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THE

FIVE GREAT MONARCHIES

OF THE

ANCIENT EASTERN WORLD;

OR,

THE HISTORY, GEOGRAPHY, AND ANTIQUITIES OF CHALDÆA, ASSYRIA, BABYLON, MEDIA, AND PERSIA.

COLLECTED AND ILLUSTRATED FROM ANCIENT AND MODERN SOURCES.

BY GEORGE RAWLINSON, M.A.,

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FOURTH EDITION.

IN THREE VOLUMES.—VOL. I.

WITH MAPS AND ILLUSTRATIONS.

NEW YORK:

SCRIBNER AND WELFORD.

1880.

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TO MY BROTHER,

HENRY CRESWICKE RAWLINSON, K.C.B., D.C.L.,

&c. &c. &c.,

TO WHOSE GENIUS,

LABOURS, AND CONSTANT KINDNESS

I FEEL MYSELF INDEBTED MORE THAN I CAN EXPRESS,

THIS WORK IS DEDICATED,

AS A SMALL TOKEN

OF GRATEFUL AND AFFECTIONATE REMEMBRANCE.

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PREFACE TO THE SECOND EDITION.

IN preparing for the press, after an interval of seven years, a second edition of this work, the author has found it unnecessary to make, excepting in two chapters, any important or extensive alterations. The exceptions are the chapters on the History and Chronology of Chaldæa and Assyria. So much fresh light has been thrown on these two subjects by additional discoveries, made partly by Sir Henry Rawlinson, partly by his assistant, Mr. George Smith, through the laborious study of fragmentary inscriptions now in the British Museum, that many pages of the two chapters in question required to be written afresh, and the Chronological Schemes required, in the one case a complete, and in the other a partial, revision. In making this revision, both of the Chronology and the History, the author has received the most valuable assistance both from the published papers and from the private communications of Mr. Smith—an assistance for which he desires to make in this place the warmest and most hearty acknowledgment. He is also beholden to a recent Eastern traveller, Mr. A. D. Berrington, for some valuable notes on the physical geography and productions of Mesopotamia, which have been embodied in the accounts given of those subjects. A few corrections have likewise been made of errors pointed out by anonymous critics. Substantially, however, the work continues such as it was on its first appearance, the author having found that time only deepened his conviction of the reality of cuneiform decipherment, and of the authenticity of the history obtained by means of it.

OXFORD, *November*, 1870.

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PREFACE TO THE FIRST EDITION.

THE history of Antiquity requires from time to time to be re-written. Historical knowledge continually extends, in part on the advance of critical science, which teaches us little by ttle the true value of ancient authors, but also, and more especially, from the new discoveries which the enterprise of travellers and the patient toil of students are continually bringing to light, whereby the stock of our information as to the condition of the ancient world receives constant augmentation. The extremest scepticism cannot deny that recent researches in Mesopotamia and the adjacent countries have recovered a series of "monuments" belonging to very early times, capable of throwing considerable light on the Antiquities of the nations which produced them. The author of these volumes believes that, together with these remains, the languages of the ancient nations have been to a large extent recovered, and that a vast mass of written historical matter of a very high value is thereby added to the materials at the Historian's disposal. This is, clearly, not the place where so difficult and complicated a subject can be properly argued. The author is himself content with the judgment of "experts," and believes it would be as difficult to impose a fabricated language on Professor Lassen of Bonn and Professor Max Müller of Oxford, as to palm off a fictitious for a real animal form on Professor Owen of London. The best linguists in Europe have accepted the decipherment of the cuneiform inscriptions as a thing actually accomplished. Until some good linguist, having

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carefully examined into the matter, declares himself of a contrary opinion, the author cannot think that any serious doubt rests on the subject.*

The present volumes aim at accomplishing for the Five Nations of which they treat what Movers and Kenrick have accomplished for Phœnicia, or (still more exactly) what Wilkinson has accomplished for Ancient Egypt. Assuming the interpretation of the historical inscriptions as, in general, sufficiently ascertained, and the various ancient remains as assigned on sufficient grounds to certain peoples and epochs, they seek to unite with our previous knowledge of the five nations, whether derived from Biblical or classical sources, the new information obtained from modern discovery. They address themselves in a great measure to the eye; and it is hoped that even those who doubt the certainty of the linguistic discoveries in which the author believes, will admit the advantage of illustrating the life of the ancient peoples by representations of their productions. Unfortunately, the materials of this kind which recent explorations have brought to light are very unequally spread among the several nations of which it is proposed to treat, and even where they are most copious, fall short of the abundance of Egypt. Still, in every case there is some illustration possible; and in one—Assyria—both the "Arts" and the "Manners" of the people admit of being illustrated very largely from the remains still extant.†

The Author is bound to express his obligations to the following writers, from whose published works he has drawn freely: —MM. Botta and Flandin, Mr. Layard, Mr. James Fergusson,

---

* Some writers allow that the Persian cuneiform inscriptions have been successfully deciphered and interpreted, but appear to doubt the interpretation of the Assyrian records. (See *Edinburgh Review* for July, 1862, Art. III., p. 108.) Are they aware that the Persian inscriptions are accompanied in almost every instance by an Assyrian transcript, and that Assyrian interpretation thus follows upon Persian, without involving any additional "guess-work"?

† See Chapters VI. and VII. of the Second Monarchy.

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Mr. Loftus, Mr. Cullimore, and Mr. Birch. He is glad to take this occasion of acknowledging himself also greatly beholden to the constant help of his brother, Sir Henry Rawlinson, and to the liberality of Mr. Vaux, of the British Museum. The latter gentleman kindly placed at his disposal, for the purposes of the present work, the entire series of unpublished drawings made by the artists who accompanied Mr. Loftus in the last Mesopotamian Expedition, besides securing him undisturbed access to the Museum sculptures, thus enabling him to enrich the present volume with a large number of most interesting Illustrations never previously given to the public. In the subjoined lists these illustrations are carefully distinguished from such as, in one shape or another, have appeared previously,

OXFORD, *September*, 1862.

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CONTENTS OF VOL. I.

THE FIRST MONARCHY.

CHALDÆA.

CHAPTER I.

Page

GENERAL VIEW OF THE COUNTRY 1

CHAPTER II.

CLIMATE AND PRODUCTIONS 28

CHAPTER III.

THE PEOPLE 43

CHAPTER IV.

LANGUAGE AND WRITING 61

CHAPTER V.

ARTS AND SCIENCES 70

CHAPTER VI.

MANNERS AND CUSTOMS 105

CHAPTER VII.

RELIGION 110

CHAPTER VIII.

HISTORY AND CHRONOLOGY 149

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

THE SECOND MONARCHY.

ASSYRIA.

CHAPTER I.

Page
DESCRIPTION OF THE COUNTRY 180

CHAPTER II.

CLIMATE AND PRODUCTIONS 210

CHAPTER III.

THE PEOPLE 236

CHAPTER IV.

THE CAPITAL 248

CHAPTER V.

LANGUAGE AND WRITING 262

CHAPTER VI.

ARCHITECTURE AND OTHER ARTS 277

CHAPTER VII.

MANNERS AND CUSTOMS 406

Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

LIST OF ILLUSTRATIONS.

		Page
1.	Plan of Mugheir ruins (after *Taylor*)	17
2.	Ruins of Warka (Erech) (after *Loftus*)	19
3.	Akkerkuf (after *Ker Porter*)	22
4.	Hammam (after *Loftus*)	23
5.	Tel-Ede (ditto)	23
6.	Palms (after *Oppert*)	34
7.	Chaldæan reeds, from an Assyrian sculpture (after *Layard*)	37
8.	Wild sow and pigs, from Koyunjik (*Layard*)	40
9.	Ethiopians (after *Prichard*)	53
10.	Cuneiform inscriptions (*drawn by the Author* from bricks in the British Museum)	63, 64
11.	Chaldæan tablet (after *Layard*)	68
12.	Signet-cylinder (after *Ker Porter*)	69
13.	Bowariyeh (after *Loftus*)	74
14.	Mugheir Temple (ditto)	76
15.	Ground-plan of ditto (ditto)	78
16.	Mugheir Temple, restored (*by the Author*)	79
17.	Terra-cotta cone, actual size (after *Loftus*)	82
18.	Plan and wall of building patterned with cones (after *Loftus*)	83
19.	Ground-plan of chambers excavated at Abu-Shahrein (after *Taylor*)	84
20.	Brick vault at Mugheir (ditto)	86
21.	Chaldæan dish-cover tombs (ditto)	88
22.	Chaldæan jar-coffin (ditto)	89
23.	Section of drain (ditto)	90
24.	Chaldæan vases of the first period (*drawn by the Author* from vases in the British Museum)	91
25.	Chaldæan vases, drinking-vessels, and amphoræ of the second period (ditto)	91
26.	Chaldæan lamps of the second period (ditto)	92
27.	Seal-cylinder on metal axis (drawn and partly restored by the *Author*)	93
28.	Signet-cylinder of King Urukh (after *Ker Porter*)	94
29.	Flint knives (*drawn by the Author* from the originals in the British Museum)	95
30.	Stone hammer, hatchet, adze, and nail (chiefly after *Taylor*)	96
31.	Chaldæan bronze spear and arrow-heads (*drawn by the Author* from the originals in the British Museum	96
32.	Bronze implements (ditto)	97
33.	Flint implement (after *Taylor*)	97
34.	Ear-rings (*drawn by the Author* from the originals in the British Museum)	98
35.	Leaden pipe and jar (ditto)	98
36.	Bronze bangles (ditto)	99

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

Page

37. Senkareh table of squares 103
38. Costumes of Chaldæans from the cylinders (after *Cullimore* and *Rich*) .. 106
39. Serpent symbol (after *Cullimore*) 122
40. Symbols of the Moon-God (ditto) 125
41. Symbols of the Sun-God (ditto) 128
42. Symbols of the Sun-Goddess (ditto) 129
43. Flaming sword (ditto) 130
44. Figure of Nin, the Fish-God (*Layard*, ... 132
45. Nin's emblem, the Man-Bull (ditto) 133
46. Fish symbols (after *Cullimore*) 133
47. Bel-Merodach (ditto) 135
48. Nergal's emblem, the Man-Lion (*Layard*) 137
49, 50. Clay images of Ishtar (after *Cullimore* and *Layard*) .. 139, 140
51. Nebo (*drawn by the Author* from a statue in the British Museum) .. 141
52. Signet of Kurri-galzu, King of Babylon (*drawn by the Author* from an impression in the possession of Sir H. Rawlinson) 170
53. The Khabour, from near Arban, looking north (after *Layard*) 187
54. Koukab (ditto) 189
55. Lake of Khatouniyeh (ditto) 190
56. Colossal lion, near Seruj (after *Chesney*) 197
57. Plan of the ruins at Nimrud (Calah) (*reduced by the Author* from Captain Jones's survey) 200
58. Great mound of Nimrud or Calah (after *Layard*) 202
59. Hand-swipe, Koyunjik (ditto) 215
60. Assyrian lion, from Nimrud (ditto) 220
61. Ibex, or wild goat, from Nimrud (ditto) 221
62. Wild ass (after *Ker Porter*) 222
63. Leopard, from Nimrud (after *Layard*) 223
64. Wild ass, from Koyunjik (from an unpublished drawing by *Mr. Boutcher* in the British Museum) 223
65. Gazelle, from Nimrud (after *Layard*) 224
66. Stag and hind, from Koyunjik (from an unpublished drawing by *Mr. Boutcher* in the British Museum) 224
67. Fallow deer, from Koyunjik (after *Layard*) 225
68. Hare and eagles, from Nimrud (ditto) 225
69. Hare, from Khorsabad (after *Botta*) 226
70. Chase of wild ox, from Nimrud (after *Layard*) 227
71. Vulture, from Nimrud (ditto) 228
72. Vulture feeding on corpse, Koyunjik (ditto) 228
73. Ostrich, from a cylinder (after *Cullimore*) 228
74. Ostrich, from Nimrud (after *Layard*) 228
75. Partridges, from Khorsabad (after *Botta*) 228
76. Unknown birds, Khorsabad (ditto) 229
77. Assyrian garden and fish-pond, Koyunjik (after *Layard*) 229
78. Bactrian or two-humped camel, from Nimrud (ditto) 230
79. Mesopotamian sheep (ditto) 230
80. Loading a camel, Koyunjik (ditto) 231
81. Head of an Assyrian horse, Koyunjik (ditto) 231
82. Assyrian horse, from Nimrud (ditto) 232

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

Page

83. Mule ridden by two women, Koyunjik (after *Layard*) 233
84. Loaded mule, Koyunjik (ditto) 233
85. Cart drawn by mules, Koyunjik (ditto) 234
86. Dog modelled in clay, from the palace of Asshur-bani-pal, Koyunjik, (*drawn by the Author* from the original in the British Museum) .. 234
87. Dog in relief, on a clay tablet, (after *Layard*) 235
88. Assyrian duck, Nimrud (ditto) 235
89. Assyrians, Nimrud (ditto) 238
90. Mesopotamian captives, from an Egyptian monument (*Wilkinson*) .. 338
91. Limbs of Assyrians, from the sculptures (after *Layard*) 240
92. Capture of a city, Nimrud (ditto) 242
93. Captives of Sargon, Khorsabad (after *Botta*) 243
94. Captive women in a cart, Nimrud (*Layard*) 243
95. Ruins of Nineveh (*reduced by the Author* from Captain Jones's survey) 253
96. Khosr-Su and mound of Nebbi-Yunus (after *Layard*) 255
97. Gate in the north wall, Nineveh (ditto) 258
98. Outer defences of Nineveh, in their present condition (ditto) 260
99. Assyrian cylinder (after *Birch*) 263
100. Assyrian seals (after *Layard*) 264
101. Assyrian clay tablets (ditto) 265
102. Black obelisk, from Nimrud (after *Birch*) 266
103. Terrace-wall at Khorsabad (after *Botta*) 278
104. Pavement-slab, from the Northern Palace, Koyunjik (*Fergusson*) .. 279
105. Mound of Khorsabad (ditto) 280
106. Plan of the Palace of Sargon, Khorsabad (ditto) 281
107. Hall of Esar-haddon's Palace, Nimrud (ditto) 283
108. Plan of the Palace of Sargon, Khorsabad (ditto) 287
109. Remains of Propylæum, or outer gateway, Khorsabad (*Layard*) .. 288
110. King and attendants, Khorsabad (after *Botta*) 290
111. Plan of palace gateway (ditto) 291
112. King punishing prisoners, Khorsabad (ditto) 292
113. North-West Court of Sargon's Palace at Khorsabad, restored (after *Fergusson*) 293
114. Sargon in his war-chariot, Khorsabad (after *Botta*) 294
115. Cornice of temple, Khorsabad (*Fergusson*) 296
116. Armenian *louvre* (after *Botta*) 304
117. Armenian buildings, from Koyunjik (*Layard*) 305
118. Interior of an Assyrian palace, restored (ditto) 306
119. Assyrian castle on Nimrud obelisk (*drawn by the Author* from the original in the British Museum) 308
120. Assyrian altar, from a bas-relief, Khorsabad (after *Botta*) 308
121. Assyrian temple, Khorsabad (ditto) 309
122. Assyrian temple, from Lord Aberdeen's black stone (after *Fergusson*) 309
123. Assyrian temple, Nimrud (*drawn by the Author* from the original in the British Museum 310
124. Assyrian temple, North Palace, Koyunjik (ditto) 310
125. Circular pillar-base, Koyunjik (after *Layard*) 311
126. Basement portion of an Assyrian temple, North Palace, Koyunjik (*drawn by the Author* from the original in the British Museum) 312

Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Page

127. Porch of the Cathedral, Trent (from an original sketch made by the *Author*) 313
128. Tower of a temple, Koyunjik (after *Layard*) 314
129. Tower of ditto, restored (*by the Author*) 314
130. Tower of great temple at Nimrud (after *Layard*) 315
131. Basement of temple-tower, Nimrud, north and west sides (ditto) .. 316
132. Ground-plan of Nimrud Tower (ditto) 318
133. Ground-plans of temples, Nimrud (ditto) 319
134. Entrance to smaller temple, Nimrud (ditto) 321
135. Assyrian village, Koyunjik (ditto) 322
136. Village near Aleppo (ditto) 323
137. Assyrian battlemented wall (ditto) 324
138. Masonry and section of platform wall, Khorsabad (after *Botta*) .. 325
139. Masonry of town-wall, Khorsabad (ditto) 326
140. Masonry of tower or moat, Khorsabad (ditto) 327
141. Arched drain, North-West Palace, Nimrud (after *Layard*) 328
142. Arched drain, South-East Palace, Nimrud (ditto) 329
143. False arch (Greek) 330
144. Assyrian patterns, Nimrud (*Layard*) 331
145. Ditto (ditto) 332
146. Bases and capitals of pillars (*chiefly drawn by the Author* from bas-reliefs in the British Museum) 333, 334
147. Ornamental doorway, North Palace, Koyunjik (from an unpublished drawing by *Mr. Boutcher* in the British Museum) 335
148. Water transport of stone for building, Koyunjik (after *Layard*) .. 338
149. Assyrian statue from Kileh-Sherghat (ditto) 339
150. Statue of Sardanapalus I., from Nimrud (ditto) 340
151. Clay statuettes of the god Nebo (after *Botta*) 341
152. Clay statuette of the Fish-God (*drawn by the Author* from the original in the British Museum) 342
153. Clay statuette from Khorsabad (after *Botta*) 342
154. Lion hunt, from Nimrud (after *Layard*) 344
155. Assyrian seizing a wild bull, Nimrud (ditto) 346
156. Hawk-headed figure and sphinx, Nimrud (ditto) 346
157. Death of a wild bull, Nimrud (ditto) 347
158. King killing a lion, Nimrud (ditto) 347
159. Trees from Nimrud (ditto) 348
160. Trees from Koyunjik (ditto) 349
161. Groom and horses, Khorsabad (ditto) 350
162. 163. Assyrian oxen, Koyunjik (ditto) 351
164. Assyrian goat and sheep, Koyunjik (ditto) 352
165. Vine trained on a fir, from the North Palace, Koyunjik (*drawn by the Author* from a bas-relief in the British Museum) 353
166. Lilies, from the North Palace, Koyunjik (ditto) 354
167. Death of two wild asses, from the North Palace, Koyunjik (from an unpublished drawing by *Mr. Boutcher* in the British Museum) 355
168. Lion about to spring, from the North Palace, Koyunjik (ditto) .. 355
169. Wounded wild ass seized by hounds, from the North Palace, Koyunjik (ditto) 356

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

Page

170. Wounded lion about to fall, from the North Palace, Koyunjik (from an unpublished drawing by *Mr. Boutcher*, in the British Museum) .. 357
171. Wounded lion biting a chariot-wheel, from the North Palace, Koyunjik (ditto) 358
172. King shooting a lion on the spring, from the North Palace, Koyunjik (ditto) 359
173. Lion-hunt in a river, from the North Palace, Koyunjik (ditto) .. 361
174. Bronze lion, from Nimrud (after *Layard*) 365
175. Fragments of bronze ornaments of the throne, from Nimrud (ditto) .. 365
176. Bronze casting, from the throne, Nimrud (ditto) 366
177. Feet of tripods in bronze and iron (ditto) 367
178. Bronze bull's head, from the throne (ditto) 367
179. Bronze head, part of throne, showing bitumen inside (ditto) 367
180. End of a sword-sheath, from the N.W. Palace, Nimrud (ditto) .. 368
181. Stool or chair, Khorsabad (after *Botta*) 368
182. Engraved scarab in centre of cup, from the N.W. Palace, Nimrud (*Layard*) 368
183. Egyptian head-dresses on bronze dishes, from Nimrud (ditto) .. 369
184. Ear-rings from Nimrud and Khorsabad (ditto) 371
185. Bronze cubes inlaid with gold, original size (ditto) 372
186. Egyptian scarab (from *Wilkinson*) 372
187. Fragment of ivory panel, from Nimrud (after *Layard*) 373
188. Fragment of a lion in ivory, Nimrud (ditto) 373
189. Figures and cartouche with hieroglyphics, on an ivory panel, from the N.W. Palace, Nimrud (ditto) 374
190. Fragment of a stag in ivory, Nimrud (ditto) 375
191. Royal attendant, Nimrud (ditto) 376
192. Arcade work, on enamelled brick, Nimrud (ditto) 377
193. Human figure, on enamelled brick, from Nimrud (ditto) 379
194. Ram's head, on enamelled brick, from Nimrud (ditto) 379
195. King and attendants, on enamelled brick, from Nimrud (ditto) .. 380
196. Impression of ancient Assyrian cylinder, in serpentine (ditto) 382
197. Assyrian seals (ditto) 383
198. Assyrian cylinder, with the Fish-God (ditto) 383
199. Royal cylinder of Sennacherib (ditto) 383
200. Assyrian vases, amphoræ, &c. (after *Birch*) 386
201. Funereal urn, from Khorsabad (after *Botta*) 386
202. Nestorian and Arab workmen, with jar discovered at Nimrud (*Layard*) 387
203. Lustral ewer, from a bas-relief, Khorsabad (after *Botta*) 387
204. Wine vase, from a bas-relief, Khorsabad (ditto) 388
205. Assyrian clay-lamps (after *Layard* and *Birch*) 388
206. Amphora, with twisted arms, Nimrud (*Birch*) 389
207. Assyrian glass bottles and bowl (after *Layard*) 389
208. Glass vase, bearing the name of Sargon, from Nimrud (ditto) 390
209. Fragments of hollow tubes, in glass, from Koyunjik (ditto) 391
210. Ordinary Assyrian tables, from the bas-reliefs (*by the Author*) 392
211, 212. Assyrian tables, from bas-reliefs, Koyunjik (ditto) 392
213. Table, ornamented with rams' heads, Koyunjik (after *Layard*) .. 392
214. Ornamented table, Khorsabad (ditto) 393
215. Three-legged table, Koyunjik (ditto) 393
216. Sennacherib on his throne, Koyunjik (ditto) 393

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

		Page
217.	Arm-chair or throne, Khorsabad (after *Botta*)	394
218.	Assyrian ornamented seat, Khorsabad (ditto)	394
219.	Assyrian couch, from a bas-relief, Koyunjik (*by the Author*)	395
220.	Assyrian footstools, Koyunjik (ditto)	395
221.	Stands for jars (*Layard*)	396
222.	Royal embroidered dresses, Nimrud (ditto)	397
223.	Embroidery on a royal dress, Nimrud (ditto)	398
224.	Circular breast ornament on a royal robe, Nimrud (ditto)	399
225.	Assyrians moving a human-headed bull, partly restored from a bas-relief at Koyunjik (ditto)	402
226.	Labourer employed in drawing a colossal bull, Koyunjik (ditto) ...	403
227.	Attachment of rope to sledge, on which the bull was placed for transport, Koyunjik (ditto)	403
228.	Part of a bas-relief, showing a pulley and a warrior cutting a bucket from the rope (ditto)	404
229.	Assyrian war-chariot, Koyunjik (from the original in the British Museum)	407
230.	Chariot-wheel of the early period, Nimrud (ditto)	407
231.	Chariot-wheel of the middle period, Koyunjik (ditto)	407
232.	Chariot-wheel of the latest period, Koyunjik (ditto)	408
233.	Ornamented ends of chariot-poles, Nimrud and Koyunjik (ditto) ..	408
234.	End of pole, with cross-bar, Khorsabad (after *Botta*)	410
235.	End of pole, with curved yoke, Koyunjik (after *Layard*)	410
236.	End of pole, with elaborate cross-bar or yoke, Khorsabad (after *Botta*)	411
237.	Assyrian chariot containing four warriors, Koyunjik (after *Boutcher*)	411
238.	Assyrian war-chariot of the early period, Nimrud (from the original in the British Museum)	412
239.	Assyrian war-chariot of the later period, Koyunjik (ditto)	413
240.	Assyrian chariot of the transition period, Koyunjik (after *Boutcher*) ..	414
241.	Assyrian chariot of the early period, Nimrud (from the original in the British Museum)	416
242.	Chariot horse protected by clothing, Koyunjik (ditto)	416
243.	Head of a chariot-horse, showing collar with bells attached, Koyunjik (after *Boutcher*)	417
244.	Bronze bit, Nimrud (from the original in the British Museum) ..	418
245.	Bits of chariot-horses, from the sculptures, Nimrud and Koyunjik (ditto)	419
246.	Driving-whips of Assyrian charioteers, from the Sculptures (ditto) ..	420
247.	Mode of tying horses' tails, Koyunjik (ditto)	420
248.	Mounted spearmen of the time of Sargon, Khorsabad (after *Botta*) ..	425
249.	Greave or laced boot of a horseman, Khorsabad (ditto)	426
250.	Cavalry soldiers of the time of Sennacherib, Koyunjik (after *Layard*)	426
251.	Horse archer of the latest period, Koyunjik (from the original in the British Museum)	427
252.	Ordinary sandal of the first period, Nimrud (ditto)	429
253.	Convex shield of the first period, Nimrud (after *Layard*)	429
254.	Foot spearman of the first period, with wicker shield, Nimrud (from the original in the British Museum)	429
255.	Foot archer, with attendant, first period, Nimrud (ditto)	429
256.	Foot archers of the lightest equipment, time of Sargon, Khorsabad (after *Botta*)	430

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

Page

257. Foot archer of the intermediate equipment, with attendant, time of Sargon, Khorsabad (after *Botta*) 431
258. Foot archer of the heavy equipment, with attendant, time of Sargon, Khorsabad (ditto) 432
259. Foot spearman of the time of Sargon, Khorsabad (ditto) 433
260. Shield and greave of a spearman, Khorsabad (ditto) 434
261. Spear, with weight at the lower end, Khorsabad (ditto) 434
262. Sling, Koyunjik (from the original in the British Museum) 435
263. Foot archer of the heavy equipment, with attendant, time of Sennacherib, Koyunjik (ditto) 435
264. Foot archers of the second class, time of Sennacherib, Koyunjik (ditto) 436
265. Belts and head-dress of a foot archer of the third class, time of Sennacherib, Koyunjik (after *Boutcher*).. 436
266. Mode of carrying the quiver, time of Sennacherib, Koyunjik (from the original in the British Museum) 437
267. Foot archers of the lightest equipment, time of Sennacherib, Koyunjik (ditto) 437
268. Foot spearman of the time of Sennacherib, Koyunjik (after *Layard*) 438
269. Wicker shields, time of Sennacherib, Koyunjik (from the originals in the British Museum) 439
270. Metal shield of the latest period, Koyunjik (ditto) 440
271. Slinger, time of Asshur-bani-pal, Koyunjik (after *Boutcher*) 440
272. Pointed helmet, with curtain of scales, Nimrud (after *Layard*) .. 441
273. Iron helmet, from Koyunjik, now in the British Museum (*by the Author*) 441
274. Assyrian crested helmets, from the bas-reliefs, Khorsabad and Koyunjik (from the originals in the British Museum) 442
275. Scale, Egyptian (after *Sir G. Wilkinson*) 443
276. Arrangement of scales in Assyrian scale-armour of the second period, Khorsabad (after *Botta*) 443
277. Sleeve of a coat of mail—scale-armour of the first period, Nimrud (from the original in the British Museum) 444
278. Assyrian *gerrha*, or large wicker shields (ditto) 445
279. Soldier undermining a wall, sheltered by *gerrhon*, Koyunjik (ditto) .. 446
280. Round shields or targes, patterned, Khorsabad (after *Botta*) 447
281. Convex shields with teeth, Nimrud (from the originals in the British Museum) 447
282. Egyptian convex shield, worn on back (after *Sir G. Wilkinson*) .. 448
283. Assyrian ditto, Koyunjik (from the original in the British Museum) .. 448
284. Assyrian convex shield, resembling the Greek, Koyunjik (ditto) .. 448
285. Quiver, with arrows and javelin, Nimrud (ditto) 449
286. Ornamented end of bow, Khorsabad (after *Botta*) 449
287. Stringing the bow, Koyunjik (from the original in the British Museum) 450
288. Assyrian curved bow (ditto) 450
289. Assyrian angular bow, Khorsabad (after *Botta*) 450
290. Mode of carrying the bow in a bow-case, Koyunjik (from the original in the British Museum) 451
291. Peculiar mode of carrying the quiver, Koyunjik (ditto).. 451
292. Quiver, with rich ornamentation, Nimrud (after *Layard*) 452

Digitized by Google Original from NEW YORK PUBLIC LIBRARY

Page

293. Quivers of the ordinary character, Koyunjik (from the originals in the British Museum) 452
294. Quiver with projecting rod, Khorsabad (after *Botta*) 452
295. Assyrian covered quivers, Koyunjik (from the originals in the British Museum) 453
296. Bronze arrow-heads, Nimrud and Koyunjik (ditto) 454
297. Flint arrow-head, Nimrud (ditto) 454
298. Assyrian arrow (ditto) 455
299. Mode of drawing the bow, Koyunjik (after *Boutcher*) 455
300. Guard worn by an archer, Koyunjik (ditto) 456
301. Bronze spear-head, Nimrud (from the original in the British Museum) 456
302. Spear-heads (from the Sculptures).. 457
303. Ornamented ends of spear-shafts, Nimrud (after *Layard*) 457
304. Ornamented handle of short sword, Khorsabad (after *Botta*) 457
305. Sheathed sword, Koyunjik (after *Boutcher*) 458
306. Ornamented handle of longer sword, Nimrud (from the original in the British Museum) 458
307. Assyrian curved sword, Khorsabad (after *Botta*).. 458
308. Head of royal mace, Khorsabad (ditto) 459
309. Maces, from the Sculptures.. 459
310. Assyrian battle-axes, Koyunjik (from the originals in the British Museum) 459
311. Scythian battle-axe (after *Texier*) 459
312. Ornamented handles of daggers, Nimrud (after *Layard*) 460
313. Handle of dagger, with chain, Nimrud (ditto) 460
314. Sheaths of daggers, Nimrud (ditto) 461
315. Assyrian standard, Khorsabad (after *Botta*) 461
316. Soldier swimming a river, Koyunjik (after *Layard*) 464
317. Royal tent, Koyunjik (from the original in the British Museum) .. 465
318. Ordinary tent, Koyunjik (after *Boutcher*) 465
319. Interior of tent, Koyunjik (ditto) 465
320. King walking in a mountainous country, chariot following, supported by men, Koyunjik (from an obelisk in the British Museum, after *Boutcher*) 466
321. Fortified place belonging to an enemy of the Assyrians, Nimrud (after *Layard*) 468
322. Gateway of castle, Koyunjik (after *Boutcher*) 469
323. Battering-rams, Khorsabad and Koyunjik (partly after *Botta*) 470
324. Assyrian *balistæ*, Nimrud (after *Layard*) 472
325. Crowbar, and mining the wall, Koyunjik (ditto) 473
326. Implement used in the destruction of cities, Khorsabad (after *Botta*) .. 474
327. Soldiers destroying date-palms, Koyunjik (after *Layard*) 475
328. Soldier carrying off spoil from a temple, Khorsabad (after *Botta*) .. 475
329. Scribes taking account of the spoil, Khorsabad (ditto) 476
330. Mace-bearer, with attendant, executing a prisoner, Koyunjik (from the original in the British Museum) 477
331. Swordsman decapitating a prisoner, Koyunjik (ditto) 478
332. Female captives, with children, Koyunjik (after *Layard*) 480
333. Chasuble or outer garment of the king (chiefly after *Botta*) 485

Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Page

334. King in his robes, Khorsabad (after *Botta*) 486
335. Tiaras of the later and earlier periods, Koyunjik and Nimrud (*Layard* and *Boutcher*) 487
336. Fillet worn by the king, Nimrud (after *Layard*).. 487
337. Royal sandals, times of Sargon and Asshur-izir-pal (from the originals in the British Museum) 488
338. Royal shoe, time of Sennacherib, Koyunjik (ditto) 488
339. Royal necklace, Nimrud (ditto) 489
340. Royal collar, Nimrud (ditto) 489
341. Royal armlets, Khorsabad (after *Botta*) 490
342. Royal bracelets, Khorsabad and Koyunjik (after *Botta* and *Boutcher*) .. 490
343. Royal ear-rings, Nimrud (from the originals in the British Museum) .. 491
344. Early king in his war-costume, Nimrud (ditto) 491
345. King, queen, and attendants, Koyunjik (ditto) 493
346. Enlarged figure of the queen, Koyunjik (ditto) 494
347. Royal parasols, Nimrud and Koyunjik (ditto) 495
348. Heads of eunuchs, Nimrud (ditto).. 497
349. The chief eunuch, Nimrud (ditto) 498
350. Head-dress of the vizier, Khorsabad (after *Botta*) 499
351. Costumes of the vizier, times of Sennacherib and Asshur-izir-pal, Nimrud and Koyunjik (from the originals in the British Museum) 500
352. Tribute-bearers presented by the chief eunuch, Nimrud obelisk (ditto) 502
353. Fans or fly-flappers, Nimrud and Koyunjik (ditto) 503
354. King killing a lion, Nimrud (after *Layard*) 506
355. King, with attendants, spearing a lion, Koyunjik (after *Boutcher*) .. 506
356. King, with attendant, stabbing a lion, Koyunjik (ditto) 507
357. Lion let out of trap, Koyunjik (ditto) 509
358. Hound held in leash, Koyunjik (from the original in the British Museum) 510
359. Wounded lioness, Koyunjik (ditto) 512
360. Fight of lion and bull, Nimrud (after *Layard*) 512
361. King hunting the wild bull, Nimrud (ditto) 513
362. King pouring libation over four dead lions, Koyunjik (from the original in the British Museum) 515
363. Hound chasing a wild ass colt, Koyunjik (after *Boutcher*) 516
364. Dead wild ass, Koyunjik (ditto) 516
365. Hounds pulling down a wild ass, Koyunjik (ditto) 517
366. Wild ass taken with a rope, Koyunjik (from the original in the British Museum) 517
367. Hound chasing a doe, Koyunjik (after *Boutcher*).. 518
368. Hunted stag taking the water, Koyunjik (ditto).. 519
369. Net spread to take deer, Koyunjik (from the original in the British Museum) 520
370. Portion of net showing the arrangement of the meshes and the pegs, Koyunjik (ditto) 520
371. Hunted ibex, flying at full speed, Koyunjik (after *Boutcher*) 521
372. Ibex transfixed with arrow—falling (ditto) 521
373. Sportsman carrying a gazelle, Khorsabad (from the original in the British Museum) 522
374. Sportsman shooting, Khorsabad (after *Botta*) 523

