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Arthur J. Rogers.

Yorkth Street Museum of Natural History

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At the two little mounds above are the only ruins on this side the river.

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 yards.

Scale of a British Standard Mile.

D. Reed sc.

The Ruins of Babylon on the East Bank of the Euphrates.

MEMOIR

ON THE


RUINS OF BABYLON.

BY

CLAUDIUS JAMES RICH, Esq.

RESIDENT FOR THE HONOURABLE EAST INDIA COMPANY
AT THE COURT OF THE PASHA OF BAGDAD.

WITH THREE PLATES.



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The following Memoir was originally published at Vienna in a Journal entitled *Monatsschrift*, conducted by Mr. Hammer, a learned Orientalist of that city, at whose request it was composed. It is now republished, though without any correction from the author, without the advantage of his correction, and has partly to serve, entirely on an interesting subject, but still more to exhibit the progress of the learned in the prosecution of these studies, Geographical and Anthropological, for which the situation of the German language is so favourable. It is now published by the Author, as he has been requested to do.

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THE following Memoir was originally published at Vienna, in a Journal entitled *Mines de l'Orient*, conducted by Mr. Hammer a learned Orientalist of that city, at whose request it was composed. It is now republished, though without any instructions from the author, and without the advantage of his correction, in order partly to satisfy curiosity on an interesting subject, but still more to solicit the counsel of the learned in the prosecution of those inquiries, Geographical and Antiquarian, for which the situation of Bagdad furnishes peculiarly favourable opportunities. This Memoir is viewed by the Author as only the first fruits of imperfect research. It may perhaps be

considered with the more indulgence, as it is believed that it is the only account of these memorable ruins hitherto laid before the public by a native of the British Islands.

MEMOIR

ON

THE RUINS OF BABYLON.

THE site of Babylon having never been either thoroughly explored or accurately described, I beg leave to offer to the associates of the *Mines de l'Orient* an account of my observations on that celebrated spot, the completion of which has been retarded by frequent interruptions from indisposition and official occupation.

I have frequently had occasion to remark the inadequacy of general descriptions to convey an accurate idea of persons or places. I found this particularly exemplified in the present instance. From the accounts of modern travellers, I had expected to have found on the site of Babylon more, and less,

than I actually did. Less, because I could have formed no conception of the prodigious extent of the whole ruins, or of the size, solidity, and perfect state, of some of the parts of them ; and more, because I thought that I should have distinguished some traces, however imperfect, of many of the principal structures of Babylon. I imagined I should have said, “ Here were the walls, and such must have been the extent of the area. There stood the Palace, and this most assuredly was the Tower of Belus.”—I was completely deceived : instead of a few insulated mounds, I found the whole face of the country covered with vestiges of building, in some places consisting of brick walls surprisingly fresh, in others merely of a vast succession of mounds of rubbish, of such indeterminate figures, variety, and extent, as to involve the person who should have formed any theory in inextricable confusion.—This, together with the impossibility, in such a remote situation, of referring to all the authorities I should have consulted, will cause my account of the remains of Babylon to appear very meagre and unsatisfactory. I announce no discovery, I advance no interesting hypothesis ; I am sensible that to form any thing like a correct judgement, much study and consideration, and frequent visits to the same place, are requisite. As probably more weight may be attached

to my opinions from my residence on the spot, and advantages of observation, than they would otherwise be entitled to, I would rather incur the imputation of being an ignorant and superficial observer, than mislead by forming rash decisions upon subjects so difficult to be properly discussed; and I shall therefore confine myself, in the present memoir, to a plain, minute, and accurate statement of what I actually saw, avoiding all conjectures except where they may tend to throw light on the description, or be the means of exciting others to inquiry and consideration.

I have added a few sketches illustrative of the principal objects, for which I claim no other merit than that of scrupulous fidelity, having been solicitous to render them accurate representations rather than good drawings. For the sake of greater intelligibility in my descriptions, I have added a general sketch of the ground, for the measurements of which I am indebted to a gentleman who accompanied me (Mr. Lockett), who superintended that operation whilst I was employed in drawing and exploring. I project other excursions to the same spot to confirm and prosecute my researches; and preparatory to them I solicit the communications and queries of the learned, for my guidance and information.

An inquiry concerning the foundation of Babylon, and the position of its remains, does not enter into my present plan ; the latter subject has been already so ably treated by Major Rennel, in his *Geography of Herodotus* (a work to which I have often been under obligations, which I take this opportunity of acknowledging), that I shall consider the site of Babylon as established in the environs of Hilla, and commence my description with an account of the country about that place.

The whole country between Bagdad and Hilla is a perfectly flat and (with the exception of a few spots as you approach the latter place) uncultivated waste. That it was at some former period in a far different state, is evident from the number of canals by which it is traversed, now dry and neglected ; and the quantity of heaps of earth covered with fragments of brick and broken tiles, which are seen in every direction,—the indisputable traces of former population. At present the only inhabitants of this tract are the Zobeide Arabs, the Sheikh of which tribe is responsible for the security of the road, which is so much frequented that robberies are comparatively seldom heard of. At convenient distances khans or caravanserais are erected for the accommodation of travellers, and to each of them is attached a small village of Fellahs. The first of these

is Kiahya Khan, so called from its founder Ahmed the Kiahya or minister of Suleiman Pasha; it is about seven miles from Bagdad*, and it is rather a handsome building; but from its vicinity to the town it is now unfrequented. The general direction of the Hilla road is north and south.—Assad Khan is the next stage, and is distant from Kiahya Khan about five miles; and between four and five miles to the southward of it the road is intersected by the famous Naher Malcha, or *fluvius regius*, the work, it is said, of Nebuchadnezzar; which is now dry, like many others which I forbear mentioning as being of no importance, though as late as the time of the Caliphs it was applied to the purposes of irrigation. It is confined between two very high mounds, and on the northern one near the road is a small ruin called Sheikh Shoubar, which is visible from afar.

Before arriving at the Naher Malcha, and half way between Assad Khan and the next stage, is a small canal, over which is a bridge of one arch, now ruinous. Some time ago, a large lion came regularly every evening from the banks of the

* I have laid down the distance on the Hilla road by computation and not actual measurement, taking the ordinary walk of a light caravan at three British miles the hour.

Euphrates, and took his stand on this bridge, to the terror of the traveller: he was at last shot by a Zo-beide Arab. Till very lately this canal was filled from the Euphrates, and the desert in the vicinity was in consequence cultivated; but the proprietors, finding the exactions of the government to be more than their industry could answer, were obliged to abandon the spot. The next khan, distant upwards of seven miles, is Bir-iunus, or Jonas's well, called by the Turks *Orta Khan*, from its being erroneously counted the half of the distance between Bagdad and Hilla. It is only remarkable for a deep well with a descent by steps to the water, and the tomb of a Turkish saint. Fine hawks, of the species called *Balaban*, used in hunting the antelope, are caught here. Near three miles from this, the road to Ker-bela by the bridge of Musseib on the Euphrates branches off from the Hilla road, in the direction of S. 67 W.

Iskenderia is about seven miles from Bir-iunus, and is a large handsome khan, built lately at the expense of Mohammed Hussein Khan, Emin-ed-doulah to the king of Persia, near a former much inferior one of the same name, which is still standing, though deserted. All around it are vestiges of building, which would seem to indicate the prior existence of some large town, and the bricks of

which it is built were dug up on the spot. The first khan on the Kerbela or rather Musseib road, called *Mizrakjee Oghlou*, from the name of the Bagdad merchant who founded it, is very near this on the same line; and Musseib itself is visible in the direction of S. 80 W. From Iskenderia to Khan Hajee Suleiman (a mean building erected by an Arab) is a distance of upwards of eight miles; and at this khan the road is traversed by a canal cut from the Euphrates at the village of Naseriat (which bears N. 20 W. from the road), and full of water in the spring, as are many of the canals between this and Hilla.

Four miles from Hajee Suleiman is Mohawil, also a very indifferent khan, close to which is a large canal with a bridge over it: beyond this every thing announces an approach to the remains of a large city. The ruins of Babylon may in fact be said almost to commence from this spot, the whole country between it and Hilla exhibiting at intervals traces of building, in which are discoverable burnt and unburnt bricks and bitumen; three mounds in particular attract attention from their magnitude. The ground to the right and left of the road bears the appearance of being partially and occasionally a morass, though at the time we passed it it was perfectly dry: the road, which is due south, lies within a quarter of a mile of the celebrated mass called by

Pietro della Valle the Tower of Belus ; Hilla is nine miles from Mohawil, and nearly forty-eight from Bagdad.

Hilla is called by Abulfeda, Hellah Bene Mozeid ; he and the Turkish geographer who copies him say it was built, or rather augmented, by Saif-ed-doulah, in the year of the Hejira 495*, in the land of Babel. The Turkish geographer appears to place the ruins of Babylon considerably more to the northward, in the direction of Sura and Felugiah. The district called by the natives El-Aredh Babel extends on both sides the Euphrates. Its latitude, according to Niebuhr, is $32^{\circ} 28'$, and it is situated on the western bank of the Euphrates, a few shops and huts only being on the eastern. It is meanly built, and its population does not exceed between 6 and 7000, consisting of Arabs, and Jews (who have one synagogue), there being no Christians,

* قال ياقوت في مشترک هي حلة بني مزید بارض بابل و هي بين بغداد و بين الكوفة قال واول من احتط بها المنازل و عظمها سيف الدولة صدقه بن دبیس بن علي بن مزید الاسدي في سنة ۴۹۵ قال و كان موضعها قبل ذلك یسمى اللمین
Abulfeda.

