādi on the Khabūr to Deir ez-Zor seem to be poorly supplied with water, and it might therefore be preferable to make a détour to the S., descending the Khabūr to its junction with the Euphrates, and thence ascending the Euphrates Valley.

(b) *Communication between the Tigris Valley and the Baghdad—Kirkuk—Mosul Route.*—North of the partially cultivated area that lies between the Tigris and the Lower Diyaleh, there stretches between the Tigris and the hills an open plain of clay and gravel traversed successively by the 'Adheim, the Hamrīn Hills, the Lesser Zab, and the Great Zab.

As far as the Lesser Zab this plain is apparently inhabited only by a very sparse nomadic population, who may practise a little desultory cultivation here and there on the banks of the rivers or where there are rain-water wells and springs. There is grazing in this region in spring, but in summer both water and grass are probably very scarce. The road between Salāhiyeh (Kufri) and Kirkuk might perhaps be reached by following the 'Adheim towards the point where it emerges from the hills and then striking NW. or W. across the Jebel Hamrīn: but there is no evidence as to this as a possible route. For a slight account of a route from Tekrit to Kirkuk, see *Route 26*.

Probably the easiest line would be along the course of the Lesser Zab from the neighbourhood of Qal'ah Sherghat to Altun Kōprū. Here water could always be obtained from the river and the country on both banks appears to be open and easy. There is a down-stream raft traffic on the Lower Zab, but whether steamers could ascend the river to Altun Kōprū even in fairly high water seems very doubtful. (See *Route III F*.)

North of the Lesser Zab the population, though at first semi-nomadic, seems to become more numerous. Thus in 1903 Sykes saw numerous villages on the plain between Qal'ah Sherghat and Makhmūr, though these were then (temporarily?) deserted owing to drought and locusts. For the route from Qal'ah Sherghat to Altun Kōprū *via* Makhmūr, see *Route 27*.

The plain S. and SW. of Erbil appears to be fairly well cultivated (grain is exported thence to Baghdad) and between the Great Zab and Mosul there are numerous villages, Moslem, Christian, and Yezidi. Here over the open country are numerous tracks, and communication between the Tigris and the Erbil—Mosul road should be easy.







**Routes towards Persian Frontier.**—North-east of Baghdad, in the neighbourhood of Khanikin and Qasr-i-Shīrīn, lies the main depression in the mountain system which divides the plateau of Iran (Persia) from the Mesopotamian plains. Through this depression runs the Baghdad—Kirmanshah caravan-route by Bāqūbeh,<sup>1</sup> Qizil Ribat, Khanikin, and Qasr-i-Shīrīn. This before the war was the only route passable for wheeled transport between Mesopotamia and Persia, and even this was not easy for vehicles beyond the Persian frontier. In the plain between Baghdad and Khanikin the going was good except after rain. (See *Route* 28 a.) A much more difficult alternative route (28 b) to Kirmanshah runs by Beledrūz and Mandali to join the main road at Khorāsābād. This is liable to become very bad in the plains in wet weather, and is merely a mule-track in the hills. For connexions between these routes, see *Routes* 29 and 28 b, m. 122½, 147¾, 156¾.

Khanikin and Qasr-i-Shīrīn on the main Baghdad—Kirmanshah road are connected by easy though unmade tracks with Salāhiyeh (Kufri) on the Baghdad—Mosul road. The only serious obstacle on this set of tracks is the Diyāleh River. (See *Routes* 32 a, b ; 33.)

There is a made road passable for wheels from Qasr-i-Shīrīn to the Anglo-Persian Oil Company's wells at Chiah Surkh: and there is a fairly easy line over the Zohāb Plain between Qasr-i-Shīrīn and the Suleimāniyeh—Kirmanshah route mentioned below.

To the N. of Qasr-i-Shīrīn the first principal route-centre of Kurdistan is Suleimāniyeh, a considerable town lying in a fertile though under-cultivated plain some 60–70 m. E. of Kirkuk. The easiest approach to Suleimāniyeh from the W. is from Kirkuk over stony rolling hills through Chemchemal and the Baziyan Pass. Between Kirkuk and Chemchemal and between the Baziyan Pass and Suleimāniyeh there appears to be a number of possible tracks; and there seems to have been before the war at least one route from Kirkuk to Suleimāniyeh which was just passable for wheels throughout though in need of improvement. (See *Route* 37.) From the SW. Suleimāniyeh can be approached from Salāhiyeh (Kufri) by mule-tracks which are bad in parts. From the NW. mule-tracks over a more mountainous country under the Pir 'Omar Gudrun Dagh lead to Suleimāniyeh from Kōi Sanjaq and Raniyeh: these cross the Lesser Zab by ferries at Dukhan or Khānabi. (See *Routes* 39, 38.)

South-east from Suleimāniyeh a route leads by Halebjeh across the Persian frontier to Kirmanshah: this is fairly easy for pack-

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almost flat, broken only here and there by wadis, easy undulations,  
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improve the water-supply. It has been stated that there is probably an underground stream flowing N. from Rusafeh to the Euphrates, and that water might be obtained from it by boring. This water, if found, would probably be brackish. Beyond Sertyeh the country seems to have been formerly well populated; water might be obtained by clearing old wells or sinking new ones.

Notes on old routes between Basra and Damascus or Aleppo, which are very little used at the present day, will be found in vol. ii.





between the Middle Euphrates and the Tigris valleys. In general it may be said that the difficulties of communication across the Jezreh are due not to the ground but to lack of water and supplies. North of the Baghdad—Fellūjeh line which is traversed by the Baghdad—Aleppo caravan-route the southern part of the Lower Jezreh is a very arid desert, hardly passable except by camel-caravans, small parties of horsemen, or motor-cars. The going seems to be firm and easy except at occasional wadis. Very little is known of the tracks across this region used by the Arabs. For a desert route from Anah to Baghdad, see *Route 48*. It is possible that the line of the Wadi Tartar would be found useful in traversing the Lower Jezreh from SW. to NE. or *vice versa* (e.g. between Hit and Qal'ah Sherghat or Mosul). There seems to be water (brackish?) even in the lower (southern) part of the Wadi Tartar for at least most of the year.