Digitized by Google

Original from NEW YORK PUBLIC LIBRARY

Page

375. Greyhound and hare, Nimrud (from a bronze bowl in the British Museum) 523
376. Nets, pegs, and balls of string, Koyunjik (after *Boutcher*) 524
377. Man fishing, Nimrud (after *Layard*) 525
378. Man fishing, Koyunjik (ditto) 526
379. Man fishing, seated on skin, Koyunjik (from the original in the British Museum) 527
380. Bear standing, Nimrud (from a bronze bowl in the British Museum) .. 528
381. Ancient Assyrian harp and harper, Nimrud (from the originals in the British Museum) 529
382. Later Assyrian harps and harpers, Koyunjik (ditto) 530
383. Triangular lyre, Koyunjik (ditto) 531
384. Lyre with ten strings, Khorsabad (after *Botta*) 532
385. Lyres with five and seven strings, Koyunjik (from the originals in the British Museum) 533 534
386. Guitar or tamboura, Koyunjik (ditto) 534
387. Player on the double pipe, Koyunjik (ditto) 534
388. Tambourine player and other musicians, Koyunjik (ditto) 535
389. Eunuch playing on the cymbals, Koyunjik (after *Boutcher*) 536
390. Assyrian *tubbuls*, or drums, Koyunjik (from the originals in the British Museum) 537
391. Musician playing the dulcimer, Koyunjik (ditto) 538
392. Roman trumpet (Column of Trajan) 539
393. Assyrian ditto, Koyunjik (after *Layard*) 539
394. Portion of an Assyrian trumpet (from the original in the British Museum) 539
395. Captives playing on lyres, Koyunjik (ditto) 540
396. Lyre on a Hebrew coin (ditto) 541
397. Band of twenty-six musicians, Koyunjik (ditto) 542
398. Time-keepers, Koyunjik (after *Boutcher*) 543
399. Assyrian coracle, Nimrud (from the original in the British Museum) .. 546
400. Common oar, time of Sennacherib, Koyunjik (ditto) 547
401. Steering oar, time of Asshur-izir-pal, Nimrud (ditto) 547
402. Early long boat, Nimrud (ditto) 549
403. Later long boat, Khorsabad (after *Botta*) 549
404. Phœnician bireme, Koyunjik (after *Layard*) 550
405. Oar kept in place by pegs, Koyunjik (from the original in the British Museum) 550
406. Chart of the district about Nimrud, showing the course of the ancient canal and conduit (after the survey of *Captain Jones*) 565
407. Assyrian drill-plough (from Lord Aberdeen's black stone, after *Fergusson*) 567
408. Modern Turkish plough (after *Sir C. Fellows*) 567
409. Modern Arab plough (after *C. Niebuhr*) 567
410. Ornamental belt or girdle, Koyunjik (from the original in the British Museum) 569
411. Ornamental cross-belt, Khorsabad (after *Botta*) 569
412. Armlets of Assyrian grandees, Khorsabad (ditto) 570
413. Head-dresses of various officials, Koyunjik (from the originals in the British Museum) 571

Digitized by Google
Original from NEW YORK PUBLIC LIBRARY

Page

414. Curious mode of arranging the hair, Koyunjik (from the original in the British Museum) 571
415. Female seated (from an ivory in the British Museum) 572
416. Females gathering grapes (from some ivory fragments in the British Museum) 573
417. Necklace of flat glass beads (from the original in the British Museum) 574
418. Metal mirror (ditto) 575
419. Combs in iron and lapis lazuli (from the originals in the British Museum) 575
420. Assyrian joints of meat (from the Sculptures) 577
421. Killing the sheep, Koyunjik (after *Boutcher*) 577
422. Cooking meat in caldron, Koyunjik (after *Layard*) 578
423. Frying, Nimrud (from the original in the British Museum) 578
424. Assyrian fruits (from the Monuments) 579
425. Drinking scene, Khorsabad (after *Botta*) 580
426. Ornamental wine-cup, Khorsabad (ditto) 580
427. Attendant bringing flowers to a banquet, Koyunjik (after *Layard*) .. 581
428. Socket of hinge, Nimrud (ditto) 582
429. Assyrians seated on stools, Koyunjik (from the original in the British Museum) 583
430. Making the bed, Koyunjik (after *Boutcher*) 583
431. Domestic utensils (from the Sculptures) 584
432. Dish handles, Nimrud (after *Layard*) 584
433. Bronze ladle, Nimrud (in the British Museum) 585
434. Hanging garden, Koyunjik (after *Layard*) 585
435. Assyrians drawing a hand-cart, Koyunjik (ditto) 586
436. Assyrian implements (from the Monuments) 587
437. Assyrian close carriage or litter, Koyunjik (from an obelisk in the British Museum, after *Boutcher*) 588
438. Groom feeding horses, Koyunjik (after *Layard*) 589
439. Groom currycombing a horse, Nimrud (from the original in the British Museum) 589

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THE FIRST MONARCHY.

CHALDÆA.

CHAPTER I.

GENERAL VIEW OF THE COUNTRY.

"Behold the land of the Chaldæans."—Isaiah xxiii. 13.

The broad belt of desert which traverses the eastern hemisphere, in a general direction from west to east (or, speaking more exactly, of W.S.W. to N.E.E.), reaching from the Atlantic on the one hand nearly to the Yellow Sea on the other, is interrupted about its centre by a strip of rich vegetation, which at once breaks the continuity of the arid region, and serves also to mark the point where the desert changes its character from that of a plain at a low level to that of an elevated plateau or table-land. West of the favoured district, the Arabian and African wastes are seas of sand, seldom raised much above, often sinking below, the level of the ocean; while east of the same, in Persia, Kerman, Seistan, Chinese Tartary, and Mongolia, the desert consists of a series of plateaus, having from 3000 to nearly 10,000 feet of elevation. The green and fertile region, which is thus interposed between the "highland" and the "lowland" deserts,[1] participates, curiously enough, in both characters. Where the belt of sand is intersected by the valley of the Nile, no marked change of elevation occurs; and the continuous low desert is merely interrupted by a few miles of green and cultivable surface, the whole of which is just as smooth and as flat as the waste on either side of it. But it is

[1] Humboldt, *Aspects of Nature*, vol. i. pp. 77, 78, E. T.

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otherwise at the more eastern interruption. There the verdant and productive country divides itself into two tracts, running parallel to each other, of which the western presents features not unlike those that characterise the Nile valley, but on a far larger scale; while the eastern is a lofty mountain region, consisting for the most part of five or six parallel ranges, and mounting in many places far above the level of perpetual snow.

It is with the western or plain tract that we are here concerned. Between the outer limits of the Syro-Arabian desert and the foot of the great mountain range of Kurdistan and Luristan intervenes a territory long famous in the world's history, and the chief site of three out of the five empires of whose history, geography, and antiquities it is proposed to treat in the present volumes. Known to the Jews as Aram-Naharaim, or "Syria of the two rivers;" to the Greeks and Romans as Mesopotamia, or "the between-river country;" to the Arabs as Al-Jezireh, or "the island," this district has always[2] taken its name from the streams, which constitute its most striking feature, and to which, in fact, it owes its existence. If it were not for the two great rivers—the Tigris and Euphrates—with their tributaries, the more northern part of the Mesopotamian lowland would in no respect differ from the Syro-Arabian desert on which it adjoins, and which in latitude, elevation, and general geological character it exactly resembles. Towards the south, the importance of the rivers is still greater; for of Lower Mesopotamia it may be said, with more truth than of Egypt,[3] that it is "an acquired land," the actual "gift" of the two streams which wash it on either side; being, as it is, entirely a recent formation—a deposit which the streams have

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[2] Even the title of Shinar, the earliest known name of the region (Gen. xi. 2), may be no exception; for it is perhaps derived from the Hebrew שְׁנַיִם, "two," and *ar* or *nahr* (Heb. נָהָר), "a river." The form *ar* belongs to the early Scythic or Cushite Babylonian, and is found in the Ar-malchar of Pliny (*H. N.* vi. 26), and the Armacales of Abydenus—terms used to designate the *Nahr-malcha* (Royal River) of other authors. (See the *Fragmenta Historicorum Græcorum*, vol. iv. pp. 283, 284.)

[3] Herodotus, ii. 5. Sir Gardner Wilkinson observes that Herodotus is mistaken in this instance. The Nile never emptied itself into a gulf, but from the first laid its deposits on ground already raised above the level of the Mediterranean. (See the author's *Herodotus*, vol. ii. p. 6, note [4].)

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made in the shallow waters of a gulf into which they have flowed for many ages.[4]

The division, which has here forced itself upon our notice, between the Upper and the Lower Mesopotamian country, is one very necessary to engage our attention in connexion with the ancient Chaldæa. There is no reason to think that the term Chaldæa had at any time the extensive signification of Mesopotamia, much less that it applied to the entire flat country between the desert and the mountains. Chaldæa was not the whole, but a part, of the great Mesopotamian plain; which was ample enough to contain within it three or four considerable monarchies. According to the combined testimony of geographers and historians,[5] Chaldæa lay towards the south, for it bordered upon the Persian Gulf; and towards the west, for it adjoined Arabia. If we are called upon to fix more accurately its boundaries, which, like those of most countries without strong natural frontiers, suffered many fluctuations, we are perhaps entitled to say that the Persian Gulf on the south, the Tigris on the east, the Arabian desert on the west, and the limit between Upper and Lower Mesopotamia on the north, formed the natural bounds, which were never greatly exceeded and never much infringed upon. These boundaries are for the most part tolerably clear, though the northern only is invariable. Natural causes, hereafter to be mentioned more particularly,[6] are perpetually varying the course of the Tigris, the shore of the Persian Gulf, and the line of demarcation between the sands of Arabia and the verdure of the Euphrates valley. But nature has set a permanent mark, half way down the Mesopotamian lowland, by a difference of geological structure, which is very conspicuous. Near Hit on the Euphrates, and a little below Samarah on the Tigris,[7] the traveller who descends the

[4] Loftus's *Chaldæa and Suriana*, p. 282.

[5] See Strabo, xvi. 1, § 6; Pliny, *H. N.* vi. 28; Ptolemy, v. 20; Beros. ap. Syncell. pp. 28, 29.

[6] See below, pp. 13, 14, &c.

[7] Ross came to the end of the alluvium and the commencement of the secondary formations in lat. 34°, long. 44°. (*Journal of Geographical Society*, vol. ix. p. 446.) Similarly Captain Lynch found the bed of the Tigris change from pebbles to mere alluvium near Khan Tholiyeh, a little above its confluence with the Adhem. (Ib. p. 472.) For the point where the Euphrates enters on the alluvium, see Fraser's *Assyria and Mesopotamia*, p. 27.

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streams, bids adieu to a somewhat waving and slightly elevated plain of secondary formation, and enters on the dead flat and low level of the mere alluvium. The line thus formed is marked and invariable; it constitutes the only natural division between the upper and lower portions of the valley; and both probability and history point to it as the actual boundary between Chaldæa and her northern neighbour.

The extent of ancient Chaldæa is, even after we have fixed its boundaries, a question of some difficulty. From the edge of the alluvium a little below Hit, to the present coast of the Persian Gulf at the mouth of the Shat-el-Arab, is a distance of above 430 miles; while from the western shore of the Bahr-i-Nedjif to the Tigris at Serut is a direct distance of 185 miles. The present area of the alluvium west of the Tigris and the Shat-el-Arab may be estimated at about 30,000 square miles. But the extent of ancient Chaldæa can scarcely have been so great. It is certain that the alluvium at the head of the Persian Gulf now grows with extraordinary rapidity, and not improbable that the growth may in ancient times have been even more rapid than it is at present. Accurate observations have shown that the present rate of increase amounts to as much as a mile each seventy years,[8] while it is the opinion of those best qualified to judge that the *average* progress during the historic period has been as much as a mile in every thirty years![9] Traces of post-tertiary deposits have been found as far up the country as Tel Ede and Hammam,[10] or more than 200 miles from the embouchure of the Shat-el-Arab; and there is ample reason for believing that, at the time when the first Chaldæan monarchy was established, the Persian Gulf reached inland, 120 or 130 miles further than at present. We must

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[8] Loftus, *Chaldæa and Susiana*, p. 282.

[9] Sir H. Rawlinson, in the *Journal of the Geographical Society*, vol. xxvii. p. 186. The increase did not escape the notice of the ancients. It is mentioned and exaggerated by Pliny, who says that Charax of Spasinus was originally built by Alexander the Great at the distance of little more than a mile from the shore, but that in the time of Juba the Mauritanian it was 50 miles from the sea, and in his own day 120 miles! (*Hist. Nat.* vi. 27.) This would give for the first period a rate of increase exceeding a mile in seven years, and for the second a rate of about a mile a year; or for the whole period, a rate of a mile in 3½ years.

[10] Loftus, in *Journal of the Geographical Society*, vol. xxvi. p. 146.

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deduct therefore from the estimate of extent grounded upon the existing state of things, a tract of land 130 miles long and some 60 or 70 broad, which has been gained from the sea in the course of about forty centuries. This deduction will reduce Chaldæa to a kingdom of somewhat narrow limits; for it will contain no more than about 23,000 square miles. This, it is true, exceeds the area of all ancient Greece, including Thessaly, Acarnania, and the islands;[1] it nearly equals that of the Low Countries, to which Chaldæa presents some analogy; it is almost exactly that of the modern kingdom of Denmark; but it is less than Scotland, or Ireland, or Portugal, or Bavaria; it is more than doubled by England, more than quadrupled by Prussia, and more than octupled by Spain, France, and European Turkey. Certainly, therefore, it was not in consequence of its size that Chaldæa became so important a country in the early ages. but rather in consequence of certain advantages of the soil, climate, and position, which will be considered in the next chapter.

It has been already noticed that in the ancient Chaldæa, the chief—almost the sole—geographical features, were the rivers.[2] Nothing is more remarkable even now than the *featureless* character of the region, although in the course of ages it has received from man some interruptions of the original uniformity. On all sides a dead level extends itself, broken only by single solitary mounds, the remains of ancient temples or cities, by long lines of slightly elevated embankment marking the course of canals, ancient or recent, and towards the south by a few sand-hills. The only further variety is that of colour; for while the banks of the streams, the marsh-grounds, and the country for a short distance on each side of the canals in actual operation, present to the eye a pleasing, and in some cases a luxuriant verdure; the rest, except in early spring, is parched and arid, having little to distinguish it from the most desolate districts of Arabia. Anciently, except for this difference, the

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[1] See Clinton's *Fasti Hellenici*, vol. ii. p. 473, where the whole area of European Greece, including Thessaly, Acarnania, Ætolia, Eubœa, and the other littoral islands, is shown to be 22,231 miles.

[2] See above, p. 2.

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takes a course which is, with few and unimportant deflections, about south-east, as far as Suk-es-Sheioukh, after which it runs a little north of east to Kurnah. The Tigris from Til to Mosul pursues also a south-easterly course, and draws but a very little nearer to the Euphrates. From Mosul, however, to Samarah, its course is only a point east of south; and though, after that, for some miles it flows off to the east, yet resuming, a little below the thirty-fourth parallel, its southerly direction, it is brought about Baghdad within twenty miles of the sister stream. From this point there is again a divergence. The course of the Euphrates, which from Hit to the mounds of Mohammed (long. 44°) had been E.S.E., becomes much more southerly, while that of the Tigris—which, as we have seen, was for a while due south—becomes once more only slightly south of east,[5] till near Serut, where the distance between the rivers has increased from twenty to a hundred miles. After passing respectively Serut and El Khitr, the two streams converge rapidly. The flow of the Euphrates is at first E.S.E., and then a little north of east to Kurnah, while that of the Tigris is S.S.E. to the same point. The lines of the streams in this last portion of their course, together with that which may be drawn across from stream to stream, form nearly an equilateral triangle, the distances being respectively 104, 110, and 115 miles.[6] So rapid is the final convergence of the two great rivers.