حله بغداد ایله کوفه بیننده بوکا حله بني مزید دیرلر و بو حله یه اول نزول ایدوب و منازلی احتطاط ایله بونی تعظیم ایدن سيف الدولة صدقه بن دبیس بن علي بن مزید الاسدي درکه دورتیوز بشده نزول ایتدی Djihannuma.

and only such Turks as are employed in the government. It is divided into seven small *mahalles* or parishes ; but there is only one mosque in the town, all the other places of worship being mere *ibadetgahs* or oratories. The walls are of mud, and present a truly contemptible appearance ; but the present Pasha of Bagdad has ordered a new wall to be constructed of the finest Babylonian bricks. The gates are three in number, and, as usual in the East, each takes the name of the principal place it leads to, the northern one being called the gate of Hussein or Kerbela, the centre that of Tahmasia (a large village in the neighbourhood), and the southern the gate of Nejef or Imam Ali. The little street on the eastern side is also closed by a gate, or rather door. The gardens on both sides the river are very extensive, so that the town itself from a little distance appears embosomed in a wood of date-trees ; on the outer verge of the gardens on the west, small redans are established, within sight and hearing of each other, in each of which a matchlockman mounts guard at night ; and for greater security against the marauders of the Desert, the late Ali Pasha dug an ample trench round the whole, and built a citadel, (which, as usual in these countries, is nothing more than a square inclosure,) in the town, on the bank of the river.

Among the gardens a few hundred yards to the west of the Husseinia gate, is the Mesjid-esshems, a mosque built on the spot where popular tradition says a miracle, similar to that of the prophet Joshua, was wrought in favour of Ali, and from this the mosque derives its appellation. It is a small building, having instead of a minaret an obelisk, or rather hollow cone fretted on the outside like a pine-apple, placed on an octagonal base : this form, which is a very curious one, I have observed in several very old structures, particularly the tomb of Zobeide, the wife of Haroun-al-raschid, at Bagdad ; and I am informed it cannot now be imitated. On the top of the cone is a mud cap, elevated on a pole, resembling the cap of liberty. This, they say, revolves with the sun ; a miracle I had not the curiosity to verify. The inside of the mosque is supported by rows of short pillars about two feet in girth ; from the top of each spring pointed arches, in form and combination resembling in a striking manner the Gothic architecture. It contains nothing remarkable except what the people show as the tomb of the prophet Joshua. This country abounds in pretended tombs of prophets. On the Tigris between Bagdad and Bussora they show the sepulchre of Ezra ; twelve miles in the Desert to the south-west of Hilla is that of Ezechiel, and to the southward the tomb of Job : the two

former are places of pilgrimage of the Jews, who do not acknowledge those of Job and Joshua.

The district of Hilla extends from Husseinia (which is a canal leading from the Euphrates near Nusseib to Imam Hussein) on the north to the town of Hasca on the south. It is governed by a Bey, who is always a Turk or Georgian, appointed by the Pasha of Bagdad, from whom the government is farmed for a stipulated yearly sum*. There is also

* For the information of those who may be curious regarding such subjects, I subjoin a statement of the revenue of Hilla, communicated to me by the Serraf Bashi of the place.

Annual Receipts of the Governor of Hilla.

From the farms and villages	100,000
Duties on rice, corn, &c., grown in the vicinity and passing through the town from the Khezail territory	100,000
Farm of sesame	15,000
—— dyeing	15,000
—— the butchery	6,000
—— silk	4,000
—— tannery	1,000
—— lime kilns	1,500
Collections or <i>voluntary</i> contributions levied on the townspeople under various pretexts about three times a year generally	8,000
Miri on the dates	20,000
Paid by the Commandant of Janissaries for his appoint- ment	2,000
Private revenue of the Zabit his own farms, gardens .	20,000
<hr/>	
Total in piastres Hilla currency	290,500
Add the difference of exchange	50,000
<hr/>	
Total in standard Turkish piastres	340,500

a Serdar or commandant of Janissaries, and a Cadi, whose office, unlike any other of the same kind in Turkey, has been continued in the same family for upwards of a century. The inhabitants of Hilla bear a very bad character. The air is salubrious, and the soil extremely fertile, producing great quantities of rice, dates, and grain of different kinds, though it is not cultivated to above half the degree of which it is susceptible.

Public Payments made by him to the Bagdad Government.

To the Pasha	260,000
----- Kiahya Bey	30,000

Total in Turkish piastres 290,000

He also supplies government with 5,500 tagars of corn and barley, in value about 165,000 piastres on the average; but this he levies on the farmers at the rate of 2 tagars for every 5, over and above the rent and imposts of their farms and produce. He must also supply the Pasha's army or any detachment of it that may be in the neighbourhood; fee the most powerful members of government from time to time, and yet be able to lay by a sufficiency not only for his own reimbursement, but also to pay the mulct that is invariably levied on governors when they are removed, however well they may have discharged their duty. And when it is considered that his continuance in office seldom exceeds two or three years, it may well be imagined that he has recourse to secret methods of accumulating wealth, and that the inhabitants of his district are proportionally oppressed. The regulation of this petty government is a just epitome of the general system which has converted some of the finest countries of the world into savage wastes and uninhabitable deserts.

The grand cause of this fertility is the Euphrates, the banks of which are lower and the stream more equal than the Tigris. Strabo says that it was a stadium in breadth at Babylon; according to Rennel, about 491 English feet, or d'Anville's still more reduced scale, 330. Niebuhr says, at Hilla it is 400 Danish feet broad; my measurement by a graduated line at the bridge there brings it to 75 fathoms, or 450 feet; its breadth however varies in its passage through the ruins. Its depth I found to be $2\frac{1}{2}$ fathoms, and the current runs at the medium rate of about two knots, when lowest being probably half a knot less, and when full, a knot more. The Tigris is infinitely more rapid, having a current of near seven knots when at its height. The Euphrates rises at an earlier period than the Tigris; in the middle of the winter it increases a little, but falls again soon after; in March it again rises, and in the latter end of April is at its full, continuing so till the latter end of June. When at its height it overflows the surrounding country, fills the canals dug for its reception, without the slightest exertion of labour, and facilitates agriculture in a surprising degree. The ruins of Babylon are then inundated so as to render many parts of them inaccessible, by converting the valleys among them into morasses. But the most remarkable inundation of the Euphrates is at Felu-

giah, twelve leagues to the westward of Bagdad, where on breaking down the dyke which confines its waters within their proper channel, they flow over the country and extend nearly to the banks of the Tigris, with a depth sufficient to render them navigable for rafts and flat-bottomed boats. At the moment I am now writing (May 24th, 1812) rafts laden with lime are brought on this inundation almost every day from Felugiah, to within a few hundred yards of the northern gate of Bagdad, called the Imam Mousa gate.

The water of the Euphrates is esteemed more salubrious than that of the Tigris. Its general course through the site of Babylon is north and south. I questioned the fishermen who ply on the river respecting its bottom, and they all agreed that bricks and other fragments of building are very commonly found in it. From the gentleness of the current, regularity of the stream, and equal substance of the banks, I am of opinion that the Euphrates would not naturally alter its course in any great degree, certainly not so much as the Tigris, whose variations in a few years are often very considerable. A variety of circumstances may however have caused some alterations. It is evident from what Strabo says, that the neglected state of the canals had considerably injured the original stream, and it is possible that a

part of it might have continued to flow through the channel cut by Cyrus for a long time afterwards*. That some change in the course of the river has taken place, will be hereafter shown.

I have before remarked that the whole of this part of Mesopotamia is intersected by canals (نهر). These are of all ages; and it is not uncommon to see workmen employed in excavating a new canal close to and parallel with an old one, when it might be supposed that the cleansing of the old one would be a work of much less toil. The high embankments of these canals easily impose on the unpractised eye for ruins of buildings, especially when the channel has been filled up by the accession of soil, and I doubt not are the origin of the belief expressed by some travellers, that there are ruins in the gardens of Hilla. Niebuhr and Otter say that remains of walls and edifices are in existence, though enveloped in woods and coppices. Otter in particular observes that the site of Babylon is generally covered with wood: this is certainly incorrect. On the ruins of Babylon there is not a single tree growing, excepting the old one which I shall hereafter have occasion to mention; but in the intervals of the ruins, where

* Vide Rollin, who quotes Arrian, whose work I regret not having at present to refer to.

in all probability no building ever stood, there are some patches of cultivation*: I made the most diligent search all through the gardens, but found not the slightest vestige of ruins, though previously I heard of many,—an example of the value of information resting solely on the authority of the natives. The reason is obvious. Ruins composed, like those of Babylon, of heaps of rubbish impregnated with nitre, cannot be cultivated, and any inferior mound would of course be levelled in making the garden.

In such a soil as that of Babylon it appears surprising how long some of the canals have remained. The Naher Malcha, a work of the Babylonian monarchs, might still be effectually repaired, and it is probable that many of the canals now seen on the site of Babylon may have been in existence when it was a flourishing city. Some of the canals were used for the purpose of navigation, and Alexander took great pains to cleanse and restore those that were out of order. Aristobulus, quoted by Strabo, lib. xvi. page 510, edit. Casaub., says that he went into these canals in a boat, which he steered himself, and inspected the repairs in person, in presence of a mul-

* I am unacquainted with the original work of Mr. Otter, and imagine that the word *coppice* must exist only in the translation, as it is an improper term, the only wood being the date gardens of Hilla, to which certainly the word *coppice* will not apply.

titute of spectators, cleansing the mouths of some which were choked up with mud, and blocking up others. In one instance, where the canal led toward the morasses and lakes of the Arabian side, he opened a new mouth thirty stadia from the old one, in a more stony place, to ensure greater durability. He also dug basons for his fleet; and in performing these works, it is said the graves of many of the kings and princes who were buried in the morasses were dug up; by which I understand that the bad state of the canals had caused inundations in the places of sepulture. From the yielding nature of the soil I can readily conceive the ease with which Cyrus dug a trench round the city, sufficient to contain the river (*Cyrop.* lib. vii.). I have not however been able to discover any traces either of this trench, or the lines of circumvallation.