— Nearer the Sinjar Hills conditions improve, and a number of fairly well frequented routes over open easy country connect Mosul with Deir ez-Zor. The chief obstacle is the River Khabūr, which seems, however, to be fordable here and there in the low-water season. Water is less scarce than in the southern part of Lower Jezreh. It is always to be found in abundance in the Khabūr River, and a number of small streams run down from the Sinjar Hills into the plain, but these may dry up in summer. There are also a fair number of springs in the desert. The water in some of the streams and springs is rather brackish or sulphurous, though usually drinkable. Good grazing may be found in this region in spring. Fuel is obtainable in the Sinjar Hills. The lines preferred by guides in crossing this country vary with the season, the condition of wells, &c. The route from Mosul to Deir *via* 'Ain el-Ghazal and Tel es-Sawwār is certainly passable for wheels, but it is reported that infantry would not be able to use the route in summer owing to scarcity of water. (See *Route 49 a.*) The more northerly route (*49 b*) lies under the Sinjar Hills, passing through Beled Sinjar and Sekenik. This appears to be passable for vehicles, though the track may become heavy after rain and would perhaps need improvement at wadis. The direct routes between Sekenik and the Khabūr at Shedādi or Tel 'Arabān (see *Routes 49 c, d*) appear to suffer from lack of water. A circuitous way from Sekenik to the Khabūr which crosses between the Jebel Sinjar and the Jebel Jereibeh by the Shillo Pass and then turns W. along the northern side of the hills, may be better provided with water, but the quality of the supply seems to be poor. The Shillo Pass is the main passage across the hills, and, though stony, seems to need little improvement for wheels. There are other tracks over the Sinjar range, but they are said to be difficult. The Sinjar Mountains



are fairly well populated: the inhabitants (Yezidis) are said to have been raiding the Deir—Mosul route since the outbreak of the war. The direct lines across the desert from Tel es-Sawwār or Shedādi on the Khabūr to Deir ez-Zor seem to be poorly supplied with water, and it might therefore be preferable to make a *détour* to the S., descending the Khabūr to its junction with the Euphrates, and thence ascending the Euphrates Valley.

(b) *Communication between the Tigris Valley and the Baghdad—Kirkuk—Mosul Route.*—North of the partially cultivated area that lies between the Tigris and the Lower Diyāleh, there stretches between the Tigris and the hills an open plain of clay and gravel traversed successively by the 'Adheim, the Hamrīn Hills, the Lesser Zab, and the Great Zab.

As far as the Lesser Zab this plain is apparently inhabited only by a very sparse nomadic population, who may practise a little desultory cultivation here and there on the banks of the rivers or where there are rain-water wells and springs. There is grazing in this region in spring, but in summer both water and grass are probably very scarce. The road between Salāhiyeh (Kufri) and Kirkuk might perhaps be reached by following the 'Adheim towards the point where it emerges from the hills and then striking NW. or W. across the Jebel Hamrīn: but there is no evidence as to this as a possible route. For a slight account of a route from Tekrit to Kirkuk, see *Route 26*.

Probably the easiest line would be along the course of the Lesser Zab from the neighbourhood of Qal'ah Sherghat to Altun Kōprū. Here water could always be obtained from the river and the country on both banks appears to be open and easy. There is a down-stream raft traffic on the Lower Zab, but whether steamers could ascend the river to Altun Kōprū even in fairly high water seems very doubtful. (See *Route III F*.)

North of the Lesser Zab the population, though at first semi-nomadic, seems to become more numerous. Thus in 1903 Sykes saw numerous villages on the plain between Qal'ah Sherghat and Makhmūr, though these were then (temporarily?) deserted owing to drought and locusts. For the route from Qal'ah Sherghat to Altun Kōprū *via* Makhmūr, see *Route 27*.

The plain S. and SW. of Erbil appears to be fairly well cultivated (grain is exported thence to Baghdad) and between the Great Zab and Mosul there are numerous villages, Moslem, Christian, and Yezidi. Here over the open country are numerous tracks, and communication between the Tigris and the Erbil—Mosul road should be easy.





**Routes towards Persian Frontier.**—North-east of Baghdad, in the neighbourhood of Khanikin and Qasr-i-Shīrīn, lies the main depression in the mountain system which divides the plateau of Iran (Persia) from the Mesopotamian plains. Through this depression runs the Baghdad—Kirmanshah caravan-route by Bāqūbeh,<sup>1</sup> Qizil Ribat, Khanikin, and Qasr-i-Shīrīn. This before the war was the only route passable for wheeled transport between Mesopotamia and Persia, and even this was not easy for vehicles beyond the Persian frontier. In the plain between Baghdad and Khanikin the going was good except after rain. (See *Route* 28 a.) A much more difficult alternative route (28 b) to Kirmanshah runs by Beledrūz and Mandali to join the main road at Khorāsābād. This is liable to become very bad in the plains in wet weather, and is merely a mule-track in the hills. For connexions between these routes, see *Routes* 29 and 28 b, m. 122½, 147½, 156½.

Khanikin and Qasr-i-Shīrīn on the main Baghdad—Kirmanshah road are connected by easy though unmade tracks with Salāhiyeh (Kufri) on the Baghdad—Mosul road. The only serious obstacle on this set of tracks is the Diyāleh River. (See *Routes* 32 a, b; 33.)

There is a made road passable for wheels from Qasr-i-Shīrīn to the Anglo-Persian Oil Company's wells at Chiah Surkh: and there is a fairly easy line over the Zohāb Plain between Qasr-i-Shīrīn and the Suleimāniyeh—Kirmanshah route mentioned below.