The Tigris and Euphrates are both streams of the first order. The estimated length of the former, including main windings, is 1146 miles; that of the latter is 1780 miles.[7] Like most rivers that have their sources in high mountain regions, they are strong from the first, and, receiving in their early course a vast number of important tributaries, become broad and deep streams before they issue upon the plains. The Euphrates is navigable from Sumeïsat (the ancient Samosata), 1200 miles

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[5] In one part of its course, viz., from Kut-el-Amarah at the mouth of the Shat-el-Hie to Hussun Khan's fort, 50 miles lower down the stream, the direction of the Tigris is even north of east.

[6] From El Khitr to Serut the direct distance is 104 miles, from Serut to Kurnah 110, and from Kurnah to El Khitr 115.

[7] Chesney, *Euphrates Expedition*, vol. i. pp. 38 and 40.

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above its embouchure; and even 180 miles higher up, is a river "of imposing appearance," 120 yards wide and very deep.[8] The Tigris is often 250 yards wide at Diarbekr,[9] which is not a hundred miles from its source, and is navigable in the flood time from the bridge of Diarbekr to Mosul,[10] from which place it is descended at all seasons to Baghdad, and thence to the sea.[1] Its average width below Mosul is 200 yards, with a depth which allows the ascent of light steamers, unless when there is an artificial obstruction.[2] Above Mosul the width rarely exceeds 150 yards, and the depth is not more in places than three or four feet. The Euphrates is 250 yards wide at Balbi, and averages 350 yards from its junction with the Khabour to Hit; its depth is commonly from fifteen to twenty feet.[3] Small steamers have descended its entire course from Bir to the sea. The volume of the Euphrates in places is, however, somewhat less than that of the Tigris, which is a swifter and in its latter course a deeper stream. It has been calculated that the quantity of water discharged every second by the Tigris at Baghdad is 164,103 cubic feet, while that discharged by the Euphrates at Hit is 72,804 feet.[4]

The Tigris and Euphrates are very differently circumstanced with respect to tributaries. So long as it runs among the Armenian mountains, the Euphrates has indeed no lack of affluents; but these, except the Kara Su, or northern Euphrates, are streams of no great volume, being chiefly mountain-torrents which collect the drainage of very limited basins. After it leaves the mountains and enters upon a low country at Sumeïsat, the affluents almost entirely cease; one, the river of Sajur, is received from the right, in about lat. 36° 40′; and two

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[8] Chesney, *Euphrates Expedition*, vol. i. p. 44.

[9] Ibid. p. 15. It only attains this width, however, in the season of the floods. Generally it is at Diarbekr about 100 or 120 yards wide.

[10] Loftus, *Chaldæa and Susiana*, p. 3.

[1] Chesney, *Euphrates Expedition*, vol. i. p. 32; compare Layard, *Nineveh and its Remains*, vol. ii. ch. xiii. p. 92.

[2] The 'Euphrates' steamer, under Lieutenant Lynch, ascended the Tigris nearly to Nimrud in 1838; but was stopped by an artificial bund or dam thrown across the stream near that place. (Chesney, vol. i. p. 32.) The 'Nitocris' in 1846 attempted the ascent, but was unable to proceed far above Tekrit, from a want of sufficient power. (*Nineveh and its Remains*, vol. i. ch. v. p. 139.)

[3] Chesney, vol. i. pp. 53-57.

[4] Ibid. p. 62.

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of more importance flow in from the left—the Belik (ancient Bilichus), which joins it in long. 39° 9′; and the Khabour (ancient Habor or Chaboras), which effects a junction in long. 40° 30′, lat. 35° 7′. The Belik and Khabour collect the waters which flow from the southern flank of the mountain range above Orfa, Mardin, and Nisibin, best known as the "Mons Masius" of Strabo.[5] They are not, however, streams of equal importance. The Belik has a course which is nearly straight, and does not much exceed 120 miles. The Khabour, on the contrary, is sufficiently sinuous, and its course may be reckoned at fully 200 miles. It is navigable by rafts from the junction of its two main branches near the volcanic cone of Koukab,[6] and adds a considerable body of water to the Euphrates. Below its confluence with this stream, or during the last 800 miles of its course, the Euphrates does not receive a single tributary. On the contrary, it soon begins to give off its waters right and left, throwing out branches, which either terminate in marshes, or else empty themselves into the Tigris. After a while, indeed, it receives compensation, by means of the Shat-el-Hie and other branch streams, which bring back to it from the Tigris, between Mugheir and Kurnah, the greater portion of the borrowed fluid. The Tigris, on the contrary, is largely enriched throughout the whole of its course by the waters of tributary streams. It is formed originally of three main branches: the Diarbekr stream, or true Tigris, the Myafarekin River, and the Bitlis Chai, or Centrites of Xenophon,[7] which carries a greater body than either of the other two.[8] From its entry on the low country near Jezireh to the termination of its course at Kurnah, it is continually receiving from the left a series of most important additions. The chain of Zagros, which, running parallel to the two main springs, shuts in the Mesopotamian plain upon the east, abounds with springs, which

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[5] Strab. xi. 12, § 4; 14, § 2, &c.
[6] Layard, *Nineveh and Babylon*, ch. xv. p. 22. Compare ch. xi. pp. 269, 270.
[7] Xenophon, *Anabasis*, iv. 3, § 1.
[8] Layard, *Nineveh and Babylon*, ch. iii. p. 49. The Bitlis Chai at Til, just above the point of confluence, was found by Mr. Layard to be "about equal in size" to the united Myafarekin and Diarbekr rivers.

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are well supplied during the whole summer from its snows,[9] and these when collected form rivers of large size and most refreshing coolness. The principal are, the eastern Khabour, which joins the Tigris in lat. 37° 12′; the Upper Zab, which falls in by the ruins of Nimrud; the Lower Zab, which joins some way below Kileh Sherghat; the Adhem, which unites its waters half way between Samarah and Baghdad; and the Diyaleh (ancient Gyndes), which is received between Baghdad and the ruins of Ctesiphon.

By the influx of these streams the Tigris continues to grow in depth and strength as it nears the sea, and becomes at last (as we have seen) a greater river than the Euphrates, which shrinks during the latter part of its course, and is reduced to a volume very inferior to that which it once boasted. The Euphrates at its junction with the Khabour, 700 miles above Kurnah, is 400 yards wide and 18 feet deep; at Irzah or Werdi, 75 miles lower down, it is 350 yards wide and of the same depth; at Hadiseh, 140 miles below Werdi, it is 300 yards wide, and still of the same depth; at Hit, 50 miles below Hadiseh, its width has increased to 350 yards, but its depth has diminished to 16 feet; at Felujiah, 75 miles from Hit, the depth is 20 feet, but the width has diminished to 250 yards. From this point the contraction is very rapid and striking. The Saklawiyeh canal is given out upon the left, and some way further down the Hindiyeh branches off upon the right, each carrying, when the Euphrates is full, a large body of water. The consequence is that at Hillah, 90 miles below Felujiah, the stream is no more than 200 yards wide and 15 feet deep; at Diwaniyeh, 65 miles further down, it is only 160 yards wide; and at Lamlun, 20 miles below Diwaniyeh, it is reduced to 120 yards wide, with a depth of no more than 12 feet! Soon after, however, it begins to recover itself. The water, which left it by the Hindiyeh, returns to it upon the one side, while the Shat-el-Hie and numerous other branch streams from the Tigris flow in upon the other; but still the Euphrates never recovers itself entirely,

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[9] Loftus, *Chaldæa and Susiana*, p. 308; *Journ. of Geograph. Society*, vol. ix. p. 95.

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nor even approaches in its later course to the standard of its earlier greatness. The channel from Kurnah to El Khitr was found by Colonel Chesney to have an average width of only 200 yards, and a depth of about 18 or 19 feet,[10] which implies a body of water far inferior to that carried between the junction with the Khabour and Hit. More recently, the decline of the stream in its later course has been found to be even greater. Neglect of the banks has allowed the river to spread itself more and more widely over the land; and it is said that, except in the flood time, very little of the Euphrates water reaches the sea.[1] Nor is this an unprecedented or very unusual state of things. From the circumstance (probably) that it has been formed by the deposits of streams flowing from the east as well as from the north, the lower Mesopotamian plain slopes not only to the south, but to the west.[2] The Euphrates, which has low banks, is hence at all times inclined to leave its bed, and to flow off to the right,[3] where large tracts are below its ordinary level. Over these it spreads itself, forming the well-known "Chaldæan marshes,"[4] which absorb the chief proportion of the water that flows into them, and in which the "great river" seems at various times to have wholly, or almost wholly, lost itself.[5] No such misfortune can befall the Tigris, which runs in a deep bed, and seldom varies its channel, offering a strong contrast to the sister stream.[6]

Frequent allusion has been made, in the course of this description of the Tigris and Euphrates, to the fact of their having each a flood season. Herodotus is scarcely correct when he says that in Babylonia "the river does not, as in Egypt, overflow the

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[10] *Euphrates Expedition*, vol. i. pp. 59, 60.

[1] Layard, *Nineveh and Babylon*, ch. xxi. p. 475; Loftus, *Chaldæa and Susiana*, p. 45.

[2] Heeren's statement, which is directly the reverse of this (*Asiatic Nations*, vol. ii. p. 131, E. T.), is at once false and self-contradictory. The "deep bed" and "bold shores" of the Tigris are the consequence of the *higher* level of the plain in its vicinity. The fall of the Tigris is much greater than that of the Euphrates in its lower course, and the stream cuts deeper into the alluvium, on the principle of water finding its own level.

[3] Loftus, p. 44.

[4] Arrian, *Exped. Alex.* vii. 21, 22; Strab. xvi. 1, §§ 11, 12. The "lacus Chaldaici" of Pliny (*Hist. Nat.* vi. 27) refer rather to the marshes on the Lower Tigris. (See the next page.)

[5] Arrian, *Exped. Alex.* vii. 7; Plin. *Hist. Nat.* l. s. c.

[6] Arrian, vii. 21.

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corn-lands of its own accord, but is spread over them by the help of engines."[7] Both the Tigris and Euphrates rise many feet each spring, and overflow their banks in various places. The rise is caused by the melting of the snows in the mountain regions from which the two rivers and their affluents spring. As the Tigris drains the southern, and the Euphrates the northern side of the same mountain range, the flood of the former stream is earlier and briefer than that of the latter. The Tigris commonly begins to rise early in March, and reaches its greatest height in the first or second week of May, after which it rapidly declines, and returns to its natural level by the middle of June. The Euphrates first swells about the middle of March, and is not in full flood till quite the end of May or the beginning of June; it then continues high for above a month, and does not sink much till the middle of July, after which it gradually falls till September. The country inundated by the Tigris is chiefly that on its lower course, between the 32nd and 31st parallels, the territory of the Beni Lam Arabs. The territory which the Euphrates floods is far more extensive. As high up as its junction with the Khabour, that stream is described as, in the month of April, "spreading over the surrounding country like a sea."[8] From Hit downwards, it inundates both its banks, more especially the country above Baghdad (to which it is carried by the Saklawiyeh canal), the tract west of the Birs Nimrud and extending thence by way of Nedjif to Samava, and the territory of the Affej Arabs, between the rivers above and below the 32nd parallel. Its flood is, however, very irregular, owing to the nature of its banks, and the general inclination of the plain, whereof mention was made above.[9] If care is taken, the inundation may be pretty equally distributed on either side of the stream; but if the river banks are neglected, it is sure to flow mainly to the west, rendering the whole country on that side the river a swamp, and leaving the territory on the left bank almost without water. This state of things may be traced historically from the age of Alexander to

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[7] Herod. i. 193. [8] Layard, *Nineveh and Babylon*, p. 297. [9] See page 11.

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the present day, and has probably prevailed more or less since the time when Chaldæa received its first inhabitants.

The floods of the Tigris and Euphrates combine with the ordinary action of their streams upon their banks to produce a constant variation in their courses, which in a long period of time might amount to something very considerable. It is impossible to say, with respect to any portion of the alluvial plain, that it may not at some former period have been the bed of one or the other river. Still it would seem that, on the whole, a law of compensation prevails, with the result that the general position of the streams in the valley is not very different now from what it was 4000 years ago. Certainly between the present condition of things and that in the time of Alexander, or even of Herodotus, no great difference can be pointed out, except in the region immediately adjoining on the gulf, where the alluvium has grown, and the streams, which were formerly separate, have united their waters. The Euphrates still flows by Hit (Is) and through Babylon;[10] the Tigris passes near Opis,[1] and at Baghdad runs at the foot of an embankment made to confine it by Nebuchadnezzar.[2] The changes traceable are less in the main courses than in the branch streams, which perpetually vary, being sometimes left dry within a few years of the time that they have been navigable channels.[3]

The most important variations of this kind are on the side of Arabia. Here the desert is always ready to encroach; and the limits of Chaldæa itself depend upon the distance from the main river, to which some branch stream conveys the Euphrates water. In the most flourishing times of the country, a wide and deep channel, branching off near Hit, at the very commencement of the alluvium, has skirted the Arabian rock and gravel for a distance of several hundred miles, and has entered the

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[10] Herod. i. 179, 180.

[1] Ibid. i. 189; Xen. *Anab.* ii. 4, § 25. The site of Opis is probably marked by the ruins at *Khafaji*. (See the remarks of Sir H. Rawlinson in the author's *Herodotus*, vol. i. p. 326, note [8].)

[2] Sir H. Rawlinson, *Commentary on the Cuneiform Inscriptions of Assyria and Babylonia*, p. 77, note.

[3] Loftus, *Chaldæa and Susiana*, p. 112. Some rather considerable changes in the bed of the Tigris are thought to be traceable a little below Samarah. (See *Journal of Geographical Society*, vol. ix. p. 472.)

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Persian Gulf by a mouth of its own.[4] In this way the extent of Chaldæa has been at times largely increased, a vast tract being rendered cultivable, which is otherwise either swamp or desert.

Such are the chief points of interest connected with the two great Mesopotamian rivers. These form, as has been already observed, the only marked and striking characteristics of the country, which, except for them, and for one further feature, which now requires notice, would be absolutely unvaried and uniform. On the Arabian side of the Euphrates, 50 miles south of the ruins of Babylon, and 25 or 30 miles from the river, is a fresh-water lake of very considerable dimensions—the Bahr-i-Nedjif, the "Assyrium stagnum" of Justin.[5] This is a natural basin, 40 miles long, and from 10 to 20 miles broad, enclosed on three sides by sandstone cliffs, varying from 20 to 200 feet in height, and shut in on the fourth side—the north-east—by a rocky ridge, which intervenes between the valley of the Euphrates and this inland sea. The cliffs are water-worn, presenting distinct indications of more than one level at which the water has rested in former times.[6] At the season of the inundation this lake is liable to be confounded with the extensive floods and marshes, which extend continuously from the country west of the Birs Nimrud to Samava. But at other times the distinction between the Bahr and the marshes is very evident, the former remaining when the latter disappear altogether, and not diminishing very greatly in size even in the driest season. The water of the lake is fresh and sweet, so long as it communicates with the Euphrates; when the communication is cut off it becomes very unpalatable, and those who dwell in the vicinity are no longer able to drink it. This result is attributed to the connexion of the lake with rocks of the gypsiferous series.[7]

It is obvious that the only natural divisions of Chaldæa proper are those made by the river-courses. The principal tract must

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[4] Shapur Dholactuf, in the fourth century of our era, either cut or reopened this canal. He is said to have intended it as a defence against the Arabs. In Arabian geography it is known as *Khandak Sabur*, or "Shapur's ditch." The present name is *Aerrek Saideh*.

[5] Justin, xviii. 3, § 2.

[6] Loftus, p. 50. [7] Ibid., l. s. c.

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always have been that which intervenes between the two streams. This was anciently a district some 300 miles in length, varying from 20 to 100 miles in breadth, and perhaps averaging 50 miles, which must thus have contained an area of about 15,000 square miles. The tract between the Euphrates and Arabia was at all times smaller than this, and in the most flourishing period of Chaldæa must have fallen short of 10,000 square miles.