The ruins of the eastern quarter of Babylon commence about two miles above Hilla, and consist of two large masses or mounds connected with and lying north and south of each other, and several smaller ones which cross the plain at different intervals. The northern termination of this plain is Pietro della Valle's ruin, from the south-east angle of which (to which it evidently once joined, being only obliterated there by two canals,) proceeds a narrow ridge or mound of earth, wearing the appearance of hav-

ing been a boundary wall. Vide the annexed plan (A). This ridge forms a kind of circular inclosure, and joins the south-east point of the most southerly of the two grand masses.

The river bank is skirted by a ruin (B), which I shall, for perspicuity's sake, call its embankment; though, as will hereafter be seen, there is good reason for supposing it never was intended for one. It commences on a line with the lower extremity of the southernmost grand mound, and is there nearly three hundred yards broad at its base, from the east angle of which a mound (resembling the boundary A, but broader and flatter,) proceeds, taking a sweep to the south-east, so as to be nearly parallel with, and forty yards more to the south than, that boundary; this loses itself in the plain, and is in fact the most southerly of all the ruins. The embankment is continued in a right line to the north, and diminishes in breadth, but increases in elevation till at the distance of seven hundred and fifty yards from its commencement, where it is forty feet perpendicular height, and is interrupted by a break (C) nearly of the same breadth with the river: at this point a triangular piece of ground commences, recently gained from the river, which deserts its original channel above and returns to it again here: this gained ground (D) is a hundred and ten yards in length,

and two hundred and fifty in breadth at its angle or point, and along its base are traces of a continuation of the embankment, which is there a narrow line that soon loses itself. Above this the bank of the river affords nothing worthy of remark ; for though in some places there are slight vestiges of building, they were evidently not connected with the above-mentioned embankment.

The whole of the area inclosed by the boundary on the east and south, and river on the west, is two miles and six hundred yards in breadth from east to west, (exclusive of the gained ground which I do not take into account, as comprising no part of the ruins,) as much from Pietro della Valle's ruin to the southern part of the boundary (A), or two miles and one thousand yards to the most southerly mound of all, which has been already mentioned as branching off from the embankment. This space is again longitudinally subdivided into nearly half, by a straight line of the same kind with the boundary, but much its inferior in point of size (B). This may have crossed the whole inclosure from north to south, but at present only a mile of it remains. Exactly parallel with it, and a little more than a hundred yards to the west of it, is another line precisely of a similar description, but still smaller and shorter (F) : its northern termination is a high heap of rubbish of a curi-

ous red colour, nearly three hundred yards long and one hundred broad, terminating on the top in a ridge: it has been dug into in various parts, but few or no fine whole bricks have been found in it*. All the ruins of Babylon are contained within the western division of the area, *i. e.* between the innermost of these lines and the river, there being vestiges of building in the eastern or largest division between the outermost line and the external boundary.

Before entering into a minute description of the ruins, to avoid repetition, it is necessary to state that they consist of mounds of earth, formed by the decomposition of building, channelled and furrowed by the weather, and the surface of them strewn with pieces of brick, bitumen, and pottery.

On taking a view of the ruins from south to north, the first object that attracts attention is the low mound connected with the embankment; on it are two little parallel walls close together, and only a few feet in height and breadth, which bear indisputable marks of having formed part of a Mohame-

* I saw one found at the foot of this heap, which had an impression resembling the spade or shovel in use at present among the Arabs. This is a singular specimen, as I never saw an instance of any other impression than that of writing on a Babylonian brick. I therefore made a drawing of it, which will be given in its proper place.

tan oratory or *Koubbè*. This ruin is called *Jumjuma* (Calvary), and gives its name to a village a little to the left of it. The Turkish Geographer says, "To the north of Hilla on the river is Jumjuma, which is the burial place of a Sultan." جمجمة is the common name here for a skull. It also means, according to Castell and Golius, "Puteus in loco salsuginoso fossus." Either etymology would be applicable to this. To this succeeds the first grand mass of ruins, which is one thousand one hundred yards in length, and eight hundred in greatest breadth, its figure nearly resembling that of a quadrant: its height is irregular; but the most elevated part may be about fifty or sixty feet above the level of the plain, and it has been dug into for the purpose of procuring bricks. Just below the highest part of it is a small dome in an oblong inclosure, which, it is pretended, contains the body of a son of Ali, named Amran, together with those of seven of his companions, all slain at the battle of Hilla. Unfortunately for the credit of the tradition, however, it is proved on better authority to be a fraud not uncommon in these parts, Ali having had no son of this description. From the most remarkable object on it, I shall distinguish this mound by the name of Amran.

On the north is a valley of five hundred and fifty

yards in length, the area of which is covered with tussocks of rank grass, and crossed by a line of ruins of very little elevation. To this succeeds the second grand heap of ruins, the shape of which is nearly a square, of seven hundred yards length and breadth, and its south-west angle is connected with the north-west angle of the mounds of Amran by a ridge of considerable height and nearly one hundred yards in breadth. This is the place where Beauchamp made his observations, and it is certainly the most interesting part of the ruins of Babylon: every vestige discoverable in it declares it to have been composed of buildings far superior to all the rest which have left traces in the eastern quarter: the bricks are of the finest description; and notwithstanding this is the grand storehouse of them, and that the greatest supplies have been and are now constantly drawn from it, they appear still to be abundant. But the operation of extracting the bricks has caused great confusion, and contributed much to increase the difficulty of decyphering the original design of this mound, as in search of them the workmen pierce into it in every direction, hollowing out deep ravines and pits, and throwing up the rubbish in heaps on the surface. In some places they have bored into the solid mass, forming winding caverns and subterranean passages, which, from their being left

without adequate support, frequently bury the workmen in the rubbish. In all these excavations walls of burnt brick laid in lime mortar of a very good quality are seen; and in addition to the substances generally strewed on the surfaces of all these mounds we here find fragments of alabaster vessels, fine earthen ware, marble, and great quantities of varnished tiles, the glazing and colouring of which are surprisingly fresh. In a hollow near the southern part I found a sepulchral urn of earthen ware, which had been broken in digging, and near it lay some human bones which pulverized with the touch,

To be more particular in my description of this mound, not more than two hundred yards from its northern extremity is a ravine (G) hollowed out by those who dig for bricks, in length near a hundred yards, and thirty feet wide by forty or fifty deep. On one side of it a few yards of wall remain standing, the face of which is very clean and perfect, and it appears to have been the front of some building. The opposite side is so confused a mass of rubbish, that it should seem the ravine had been worked through a solid building. Under the foundations at the southern end an opening is made, which discovers a subterranean passage floored and walled with large bricks laid in bitumen, and covered over with pieces of sand stone, a yard thick and several

yards long, on which the whole being so great as to have given a considerable degree of obliquity to the side walls of the passage. It is half full of brackish water (probably rain water impregnated with nitre in filtering through the ruins, which are all very productive of it), and the workmen say that some way on it is high enough for a horseman to pass upright: as much as I saw of it, it was near seven feet in height, and its course to the south. This is described by Beauchamp (vide Rennel, p. 369), who most unaccountably imagines it must have been part of the city wall. The superstructure over the passage is cemented with bitumen, other parts of the ravine with mortar, and the bricks have all writing on them. The northern end of the ravine appears to have been crossed by an extremely thick wall of yellowish brick cemented with a brilliant white mortar, which has been broken through in hollowing it out; and a little to the north of it I discovered what Beauchamp saw imperfectly, and understood from the natives to be an idol (Rennel, *ibid.*). I was told the same thing, and that it was discovered by an old Arab in digging, but that not knowing what to do with it, he covered it up again*.

* It is probable that many fragments of antiquity, especially of the larger kind, are lost in this manner. The inhabitants call all stones with inscriptions or figures on them *Idols* صنم

On sending for the old man who pointed out the spot, I set a number of men to work, who after a day's hard labour laid open enough of the statue to show that it was a lion of colossal dimensions standing on a pedestal of a coarse kind of gray granite and of rude workmanship ; in the mouth was a circular aperture into which a man might introduce his fist.

A little to the west of the ravine at (H) is the next remarkable object, called by the natives the Kasr, or Palace, by which appellation I shall designate the whole mass. It is a very remarkable ruin, which being uncovered, and in part detached from the rubbish, is visible from a considerable distance, but so surprisingly fresh in its appearance, that it was only after a minute inspection I was satisfied of its being in reality a Babylonian remain. It consists of several walls and piers (which face the cardinal points) eight feet in thickness, in some places ornamented with niches, and in others strengthened by pilasters and buttresses built of fine burnt brick (still perfectly clean and sharp) laid in lime-cement of such tenacity that those whose business it is have given up working, on account of the extreme difficulty of extracting them whole. The tops of these walls are broken, and may have been much higher. On the outside they have in some places been cleared

nearly to the foundations, but the internal spaces formed by them are yet filled with rubbish in some parts almost to their summit. One part of the wall has been split into three parts and overthrown as if by an earthquake; some detached walls of the same kind, standing at different distances, show what remains to have been only a small part of the original fabrick: indeed it appears that the passage in the ravine, together with the wall which crosses its upper end, were connected with it. There are some hollows underneath, in which several persons have lost their lives; so that no one will now venture into them, and their entrances have now become choked up with rubbish. Near this ruin is a heap of rubbish, the sides of which are curiously streaked by the alternation of its materials, the chief part of which it is probable was unburnt brick, of which I found a small quantity in the neighbourhood, but no reeds were discoverable in the interstices. There are two paths near this ruin, made by the workmen who carry down their bricks to the river side, whence they are transported by boats to Hilla; and a little to the north-north-east of it is the famous tree which the Natives call *Athelè*, and maintain to have been flourishing in ancient Babylon, from the destruction of which they say God purposely preserved it, that it might afford Ali a convenient place to tie up his

horse after the battle of Hilla ! It stands on a kind of ridge, and nothing more than one side of its trunk remains (by which it appears to have been of considerable girth) ; yet the branches at the top are still perfectly verdant, and gently waving in the wind produce a melancholy rustling sound. It is an ever-green, something resembling the *lignum vitæ*, and of a kind, I believe, not common in this part of the country, though I am told there is a tree of the same description at Bassora.