To the N. of Qasr-i-Shīrīn the first principal route-centre of Kurdistan is Suleimāniyeh, a considerable town lying in a fertile though under-cultivated plain some 60–70 m. E. of Kirkuk. The easiest approach to Suleimāniyeh from the W. is from Kirkuk over stony rolling hills through Chemchemal and the Baziyan Pass. Between Kirkuk and Chemchemal and between the Baziyan Pass and Suleimāniyeh there appears to be a number of possible tracks; and there seems to have been before the war at least one route from Kirkuk to Suleimāniyeh which was just passable for wheels throughout though in need of improvement. (See *Route* 37.) From the SW. Suleimāniyeh can be approached from Salāhiyeh (Kufri) by mule-tracks which are bad in parts. From the NW. mule-tracks over a more mountainous country under the Pīr 'Omar Gudrun Dagh lead to Suleimāniyeh from Kōi Sanjaq and Raniyeh: these cross the Lesser Zab by ferries at Dukhan or Khānābi. (See *Routes* 39, 38.)

South-east from Suleimāniyeh a route leads by Halebjeh across the Persian frontier to Kirmanshah: this is fairly easy for pack-

<sup>1</sup> As far as Bāqūbeh (where it crosses the Diyāleh by a bridge) it is identical with the better road from Baghdad to Delli 'Abbās on the Baghdad—Kirkuk—Mosul route. See *Route* 25 a.

animals until the mountains overlooking the Ab-i-Shirwān (Upper Diyāleh) are reached. Difficult paths lead through these hills: but beyond them comparatively easy mule-roads run to Kirmanshah. (See *Route 35.*) Lastly, eastwards from Suleimāniyeh, a route which in parts is practicable for led animals only leads by Penjevin over the frontier to Senna. (See *Route 36 a.*)

It has been stated that the best line for a military road or railway from the Tigris Valley into the Urmia district and NW. Persia would run by the Lesser Zab Valley from Altun Köprü to Kōi Sanjaq, thence to Raniyeh, and on by Pishder Plain to the Wazneh Pass, from there to El-Watan and the Lahjān Plain, and so to Ushnu and Urmia. In the present volume this line is described as far as Raniyeh. Before the war the road from Altun Köprü to Kōi Sanjaq and Raniyeh does not seem to have been passable for wheels throughout, but it appears to have been capable of being easily improved into a carriage-road. It traverses down-country and fairly low ridges, running over clay and gravel. (See *Route 40.*) Beyond Raniyeh the route to Urmia is described in vol. iv: it may be mentioned here that at any rate in 1905 the road was not practicable throughout for all arms, and it was reported that much labour and expense would be needed to make it passable for large forces: the passes beyond Raniyeh are blocked by snow in winter.

From Kōi Sanjaq and Raniyeh roads for pack-animals lead, as has been said, to Suleimāniyeh, and mule-tracks which are difficult in parts and are mostly blocked by snow in winter connect these places with Rowanduz to the N. (See *Routes 44 a-c.*) From Raniyeh a route runs by Ser Desht to Banah. (See *Route 41.*) A difficult mule-track connects Ser Desht with Penjevin on the Suleimāniyeh—Senna road. (See *Route 36 c.*)

The last road-centre in the area here in question is Rowanduz. This place lies, shut in among high steep hills, on the Rowanduz Chai, which here flows in a narrow, deep valley. The approaches to it before the present war were difficult even for pack-animals, but from Harīr (below) a cart-road has been made. In the present volume are described routes to Rowanduz from Mosul. One goes by 'Aqreh and across the Great Zab by the Qandīl ferry, the other crosses the Zab by the Girdamamik ferry farther south, and then turns NE. to join the northern route near Harīr, not far from Qandīl. Thence hilly country is crossed to the Khalīfan gorge, by which the difficult valley of the Rowanduz Chai is reached. The southern route, if not already passable for wheels as far as Girdamamik, could probably be made so with a few improvements. (See *Routes 45 a, b.*)

From Erbil one route runs to join the Mosul—Rowanduz route in





the neighbourhood of Harrîr, another leads over the hills to Shakhlawā and thence to the Khalifan gorge, where it too connects with the Mosul—Rowanduz route. These roads from Erbil are impassable for wheels except perhaps in the Erbil Plain.

For the routes leading from Rowanduz NW. to Amadiyah, north to Neri, and NE. towards El-Watan and Urmia, see vol. iv.

*The Syrian Desert.* West of the Euphrates stretches the northern part of the Hamād, a bare stony desert which slopes gradually from Syria and Arabia NE. to the Euphrates Valley. The ground is almost flat, broken only here and there by wadis, easy undulations, or low ranges of hills. The surface is generally sand or shingle with occasional outcrops of volcanic rock. In the north, however, beyond the line Raqqah—Hama, the nature of the soil changes and becomes more capable of cultivation, and the country between Meskeneh and Aleppo is already fairly well populated and tilled.

In the desert the pools or wells, which occur at long intervals, contain water that is frequently bad and infested with leeches, &c., and generally brackish. Conditions for travel are best during a few weeks in spring. At that season there is much pasture in the hollows of the Hamād, and water-holes (known to the Bedouin) are available then which are dry later in the year. Most of the grass is shrivelled up by the middle of April.

The direction of routes across the desert is generally determined by the position of water. The tracks are often badly defined or quite indistinguishable, as, owing to the easy nature of the ground, there is usually no need to follow a definite path. Towards Tadmor and Damascus the country becomes hillier, and directions are here determined to some extent by the trend of the valleys, but the chief factor is still the water-supply.

Owing to the scarcity of water, Syria cannot be approached from the Euphrates Valley south of the line Meskeneh—Aleppo except by small parties or by the aid of camel-transport on a large scale. Of the routes described in this volume those which run almost due W. from Hit to Damascus (*Route 52*) and from Abu Kemāl to Tadmor (*Route 53*) are difficult even for small parties. Nothing is known of the route by the Wādi-Haurān from Jibbeh; but in 1907 it was said that Damascus could be reached in six days from the Euphrates by this route. *Route 52* is important only as a route for the camel-post. The main desert-route is that from Deir ez-Zor to Damascus which is part of a regular caravan-route between Damascus and Baghdad. (See *Route 54*.)