We have no evidence that the natural division of Chaldæa here indicated was ever employed in ancient times for political purposes. The division which appears to have been so employed was one into northern and southern Chaldæa, the first extending from Hit to a little below Babylon, the second from Niffer to the shores of the Persian Gulf. In each of these districts we have a sort of tetrarchy, or special pre-eminence of four cities, such as appears to be indicated by the words—"The beginning of his kingdom was Babel, and Erech, and Accad, and Calneh, in the land of Shinar."[8] The southern tetrarchy is composed of the four cities, Ur or Hur, Huruk, Nipur, and Larsa or Larancha, which are probably identified with the Scriptural "Ur of the Chaldees," Erech, Calneh, and Ellasar.[9] The northern consists of Babel or Babylon, Borsippa, Cutha, and Sippara, of which all except Borsippa are mentioned in Scripture.[10] Besides these cities the country contained many others, as Chilmad, Dur-Kurri-galzu, Ihi or Ahava, Rubesi, Duran, Tel-Humba, &c. It is not possible at present to locate with accuracy all these places. We may, however, in the more important instances, fix either certainly, or with a very high degree of probability, their position.

Hur or Ur, the most important of the early capitals, was

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[8] Gen. x. 10. The sacred historian perhaps further represents the Assyrians as adopting the Babylonian number on their emigration to the more northern regions:—"Out of that land went forth Asshur, and builded Nineveh, and the city Rehoboth, and Calah, and Resen." (Gen. x. 11, 12.)

[9] In three out of these four cases, the similarity of the name forms a sufficient ground for the identification. In the fourth case the chief ground of identification is a statement in the Talmud that Nopher was the site of the Calneh of Nimrod.

[10] Sippara is the Scriptural Sepharvaim. The Hebrew term has a dual ending, because there were two Sipparas, one on either side of the river.

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situated on the Euphrates, probably at no great distance from its mouth. It was probably the chief commercial emporium in the early times; as in the bilingual vocabularies its ships are mentioned in connexion with those of Ethiopia.[1] The name is found to have attached to the extensive ruins (now about six miles from the river, on its right bank, and nearly opposite its junction with the Shat-el-Hie) which are known by the name of Mugheir, or "the bitumened."[2] Here, on a dead flat, broken only by a few sand-hills, are traces of a considerable town, consisting chiefly of a series of low mounds, disposed in an oval shape, the largest diameter of which runs from north to south, and measures somewhat more than half a mile. The chief building is a temple, hereafter to be more particularly described, which is a very conspicuous object even at a considerable distance, its greatest height above the plain being about seventy feet.[3] It is built in a very rude fashion, of large bricks, cemented with bitumen, whence the name by which the Arabs designate the ruins.

About thirty miles from Hur, in a north-westerly direction, and on the other side of the Euphrates, from which it is distant eight or nine miles, are the ruins of a town, called in the inscriptions Larrak, or Larsa, in which some of the best Orientalists have recognised at once the Biblical Ellasar,[4] the Laranchæ of Berosus,[5] and the Larissa of Apollodorus, where the king held his court who sent Memnon to the siege of Troy.[6] The identification is perhaps doubtful; but, at any rate, we have here the remains of a second Chaldæan capital, dating from the very earliest times. The ruins, which bear now the name of Senkereh or Sinkara, consist of a low circular platform, about four and a half miles in circumference, rising gradually from the level of the plain to a central mound, the highest point of which attains an elevation of seventy feet above the plain itself, and is

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[1] Sir H. Rawlinson, in the *Journal of the Geographical Society*, vol. xxvii. p. 185.

[2] Mr. Taylor, in the *Journal of the Asiatic Society*, vol. xv. p. 260. Sir H. Rawlinson prefers the derivation of *Um-qir*, "the mother of bitumen."

[3] Loftus, *Chaldæa and Susiana*, p. 128.

[4] Gen. xiv. 1.

[5] Beros. ap. Syncell., *Chronographia*, p. 39.

[6] Apollod. *Bibliotheca*, ii. 4, § 4.

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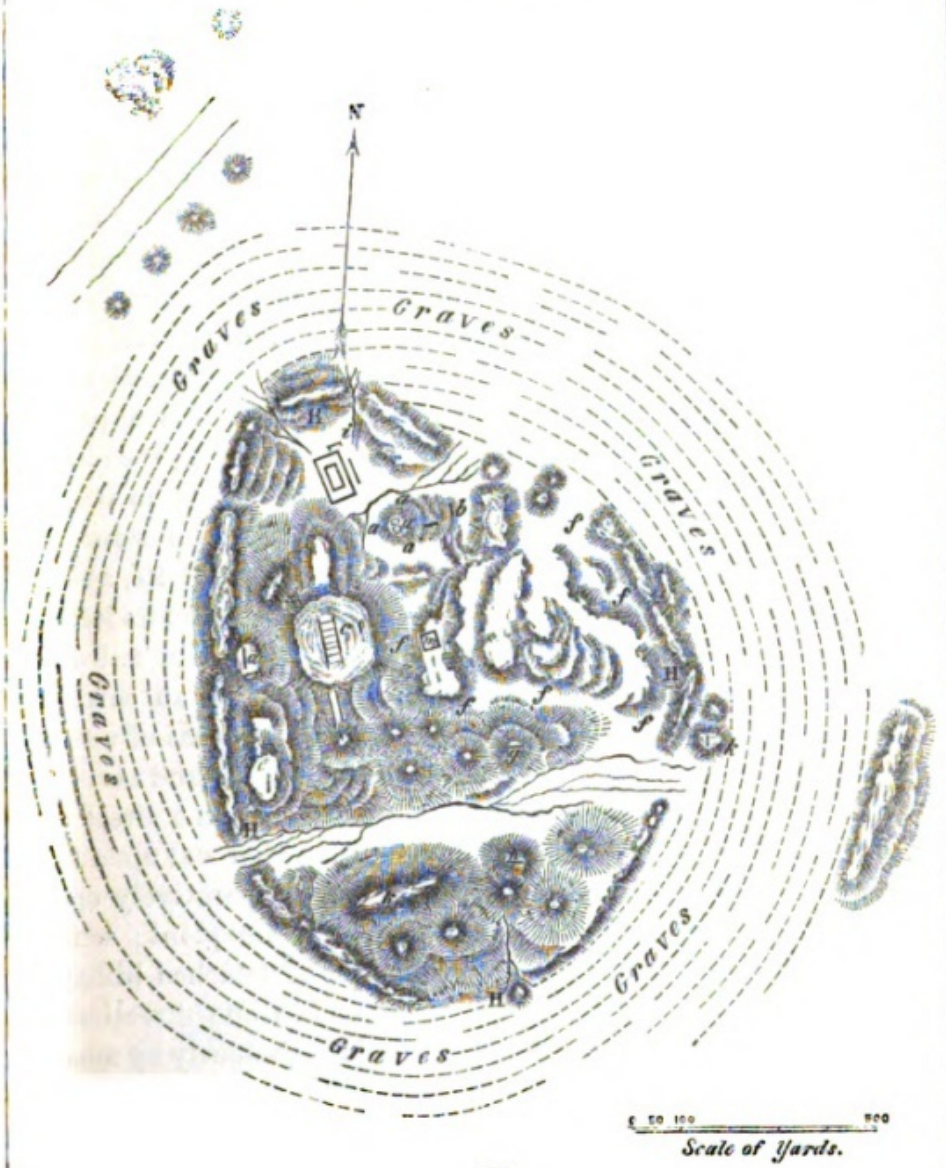

Plan of Mugheir Ruins.

H H H H. 2946 yards round.
a a a. Platform on which the house *a* is built.
a. House cleared.
b. Pavement at edge of platform *a*, 12 feet below surface.
c. Tomb mound.
d e g h k l m. Points at which excavations were made by Mr. Loftus.
f f f f Comparatively open space of very low mounds.

69
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distinctly visible from a distance of fifteen miles.[7] The material used consists of the ordinary sun-dried and baked bricks; and the basement platforms bear the inscriptions of the same king who appears to have been the original founder of the chief buildings at Ur or Mugheir.

Fifteen miles from Larsa, in a direction a little north of west, and on the same side of the river, are ruins considerably more extensive than those of either Ur or Larsa, to which the natives apply the name of Warka, which is no doubt a corruption of the original appellation. The Erech, or Orech,[8] of the Hebrews, which appears as Huruk in the cuneiform geographical lists, became known to the Greeks as Orchoë;[9] and this appellation, probably continuing in use to the time of the Arab conquest, was then corrupted into Urka or Warka, in which shape the name given by Nimrod still attaches to the second of his cities. The ruins stand in lat. 31° 19′, long. 45° 40′, about four miles from the nearest bend of the Euphrates, on its left or east bank. They form an irregular circle, nearly six miles in circumference, which is defined by the traces of an earthen rampart, in some places forty feet high. A vast mass of undulating mounds, intersected by innumerable channels and ravines, extends almost entirely across the circular space, in a direction, which is nearly north and south, abutting at either end upon the rampart. East and west of this mass is a comparatively open space, where the mounds are scattered and infrequent; while outside the rampart are not only a number of detached hillocks marking the site of ancient buildings, but in one direction—towards the east—the city may be traced continuously by means of ruined edifices, mounds, and pottery, fully three miles beyond the rampart into the desert. The greatest height of the ruins is about 100 feet; their construction is very rude and primitive, the date of some buildings being evidently as early as that of the most ancient structures of either Mugheir or Senkereh.[10]

Sixty miles to the north-west of these ruins, still on the left

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[7] Loftus, p. 244.

[8] The LXX translators express the Hebrew אֶרֶךְ by Ὀρέχ.

[9] Strab. xvi. 1, § 6; Ptol. v. 20, p. 137. See also Pliny, *Hist. Nat.* vi. 27.

[10] Loftus, pp. 162-170.

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or eastern bank of the Euphrates, but at the distance of thirty miles from its present course, are the remains of another

Ruins of Warka (Erech).

A. Bowariyeh.
B. Wuswas.
C. Parthian ruin.
D. Edifice of cones.

city, the only Chaldæan ruins which can dispute, with those already described, the palm of antiquity. They consist of a number of separate and distinct heaps, which seem to be

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the remains of different buildings, and are divided into two nearly equal groups by a deep ravine or channel 120 feet wide, apparently the dry bed of a river which once ran through the town.[1] Conspicuous among the other hillocks is a conical heap, occupying a central position on the eastern side of the river-bed, and rising to the height of about seventy feet above the general level of the plain.[2] Further on in this direction is a low continuous mound, which seems to be a portion of the outer wall of the city. The ruins are of considerable extent, but scarcely so large as those at either Senkereh or Warka. The name which now attaches to them is Niffer; and it appears, from the inscriptions at the place, that the ancient Semitic appellation was but slightly different.[3] This name, as read on the bilingual tablets, was Nipur; and as there can be little doubt that it is this word which appears in the Talmud as Nopher,[4] we are perhaps entitled, on the authority of that treasure-house of Hebrew traditions, to identify these ruins with the Calneh of Moses,[5] and the Calno of Isaiah.[6]

About sixty-five miles from Niffer, on the opposite side of the Euphrates, and in a direction only slightly north of west, are the remains of the ancient Borsippa. These consist of little more than the ruins of a single building—the great temple of Merodach—which was entirely rebuilt by Nebuchadnezzar. They have been sometimes regarded as really a portion of the ancient Babylon;[7] but this view is wholly incompatible with the cuneiform records, which distinctly assign to the ruins in question the name of Borsip or Borsippa, a place known with

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[1] Layard, *Nineveh and Babylon*, ch. xxiv. p. 551. Boats smeared with bitumen, and similar to those still in use in Lower Mesopotamia, are said to be occasionally found, beneath the soil, in this ravine.

[2] Loftus, p. 101.

[3] In the early Scythic or Cushite Babylonian the name of the city is represented by the same characters as are used for the god Belus, though of course with a different determinative; and it thus seems highly probable that we have the vernacular pronunciation of the name in the Βίλβη of Ptolemy, which he joins with Βάρσιτα and Διγούα, precisely as the inscriptions are joined Borsip, Nipur, and Cutha or Tiggaba. *Nipur* is given in the bilingual tablets as the Semitic translation of the Scythic *Bilu*.

[4] See above, page 15, note [9].

[5] Gen. x. 10. [6] Isaiah x. 9.

[7] Rich, *Second Memoir on Babylon*, p. 32; Heeren, *Asiatic Nations*, vol. ii. p. 172; Ker Porter, *Travels*, vol. ii. p. 379. See also Oppert's map, entitled "Babylon Antiqua," in his *Expédition scientifique en Mésopotamie*, Paris, Gide, 1858.

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certainty to have been distinct from, though in the neighbourhood of, the capital.[8] A remnant of the ancient name appears to be contained in the modern appellation, Birs-Nimrud or Birs-i-Nimrud, which does not admit of any explanation from the existing language of the country.[9]

Fifteen miles from thence, to the north-east, chiefly but not entirely on the left or east bank of the Euphrates, are the remains of "Babylon the Great," which have been so frequently described by travellers, that little need be said of them in this place. The chief ruins cover a space about three miles long, and from one to two broad, and consist mainly of three great masses: the first a square mound, called "Babil" by the Arabs, lying towards the north at some distance from the other remains; the second or central mound, a pile called the "Kasr" or Palace; and the third, a great irregular heap lying towards the south, known as the "mound of Amram," from a tomb which crowns its summit. The "Kasr" and "Amram" mounds are enclosed within two lines of rampart, lying at right angles to each other, and forming, with the river, a sort of triangle, within which all the principal ruins are comprised, except the mound called "Babil." Beyond the rampart, towards the north, south, and east, and also across the river to the west, are various smaller detached ruins, while the whole ground, in every direction, is covered with fragments of brick and with nitre, the sure marks of former habitations.

The other cities of ancient Chaldæa which may be located with an approach to certainty, are Cutha, now Ibrahim, fifteen miles north-east by north of Hymar; Sippara or Sepharvaim, which was at Sura, near Mosaib on the Euphrates, about twenty miles above Babylon by the direct route; and Dur-Kurri-galzu, now Akkerkuf, on the Saklawiyeh canal, six miles from Baghdad, and thirty from Mosaib, in a direction a little west of north. Ihi, or Ahava, is probably Hit, ninety miles above Mosaib, on the right bank of the river; Chilmad may be Kalwadha, near Baghdad; and Rubesi is perhaps Zerghul, near the left bank of

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[8] Berosus, *Fr.* 14; Strab. xvi. 1, § 7; Justin, xii. 13; Steph. Byz. ad voc.
[9] Rich, *First Memoir*, p. 34, note.

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the Shat-el-Hie, a little above its confluence with the Euphrates. Chaldæan cities appear likewise to have existed at Hymar, ten miles from Babylon towards the east; at Sherifeh and Im Khithr, south and south-east of Hymar; at Zibbliyeh,[10] on the line of the Nil canal, fifteen miles north-west of Niffer; at Delayhim and Bismiya, in the Affej marshes, beyond Niffer, to

Akkerkuf.

the south-east; at Phara and Jidr, in the same region, to the south-west and south-east of Bismiya; at Hammam,[11] sixteen miles south-east of Phara, between the Affej and the Shatra marshes; at Tel-Ede, six miles from Hammam, to the south-south-west; at Tel-Medineh and Tel-Sifr, in the Shatra marshes,

[10] Layard, *Nineveh and Babylon*, p. 569. Mr. Loftus suggests that the remains here are of a later date. (*Chaldæa and Susiana*, p. 85.) Sir H. Rawlinson regards the existing buildings at Akkerkuf and Hammam as also of the Parthian age, though occupying the sites of earlier Chaldæan cities.

[11] Hammam is thought to be the Gulaba of the Cuneiform Inscriptions (Loftus, p. 113); but this identification is uncertain.