All the people of the country assert that it is extremely dangerous to approach this mound after night-fall, on account of the multitude of evil spirits by which it is haunted.

It will not be necessary to describe the inferior heaps, which cross the plain between the two principal mounds and the inner line (F), and whose form and extent will be sufficiently apparent from the accompanying sketch : but, previous to giving an account of the last grand ruin, I shall say a few words more on the embankment of the river, which is separated from the mounds of Amran and the Kasr by a winding valley or ravine a hundred and fifty yards in breadth, the bottom of which is white with nitre, and apparently never had any buildings in it, except a small circular heap in the centre of it near the point (C). The whole embankment on

the river side is abrupt, perpendicular, and shivered by the action of the water ; at the foot of the most elevated and narrowest part of it (K), cemented into the burnt brick wall of which it is composed, are a number of urns filled with human bones which had not undergone the action of fire. The river appears to have encroached here, for I saw a considerable quantity of burnt bricks and other fragments of building in the water.

A mile to the north of the Kasr, or full five miles distant from Hilla, and nine hundred and fifty yards from the river bank, is the last ruin of this series, which has been described by Pietro della Valle, who determines it to have been the Tower of Belus, an opinion adopted by Rennel. The natives call it Mukallibe (مقلبه), or, according to the vulgar Arab pronunciation of these parts, Mujelibè, meaning overturned ; they sometimes also apply this term to the mounds of the Kasr. It is of an oblong shape, irregular in its height and the measurement of its sides, which face the cardinal points ; the northern side being two hundred yards in length, the southern two hundred and nineteen, the eastern one hundred and eighty-two, and the western one hundred and thirty-six ; the elevation of the south-east or highest angle, one hundred and forty-one feet. The western face, which is the least elevated, is the most

interesting on account of the appearance of building it presents. Near the summit of it appears a low wall, with interruptions, built of unburnt bricks mixed up with chopped straw or reeds, and cemented with clay-mortar of great thickness, having between every layer a layer of reeds; and on the north side are also some vestiges of a similar construction. The south-west angle is crowned by something like a turret or lantern: the other angles are in a less perfect state, but may originally have been ornamented in a similar manner. The western face is lowest and easiest of ascent, the northern the most difficult. All are worn into furrows by the weather; and in some places, where several channels of rain have united together, these furrows are of great depth, and penetrate a considerable way into the mound. The summit is covered with heaps of rubbish, in digging into some of which, layers of broken burnt brick cemented with mortar are discovered, and whole bricks with inscriptions on them are here and there found: the whole is covered with innumerable fragments of pottery, brick, bitumen, pebbles, vitrified brick or scoria, and even shells, bits of glass, and mother of pearl. On asking a Turk how he imagined these latter substances were brought there, he replied, without the least hesitation, "By the deluge." There are many dens of wild beasts in various parts,

in one of which I found the bones of sheep and other animals, and perceived a strong smell like that of a lion. I also found quantities of porcupine quills, and in most of the cavities are numbers of bats and owls. It is a curious coincidence that I here first heard the oriental account of satyrs. I had always imagined the belief of their existence was confined to the mythology of the West: but a Chôadar, who was with me when I examined this ruin, mentioned by accident, that in this desert an animal is found resembling a man from the head to the waist, but having the thighs and legs of a sheep or goat: he said also that the Arabs hunt it with dogs, and eat the lower parts, abstaining from the upper on account of their resemblance to those of the human species. "But wild beasts of the desert shall lie there, and their houses shall be full of doleful creatures; and owls shall dwell there, and satyrs shall dance there." Isaiah xiii. 21.*

* I with difficulty refrain from transcribing the whole of this most spirited and poetical chapter. The Hebrew word which we translate *satyrs* is שְׂעִירִים literally "the hairy ones," a signification which has been preserved in the Vulgate. In Lev. xvii. 7. the word is used for "devils, evil spirits." The present Jews understand it in this placé as synonymous with שְׂדֵיִם or demons.

I know not why we introduced the word *satyrs*,—probably on the authority of Aben Ezra, or some other commentator,—but we should have been cautious how we made the Prophet in a man-

In the northern face of the Mujelibè, near the summit, is a niche or recess high enough for a man to stand upright in, at the back of which is a low aperture leading to a small cavity, whence a passage branches off to the right, sloping upwards in a westerly direction, till it loses itself in the rubbish. The natives call this the *serdaub* or cellar; and a respectable person informed me that four years ago some men searching in it for bricks pulled out a quantity of marble; and afterwards a coffin of mulberry wood containing a human body inclosed in a tight wrapper, and apparently partially covered with bitumen, which crumbled into dust soon after exposure to the air. This account, together with its appearing the most favourable spot to ascertain something of the original plan of the whole, induced me to set twelve men to work to open a passage into the *serdaub* from above. They dug into a shaft or hollow pier, sixty feet square, lined with fine brick laid in bitumen, and filled up with earth: in this they found a brass spike, some earthen vessels (one of which was very thin, and had the remain of fine white varnish on the out-

ner accountable for a fabulous being. Since the above was written I find that the belief of the existence of satyrs is by no means rare in this country. The Arabs call them *Sied Assad*, and say that they abound in some woody places near Semava on the Euphrates.

side), and a beam of date-tree wood. On the third day's work they made their way into the opening, and discovered a narrow passage nearly ten feet high half filled with rubbish, flat on the top, and exhibiting both burnt and unburnt bricks; the former with inscriptions on them, and the latter, as usual, laid with a layer of reeds between every row, except in one or two courses near the bottom, where they were cemented with bitumen; a curious and unaccountable circumstance. This passage appeared as if it originally had a lining of fine burnt brick cemented with bitumen, to conceal the unburnt brick, of which the body of the building was principally composed. Fronting it is another passage (or rather a continuation of the same to the eastward, in which direction it probably extends at considerable distance, perhaps even all along the northern front of the Mujelibè) choked up with earth, in digging out which I discovered near the top a wooden coffin containing a skeleton in high preservation. Under the head of the coffin was a round pebble; attached to the coffin on the outside a brass bird, and inside an ornament of the same material, which had apparently been suspended to some part of the skeleton. These, could any doubt remain, place the antiquity of the skeleton beyond all dispute. This being extracted, a little further in the rubbish, the

skeleton of a child was found; and it is probable that the whole of the passage, whatever its extent may be, was occupied in a similar manner. No skulls were found, either here or in the sepulchral urns at the bank of the river.

At the foot of the Mujelibè, about seventy yards from it, on the northern and western sides, are traces of a very low mound of earth, which may have formed an inclosure round the whole. Further to the north of the river, there are no more vestiges of ruins; but the heaps in the direction of the Bagdad road shall be examined more particularly at a future opportunity.

I have now done with the eastern side of the river, and shall next proceed to take a survey of all that remains of Babylon on the western. The loose and inaccurate accounts of some modern travellers have misled D'Anville and Rennel into the belief of there being considerable ruins on the western bank of the river, corresponding with those I have just described on the eastern. That this is not the case, I was satisfied by the view I obtained from the top of the Mujelibè; yet I determined, for greater accuracy, to examine the whole bank minutely. It is flat, and intersected by canals, the principal of which are the Tajia or Ali Pasha's trench, and the canal of Tah-masia. There are a few small villages on the river

inclosed by mud walls, and surrounded by cultivation ; but there is not the slightest vestige of ruins, excepting opposite the mass of Amran, where are two small mounds of earth overgrown with grass, forming a right angle with each other, and a little further on are two similar ones. These do not exceed a hundred yards in extent, and the place is called by the peasants *Anana*. To the north the country has a verdant marshy appearance.

But although there are no ruins in the immediate vicinity of the river, by far the most stupendous and surprising mass of all the remains of Babylon is situated in this desert, about six miles to the south-west of Hilla. It is called by the Arabs *Birs Nemroud**, by the Jews *Nebuchadnezzar's Prison*, and has been described both by Père Emanuel and Niebuhr (who was prevented from inspecting it closely by fear of the Arabs), but I believe it has not been noticed

* The etymology of the word *Birs* (برس) would furnish a curious subject for those who are fond of such discussion. It appears not to be Arabic, as it has no meaning which relates to this subject in that language, nor can the most learned persons here assign any reason for its being applied to this ruin. **בֵּירָה בִּירְתָא** in Chaldean signifies *a palace*, and **הַבִּירָה** *par excellence*, the Temple of Jerusalem. **בֵּרֶץ** in the same language, and **براص** pl. **برصة** Ar. mean the habitation of dæmons, or a sandy desert.

by any other traveller. Rennel, on the authority of D'Anville, admits Père Emanuel's ruin into the limits of Babylon, but excludes Niebuhr's, which he says cannot be supposed to have been less than two or three miles from the south-west angle of the city. No one who had not actually examined the spot could ever imagine them in fact to be one and the same ruin.

I visited the Birs under circumstances peculiarly favourable to the grandeur of its effect. The morning was at first stormy, and threatened a severe fall of rain; but as we approached the object of our journey, the heavy clouds separating discovered the Birs frowning over the plain, and presenting the appearance of a circular hill crowned by a tower with a high ridge extending along the foot of it. Its being entirely concealed from our view during the first part of our ride, prevented our acquiring the gradual idea, in general so prejudicial to effect, and so particularly lamented by those who visit the Pyramids. Just as we were within the proper distance, it burst at once upon our sight in the midst of rolling masses of thick black clouds, partially obscured by that kind of haze whose indistinctness is one great cause of sublimity, whilst a few strong catches of stormy light, thrown upon the desert in the background, served to give some idea of the immense

extent and dreary solitude of the wastes in which this venerable ruin stands.