On the route from Raqqah to Hama it might be possible to



improve the water-supply. It has been stated that there is probably an underground stream flowing N. from Rusafeh to the Euphrates, and that water might be obtained from it by boring. This water, if found, would probably be brackish. Beyond Seriyeh the country seems to have been formerly well populated; water might be obtained by clearing old wells or sinking new ones.

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# RIVER ROUTES

## THE TIGRIS AND LESSER ZĀB

### ROUTE III D

BAGHDAD—SAMARRA (89½ m.)

*Authorities* :—*Military Report on E.T.A.*, vol. iii, 1904 (report of 1892) ; Lorimer, *Report on a Tour in Turkish Arabia and Kurdistan*, April-May 1910 ; and other sources of information.

Between Baghdad and Samarra (\*89½ m., +74 m.) the course of the Tigris leads first in a general N. direction (as far as Ahmad el-Fayyadh m. 56) and thence generally WNW.

*The River.*—In this section of its course the width of the river varies very considerably. Where it flows in one channel its breadth seems to be about 300–500 yds. It is broadest from bank to bank where it breaks up into several channels passing between the numerous islands which occur in successive groups above the tract of Ba'rūreh on the l. bank (see m. 68½ and foll.). The rate of the current past these islands is said to be about 4½–3½ m.p.h. From Baghdad to the islands the bed of the Tigris is mud ; at the islands it is shingle with outcrops of conglomerate at El-Qanātr (m. 77½) ; between the neighbourhood of El-Hāwiyeh on the l. bank (m. 78) and Samarra the bed is generally of shingle, sand, or clay, with occasional outcrops of conglomerate forming small rapids in the current. While islands are especially numerous between Ba'rūreh and El-Hāwiyeh, they occur also between El-Hāwiyeh and Samarra at various points near the r. bank. They undergo frequent alteration by the floods in the annual h.w. season. At Baheirdeh I. and Ba'rūreh (m. 69), Darāwīsh I. (m. 74½), and at Tīneh (m. 85½), fords passable in the l.w. season were reported in 1910, but their situation is probably liable to be changed by the annual floods.

*Navigation.*—The navigation of the river seems to present no special difficulties between Baghdad and Ba'rūreh (m. 69) for boats of draught not exceeding 4 ft. From Ba'rūreh to the neighbourhood of

El-Hawiyeh it is troublesome owing to the islands above mentioned. The rapids, already referred to, between El-Qanātr and Samarra are apparently not considerable enough to hinder vessels of small draught even in the l.w. season. A small steam-launch, owned by a Baghdad merchant named Astrabadi, has been plying on the river between Baghdad and Samarra since 1902 with fair regularity throughout the year.  $1\frac{1}{2}$  days were allowed for the up-stream, and 1 day for the down-stream voyage. Sailing boats (*safinehs*), carrying 8 tons, can ascend to Samarra during the greater part of the year, but it is reported that at the height of the flood season they would find it difficult or impossible to make head against the current in the channel past the islands (between m. 67 and m. 80). Traffic on the river is principally down-stream, being mainly carried on by the rafts (*keleeks*, see vol. i, p. 166) which come from Tekrit and Mosul. The strong winds from the S. and SW. which are fairly frequent in the Baghdad region, especially in spring, may make the raft journey between the mouth of the 'Adheim River and Baghdad very slow (4 days or perhaps more): in the highest spring floods without an adverse wind the journey may take only 13-14 hrs. In fair weather the rafts travel all night. *Quffehs* (large coracles, see vol. i, p. 166) are used locally for short journeys. For regular ferries see under m.  $43\frac{1}{2}$  and m.  $78\frac{1}{2}$ .

**The country between Baghdad and the line Beled—Sindiyeih.**—From Baghdad to the neighbourhood of Beled and the islands of Darāwīsh (m.  $74\frac{1}{2}$ ) and Barqeh (m. 76) the Tigris flows through the most northerly part of its alluvial plain. Here the banks are of firm alluvial soil, are generally fairly high, and at places (e.g. m. 32) are protected by dykes. Nevertheless in the neighbourhood of Baghdad the flood water in spring inundates the country on either side, finding its way chiefly by the numerous irrigation-cuts.

On the r. bank date-groves are almost continuous to Ferhād (m. 11), above which they occur only at three or four places on the river (a few miles inland they are to be found at Sumeikeh and Beled). N. of Beled there are no more date-groves, only isolated palm-trees. Date-groves are frequent on the l. bank as far as the neighbourhood of Nahr el-Pasha (m. 17) and thence they occur at intervals up to Sindiyeih (m.  $45\frac{1}{2}$ ). On both sides of the river up to the neighbourhood of Darāwīsh I. there are numerous water-lifts (*cherrads*) which irrigate areas of wheat and green barley (the latter crop being used for fodder).

Between Baghdad and Beled the country W. of the immediate neighbourhood of the r. bank is a plain of alluvial soil stretching to the edge of the desert plateau. From the river to the plateau the





distance varies from about 15 to about 20 m., with one noticeable ridge near the river between Husāi tract (m. 49) and Qubbat Shawali (m. 60). This plain contains at its S. end the large lake-area known as 'Aqarqūf, extending from a point about 5 m. W. of Kazimain in a NNW. direction for about 11 m. with an average width of about  $4\frac{1}{2}$  m. The plain is much cut up by canals, generally dry, or, as in the case of the upper reaches of the Dujail, carrying some water in the flood season. These canals are specially numerous N. of the Tarmiyeh (m. 38 $\frac{1}{2}$ ): here are the numerous branches of the Dujail, and an old bed of the Tigris running in a general NW. and SE. direction. The ground is covered with large and small ruin-mounds marking the site of ancient settlements. Cultivation occurs in patches where canals still carry water for part of the year. In wet weather the going is very heavy, but in the dry season the plain is said to be passable almost everywhere for wheeled traffic, though the canal-beds would at times compel vehicles to make détours. Across the plain runs the route from Baghdad to Samarra and Mosul, traversed by the Samarra—Baghdad pilgrim wagons, and accompanied by the line of the Baghdad—Samarra railway. For further details with regard to the country see notes on the above-mentioned route (25 b).