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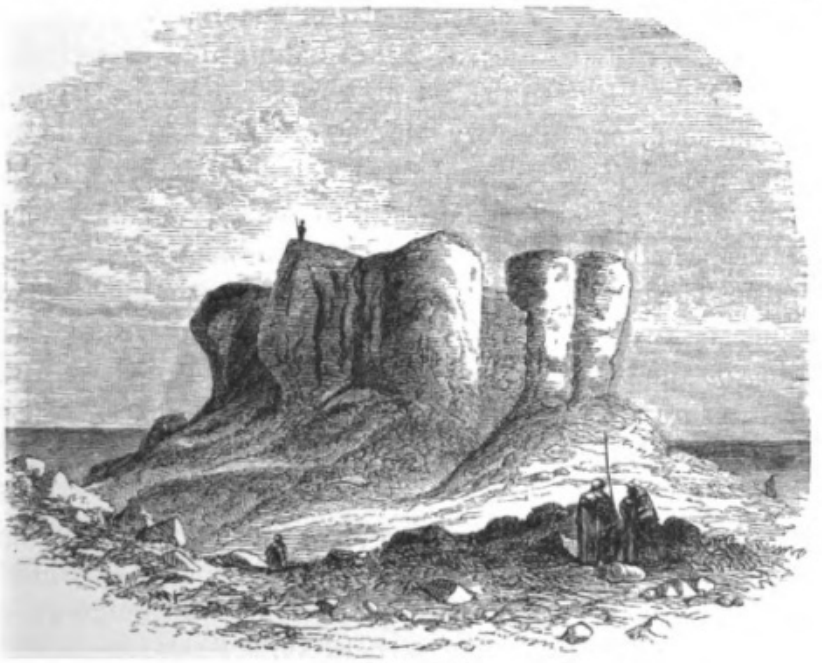
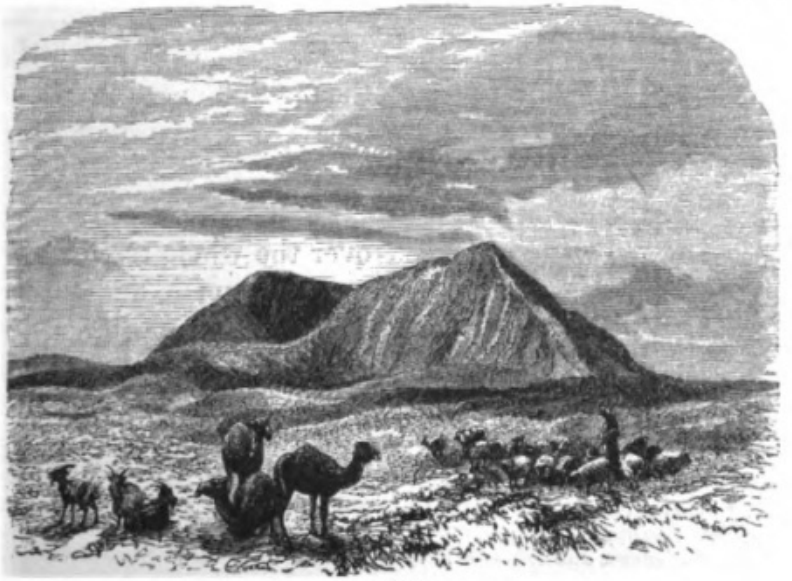
to the south-east of Tel-Ede and the north-east of Senkereh; at Yokha, east of Hammam, and Nuffdyji, north of Warka; at



Hammam.

Lethami, near Niffer; at Iskhuriyeh, north of Zibbliyeh, near the Tigris; at Tel-Kheir and Tel-Dhalab, in the upper part of



Tel-Ede.

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the alluvium, to the north of Akkerkuf; at Duair, on the right bank of the Euphrates, south of Hilleh and south-east of the Birs-Nimrud; at Jeb Mehari, south of the Bahr-i-Nedjif; at Mal Battush, near Swaje; at Tel-el-Lahm, nine or ten miles south of Suk-es-Sheioukh, and at Abu Shahrein, in the same neighbourhood, on the very border of the Arabian desert.[1] Further investigation will probably add largely to this catalogue, for many parts of Babylonia are still to some extent unexplored. This is especially true of the tract between the Shat-el-Hie and the lower Tigris,[2] a district which, according to the geographers, abounds with ruins. No doubt the most extensive and most striking of the old cities have been visited; for of these Europeans are sure to hear through the reports of natives. But it is more than probable that a number of the most interesting sites remain unexplored, and even unvisited; for these are not always either very extensive or very conspicuous. The process of gradual disintegration is continually lowering the height of the Chaldæan ruins; and depressed mounds are commonly the sign of an ancient and long-deserted city.[3] Such remains give us an insight into the character of the early people, which it is impossible to obtain from ruins where various populations have raised their fabrics in succession upon the same spot.

The cities here enumerated may not perhaps, in all cases, have existed in the Chaldæan period. The evidence hitherto obtained connects distinctly with that period only the following —Babylon, Ur or Hur, Larrak or Larsa, Erech or Huruk, Calneh or Nopher, Sippara, Dur-Kurri-galzu, Chilmad, and the places now called Abu Shahrein and Tel-Sifr.[4] These sites, it will be observed, were scattered over the whole territory from the extreme south almost to the extreme north, and show the extent of the kingdom to have been that above assigned to it.[5] They are connected together by a similarity in building arrange-

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[1] See Fraser's *Mesopotamia and Assyria*, pp. 150-155; Ainsworth's *Researches in Mesopotamia*, p. 127 and p. 177; Ross and Lynch, in *Journal of Geographical Society*, vol. ix. pp. 443 et seq.; Loftus' *Chaldæa and Susiana*, passim; and *Journal of Geographical Society*, vol. xxvi. pp. 133-144.

[2] This district has been visited by Mr. Taylor, but its marshy character makes it very difficult to explore at all completely.

[3] Loftus, *Chaldæa and Susiana*, p. 251.

[4] Ibid. p. 435.

[5] See page 3.

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ments and materials, in language, in form of type and writing, and sometimes in actual names of monarchs. The most ancient, apparently, are those towards the south, at Warka, Senkereh, Mugheir, and Niffer; and here, in the neighbourhood of the sea, which then probably reached inland as far as Suk-es-Sheioukh, there is sufficient reason to place the primitive seat of Chaldæan power. The capital of the whole region was at first Ur or Hur, but afterwards became Nipur, and finally Babel or Babylon.

The geography of Chaldæa is scarcely complete without a glance at the countries which adjoin upon it. On the west, approaching generally within twenty or thirty miles of the present course of the Euphrates, is the Arabian Desert, consisting in this place of tertiary sand and gravels, having a general elevation of a few feet above the Mesopotamian plain, and occasionally rising into ridges of no great height, whose direction is parallel to the course of the great stream. Such are the Hazem and the Qassaim, in the country between the Bahr-i-Nedjif and the Persian Gulf, low pebbly ridges which skirt the valley from the Bahr to below Suk-es-Sheioukh. Further west the desert becomes more stony, its surface being strewn with numerous blocks of black granite, from which it derives its appellation of Hejerra.[6] No permanent streams water this region; occasional "wadys" or torrent-courses, only full after heavy rains, are found; but the scattered inhabitants depend for water chiefly on their wells, which are deep and numerous, but yield only a scanty supply of a brackish and unpalatable fluid. No settled population can at any time have found subsistence in this region, which produces only a few dates, and in places a poor and unsucculent herbage. Sandstorms are frequent, and at times the baleful simoom sweeps across the entire tract, destroying with its pestilential breath both men and animals.[7]

Towards the north Chaldæa adjoined upon Assyria. From the foot of that moderately lofty range already described,[8] which the Greeks call Masius, and the modern Turks know as Jebel Tur and Karajah Dagh, extends, for above 300 miles, a plain of

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[6] See the *Journal of the Royal Asiatic Society*, vol. xv. p. 404.

[7] See the elder Niebuhr's *Description de l'Arabie*, pp. 7, 8.

[8] See p. 9.

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low elevation, slightly undulating in places, and crossed about its centre by an important limestone ridge, known as the Sinjar hills, which have a direction nearly east and west, beginning about Mosul, and terminating a little below Rakkah. This tract differs from the Chaldæan lowland, by being at once less flat and more elevated. Geologically it is of secondary formation, while Chaldæa proper is tertiary or post-tertiary. It is fairly watered towards the north, but below the Sinjar is only very scantily supplied. In modern times it is for nine months in the year a desert, but anciently it was well inhabited, means having apparently been found to bring the whole into cultivation. As a complete account of this entire region must be given in another part of the present volume, this outline (it is thought) may suffice for our present purpose.

Eastward of Chaldæa, separated from it by the Tigris, which in its lower course is a stream of more body than the Euphrates, was the country known to the Jews as Elam,[9] to the early Greeks as Cissia,[1] and to the later Greeks as Susis or Susiana.[2] This territory comprised a portion of the mountain country which separates Mesopotamia from Persia; but it was chiefly composed of the broad and rich flats intervening between the mountains and the Tigris, along the courses of the Kerkhah, Kuran, and Jerahi rivers. It was a rich and fertile tract, resembling Chaldæa in its general character, with the exception that the vicinity of the mountains lent it freshness, giving it cooler streams, more frequent rains, and pleasanter breezes. Capable of maintaining with ease a dense population, it was likely, in the early times, to be a powerful rival to the Mesopotamian kingdom, over which we shall find that in fact it sometimes exercised supremacy.

On the south Chaldæa had no neighbour. Here a spacious sea, with few shoals, land-locked, and therefore protected from the violent storms of the Indian Ocean, invited to commerce, offering a ready communication with India and Ceylon, as well as with Arabia Felix, Ethiopia, and Egypt. It is perhaps to

[9] Dan. viii. 2.

[1] Æschylus, *Persæ*, 123; Herodotus, v. 52.
[2] Strabo, xv. 3, § 12.

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this circumstance of her geographical position, as much as to any other, that ancient Chaldæa owes her superiority over her neighbours, and her right to be regarded as one of the five great monarchies of the ancient world. Commanding at once the sea, which reaches here deep into the land, and the great rivers by means of which the commodities of the land were most conveniently brought down to the sea, she lay in the highway of trade, and could scarcely fail to profit by her position. There is sufficient reason to believe that Ur, the first capital, was a great maritime emporium; and if so, it can scarcely be doubted that to commerce and trade, at the least in part, the early development of Chaldæan greatness was owing.

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CHAPTER II.

CLIMATE AND PRODUCTIONS.

"Ager totius Asiæ fertilissimus."—PLIN. *H. N.* vi. 26.

LOWER MESOPOTAMIA, or Chaldæa, which lies in the same latitude with Central China, the Punjab, Palestine, Marocco, Georgia, Texas, and Central California, has a climate the warmth of which is at least equal to that of any of those regions. Even in the more northern part of the country, the district about Baghdad, the thermometer often rises during the summer to 120° of Fahrenheit in the shade;[1] and the inhabitants are forced to retreat to their *serdabs* or cellars,[2] where they remain during the day, in an atmosphere which, by the entire exclusion of the sun's rays, is reduced to about 100°. Lower down the valley, at Zobair, Busrah, and Mohammrah, the summer temperature is still higher;[3] and, owing to the moisture of the atmosphere, consequent on the vicinity of the sea, the heat is of that peculiarly oppressive character which prevails on the sea-coast of Hindustan, in Ceylon, in the West Indian islands, at New Orleans, and in other places whose situation is similar. The vital powers languish under this oppression, which produces in the European a lassitude of body and a prostration of mind that wholly unfit him for active duties. On the Asiatic, however, these influences seem to have little effect. The Cha'b Arabs, who at present inhabit the region, are a tall and warlike race, strong-limbed, and muscular;[4] they appear to enjoy the climate, and are as active, as healthy, and as long-lived as any tribe of their nation. But if man by long residence becomes thoroughly inured to the intense heat of

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[1] Loftus, *Chaldæa and Susiana*, p. 9.

[2] Chesney, *Euphrates Expedition*, vol. i. p. 106.

[3] Loftus, p. 280. This traveller found the temperature at Mohammrah, in June, 1850, to rise often to 124° of Fahrenheit in the shade.

[4] Ibid. p. 285.

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these regions, it is otherwise with the animal creation. Camels sicken, and birds are so distressed by the high temperature that they sit in the date-trees about Baghdad, with their mouths open, panting for fresh air.[5]

The evils proceeding from a burning temperature are augmented in places under the influence of winds, which, arising suddenly, fill the air with an impalpable sand, sometimes circling about a point, sometimes driving with furious force across a wide extent of country. The heated particles, by their contact with the atmosphere, increase its fervid glow, and, penetrating by the nose and mouth, dry up the moisture of the tongue, parch the throat, and irritate or even choke the lungs.[6] Earth and sky are alike concealed by the dusty storm, through which no object can be distinguished that is removed many yards; a lurid gleam surrounds the traveller, and seems to accompany him as he moves; every landmark is hid from view; and to the danger of suffocation is added that of becoming bewildered and losing all knowledge of the road. Such are the perils encountered in the present condition of the country. It may be doubted, however, if in the times with which we are here concerned the evils just described had an existence. The sands of Chaldæa, which are still progressive and advancing, seem to have reached it from the Arabian Desert, to which they properly belong: year by year the drifts gain upon the alluvium, and threaten to spread over the whole country.[7] If we may calculate the earlier by the present rate of progress, we must conclude that anciently these shifting sands had at any rate not crossed the Euphrates.

If the heat of summer be thus fierce and trying, the cold of winter must be pronounced to be very moderate. Frost, indeed, is not unknown in the country;[8] but the frosts are only slight. Keen winds blow from the north, and in the morning the ground is often whitened by the congelation of the dew; the Arabs, impatient of a low temperature, droop and flag; but there is at

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[5] Loftus, p. 9, note.
[6] Ibid. p. 241; Layard, *Nineveh and Babylon*, p. 546.
[7] Loftus, pp. 81, 82.
[8] Layard, *Nineveh and Babylon*, l.s.c.; Loftus, *Chaldæa and Susiana*, p. 73; Fraser, *Travels*, vol. ii. pp. 37 and 47.

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no time any severity of cold; ice rarely forms in the marshes; snow is unknown; and the thermometer, even on the grass, does not often sink below 30°. The Persian kings passed their winter in Babylon, on account of the mildness of the climate; and Indian princes, expelled from the Peninsula, are wont, from a similar cause, to fix their residence at Busrah or Baghdad. The cold of which travellers speak is relative rather than positive. The range of the thermometer in Lower Chaldæa is perhaps 100°, whereas in England it is scarcely 80°; there is thus a greater difference between the heat of summer and the cold of winter there than here; but the actual greatest cold—that which benumbs the Arabs and makes them fall from their horses [9]—is no more than we often experience in April, or even in May.

The rainy season of Chaldæa is in the winter time. Heavy showers fall in November, and still more in December, which sensibly raise the level of the rivers.[1] As the spring advances the showers become lighter and less frequent; but still they recur from time to time, until the summer sets in, about May. From May to November rain is very rare indeed. The sky continues for weeks or even months without a cloud; and the sun's rays are only tempered for a short time at morning and at evening by a grey mist or haze. It is during these months that the phenomenon of the mirage is most remarkable. The strata of air, unequally heated, and therefore differing in rarity, refract the rays of light, fantastically enlarging and distorting the objects seen through them, which frequently appear raised from the ground and hanging in mid-air, or else, by a repetition of their image, which is reflected in a lower stratum, give the impression that they stand up out of a lake. Hence the delusion which has so often driven the traveller to desperation—the "image of a cool rippling watery mirror,"[2] which flies

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[9] Mr. Loftus tells us that he has seen this effect of the cold.

[1] Sir H. Rawlinson, in the author's *Herodotus*, vol. i. p. 331, note[8]; Rich, *First Memoir*, p. 13; Chesney, *Euphrates Expedition*, vol. i. pp. 38, 39, and 61, 62.

[2] Humboldt, *Aspects of Nature*, vol. i. p. 18. See, for the fact, Layard, *Nineveh and Babylon*, p. 549; Loftus, p. 113.

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before him as he advances, and at once provokes and mocks his thirst.

The fertility of Chaldæa in ancient times was proverbial. "Of all countries that we know," says Herodotus, "there is none that is so fruitful in grain. It makes no pretension, indeed, of growing the fig, the olive, the vine, or any other tree of the kind; but in grain it is so fruitful as to yield commonly two hundred-fold, and when the production is at the greatest, even three hundred-fold. The blade of the wheat-plant and of the barley-plant is often four fingers in breadth. As for the millet and the sesame, I shall not say to what height they grow, though within my own knowledge; for I am not ignorant that what I have already written concerning the fruitfulness of Babylonia must seem incredible to those who have not visited the country."[3] Theophrastus, the disciple of Aristotle, remarks —"In Babylon the wheat-fields are regularly mown twice, and then fed off with beasts, to keep down the luxuriance of the leaf; otherwise the plant does not run to ear. When this is done, the return, in lands that are badly cultivated, is fifty-fold; while, in those that are well farmed, it is a hundred-fold."[4] Strabo observes—"The country produces barley on a scale not known elsewhere, for the return is said to be three hundred-fold. All other wants are supplied by the palm, which furnishes not only bread, but wine, vinegar, honey, and meal."[5] Pliny follows Theophrastus, with the exception that he makes the return of the wheat-crop, where the land is well farmed, a hundred and fifty-fold.[6] The wealth of the region was strikingly exhibited by the heavy demands which were made upon it by the Persian kings, as well as by the riches which, notwithstanding these demands, were accumulated in the hands of those who administered its government. The money-tribute paid by Babylonia and Assyria to the Persians was a thousand talents of silver (nearly a quarter of a million of our money) annually;[7] while

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[3] Herodotus, i. 193.
[4] Theophrast. *Hist. Plant.* viii. 7.
[5] Strabo, xvi. 1, § 14. Compare Xen. *Anab.* ii. 3, §§ 14-16.
[6] Pliny, *Hist. Nat.* xviii. 17.
[7] Herodotus, iii. 92. If we set aside the Indian gold tribute, this was one-ninth of the whole tribute of the empire.