The Birš Nemroud is a mound of an oblong figure, the total circumference of which is seven hundred and sixty-two yards. At the eastern side it is cloven by a deep furrow, and is not more than fifty or sixty feet high; but at the western it rises in a conical figure to the elevation of one hundred and ninety-eight feet, and on its summit is a solid pile of brick thirty-seven feet high by twenty-eight in breadth, diminishing in thickness to the top, which is broken and irregular, and rent by a large fissure extending through a third of its height. It is perforated by small square holes disposed in rhomboids. The fine burnt bricks of which it is built have inscriptions on them; and so admirable is the cement, which appears to be lime-mortar, that, though the layers are so close together that it is difficult to discern what substance is between them, it is nearly impossible to extract one of the bricks whole. The other parts of the summit of this hill are occupied by immense fragments of brick-work of no determinate figure, tumbled together and converted into solid vitrified masses, as if they had undergone the action of the fiercest fire, or been blown up with gunpowder, the layers of the bricks being perfectly discernible,—a curious fact, and one for which I am utterly inca-

pable of accounting. These, incredible as it may seem, are actually the ruins spoken of by Père Emanuel, who takes no sort of notice of the prodigious mound on which they are elevated*.

It is almost needless to observe that the whole of this mound is itself a ruin, channelled by the weather and strewn with the usual fragments and with pieces of black stone, sand-stone, and marble. In the eastern part layers of unburnt brick are plainly to be seen, but no reeds were discernible in any part: possibly the absence of them here, when they are so generally seen under similar circumstances, may be an argument of the superior antiquity of the ruin. In the north side may be seen traces of building exactly similar to the brick-pile. At the foot of the mound a step may be traced, scarcely elevated above the plain, exceeding in extent by several feet each way the true or measured base; and there is a quadrangular inclosure round the whole, as at the Mujelibè, but much more perfect and of greater dimen-

* “ Le P. Emanuel dit avoir vu (dans la partie occidentale) de grands pans de murs encore debout, d’autres renversés, mais d’une construction si solide, qu’il n’est presque pas possible de détacher d’entre eux les carreaux de brique d’un pied et demi de longueur dont on sait que les édifices de Babylone étoient construits. Les Juifs, établis dans le pays, appellent ces restes de bâtisse *la prison de Nabuchadnasser*; il conviendrait mieux de dire *le palais*.” — D’Anville sur l’Euphrate et le Tigre, p. 117.

sions. At a trifling distance from the Birs, and parallel with its eastern face, is a mound not inferior to that of the Kasr in elevation, but much longer than it is broad. On the top of it are two Koubbès or oratories, one called Makam Ibrahim Khalil, and said to be the place where Ibrahim was thrown into the fire by order of Nemroud, who surveyed the scene from the Birs; the other, which is in ruins, Makam Saheb Zeman; but to what part of Mehdy's life it relates I am ignorant. In the oratories I searched in vain for the inscriptions mentioned by Niebuhr; near that of Ibrahim Khalil is a small excavation into the mound, which merits no attention; but the mound itself is curious from its position, and correspondence with others, as I shall in the sequel have occasion to remark.

Round the Birs are traces of ruins to a considerable extent. To the north is the canal which supplies Mesjid Ali with water, which was dug at the expense of the Nuwaub Shujahed doulah, and called after his country Hindia. We were informed that from the summit of the Birs, in a clear morning, the gilt dome of Mesjid Ali might be seen.

To this account of the ruins, which are supposed to have stood in the enceinte of the city itself, it may be useful to subjoin a notice of some remarkable places in the vicinity of Hilla, - which bear some re-

lation to the ruins of Babylon. Nebbi Eyoub, or the tomb of the prophet Job, is a Koubbè situated near the Euphrates, three leagues to the southward of Hilla; and just below it is a large canal called Jazeria (جاذرية), said to be of great antiquity; close to which are two large mounds or masses of ruins named El Mokhatat (المخاطط) and El Adouar (الادوار). Four leagues below Hilla, on the same side of the Euphrates, but not on the bank, is a village called Jerbouiya (جربوعية), near which is a considerable collection of ruins similar to those of Babylon, and called by the natives Bursa (بورسه), probably the Borosippa of Strabo, and Barsita of Ptolemy*. The governor of Hilla informed me of a mound as large as the Mujelibè, situated thirty-five hours to the southward of Hilla; and that a few years ago, a cap or diadem of pure gold, and some other articles of the same metal, were found there, which the Khezail Arabs refused to give up to the Pasha. In the

* **בִּיר שֶׁאֲפִי** *quasi* **בִּירְסִיפָּה** in Chaldean, whence the Greek Borosippa, is, according to the Talmuds, the name of the place in Babel near the Tower, whose air renders a man forgetful. I have not yet had leisure to search the Talmud and other Hebrew and Chaldean works for the traditions concerning Babylon, and am unwilling to detain this memoir (which has already been so much and so unexpectedly retarded) any longer for such information; but I have some hopes of being able to make it the subject of a future communication.

western desert bearing north-west from the top of the Mujelibè, is a large mound called Towereij (طويريج). In the same desert, two leagues to the west of Hilla, is the village of Tahmasia, built by Nadir Shah, where, it is said, are some trifling mounds; this village must occupy part of the site of Babylon. From the top of the Mujelibè in a southerly direction, at a great distance, two large mounds are visible, with whose names I am unacquainted. Five or six miles to the east of Hilla is Al Hheimar (الحيمر), which is a curious ruin, as bearing, on a smaller scale, some resemblance to the Birs Nemroud. The base is a heap of rubbish, on the top of which is a mass of red brick-work, between each layer of which is a curious white substance, which pulverizes on the least touch. I have not yet visited Al Hheimar, but those who have, conjectured, from the grain of the white substance or powder, seemingly lying in filaments, that it must have originally been layers of reeds. I have seen a specimen adhering to a piece of brick, but not sufficiently well preserved to enable me to form any decisive judgment; but I cannot imagine how reeds, under any circumstances, could be brought to assume such an appearance; and besides, they are never found in buildings composed, as this is, of burnt brick.

To these ruins I add one, which, though not in

the same direction, bears such strong characteristics of a Babylonian origin, that it would be improper to omit a description of it in this place. I mean Akerkouf (عقروق), or, as it is more generally called, Nimrod's Tower, for the inhabitants of these parts are as fond of attributing every vestige of antiquity to Nimrod, as those of Egypt are to Pharaoh. It is situated ten miles to the north-west of Bagdad, and is a thick mass of unburnt brick-work of an irregular shape, rising out of a base of rubbish; there is a layer of reeds between every fifth or sixth (for the number is not regulated) layer of bricks. It is perforated with small square holes, as the brick-work at the Birs Nemroud, and about half way up on the east side is an aperture like a window; the layers of cement are very thin, which, considering it is mere mud, is an extraordinary circumstance. The height of the whole is one hundred and twenty-six feet; diameter of the largest part, one hundred feet; circumference of the foot of the brick-work above the rubbish, three hundred feet; the remains of the tower contain one hundred thousand cubic feet. (Vide Ives's Travels, p. 298.) To the east of it is a dependent mound resembling those at the Birs, and Al Hheimar.

I shall now inquire which of the public works, that conspired with its size to render Babylon so

celebrated among the ancients, was likely to have left the most considerable traces at the present day; and how far the vestiges which may be imagined would have remained, correspond with what we now find.

Of all the ancient writers who have described Babylon, Herodotus and Diodorus are the most minute. Much weight must certainly be placed on the accounts of the former of these historians, who was an eye-witness of what he relates, notwithstanding the exaggeration and credulity which may in some instances be laid to his charge. The accounts of later writers are of comparatively small value. Pliny in particular has done nothing more than copy Herodotus. Strabo's general accuracy and personal experience indeed render his description of great interest, as far as it goes; but he could only have seen Babylon at a period when its public buildings had already become heaps of rubbish, and consequently must have depended upon more ancient authorities for particular accounts of most of them.

The greatest circumference the ancients have ascribed to the city walls, is four hundred and eight stadia; the most moderate, three hundred and sixty. Strabo, who is excellent authority in this particular, as he must have seen the walls in a sufficiently perfect state to form his judgement, allows three hun-

dred and eighty-five ; but the smallest computation supposes an area for the city, of which we can now scarcely form an idea. Whatever may have been the size of Babylon, I imagine that its population bore no proportion to it : and that it would convey to a modern the idea of an inclosed district, rather than that of a regular city ; the streets, which are said to have led from gate to gate across the area, being no more than roads through cultivated land, over which buildings were distributed in groups or patches. Quintus Curtius says positively that there was pasture and arable land in the inclosure, sufficient to support the whole of the population during a long siege ; and Xenophon reports that when Cyrus took Babylon (which event happened at night) the inhabitants of the opposite quarter of the town were not aware of it till the third part of the day, *i. e.* three hours after sun-rise ; which was very possibly owing to the great distance of one cluster of houses from another ; since, had they been connected with each other in regular streets, the noise and confusion would, I think, have spread the information of the event with much greater rapidity.

All accounts agree in the height of the walls, which was fifty cubits, having been reduced to these dimensions from the prodigious height of three hundred and fifty feet, by Darius Hystaspes, after the

rebellion of the town, in order to render it less defensible. I have not been fortunate enough to discover the least trace of them in any part of the ruins at Hilla ; which is rather an unaccountable circumstance, considering that they survived the final ruin of the town, long after which they served as an inclosure for a park ; in which comparatively perfect state St. Jerome informs us they remained in his time. Nor can the depredations subsequently committed in them in the building of Hilla, and other similar places, satisfactorily account for their having totally disappeared : for though it is evident they would have been the first object to attract the attention of those who searched after bricks ; yet when they had been thoroughly dilapidated, the mass of rubbish, which most probably formed the heart or substance of them, together with the very deep ditch, would alone have left traces sufficiently manifest at the present day.

Similar in solidity and construction to the city walls, was the artificial embankment of the river with its breast-work, the former of which Diodorus informs us was one hundred stadia in length. The traces of these are entirely obliterated : for though on a cursory view the mound which now forms the eastern bank of the river (and which for perspicuity's sake I have called the embankment) would be likely

to deceive observers; yet the alteration in the course of the river at that place, the form of the southern part of the mound, and, above all, the sepulchral urns found built up in it close to the water's edge, are sufficient proofs that it cannot be the remains of the ancient embankment.