From the l. bank of the river, as far as the neighbourhood of Sindiyyeh (above which the up-stream course begins to take a general NW. direction towards the 'Adheim), a flat alluvial plain stretches towards the Diyaleh river (distant 11–16 m.). In the neighbourhood of Baghdad the plain is liable to inundation during the spring floods. For the swamps of Reshīdiyyeh and Jedeideh see under m. 19 $\frac{1}{2}$ . This country between the Tigris and the Diyāleh is still more intersected by canals than the plain on the opposite bank, and a far greater proportion of the cuts on this side carry water, for most of them belong to the system of the Nahr Khālis, which brings the water of the Diyāleh from the neighbourhood of Mansūriyyeh (see m. 38 $\frac{1}{2}$ ). The Khālis, near Deltāweh, divides into two principal branches, a westerly, the Murādiyyeh, and an easterly, the Tahwīleh, which flow in a general southerly direction to the neighbourhood of Baghdad. But the Khālis and its two great arms also throw off a multitude of smaller irrigation-cuts which are interlaced by cross-cuttings. The whole system waters large areas of wheat and barley and supports a large number of villages between the Tigris and the Diyaleh. Across the plain run the Baghdad—Salāhiyyeh—Mosul route, throwing off a branch to Samarra near Deltāweh, and the Baghdad—Bāqūbeh route. For further details with regard to the country see notes on these routes (25 a, 31).



**The country between the line Beled—Sindiyeḥ and Samarra.**—From the neighbourhood of Beled up to Samarra the Tigris cuts a trench through undulating plains of clay, shingle, and sand with scattered outcrops of limestone. These plains stretch away from the l. bank to the Hamrīn Hills some 40 m. to the NE., and extend from the r. bank to the edge of the desert plateau. On the r. bank the most noticeable feature is the complicated network of canals (mostly dry or almost dry) which stretch W. and NW. of Beled to the mouth of the Dujeil, above which an old canal-bed (Nahr Shaqi?) runs parallel with the river (see m. 81½). On the l. bank are the beds of the large ancient canals of the Nahrawān system (Nahr er-Rasāsi, Nahr el-Qa'im, and Nahr Talsiyeh) with the remains of numerous cross-cuttings: and in the neighbourhood of Samarra (see m. 83½) appear the numerous ruins which for the most part date from the ninth century A. D., during which that city was the capital of the Caliphate. The banks are sparsely inhabited, but there are patches of cultivation near them mostly dependent on rain, and in the plain between Samarra and the 'Adheim winter crops are raised by the Arabs with the aid of ancient wells. Sheep and cattle are fairly numerous.

**Inhabitants.**—The inhabitants of both banks are settled Arabs of various tribes, though some of their communities still live in tents for the whole of the year or during the summer. Near Baghdad the land is held by various wealthy landowners: on the Dujeil and round Samarra it is mostly Turkish Government property. On the

Right Bank	Total distance
	Miles
<b>Baghdad.</b>	0
Date plantations.	2
<b>Kaximain</b> (see under Baghdad in <i>Gazetteer of Towns</i> , vol. ii).	4½
	5½
River bends NNE. Baghdad—Samarra road touches bank, and W. of it is the line of the railway. Beyond railway begins course of ancient canal, which runs parallel to railway for some miles to neighbourhood of Beit Nawāb, then NW. (So I. D. Map, Sheet C 2.)	7¼
	8¼
<b>Hibneh</b> village.	9
	9½





r. bank as far as the neighbourhood of Bābi tract the villages are inhabited by Hashāhideh : N. of Bābi are found communities of various tribes, as Beni Tamīm, the Al Bu Hayyāzeh, and 'Azzeḥ, sections of the 'Obeid, Abu Handhal, and Mujammeh (the last tribal name implies a miscellaneous origin). The desert W. of the southern part of this route is usually occupied by Dilaim ; but the Shammār are the predominant tribe in the interior in this region. The Shammār were apparently in recent years somewhat more under the control of the Turkish administration than that part of the tribe living farther to the N. which acknowledged the sons of Faris. Their sheikhs (the family of Ferhan Pasha) had been reduced to the position of protégés of the Turkish Government, and the fact that so much of the land in the Dujail district and in the neighbourhood of Samarra is Government property seems to have given protection to the settled Arabs against the levying of tribute or blackmail (*khubbeh*) by the Shammār.

On the l. bank the inhabitants are chiefly Jebūr, with some Juheish, Beni Tamīm, Mujammeh, and fragments of other tribes. When the Kurds were giving trouble their raids sometimes penetrated as far south as this region.

It may be noticed that while the Arabs of the r. bank are mainly Sunnis, most of the inhabitants of the l. bank from Baghdad at least to Sindiyeḥ and Jeizāni (see m. 46 $\frac{3}{4}$ ) are Shiah. Almost all the Mohammedans of Samarra are Shiah.

Inter-  
mediate  
distance

## Left Bank

Miles

0

2

2 $\frac{1}{2}$ 3 $\frac{1}{4}$ 

2

1

3 $\frac{3}{4}$ 1 $\frac{1}{2}$ 

Date plantations.