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the tribute in kind was reckoned at one-third part of the contributions of the whole empire.[8] Yet, despite this drain on its resources, the government was regarded as the best that the Persian king had to bestow, and the wealth accumulated by Babylonian satraps was extraordinary. Herodotus tells us of a certain Tritantæchmes, a governor, who, to his own knowledge, derived from his province nearly two bushels of silver daily! This fortunate individual had a stud of sixteen thousand mares, with a proportionate number of horses.[9] Another evidence of the fertility of the region may be traced in the fear of Artaxerxes Mnemon, after the battle of Cunaxa, lest the Ten Thousand should determine to settle permanently in the vicinity of Sittace upon the Tigris.[1] Whatever opinion may be held as to the exact position of this place, and of the district intended by Xenophon, it is certain that it was in the alluvial plain,[2] and so contained within the limits of the ancient Chaldæa.

Modern travellers, speaking of Chaldæa in its present condition, express themselves less enthusiastically than the ancients; but, on the whole, agree with them as to the natural capabilities of the country. "The soil," says one of the most judicious, "is 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."[3] "The soil is rich," says another, "not less bountiful than that on the banks of the Egyptian Nile."[4] "Although greatly changed by the neglect of man," observes a third, "those portions of Mesopotamia which are still cultivated, as the country about Hillah, show that the region has all the fertility ascribed to it by Herodotus."[5] There is a general recognition of the productive qualities of the district, combined with a general lamentation over the existing

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[8] Herodotus, i. 192. This proportion appears excessive. Perhaps Babylonia really supplied one-third of the *grain* which the court consumed.

[9] Ibid. l. s. c.

[1] Xen. *Anab.* ii. 4, § 22.

[2] Ibid. § 13. Compare Ainsworth, *Retreat of the Ten Thousand*, pp. 105-114. He regards the district intended as that between the Shat-Eidha and the bend of the Tigris, in lat. 34°. I should place it lower down, below Baghdad, near the ruins of Ctesiphon.

[3] Rich, *First Memoir*, p. 12.

[4] Loftus, *Chaldæa and Susiana*, p. 14.

[5] Chesney, *Euphrates Expedition*, vol. ii. p. 602.

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neglect and apathy which allow such gifts of Nature to run to waste. Cultivation, we are told, is now the exception, instead of the rule. "Instead of the luxuriant fields, the groves and gardens of former times, nothing now meets the eye but an arid waste."[6] Many parts of Chaldæa, naturally as productive as any others, are at present pictures of desolation. Large tracts are covered by unwholesome marshes, producing nothing but enormous reeds; others lie waste and bare, parched up by the fierce heat of the sun, and utterly destitute of water; in some places, as has been already mentioned, sand-drifts accumulate, and threaten to make the whole region a mere portion of the desert.

The great cause of this difference between ancient and modern Chaldæa is the neglect of the water-courses. Left to themselves, the rivers tend to desert some portions of the alluvium wholly, which then become utterly unproductive; while they spread themselves out over others, which are converted thereby into pestilential swamps. A well-arranged system of embankments and irrigating canals is necessary in order to develop the natural capabilities of the country, and to derive from the rich soil of this vast alluvium the valuable and varied products which it can be made to furnish.

Among the natural products of the region two stand out as pre-eminently important—the wheat-plant and the date-palm. According to the native tradition,[7] wheat was indigenous in Chaldæa; and the first comers thus found themselves provided by the bountiful hand of Nature with the chief necessary of life. The luxuriance of the plant was excessive. Its leaves were as broad as the palm of a man's hand, and its tendency to grow leaves was so great that (as we have seen[8]) the Babylonians used to mow it twice and then pasture their cattle on it for a while, to keep down the blade and induce the plant to run to ear. The ultimate return was enormous: on the most moderate computation[9] it amounted to fifty-fold at the least, and often to a

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[6] Loftus, l. s. c. [7] Berosus, Fr. 1. [8] See p. 31.
[9] That of Theophrastus, the professed naturalist. See above, p. 31, note [4].

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hundred-fold. The modern Oriental is content, even in the case of a rich soil, with a ten-fold return.[1]

The date-palm was at once one of the most valuable and one of the most ornamental products of the country. "Of all vegetable forms," says the greatest of modern naturalists, "the palm is that to which the prize of beauty has been assigned by

Palms.

the concurrent voice of nations in all ages."[2] And though the date-palm is in form perhaps less graceful and lovely than some of its sister species, it possesses in the dates themselves a beauty which they lack. These charming yellow clusters, semi-transparent, which the Greeks likened to amber,[3] and moderns compare to gold,[4] contrast, both in shape and tint, with the green

[1] *Geograph. Journ.* vol. ix. p. 27. Compare Niebuhr, *Description de l'Arabie*, p. 134.

[2] Humboldt, *Aspects of Nature*, vol. ii. p. 20, E. T.

[3] Xen. *Anab.* ii. 3, § 15; Philostrat. *Vit. Apollon. Tyan.* i. 21.

[4] Loftus, *Chaldæa and Susiana*, p. 25.

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feathery branches beneath whose shade they hang, and give a richness to the landscape they adorn which adds greatly to its attractions. And the utility of the palm has been at all times proverbial. A Persian poem celebrated its three hundred and sixty uses.[5] The Greeks, with more moderation, spoke of it as furnishing the Babylonians with bread, wine, vinegar, honey, groats, string and ropes of all kinds, firing, and a mash for fattening cattle.[6] The fruit was excellent, and has formed at all times an important article of nourishment in the country. It was eaten both fresh and dried, forming in the latter case a delicious sweetmeat.[7] The wine, "sweet but headachy,"[8] was probably not the spirit which it is at present customary to distil from the dates, but the slightly intoxicating drink called *lagby* in North Africa, which may be drawn from the tree itself by decapitating it, and suffering the juice to flow.[9] The vinegar was perhaps the same fluid corrupted, or it may have been obtained from the dates. The honey was palm-sugar, likewise procurable from the sap. How the groats were obtained we do not know; but it appears that the pith of the palm was eaten formerly in Babylonia, and was thought to have a very agreeable flavour.[10] Ropes were made from the fibres of the bark; and the wood was employed for building and furniture.[1] It was soft, light, and easily worked; but tough, strong, and fibrous.[2]

The cultivation of the date-palm was widely extended in Chaldæa, probably from very early times. The combination of sand, moisture, and a moderately saline soil, in which it delights,[3] was there found in perfection, more especially in the lower country, which had but recently been reclaimed from the sea. Even now, when cultivation is almost wholly laid aside, a thick forest of luxuriant date-trees clothes the banks of the Euphrates

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[5] Strabo, xvi. 1, § 14. [6] Ibid.

[7] Xen. *Anab.* l. s. c. "The peasantry in Babylonia now principally subsist on dates pressed into cakes." Rich, *First Memoir*, p. 59, note.

[8] Ἡδὺ μὲν, κεφαλαλγὲς δέ. Xen. *Anab.* l. s. c.

[9] Hamilton's *Wanderings in North Africa*, ch. xiv. pp. 189, 190.

[10] Xen. *Anab.* ii. 3, § 16.

[1] Theophrast. *Hist. Plant.* ii. 7; p. 66.

[2] Ibid. v. 4 and 6.

[3] Theophrast. *Hist. Plant.* ii. 7; p. 64; Plin. *H. N.* xiii. 4.

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on either side, from the vicinity of Mugheir to its embouchure at the head of the Persian Gulf.[4] Anciently the tract was much more generally wooded with them. "Palm-trees grow in numbers over the whole of the flat country," says one of the most observant and truthful of travellers—Herodotus.[5] According to the historians of Julian, a forest of verdure extended from the upper edge of the alluvium, which he crossed, to Mesene and the shores of the sea.[6] When the Arabian conquerors settled themselves in the lower country, they were so charmed with the luxuriant vegetation and the abundant date-groves, that they compared the region with the country about Damascus, and reckoned it among their four earthly paradises.[7] The propagation of the date-palm was chiefly from seed. In Chaldæa, however, it was increased sometimes from suckers or offshoots thrown up from the stem of the old tree;[8] at other times by a species of cutting, the entire head being struck off with about three feet of stem, notched, and then planted in moist ground.[9] Several varieties of the tree were cultivated; but one was esteemed above all the rest, both for the size and flavour of the fruit. It bore the name of "Royal," and grew only in one place near Babylon.[10]

Besides these two precious products, Chaldæa produced excellent barley, millet, sesame, vetches, and fruits of all kinds.[1] It was, however, deficient in variety of trees, possessing scarcely any but the palm and the cydress. Pomegranates, tamarisks, poplars, and acacias are even now almost the only trees besides the two above mentioned, to be found between Samarah and the Persian Gulf. The tamarisk grows chiefly as a shrub along the rivers, but sometimes attains the dimensions of a tree, as in the case of the "solitary tree" still growing upon the ruins of Babylon.[2] The pomegranates with their scarlet flowers, and the acacias with their light and graceful foliage,

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[4] Loftus, *Chaldæa and Susiana*, p. 127 and p. 277; Ainsworth, *Travels in the Track of the Ten Thousand*, p. 105.

[5] Herod. i. 193.

[6] Amm. Marc. xxiv. 3; Zosim. iii. pp. 173-9.

[7] Sir H. Rawlinson, in the *Journal of the Geographical Society*, vol. xxvii. p. 186.

[8] Theophrast. *Hist. Plant.* ii. 2; p. 53.

[9] Ibid. ii. 7; p. 64.

[10] Ibid. p. 67.

[1] Berosus, Fr. 1, § 2; Herod. i. 193.

[2] Rich, *First Memoir*, p. 26; Heeren, *Asiatic Nations*, vol. ii. p. 158; Ainsworth, *Researches in Assyria, Babylonia, and Chaldæa*, p. 125.

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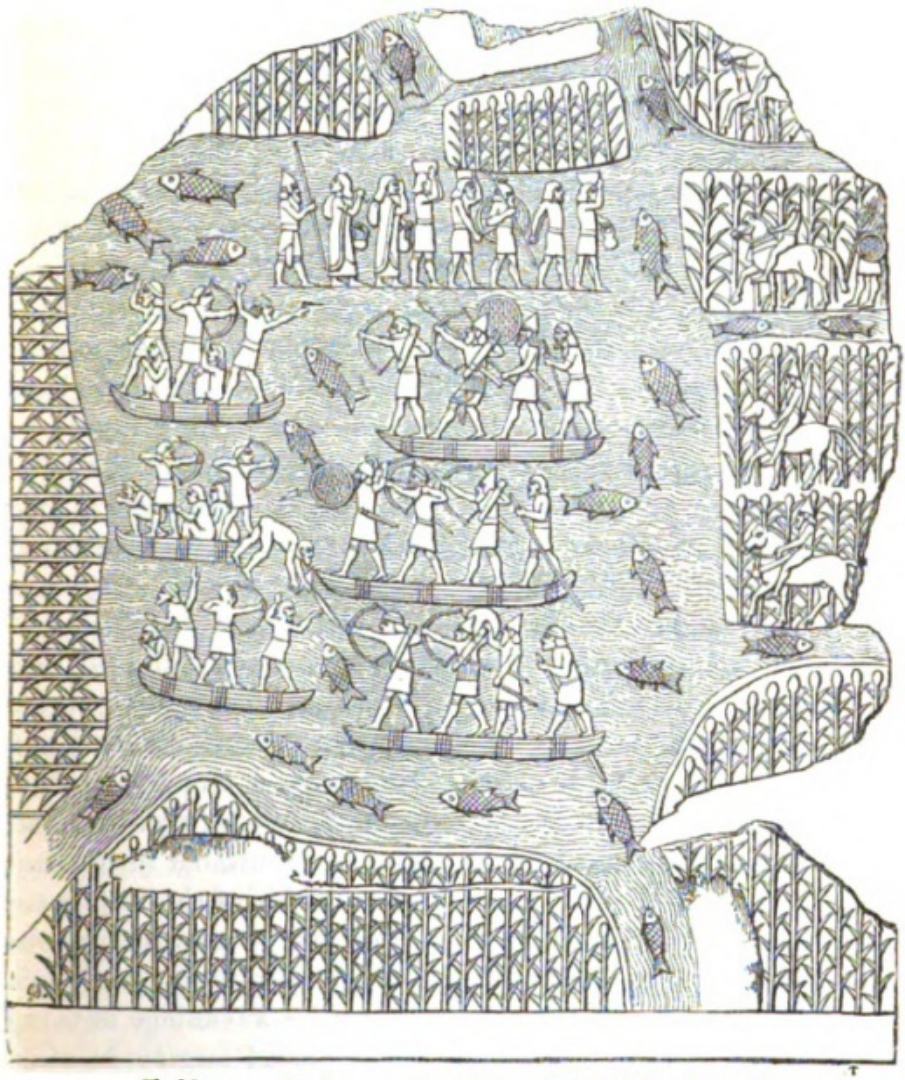
ornament the banks of the streams, generally intermingled with the far more frequent palm, while oranges, apples, pears, and vines are successfully cultivated in the gardens and orchards.



Chaldæan reeds, from an Assyrian sculpture (after Layard).

Among the vegetable products of Chaldæa must be noticed, as almost peculiar to the region, its enormous reeds. These, which are represented with much spirit in the sculptures of Sennacherib, cover the marshes in the summer-time, rising often to

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the height of fourteen or fifteen feet.[3] The Arabs of the marsh region form their houses of this material, binding the stems of the reeds together, and bending them into arches, to make the skeleton of their buildings; while, to form the walls, they stretch across from arch to arch mats made of the leaves. From the same fragile substance they construct their *terradas* or light boats, which, when rendered waterproof by means of bitumen, will support the weight of three or four men.[4]

In mineral products Chaldæa was very deficient indeed. The alluvium is wholly destitute of metals, and even of stone, which must be obtained, if wanted, from the adjacent countries. The neighbouring parts of Arabia could furnish sandstone and the more distant basalt; which appears to have been in fact transported occasionally to the Chaldæan cities.[5] Probably, however, the chief importation of stone was by the rivers, whose waters would readily convey it to almost any part of Chaldæa from the regions above the alluvium. This we know to have been done in some cases;[6] but the evidence of the ruins makes it clear that such importation was very limited. The Chaldæans found, in default of stone, a very tolerable material in their own country; which produced an inexhaustible supply of excellent clay, easily moulded into bricks, and not even requiring to be baked in order to fit it for the builder. Exposure to the heat of the summer sun hardened the clay sufficiently for most purposes, while a few hours in a kiln made it as firm and durable as freestone, or even granite. Chaldæa, again, yielded various substances suitable for mortar. Calcareous earths abound on the western side of the Euphrates towards the Arabian frontier;[7] while everywhere a tenacious slime or mud is easily procurable, which, though imperfect as a cement, can serve the purpose, and has the advantage of being always at hand. Bitumen is also produced largely in some

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[3] Ainsworth, *Researches*, p. 129; Layard, *Nineveh and Babylon*, p. 553. Mr. Loftus says "12 or 14 feet." (*Chaldæa and Susiana*, p. 105.)

[4] Layard, pp. 522-524.

[5] Ibid. p. 528.

[6] Xenophon states that millstones were supplied to Babylon from a place which he calls Pylæ (Felujiah ?), on the middle Euphrates. (*Anab.* i. 5, § 5.)

[7] Rich, *First Memoir*, p. 65.

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parts, particularly at Hit, where are the inexhaustible springs which have made that spot famous in all ages.[8] Naphtha and bitumen are here given forth separately in equal abundance; and these two substances, boiled together in certain proportions, form a third kind of cement, superior to the slime or mud, but inferior to lime-mortar. Petroleum, called by the Orientals *mumia*, is another product of the bitumen-pits.[9]

The wild animals indigenous in Babylonia appear to be chiefly the following:—the lion, the leopard, the hyæna, the lynx, the wild-cat, the wolf, the jackal, the wild-boar, the buffalo, the stag, the gazelle, the jerboa, the fox, the hare, the badger, and the porcupine. The Mesopotamian lion is a noble animal. Taller and larger than a Mount St. Bernard dog, he wanders over the plains their undisputed lord, unless when an European ventures to question his pre-eminence. The Arabs tremble at his approach, and willingly surrender to him the choicest of their flocks and herds. Unless urged by hunger, he seldom attacks man, but contents himself with the destruction of buffaloes, camels, dogs, and sheep. When taken young, he is easily tamed, and then manifests considerable attachment to his master.[1] In his wild state he haunts the marshes and the banks of the various streams and canals, concealing himself during the day, and at night wandering abroad in search of his prey, to obtain which he will approach with boldness to the very skirts of an Arab encampment. His roar is not deep or terrible, but like the cry of a child in pain, or the first wail of the jackal after sunset, only louder, clearer, and more prolonged. Two

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[8] Thothmes III. brought bitumen from Hit to Egypt about B.C. 1400. (See Sir G. Wilkinson's *Historical Notice of Egypt* in the Author's *Herodotus*, vol. ii. p. 360.) Herodotus mentions Hit as the great place for bitumen, about B.C. 450 (Herod. i. 179). Isidore of Charax takes notice of its bitumen-springs, about B.C. 150 (*Mans. Parth.* p. 5). Shortly afterwards its name was made to include a notice of the bitumen; and thus it is called Ihi-da-kira in the Talmud, Idi-cara in Ptolemy, and Dacira by the historians of Julian.—*kier* or *ghier* (قير) being the Arabic term for bitumen.