The most extraordinary building within the city was the tower, pyramid, or sepulchre of Belus, the base of which Strabo says was a square of a stadium each side, and it was a stadium in height. It has been generally considered that Herodotus has given an extravagant account of its dimensions: he says that the first platform, or largest and lowest of the eight towers of which it was composed, was σταδίου καὶ τὸ μῆκος καὶ τὸ εὖρος, which has been rendered "a stadium in height and breadth;" which, supposing the seven other towers to have borne some proportion to it, may be clearly pronounced an absurdity: but μῆκος also signifies length, space, prolixity; in this signification it combines better with εὖρος, as length and breadth is a more usual phrase than height and breadth, and the passage then would mean no more than that the base was a square of a stadium.

If a sentence can be interpreted in two different ways, it is surely not fair to charge the author with the worst; and it is possible that, on a critical ex-

amination of the venerable father of history, much of the blame arising from his reputed inaccuracies would be divided between his transcribers and translators*. The tower stood in a quadrangle of two miles and a half, which contained the temple in which divine honours were paid to the tutelar deity of Babylon, and probably also cells for the numerous establishment of priests attached to it.

An additional interest attaches itself to the sepulchre of Belus, from the probability of its identity with the tower which the descendants of Noah, with Belus at their head, constructed in the plain of Shinaar, the completion of which was prevented in so memorable a manner. I am strongly inclined to differ from the sense in which Gen. xi. 4. is commonly understood, and I think too much importance has been attached to the words "*may reach unto heaven,*" which are not in the original, whose words are וְרֵאשׁוֹ בַּשָּׁמַיִם "*and its top to the skies,*" by a

* The only passage my memory immediately supplies me with, in which the word *μῆκος* may also be understood in the way I propose, is the 155th line of the 7th book of the Iliad. Nestor is relating his victory over the giant Ereuthalion; after having stretched him on the plain, he exclaims "Τὸν δὲ μῆγιστον καὶ κάρτιστον κτάνον ἄνδρα" evidently with the idea present to him of viewing the space of ground he covered as he lay; for he immediately adds "Πολλὸς γάρ τις ἔκειτο, παρήγορος ἔνθα καὶ ἔνθα." But, I doubt not, better authorities might be easily produced.

metaphor common to all ages and languages, *i. e.* with a very elevated and conspicuous summit. This is certainly a more rational interpretation than supposing a people in their senses, even at that early period, would undertake to scale heaven by means of a building of their own construction. The intention in raising this structure might have been displeasing to the Almighty on many other accounts; such for instance as the paying of divine honours to other beings, or the counteracting of the destined dispersion of mankind. For, notwithstanding the testimony of Josephus's Sibyl, we have no good reason for supposing that the work suffered any damage; and allowing it to have been in any considerable degree of forwardness, it could have undergone no material change at the period the building of Babel was recommenced. It is therefore most probable that its appearance, and the tradition concerning it, gave those who undertook the continuation of the labour, the idea of a monument in honour of Belus; and the same motives which made them persist in adhering to the spot on which such a miracle had been wrought, would naturally enough induce them to select its principal structure for that purpose. Be this as it may, the ruins of a solid building of five hundred feet must, if any traces of the town remain, be the most remarkable object among

them. Pliny, seventy years after Strabo, mentions "the Temple of Jupiter Belus, the inventor of astronomy," as still standing; and all travellers since the time of Benjamin of Tudela, who first revived the remembrance of the ruins, whenever they fancied themselves near the site of Babylon, universally fixed upon the most conspicuous eminence to represent the Tower of Belus. Benjamin of Tudela, Rawulf, and some others, saw it among the ruins of old Felugiah; and, fully bent upon verifying the words of Scripture, fancied it infested by every species of venomous reptile. If we take Rawulf's account, indeed, he must in the 16th century have seen Babylon nearly as perfect as it was in Strabo's time, and he has no kind of difficulty in pointing out the minutest divisions of the city. I believe Pietro della Valle was the first who selected the Mujelibè as the remains of this celebrated structure. Père Emanuel and Niebuhr are the only writers who have noticed the Biris Nemroud; and the former, from the account he has given, or the clearness of the idea he appears to have formed, might with equal advantage to the world and himself have never seen it.

Notwithstanding the apparent ease with which this important point in the topography of Babylon has been determined, a careful examiner will find as great a difficulty in discovering the Tower of

Belus, as in identifying any other part of the ruins. Taking for granted the site of Babylon to be in the vicinity of the Hilla, his choice will be divided between two objects, the Mujelibè and the Birs Nemroud. I shall briefly notice the arguments in favour of each, with the difficulties and objections which may be advanced, first giving a comparative statement of their dimensions with those of the original tower.

	English feet.
Total circumference or sum of the four	
sides of the Birs	2286
Ditto of the Mujelibè	2111
Ditto of the Tower of Belus, taking five	
hundred feet for the stadium, at a	
rough calculation	2000

By this it appears that the measurement both of the Birs and the Mujelibè agrees as nearly as possible with that of the Tower of Belus, considering our ignorance of the exact proportion of the stadium, and the enlargement which the base must have undergone by the crumbling of the materials. The variations in the form of the Mujelibè from a perfect square, are not more than the accidents of time will account for; and the reader will best judge from my description, whether the summit and ex-

ternal appearance of this ruin correspond in any way with the accounts of the tower. That there may have been some superstructure on it appears probable, from the irregularity of the summit, and the quantity of burnt brick found there; but it is impossible to decide on the form or extent of this superstructure, and it may be thought that there does not remain in the irregularities on the top, a sufficient quantity of rubbish to account for an elevation equal to that of the tower, the whole height now being only one hundred and forty feet. To those who, from the traces of an inclosure somewhat resembling a ditch with a glacis, and the appearances of lanterns or turrets at one or two of the corners, would conjecture this to be the ruins of a castle, it must be objected that the inclosure which we know surrounded the tower, might leave just such traces; and indeed we observe perfectly similar ones in ruins which we know never could have been castellated, as for instance, at the Birs Al Hheimar and Akerkouf; that the corners of the base of the tower may have been rounded off for ornament or use, and that the interior appearance and solidity of the ruin argue completely against its having been a castle. We have besides every reason to believe that there never was a castle at Babylon, except the fortified palace; and the opinion of a

few Turks, who call it the Kalâa, or citadel, is not worth noticing.

Of the grand inclosure of two miles and half, which surrounded the temple and tower, and was probably the boundary of the sanctuary or holy ground, there are no traces here; and indeed such an inclosure would be incompatible with the boundary-line (A). The passage filled with skeletons in the Mujelibè, is a circumstance that will embarrass equally those who may be of opinion it was a castle, and those who judge it to have been the Tower of Belus; though probably it would be more favourable to the theory of the latter than that of the former. We gain nothing in this instance by studying position. Major Rennel considers this ruin as sufficiently answering to the site of the Tower of Belus: he does not however establish its position from that of the other ruins, but assumes it as a datum to ascertain the situation and extent of the rest of Babylon.

The only building which can dispute the palm with the Mujelibè is the Bir's Nemroud, previous to visiting which I had not the slightest idea of the possibility of its being the Tower of Belus; indeed its situation was a strong argument against such a supposition: but the moment I had examined it I could not help exclaiming, "Had this been on the

other side of the river, and nearer the great mass of ruins, no one could doubt of its being the remains of the tower." As this therefore is the principal objection that can be brought against it, it will be proper to consider it first.

I believe it is no where positively asserted that the Tower of Belus stood in the eastern quarter of Babylon. Herodotus, Strabo, Pliny, and Quintus Curtius, do not affirm this, but it is certainly the generally received opinion; and Major Rennel says, "It may be pretty clearly collected from Diodorus, that the temple stood on the east side and the palace on the west. A presumptive proof of the supposed position of the temple, should the words of Diodorus be regarded as ambiguous, is, that the gate of the city named Belidian, and which we must conclude to be denominated from the temple, appears pretty clearly to have been situated on the east side. When Darius Hystaspes besieged Babylon, the Belidian and Cissian gates were opened to him by Zopyrus; and the Babylonians fled to the Temple of Belus, as we may suppose, the nearest place of refuge. The Cissian or Susian gate must surely have been in the eastern part of the city, as Susa lay to the east; and by circumstances the Belidian gate was near it." Geogr. of Herod. page 355—357. Now, I do not think these premises altogether warrant the

conclusion : in these countries, as has before been remarked*, gates take the names of the places to and not from which they lead; the gates of Babylon are instances of this, and the very gate next the Belidian was called Susian, from the town to which the road it opened upon led; so that, if the Belidian gate really derived its appellation from the temple, it would have been a singular instance, not merely in Babylon, but in the whole East at any period. It is consequently much easier to suppose there may have been a town, village, or other remarkable place without the city, the tradition of which is now lost, which gave its name to the gate, than that such an irregularity existed. As to the inhabitants in their distress taking refuge within the precincts of the temple, it is probable they were induced to it, not from its proximity to the point of attack, but as the grand sanctuary, and from its holiness and great celebrity the one most likely to be respected by the enemy.

The difficulty is however by no means vanquished, by allowing the Temple and Tower of Belus to have stood on the east side: a very strong objection may be brought against the Birs Nemroud, in the distance of its position from the extensive remains on

* Vide also Rennel.

the eastern bank of the Euphrates, which, for its accommodation within the area of Babylon, would oblige us to extend the measurement of each side of the square to nine miles; or adopt a plan which would totally exclude the Mujelibè, all the ruins above it, and most of those below: even in the former case the Mujelibè and the Birs would be at opposite extremities of the town, close to the wall, while we have every reason to believe that the Tower of Belus occupied a central situation. Whether the Birs stood within or without the walls, if it was a building distinct from the Tower of Belus, it appears very surprising how so stupendous a pile, as it must have been in its perfect state, never attracted the attention of those who have enumerated the wonders of Babylon.