**Mo'adhdam.** Immediately above is Imām Abu Hanīfah.  
See description of Baghdad, vol. ii.

**Es-Saleikh.****Childāyeh** village.**Chaldāri** village.**Ferājāt** village.

Right Bank	Total distance
	Miles
<b>Ferhād</b> village.	10½
	11
	11½
Date plantations cease on r. bank.	12½
	13
Road runs close to bank about here.	13½
<b>Beit Nawāb</b> on road : about ¼ m. from bank.	15½
	16
	17
	17½
<b>Haseiweh</b> hamlet, six houses of Meshāhidiyeh. ' <b>Aweijeh</b> tract begins.	17¾
' <b>Aweijeh</b> village : 30 houses of Meshāhidiyeh.	18¾
	19¾
	21¼
<b>Meshāhidiyeh</b> tract.	21¼
Shrine of <b>Imām 'Alī</b> , about 2 m. from river, near a mound called Tel Gosh.	22¼
<b>Bābi</b> tract begins.	23
8 m. W. of bank lies <b>Khān Meshāhidiyeh</b> , on the Baghdad—Samarra road (see <i>Route 25 b</i> , m. 23). Railway station.	23¼





Inter-  
mediate  
distance

## Left Bank

Miles	
1	<b>Abu 'Ali</b> village.
$\frac{1}{2}$	<b>Haji Ahmad</b> village. Baghdad—Salāhiyeh road touches bank in this neighbourhood.
$\frac{1}{2}$	<b>El-Mīmār</b> village.
1	
$\frac{1}{2}$	<b>Kādhim Pasha</b> village: this is inhabited by mixed population from Jebār and Juheish.
$\frac{1}{2}$	
2	
$\frac{1}{2}$	<b>Abu Dāli</b> village: about 20 earthen huts, with palm-groves.
1	Mouth of <b>Nahr el-Pasha</b> Canal (dry even in May 1910), which runs S. at the back of the date plantations as far as Childāyeh. It is about 5 yds. wide, and its bed is sunk several feet. It is spanned near its head by a brick bridge. About $\frac{1}{2}$ m. from its mouth it is joined by a canal which runs parallel with the river above this point as far as Yehūdiyeh. Continuous date plantations cease on l. bank. Small village (Qasr el-Pasha) at the head of the canal.
$\frac{1}{2}$	Small village. This and the village mentioned immediately above are <i>Waqf</i> (i. e. held in trust for spiritual or secular purposes). The inhabitants are Dilaim.
$\frac{1}{4}$	<b>Dāūdiyeh</b> tract. Poplar-trees on bank.
1	Walled enclosure.
1	<b>Dāūdiyeh</b> village (15 houses of Shiah Arabs) is apparently in this neighbourhood. NE. of this village lies the S. end of the <b>Khōr Reshīdiyeh</b> , a swampy area about $3\frac{1}{2}$ m. long and $1\frac{1}{2}$ m. broad. Road and T.L. run E. of this swamp, between it and another marsh called <b>Khōr Jedeideh</b> .
$1\frac{1}{2}$	<b>Sawākin</b> village: 10 houses of Shiah Arabs: two brick-kilns.
1	
$\frac{3}{4}$	
$\frac{1}{4}$	<b>Reshīd Pasha</b> or <b>Reshīdiyeh</b> village. A two-storied house, and a few cultivators' huts.



Right Bank	Total distance
River bends SE.	
<b>Mallūh</b> tract begins a short way above Yehūdīyeh.	Miles 24 $\frac{1}{4}$
Village ?	24 $\frac{1}{2}$
<b>Mallūh</b> tract ends in this neighbourhood.	25 $\frac{1}{4}$
	26 $\frac{1}{2}$
	27 $\frac{1}{2}$
<i>General Note on the Old Bed of the Tigris.</i>	
Between the river and Khan Meshāhidīyeh depressions W. of the l. bank may be the lower end of an old bed of the river. N. of Khōr Tarmīyeh this bed is better defined, and extends past 'Akbareh and Sumeikeh ( <i>Route 25 b</i> , m. 35, 39). From near Sumeikeh one dry bed, fairly deep but narrow, can be traced N. to Baniyeh (m. 67 $\frac{1}{4}$ , below); another, broader, runs NNW. to m. 76 $\frac{1}{4}$ , below: its W. bank is higher than the E.	
<b>Suweidīyeh</b> tract begins.	28 $\frac{1}{2}$
	31
<b>Has-Hūs</b> tract begins. Numerous water-lifts on the bank in this tract.	31 $\frac{1}{2}$
	32
Numerous water-lifts.	34 $\frac{1}{4}$
<b>Tarmīyeh</b> tract. River becomes unusually broad. In May 1910 its width was about 600 yds.	35 $\frac{3}{4}$
<b>Tarmīyeh</b> Canal, running W. and SW. to the Khōr Tarmīyeh, $\frac{7}{5}$ m. SSW. It is above the level of the river. Even in flood-time water very seldom passes into it. Width of the river here is 400-500 yds.	38 $\frac{1}{4}$
End of highly silted-up dry canal is seen on river bank. This landmark is called <b>Īshān Tarmīyeh</b> .	39 $\frac{1}{4}$
Shrine of <b>Sheikh Jemīl</b> .	40 $\frac{1}{2}$
	41 $\frac{1}{2}$





Inter-  
mediate  
distance

## Left Bank

Miles	
1	<b>Yehūdiyyeh</b> tract begins in this neighbourhood: date-groves.
$\frac{1}{2}$	
$\frac{3}{4}$	
$1\frac{1}{4}$	Yehūdiyyeh tract ends about here.
1	<b>Jedeideh</b> posting-station on Baghdad—Salāhiyeh road. 200 houses (of Shiah Arabs) in date-groves, enclosed by mud walls. Two khans. The first khan about 80 yds. square, with stabling for 200 horses; well in centre, water 20 ft. below surface. The other khan near river, 60 yds. square; stabling for 100 horses. Southern end of a branch of the Nahr Khālis. See Introduction to this section.
1	
$2\frac{1}{2}$	<b>Dokheileh</b> village, on the Baghdad—Salāhiyeh road, some distance back from the river. The ground E. of the road is here very marshy.
$\frac{1}{2}$	<b>El-Howeish</b> village (300 houses of Shiah Arabs).
$\frac{1}{2}$	<b>Qasrīn</b> (100 houses of Shiah Arabs): date-groves. Road skirts river where the latter bends NW. and then leaves it, running N. The bank is protected by dykes 15 ft. wide at the top, 20 high, 40 ft. at base, revetted with breast-work.
$2\frac{1}{4}$	<b>Raqqah</b> district (no village).
$1\frac{1}{2}$	<b>Mansūriyeh</b> tract begins.
$2\frac{1}{2}$	Shrine of <b>Imām Beni el-'Abbās</b> . <b>Mansūriyeh</b> village: 260 to 300 mud houses, hidden from the river by date-groves: ferry. Branch of Nahr Khālis running N. and then NW.
1	
$1\frac{1}{2}$	Haji 'Omar irrigation pump.
1	Shrine of <b>Imām Banāt el-Hasan</b> below Sa'diyeh. Branch of Nahr Khālis, running N. and then NW. <b>Sa'diyeh</b> village (100 houses of Shiah Arabs): date-groves extending 2 m. (The Khanikin branch of the Baghdad Railway was intended to cross the river in this neighbourhood). Above this point the country is much intersected by offshoots of the Nahr Khālis.

Right Bank	Total distance Miles
Above Sa'diyeh is <b>Tuweir</b> reach.	48 $\frac{3}{4}$
Grove of Euphrates poplar ( <i>gharab</i> ). This is a halting-place for caravans from Baghdad that follow tracks along river bank.	45 $\frac{1}{2}$
	46 $\frac{3}{4}$
River was here about $\frac{1}{4}$ m. wide in May 1910. Above this point river banks on both sides become quite low for some distance.	
<b>Husāi</b> tract: water-lifts. Beni Tamīm settlements.	49
Rising ground begins, running NW. about $1\frac{1}{4}$ m. from river for about 8 m.	
Along its SW. side runs the old bed of the 'Uqāb Canal and several <i>tels</i> lie SW. of the canal. Round them stretches a large ruin-field, believed to mark the site of the ancient city of Opis, in the fourth and fifth centuries B. C. accounted second only to Babylon among the cities of Mesopotamia. It is possible that the present bed of the Tigris cuts across the site of Opis, and that the ruins on Tel Mahāsīl on the l. bank (see m. 60 $\frac{1}{2}$ ) are also part of the same city.	
<b>Zambūr</b> : camping-place of the Beni Tamīm.	52
<b>Khadheireh</b> tract.	54
<b>Ahmad el-Fayyadh</b> tract, 25-30 water-lifts. Above this tract is that of <b>Sufeil</b> .	56





Inter-  
mediate  
distance  
Miles

Left Bank

21  
1 1/4  
Ferry of one *quffeh* in this neighbourhood.  
**Sindiyyeh** village: 100 houses of mixed Shiah Arabs. Some lands here belong to the Makkeh shrines, and in 1910 were held on lease by Anwar Bey, of the Haidarizadeh family of Baghdad. This place is included in the mudirate of **Deltāweh**, a large village with date-groves about 4 m. from river bank (a little E. of SE. from Sindiyyeh). Near Deltāweh the Salāhiyyeh road diverges to NE., while a track to Samarra follows the line of the l. bank of the Tigris.

Date-groves extend for some distance above Sindiyyeh village.

1 1/4  
**Jeizāni** date-groves. Village lies a little way inland, and consists of 50-100 houses of Shiah Arabs.

**Dighāreh** reach is above Jeizāni date-groves.

2 1/4

The course of the ancient **Nahrawān** Canal is here marked as running close to bank for about 76 m.: the Samarra road apparently lies on the farther side of it.

3  
**Himmeh** village, between river bank and Nahrawān Canal.

2  
**Dōjmeh** tract, large settlement of the Jebūr and Āl Bu Hayyāzeh. Above Dōjmeh is **Quwār** tract. Brick-kilns.

2  
Course of Nahrawān Canal touches river bank. On Samarra road, 1/2 m. from river, **Khān es-Safineh** (Government grain-store); road turns WNW.



Right Bank	Total distance
	Miles
Upper end of Sufeil tract: camping ground of Āl Bā Hayyāzeh (ʿObeid) Arabs.	57½
Lower end of 'Aqab tract.	59½
<b>Qubbat Shawāli.</b> About this neighbourhood is the lower end of the shingly zone of the Tigris bed.	60
	60½





Inter-  
mediate  
distance

## Left Bank

Miles

1½

2½

Mouth of **Shatt el-'Adheim**; near its confluence with the Tigris it has a trough some 45 yds. wide and 13 ft. deep. It flows in a valley from ½ m. to 1½ m. wide and 65 ft. deep. In December 1904 it was reported as having a depth of about 4 ft. and a current of 1 to 1½ m. per hour; in h.w. both depth and velocity must be much greater; but in l.w. the river dries up altogether.

Followed up-stream its course runs NNE. to the foot of the Hamrtn Hills (740 m.), then N., and NNW. to near Kirkuk. The river leaves the hills by a broken dam and cuts its way through the flat plain to the Tigris. Large areas of wheat and barley are still cultivated in this plain if the rains are favourable, but since the bursting of the Hamrtn dam there has been no irrigation in the country-side, and the river near its mouth has broken through the dry course of the Nahrawān. The 'Adheim adds considerably to the volume of the Tigris.