The plan of the Birs varies more from a perfect square than that of the Mujelibè, which may be accounted for, on the supposition of its having been in a state of ruin for a much longer period. I think from its general appearance there are some reasons to conclude it was built in several stages, gradually diminishing to the summit. The annexed sketch, in four different views, will convey a clearer idea of it than any description would, and enable in some measure the reader to judge for himself.

In forming a conjecture on the original destina-

tion of the Birs, the mound situated parallel to its eastern face, which must have been a building of great dimensions, must not be overlooked. The temple attached to the Tower of Belus must have been a very spacious edifice, and formed part of its quadrangular inclosure, of which it is probable it did not occupy more than one side, the three remaining ones being composed of accommodations for the priests and attendants, of course inferior in proportions to the temple, allowing some degree of resemblance in other respects, between the Birs and the Tower, the elevation observable round the former will represent the priests' apartments, and the above-mentioned mound the temple itself. We find the same kind of mound, and precisely in the same situation, attached to other ruins which have a strong resemblance in themselves to the Birs; and we may therefore reasonably conclude that they were intended for the same design, either the honour of the dead, the observation of the celestial bodies, religious worship, or perhaps some of these motives combined. In like manner we find in Egypt, the original idea of the Pyramids exactly copied at different times on a smaller scale, and each pyramid having its dependant temple. I leave to the learned the decision of this point, and the determining what degree of resemblance, in form and purpose, exists

between the Pyramids of Memphis and the Tower of Belus.

I have dwelt the longer on this most interesting of the Babylonian edifices, as I shall have but little to offer on the rest. The citadel or palace, (for it served both these purposes, and was the only fortress within the walls,) was surrounded by an exterior wall of sixty stadia in circumference; inside which was another of forty stadia, the interior face of which was ornamented with painting, as is the custom of the Persians at the present day; and again, within this last was a third, adorned with designs of hunting. On the opposite side of the river, and on the same side with the Tower of Belus, was situated the old palace, the outer wall of which was no larger than the inner one of the new. Above the new palace or citadel were the hanging gardens, which, according to Strabo, formed a square of four plethra each face, and were fifty cubits in height. When I consider the dimensions of the Sefivieh palace at Isfahaun, and other similar buildings yet remaining in the East, I see no difficulty in admitting the account of the Babylonian palace in its full extent. The antiquarian will consider how far the measurement of the ruins inclosed between the river and the boundary on the east corresponds with those of the palace: in some respects the Mujelibè would

answer sufficiently well with the accounts of the hanging gardens, were it not for the skeletons found there, which must embarrass almost any theory that may be formed on this extraordinary pile.

There was a tunnel under the Euphrates, of which no trace can reasonably be expected at this time. Semiramis, according to Diodorus, erected a stone obelisk of a hundred and twenty-five feet high by five feet square, which was cut on purpose in the Armenian mountains. As we do not trace this monument in any of the neighbouring towns after the destruction of Babylon, it is not impossible that some vestige of it may yet be discovered.

I have already expressed my belief that the number of buildings in Babylon bore no proportion to the space inclosed by the wall: besides this, it is most probable that the houses were in general small; and even the assertion of Herodotus, that it abounded in houses of two and three stories, argues that the majority consisted of only one. The peculiar climate of this district must have caused a similarity of habits and accommodation in all ages; and if, upon this principle we take the present fashion of building as some example of the mode heretofore practised in Babylon, the houses that had more than one story must have consisted of the ground floor or *basse-cour*, occupied by stables, magazines,

and serdaubs or cellars, sunk a little below the ground, for the comfort of the inhabitants during the heats; above this a gallery with the lodging-rooms opening into it, and over all the flat terrace for the people to sleep on during the summer.

From what remains of Babylon, and even from the most favourable account handed down to us, there is every reason to believe that the public edifices which adorned it, were remarkable more for vastness of dimensions than elegance of design, and solidity of fabric rather than beauty of execution. The Tower of Belus appears merely to have been astonishing from its size. It was inferior in some respects to the Pyramids, and did not surpass either them or probably the great temple of Mexico in external appearance; and the ornaments of which Xerxes despoiled it, convey an idea of barbaric richness, rather than taste: all the sculptures which are found among the ruins, though some of them are executed with the greatest apparent care, speak a barbarous people. Indeed with a much greater degree of refinement than the Babylonians seem to have been in possession of, it would be difficult to make any thing of such unpropitious materials as brick and bitumen. Notwithstanding the assertion of M. Dutens, there are the strongest grounds for supposing that the Babylonians were entirely unac-

quainted with the arch, of which I could not find the slightest trace in any part of the ruins where I purposely made the strictest search; particularly in the subterranean at the Kasr, and the passages in Mujelibè. The place of the column too appears to have been supplied by thick piers, buttresses, and pilasters; for to the posts of date-wood, which was then and is still made great use of in the architecture of this country, the name of *pillar* certainly cannot with propriety be applied. Strabo says, "On account of the scarcity of proper timber, the wood-work of the houses is made of the date-tree; round the posts they twist reeds, on which they apply a coat of paint*." What Xenophon and Strabo say of the doors being smeared over with bitumen, I understand to be meant of the naphtha oil, with which they at present varnish all their painted work; the reasons for covering a door with bitumen not

* It is curious to compare the account Strabo gives, lib. xvi. pag. 511, of the uses to which the Babylonians applied the date in his time, with the practice of the present day. He says, The date furnished them with bread, honey, wine, and vinegar; the stones supplied the blacksmiths with charcoal; or, being macerated, afforded food for cattle. The peasantry now principally subsist on dates pressed into cakes; they prepare molasses (*dibs*), make vinegar, and distil a spirituous liquor called Arrak from them, but of the two latter uses mentioned by Strabo they are ignorant. Oil of sesame is still the only sort used, either for eating or burning, as in the time of Strabo.

being so obvious. When any considerable degree of thickness was required, the way of building was to form an interior of common brick or rubbish, cased with a revêtement of fine brick; there are traces in the ruins which justify this opinion; and in this manner the Tower of Belus (which Herodotus calls *πυργὸν στερρόν*), the city walls, and other buildings of that description, seem to have been constructed.

We find two kinds of brick in Babylon; one burnt in a kiln, the other simply dried in the sun. I cannot refrain in this place from offering a few remarks on Gen. xi. 3, where concerning the building of Babel it is said: *וַיֹּאמְרוּ אִישׁ אֶל־אֶחָיו הָבָה נִלְבְּנָה לִבְנִים וְנִשְׂרָפָה לְשׁוּפָה וְהָיָה לָהֶם הַלֵּבָנָה לְאַבֵּן וְהַחֲמֶר וְנִשְׂרָפָה לְשׁוּפָה וְהָיָה לָהֶם הַחֲמֶר*. Our translation is: "And they said one to another, Go to, let us make brick and burn them thoroughly: and they had brick for stone, and slime had they for mortar." This is incorrect. The Chaldee paraphrast has *וְקִרְתָּא וְהָיָה לְהוֹן לְבִינָתָא לְאַבְנָא וְחִמְרָא הָיָה לְהוֹן לְשִׁיעַ*. According to Buxtorff, and indeed the sense it still bears in these parts, *חֲמֶר* means cement, and *חֲמֶר* bitumen; so that the Vulgate is correct in saying: "Dixitque alter ad proximum suum, Venite, faciamus lateres et coquamus eos igni: habueruntque la-

teres pro saxis, et bitumen pro cemento.” I have not a Polyglot to consult, and therefore am not able to trace the error in our version higher than to Luther’s German one. It is true Castell translates **הַמָּר** *limus, lutum*; in Gen. xi. 3, and *bitumen* in Exod. ii. 3. This is extraordinary; for, of the two, the context of the latter passage would appear rather to justify the former reading, to avoid the seeming tautology between **הַמָּר** and **זָפֶת**. I conclude he must have taken the common translation of the Bible as sufficient authority, without further examination; for he allows the Chaldee word **הַמָּרָא** (Targ. Gen. xi. 3.) to signify bitumen, in direct opposition to his definition of the corresponding Hebrew word. **לִבְנָה** signifies *brick*, of course the burnt sort from its root; and both Golius and Castell, perhaps relying too much on the Hebrew derivation, translate the Arabic word **الْبِن** *burnt brick* also. Nevertheless it is now exclusively applied by the Arabs to the brick merely dried in the sun.

The general size of the kiln-burnt brick is thirteen inches square, by three thick: there are some of half these dimensions; and a few of different shapes for particular purposes; such as rounding corners, &c. They are of several different colours; white, approaching more or less to a yellowish cast, like our Stourbridge or fire brick, which is the finest

sort; red, like our ordinary brick, which is the coarsest sort; and some which have a blackish cast and are very hard. The sun-dried brick is considerably larger than that baked in the kiln, and in general looks like a thick clumsy clod of earth, in which are seen small broken reeds, or chopped straw, used for the obvious purpose of binding them: in like manner the flat roofs of the houses at Bagdad are covered with a composition of earth and mortar mixed up with chopped straw. At the Birs Nemroud I found some fire-burnt bricks, which appeared to have had the same materials in their composition. The best sun-dried bricks I ever saw, are those which compose the ruin called Akerkouf.

There are three kinds of cement discoverable in the ruins of Babylon: bitumen, mortar, and clay, I am inclined to think the former could never have been of such very general use as is commonly imagined; we now only find it in a few situations (not always such as indicate the reason for which it was used), except the small pieces of it which are found on the surface of the mounds. Though the fountains at Heet are inexhaustible, the Babylonians had nearer at hand a much better cement, the discovery of which was a very obvious one; and the richness of the ruins in nitre, is some proof that lime cement was the one most generally employed. The pre-

paration necessary for the bitumen is a much more expensive and troublesome one than that requisite for lime, for the commoner sort of which a simple burning with the brambles, which abound in the Desert, is sufficient ; while the bitumen, to deprive it of its brittleness and render it capable of being applied to the brick, must be boiled with a certain proportion of oil ; and after all, the tenacity of the bitumen bears no comparison with that of the mortar. The bricks which Niebuhr mentions as being so easily separated, were all laid in bitumen ; and I invariably found that when this was the case, as above the subterranean passage in the mound of the Kasr, the bricks could be picked out with a small pickaxe, or even trowel, with the utmost facility ; but where the best mortar had been used, as at the Birs, no force or art could detach the bricks without breaking them in pieces.

There are two places in the pashalick of Bagdad where bitumen is found : the first is near Kerkouk, and too remote to come under present consideration ; the next is at Heet, the Is of Herodotus, whence the Babylonians drew their supplies. Heet is a town situated on the Euphrates, about thirty leagues to the west of Bagdad, inhabited by Arabs and Karaite Jews. The principal bitumen-pit has two sources, and is divided by a wall in the centre,

on one side of which the bitumen bubbles up, and on the other oil of naphtha; for these two productions are always found in the same situation. That kind of petroleum, called by the Orientals *Mumia*, is also found here, but of a quality greatly inferior to that brought from Persia. Strabo, who calls the naphtha *liquid bitumen*, says its flame cannot be extinguished by water, and relates a cruel experiment made by Alexander, to prove the truth of this, the result of which however is in direct contradiction of it. I believe it is Diodorus alone who asserts that bitumen flows out of the ground at Babylon. Herodotus positively says it was brought from Heet, and Strabo generally that it is produced in Babylonia. I was unable to discover any traces of it in the vicinity of Hilla, except on the testimony of a Jew, who told me he believed it might be found in the Desert. It is at present used for caulking boats, coating cisterns, baths, and other places that are to remain in contact with water. The fragments of it scattered over the ruins of Babylon are black, shining, and brittle, somewhat resembling pit-coal in substance and appearance; the Turks call it *Zift*, and the Arabs *Kier* or *Geer* (قير).

There are three kinds of calcareous earth found in most situations in the western desert between Babylon, Heet, and Ana. The first is called *Noora*,

and is a white powder particularly abundant at Heet and Ana. Mixed with ashes it is used as a coating for the lower parts of walls, in baths and other places liable to damps. The second is also found in powder, mixed with indurated pieces of the same substance, and round pebbles; it is called by the Turks *Kárej*, and by the Arabs *Jus*; it is very plentiful between Hilla and Felugiah, is the common cement of the country, and composes the mortar which is found in the ruins of Babylon. The third species, called *Borak*, is a substance resembling gypsum, and is found in large craggy lumps of an earthy appearance externally, but being burnt it forms an excellent white-wash or plaster. I have seen some mortar in Babylon of a reddish appearance, as if clay had been mixed with it; and there yet remains another kind of cement to be spoken of, viz. pure clay or mud, the use of which is exclusively confined to the sun-dried brick; and it is indeed a very imperfect cement, notwithstanding the great thickness in which it is laid on. At the Mujelibè, layers of reeds are found on the top of every layer of mud-cement, between it and the layer of brick: the use of the reeds (which are the common growth of the marshes) is not very obvious, unless it be supposed that they were intended to prevent the bricks sinking unequally and too speedily into the thick layer of mud:

they are in a surprisingly perfect state, and hand-fuls of them are easily drawn out. I never saw any reeds employed where any other kind of cement was used. Herodotus asserts that the tops of them are intermixed with the bitumen, and I have certainly observed on pieces of bitumen, impressions like short pieces of reed, though not a fragment of the reeds themselves (if there ever were any) remain ; and from subsequent observations I am inclined to think such appearances might proceed from other causes. In the mud cement of the walls of Ctesiphon there are layers of reeds as at Babylon, and I believe they are also to be found among the ruins of Seleucia, the builders of which would naturally have copied the peculiarities of the Babylonian architecture, and have been imitated in their turn by their Parthian neighbours.

I have thus given a faithful account of my observations at Babylon, and offer it merely as a prelude to further researches, which repeated visits to the same spot may enable me to make. My wish to be minutely accurate, has, I fear, often betrayed me into tediousness; but the subject is a curious, perhaps an important one, as it may tend to illustrate several passages in the sacred and profane writers. Instead of being disappointed at the difficulty of ascertaining any part of the original plan of Baby-

lon, from its present remains, we ought rather to be astonished at the grandeur of that city which has left such traces, when we consider that it was nearly a heap of ruins two thousand years ago; that immense cities have been built out of its materials, which still appear to be inexhaustible; and that the capital of the Abassides, which we know to have been one of the most extensive and magnificent cities of comparatively modern times, has left but a few confused vestiges, which are scarcely elevated above the level of the Desert, and which in a few years the most inquiring eye will be unable to discover.

THE END.

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Northern face of the Mycithæ.



Southern face of the Mycithæ.

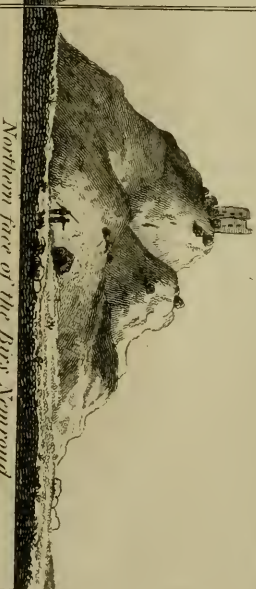


Eastern face of the Mycithæ.



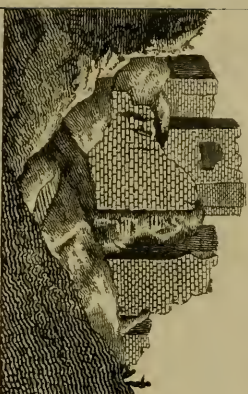
Western face of the Mycithæ.





Southern face of the Birs Namroud.

Northern face of the Birs Namroud.



East face of the Birs.

West face of the Birs.

North face of the Birs.

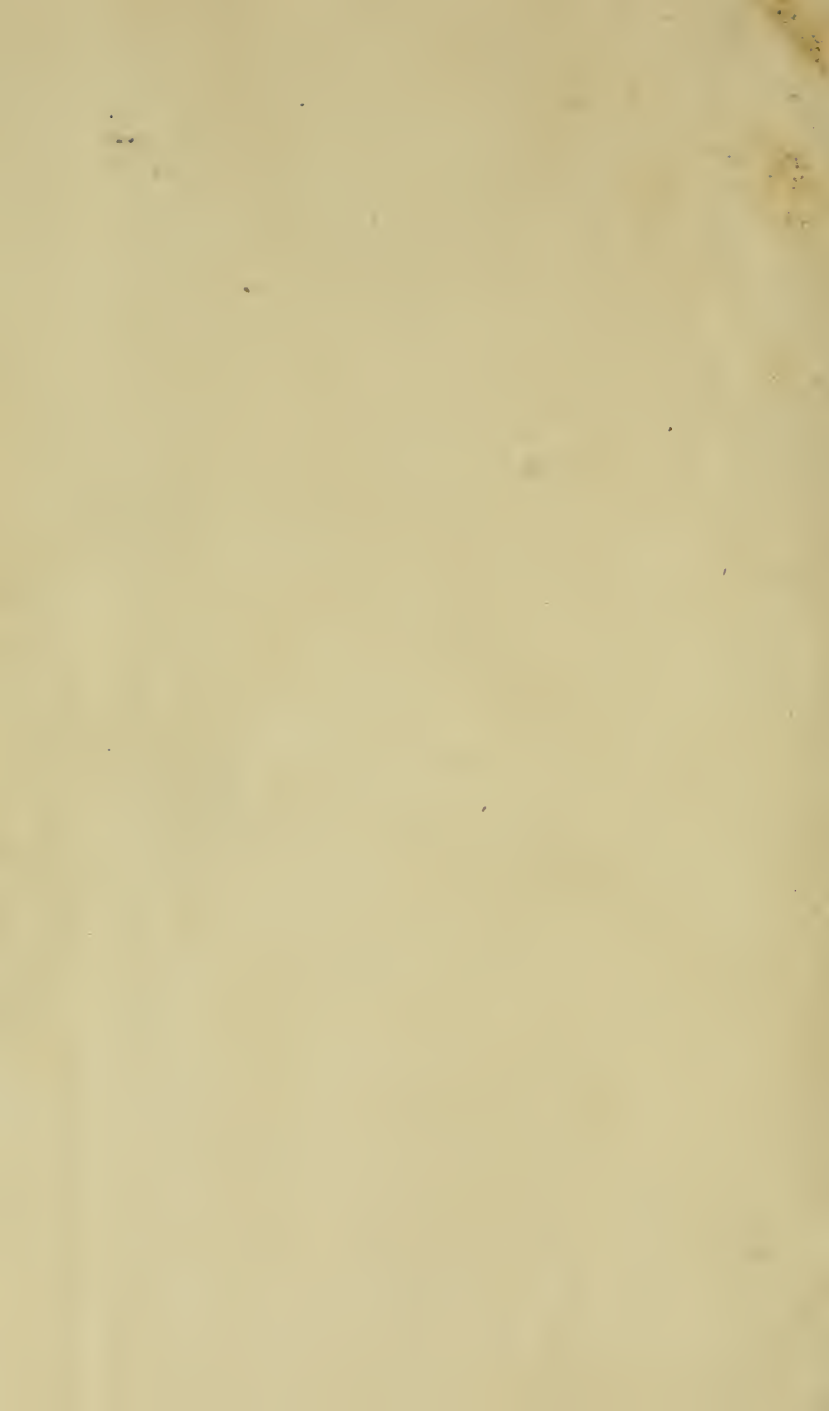


View of the Embankment (B & K in the Plan) together with part of the Eastern Birs, from the opposite bank of the River.

Engraved by

- A. The mound of Amur.
- B. The Tomb of Amur in the III.
- C. The Embankment. Lines connecting human bones were found at the foot of this part of it, close to the water.
- D. The ground gained from the River, by its having altered its course.

(Marked also I in the Plan)



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