½

½

Report, 1892, mentions **Khān Dhulū'iyeh** (Khān Dhulei'ah?) as a large khan on l. bank 1 m. above the mouth of the 'Adheim. In this neighbourhood the dry course of the old Nahrawān Canal is resumed on the l. bank, here called Nahr er-Rasāsi. 1 m. WNW. of the khan the course of the main bed of the Nahrawān Canal turns NW., while a branch, called Nahr el-Qa'im, continues to follow the l. bank of the river. Between them lies a swampy area into which streams from the hills flow in h.w., breaking up the line of the Nahrawān Canal. At the same point another dry canal, the ancient Nahr el-Batt, enters the Nahrawān from the NNE., and in the angle so formed are the ruins of Tel Mahāsil (? part of the ruins of Opis. See m. 49.) The Nahr el-Batt is a relic of the ancient irrigation system of this region. Immediately above the Hamrtn dam (see under m. 59½) two canals were taken off on either side, which carried the waters of the 'Adheim, blocked by the dam, into the Tigris at different points. Of these the westernmost was the Nahr el-Batt, the

Right Bank	Total distance  Miles
<b>'Ausajeh</b> district.	62 $\frac{1}{2}$
Camp of 'Azzeh Arabs (May 1910).	64 $\frac{1}{4}$
<b>El-Habbāb</b> : walled camp of 'Azzeh or 'Obeid Arabs.	65
A tract occupied by Abu Handhal Arabs.	66 $\frac{1}{4}$
<b>Es-Sefīneh</b> : square enclosure where the Turkish authorities receive and store agricultural rents paid in kind.	
<b>Baniyeh</b> village ? S. of this point begin traces of ancient canal running SW. and SSE. for 4 $\frac{1}{2}$ m.	67 $\frac{1}{4}$
Upper entrance of old Tigris bed ? Other authorities place it opposite Khān Mizraqji (see m. 76 $\frac{3}{4}$ ). About 2 $\frac{1}{2}$ m. W. by S. of bend lies the mosque of Seyyid Mohammed, with large khan close to it, and 4-5 m. W. of bend is Beled village with date gardens, a flourishing place, the property of the <i>Dā'irat es-Saniyeh</i> . Its palm-groves are the most northerly that occur in the region of the Tigris. There is a railway station of Beled. The village is apparently visible from the river at a point somewhat higher up.	
In this neighbourhood Harbeh Canal takes off from the r. bank and runs SE. past Beled ; it is crossed by a bridge carrying the Baghdad—Samarra road, about 6 m. from river.	68 $\frac{3}{4}$
River above this point apparently broadens out and breaks into several channels enclosing and passing between numerous islands, which are liable to considerable alterations due to annual floods.	
<b>Baheirdeh I.</b> , near r. bank.	69
There is a ford in this neighbourhood in l.w. leading across Baheirdeh Island (at its lower end ?) to the Ba'rūreh tract on l. bank. Pebbly bottom.	





Inter-  
mediate  
distance

## Left Bank

Miles

course of which can still be traced, running to the hills, gradually nearing the Shatt el-'Adheim, which it meets at the dam, and along it are ruins of the settlements which it brought into existence. The other arm (Nahr Radhān?) ran to the E. of the present course of the 'Adheim, but does not seem to have been traced from the dam for more than 10 m.

*General Note on the Nahrawān Canal.*

The lower part of the dry **Nahrawān** Canal is traceable on the l. bank of the Tigris below Kut el-Amara and Azziyeh. For its course thence to the **Diyāleh** see vol. ii. It reaches the l. bank of that river near **Sifweh** (*Route* 31, m. 23½) and follows it to **Bāqūbeh** (23 m.), crossing to r. bank below **Bahrin**. Above Bāqūbeh it turns NW. to the Tigris (15 m.), its bed being broken by branches of the Khālis Canal. Striking the l. bank a little above **Sindiyeh** (m. 49, above) it follows it more or less closely as far as the 'Adheim and **Khān Dhulū'iyeh** as described in the preceding paragraphs. Its bed thus far is 100-140 yds. wide, and at the 'Adheim it is 20 ft. below the surface-level. Above the Khan the main canal, diverging from the river as described above (p. 81), is almost obliterated. Deep cuts interrupt its bed, which is on the level of the plain. About 10 m. below **Samarra** it begins to be better marked, through marl, though the banks are low and not abrupt. E. of Samarra soil becomes pebbly; banks about 30 yds. thick; canal approaches river. About 8 m. above Samarra compact conglomerate is reached, through which canal is cut with steep banks; galleries sloping up them from the bed to the surface for the removal of excavated material may be traced. The bed is below the general level, and banks 15 ft. above it and 15 yds. thick. Below **Dūr** traces of a head of the canal are seen (*Route* III E, m. 17½), but an upper branch (Nahr en-Neifeh) is traceable nearly to the **Hamrin Hills** (*Route* III E, m. 56).

Ford across channels on both sides of island.



Right Bank	Total distance
	Miles
<b>Ba'rūreh</b> reach above island.	
<b>Tuthah I.</b>	78
<b>Darāwīsh I.</b> Cultivated by Sawākinēh. Small island on S. side.	74½
Beled village lies some miles S. of this point.	
Upper end of Darāwīsh I. Several water-lifts. Cultivators are Sawākinēh.	75½
<b>Barqeh I.</b> (possibly not surrounded by water except in the h.w. season).	76
Breadth of the river 300-250 yds.	76¾
Upper end of old bed of Tigris?	
 <b>Tel Tabbārat.</b>	 77½
Upper end of Barqeh I.	77½
Camp of Mujammeh Arabs. <b>Sidd Nimrūd</b> , remains of an ancient rampart or dyke, with trench, running SSW. from the river bank, which has been identified with one end of the Median Wall, a fortification which in the fourth century B.C. stretched from the Euphrates to the Tigris in this neighbourhood. Possibly, however, the Sidd Nimrūd was merely an irrigation dam.	78
About ¾ m. above Sidd Nimrūd and El-Hāwiyeh is a ferry by which communication is possible between the Baghdad—Samarra routes on the r. and l. bank respectively. The normal service here is reported as being one of three boats, each capable of carrying 50-60 persons. A hut and two or three sheds on the r. bank.	78¾
At the ferry the Baghdad—Samarra T.L. crosses the river. It apparently leaves the line of the Baghdad—Samarra route and railway near Tel Husein (about 4 m. SSE. of the ferry) and traverses the Dujail Canal (see m. 81½) and several of its branches, running NNW. to river, after crossing which it turns NW. to Samarra. 3 m. S. of the ferry, and for some distance from this point on the way to Samarra, the Baghdad—Samarra road and railway pass over a network of canals, mostly dry.	