[9] Rich, *First Memoir*, pp. 63-4.

[1] Mr. Layard gives an amusing account of a tame lion which was given him by Osman Pasha, commandant of Hillah (*Nin. and Bab.* p. 487). Sir H. Rawlinson had a tame lion for some years at Baghdad, which was much attached to him, and finally died at his feet, not suffering the attendants to remove him.

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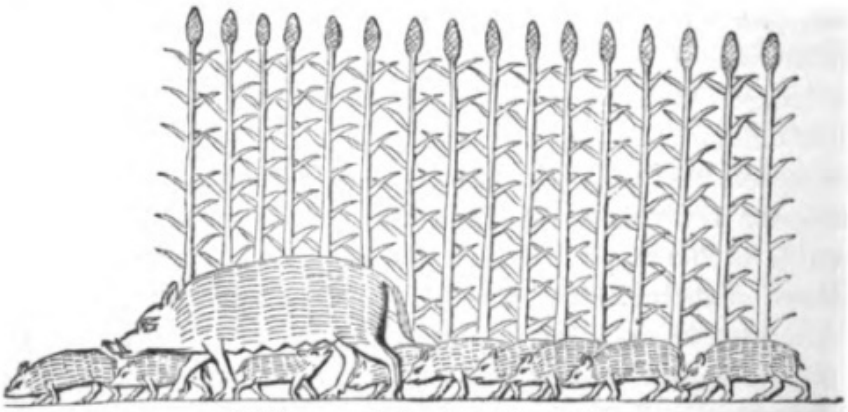
varieties of the lion appear to exist: the one is maneless, while the other has a long mane, which is black and shaggy. The former is now the more common in the country; but the latter, which is the fiercer of the two,[2] is the one ordinarily represented upon the sculptures. The lioness is nearly as much feared as the lion; when her young are attacked, or when she has lost them, she is perhaps even more terrible. Her roar is said to be deeper and far more imposing than that of the male.[3]



Wild-sow and pigs, from Koyunjik.

The other animals require but few remarks. Gazelles are plentiful in the more sandy regions; buffaloes abound in the marshes of the south, where they are domesticated, and form the chief wealth of the inhabitants;[4] troops of jackals are common, while the hyæna and wolf are comparatively rare; the wild-boar frequents the river banks and marshes, as depicted in the Assyrian sculptures; hares abound in the country about Baghdad; porcupines and badgers are found in most places; leopards, lynxes, wild-cats, and deer, are somewhat uncommon.

Chaldæa possesses a great variety of birds. Falcons, vultures, kites, owls, hawks and crows of various kinds, francolins or

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[2] The inhabitants call the maneless lions "true believers," those with manes *ghaours* or "infidels." The former, they say, will spare a Mussulman if he prays, the latter never. (Layard, *Nin. and Bab.* p. 487, note.) A similar distinction, I learn from Sir Gardner Wilkinson, is made at Cairo between the green and the black crocodile.

[3] Loftus, *Chaldæa and Susiana*, p. 259.

[4] Layard, *Nineveh and Babylon*, p. 566.

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black partridges, pelicans, wild-geese, ducks, teal, cranes, herons, kingfishers, and pigeons, are among the most common. The sand-grouse (*Pteroçles arenarius*) is occasionally found, as also are the eagle and the bee-eater. Fish are abundant in the rivers and marshes, principally barbel and carp, which latter grow to a great size in the Euphrates. Barbel form an important element in the food of the Arabs inhabiting the Affej marshes, who take them commonly by means of a fish-spear.[5] In the Shat-el-Arab, which is wholly within the influence of the tides, there is a species of goby, which is amphibious. This fish lies in myriads on the mud-banks left uncovered by the ebb of the tide, and moves with great agility on the approach of birds. Nature seems to have made the goby in one of her most freakish moods. It is equally at home in the earth, the air, and the water; and at different times in the day may be observed swimming in the stream, basking upon the surface of the tidal banks, and burrowing deep in the mud.[6]

The domestic animals are camels, horses, buffaloes, cows and oxen, goats, sheep, and dogs. The most valuable of the last-mentioned are greyhounds, which are employed to course the gazelle and the hare. The camels, horses, and buffaloes are of superior quality; but the cows and oxen seem to be a very inferior breed.[7] The goats and the sheep are small, and yield a scanty supply of a somewhat coarse wool.[8] Still their flocks and herds constitute the chief wealth of the people, who have nearly forsaken the agriculture which anciently gave Chaldæa its pre-eminence, and have relapsed very generally into a nomadic or semi-nomadic condition. The insecurity of property consequent upon bad government has in a great measure caused this change, which renders the bounty of Nature useless, and allows immense capabilities to run to waste. The present condition of Babylonia gives a most imperfect idea of its former state, which must be estimated not from modern statistics, but

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[5] Layard, *Nineveh and Babylon*, p. 567.
[6] Ainsworth, *Researches*, pp. 135, 136; Fraser, *Mesopotamia and Assyria*, p. 373.
[7] Chesney, *Euphrates Expedition*, vol. i. p. 108.
[8] Layard, *Nineveh and Babylon*, p. 566.

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from the accounts of ancient writers and the evidences which the country itself presents. From them we conclude that this region was among the most productive upon the face of the earth, spontaneously producing some of the best gifts of God to man, and capable, under careful management, of being made one continuous garden.

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CHAPTER III

THE PEOPLE.

"A mighty nation, an ancient nation."—JEREM. v. 15.

THAT the great alluvial plain at the mouth of the Euphrates and Tigris was among the countries first occupied by man after the Deluge, is affirmed by Scripture,[1] and generally allowed by writers upon ancient history.[2] Scripture places the original occupation at a time when language had not yet broken up into its different forms, and when, consequently, races, as we now understand the term, can scarcely have existed. It is not, however, into the character of these primeval inhabitants that we have here to inquire, but into the ethnic affinities and characteristics of that race, whatever it was, which first established an important kingdom in the lower part of the plain—a kingdom which eventually became an empire. According to the ordinary theory, this race was Aramaic or Semitic. "The name of Aramæans, Syrians, or Assyrians," says Niebuhr, "comprises the nations extending from the mouth of the Euphrates and Tigris to the Euxine, the river Halys, and Palestine. They applied to themselves the name of Aram, and the Greeks called them Assyrians, which is the same as Syrians (?). Within that great extent of country there existed, of course, various dialectic differences of language; and there can be little doubt but that in some places the nation was mixed with other races."[3] The early inhabitants of Lower Mesopotamia, however, he considers to have been pure Aramæans, closely akin to the Assyrians, from whom, indeed, he regards them as only separate politically.[4]

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[1] Gen. xi. 1-9.

[2] Heeren, *Asiatic Nations*, vol. ii. p. 130; Sir H. Rawlinson, in the *Journal of the Asiatic Society*, vol. xv. p. 232; Vaux, *Nineveh and Persepolis*, p. 6; Chesney, *Euphrates Expedition*, vol. ii. p. 18; Lenormant, *Histoire ancienne de l'Orient*, vol. ii. p. 5; &c.

[3] Niebuhr, *Lectures on Ancient History*, vol. i. p. 12, E. T.

[4] Ibid. p. 11: "We shall begin with the Assyrians; but with *those of Babylon*; not, like Justin, with those of Nineveh."

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Similar views are entertained by most modern writers.[5] Baron Bunsen, in one of his latest works,[6] regards the fact as completely established by the results of recent researches in Babylonia. Professor M. Müller, though expressing himself with more caution, inclines to the same conclusion.[7] Popular works, in the shape of Cyclopædias and short general histories, diffuse the impression. Hence a difficulty is felt with regard to the Scriptural statement concerning the first kingdom in these parts, which is expressly said to have been Cushite or Ethiopian. "And *Cush begat Nimrod:* (he began to be a mighty one in the earth; he was a mighty hunter before the Lord; wherefore it is said, Even as Nimrod, the mighty hunter before the Lord;) and the beginning of his kingdom was Babel, and Erech, and Accad, and Calneh, in the land of Shinar."[8] According to this passage the early Chaldæans should be Hamites, not Semites—Ethiopians, not Aramæans; they should present analogies and points of connexion with the inhabitants of Egypt and Abyssinia, of Southern Arabia and Mekran, not with those of Upper Mesopotamia, Syria, Phœnicia, and Palestine. It will be one of the objects of this chapter to show that the Mosaïcal narrative conveys the exact truth—a truth alike in accordance with the earliest classical traditions, and with the latest results of modern comparative philology.

It will be desirable, however, before proceeding to establish the correctness of these assertions, to examine the grounds on which the opposite belief has been held so long and so confidently. Heeren draws his chief argument from the supposed character of the language. Assuming the form of speech called Chaldee to be the original tongue of the people, he remarks that it is "an Aramæan dialect, differing but slightly from the proper Syriac."[9] Chaldee is known partly from the Jewish Scriptures, in which it is used occasionally,[1] partly from the

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[5] Heeren, *As. Nat.* vol. ii. p. 145; Prichard, *Physical History of Mankind*, vol. iv. p. 568; Kitto, *Biblical Cyclopædia*, vol. i. p. 275.

[6] *Philosophy of Universal History*, vol. i. p. 193.

[7] *Languages of the Seat of War*, pp. 24, 25 (first edition).

[8] Gen. x. 8-10. [9] *As. Nat.* l. s. c.

[1] The portions of the Old Testament written in the so-called Chaldee are Ezra, iv. 8 to vi. 18, and vii. 12-26;

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Targums (or Chaldæan paraphrases of different portions of the Sacred Volume), some of which belong to about the time of the Apostles, and partly from the two Talmuds, or collections of Jewish traditions, made in the third and fifth centuries of our era. It has been commonly regarded as the language of Babylon at the time of the Captivity, which the Jews, as captives, were forced to learn, and which thenceforth took the place of their own tongue. But it is extremely doubtful whether this is a true account of the matter. The Babylonian language of the age of Nebuchadnezzar is found to be far nearer to Hebrew than to Chaldee, which appears therefore to be misnamed, and to represent the western rather than the eastern Aramaic. The Chaldee argument thus falls to the ground; but in refuting it an admission has been made which may be thought to furnish fully as good proof of early Babylonian Semitism as the rejected theory.

It has been said that the Babylonian language in the time of Nebuchadnezzar is found to be far nearer to Hebrew than to Chaldee. It is, in fact, very close indeed to the Hebrew. The Babylonians of that period, although they did not speak the tongue known to modern linguists as Chaldee, did certainly employ a Semitic or Aramæan dialect, and so far may be set down as Semites. And this is the ground upon which such modern philologists as still maintain the Semitic character of the primitive Chaldæans principally rely.[2] But it can be proved, from the inscriptions of the country, that between the date of the first establishment of a Chaldæan kingdom and the reign of Nebuchadnezzar, the language of Lower Mesopotamia underwent an entire change. To whatever causes this may have been owing—a subject which will be hereafter investigated[3]—the fact is certain; and it entirely destroys the force of the argument from the language of the Babylonians at the later period.

Another ground, and that which seems to have had the chief

Daniel, ii. 4 to vii. 28; and Jeremiah, x. 10. There is also a Chaldee gloss in Genesis xxxi. 47.

[2] Bunsen, *Philosophy of Universal History*, pp. 193 and 201; Müller, *Languages*, &c. l. s. c.

[3] See below, ch. iv. pp. 61-69.

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weight with Niebuhr, is the supposed indentity or intimate connexion of the Babylonians with the Assyrians. That the latter people were Semites has never been denied; and, indeed, it is a point supported by such an amount of evidence as renders it quite unassailable. If, therefore, the primitive Babylonians were once proved to be a mere portion of the far greater Assyrian nation, locally and politically, but not ethnically separate from them, their Semitic character would thereupon be fully established. Now that this was the belief of Herodotus must be at once allowed. Not only does that writer regard the later Babylonians as Assyrians—"Assyrians of Babylon," as he expresses it[4]—and look on Babylonia as a mere "district of Assyria,"[5] but, by adopting the mythic genealogy, which made Ninus the son of Belus,[6] he throws back the connexion to the very origin of the two nations, and distinctly pronounces it a connexion of race. But Herodotus is a very weak authority on the *antiquities* of any nation, even his own; and it is not surprising that he should have carried back to a remote period a state of things which he saw existing in his own age. If the later Babylonians were, in manners and customs, in religion and in language, a close counterpart of the Assyrians, he would naturally suppose them descended from the same stock. It is his habit to transfer back to former times the condition of things in his own day. Thus he calls the inhabitants of the Peloponnese before the Dorian invasion "Dorians,"[7] regards Athens as the second city in Greece when Crœsus sent his embassies,[8] and describes as the ancient Persian religion that corrupted form which existed under Artaxerxes Longimanus.[9] He is an excellent authority for what he had himself seen, or for what he had laboriously collected by inquiry from eye-witnesses; but he had neither the critical acumen nor the linguistic knowledge necessary for the formation of a trustworthy opinion on a matter belonging to the remote history of a distant people. And the opinion of Herodotus as to the ethnic identity of the two nations is certainly not confirmed by other

[4] Herod. i. 177. [5] Ibid. ch. 106. [6] Ibid. ch. 7. [7] Ibid. vi. 53.
[8] Ibid. i. 56. [9] Ibid. iii. 16.

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ancient writers. Berosus seems to have very carefully distinguished between the Assyrians and the Babylonians or Chaldæans, as may be seen even through the doubly-distorting medium of Polyhistor and the Armenian Eusebius.[1] Diodorus Siculus made the two nations separate and hostile in very early times.[2] Pliny draws a clear line between the "Chaldæan races," of which Babylon was the head, and the Assyrians of the region above them.[3] Even Herodotus in one place admits a certain amount of ethnic difference; for, in his list of the nations forming the army of Xerxes, he mentions the Chaldæans as serving with, but not included among, the Assyrians.[4]

The grounds, then, upon which the supposed Semitic character of the ancient Chaldæans has been based, fail, one and all; and it remains to consider whether we have data sufficient to justify us in determinately assigning them to any other stock.

Now a large amount of tradition—classical and other—brings Ethiopians into these parts, and connects, more or less distinctly, the early dwellers upon the Persian Gulf with the inhabitants of the Nile valley, especially with those upon its upper course. Homer, speaking of the Ethiopians, says that they were "*divided*," and dwelt "at the ends of earth, towards the setting and the *rising sun*."[5] This passage has been variously apprehended. It has been supposed to mean the mere division of the Ethiopians south of Egypt by the river Nile, whereby some inhabited its eastern and some its western bank.[6] Again, it has been explained as referring to the east and west coasts of Africa, both found by voyagers to be in the possession of Ethiopians, who were "divided" by the vast extent of continent that lay between them.[7] But the most satisfactory explanation is that which Strabo gives from Ephorus,[8] that the Ethiopians were considered as occupying all the south coast both of Asia and Africa, and as "divided" by the Arabian Gulf (which separated the two continents) into eastern and western—Asiatic and

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[1] Euseb. *Chron. Can.* i. 4 and 5; pp. 17-21; ed. Mai.
[2] Diod. Sic. ii. 1, § 7.
[3] Plin. *H. N.* vi. 26. [4] Herod. vii. 63.
[5] Hom. *Od.* i. 23, 24—

Αἰθίοπας, τοὶ διχθὰ δεδαίαται ἔσχατοι ἀνδρῶν,
Οἱ μὲν δυσομένου Ὑπερίονος, οἱ δ' ἀνιόντος.

[6] Strab. i. 2, § 25. [7] Ibid. § 26.
[8] Ibid. §§ 26-31.

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African. This was an "old opinion" of the Greeks, we are told; and, though Strabo thinks it indicated their ignorance, we may perhaps be excused for holding that it might not improbably have arisen from real, though imperfect, knowledge.

The traditions with respect to Memnon serve very closely to connect Egypt and Ethiopia with the country at the head of the Persian Gulf. Memnon, King of Ethiopia, according to Hesiod[9] and Pindar,[1] is regarded by Æschylus as the son of a Cissian woman,[2] and by Herodotus and others as the founder of Susa.[3] He leads an army of combined Susianians and Ethiopians to the assistance of Priam, his father's brother, and, after greatly distinguishing himself, perishes in one of the battles before Troy.[4] At the same time he is claimed as one of their monarchs by the Ethiopians upon the Nile,[5] and identified by the Egyptians with their king, Amunoph III.,[6] whose statue became known as "the vocal Memnon." Sometimes his expedition is supposed to have started from the African Ethiopia, and to have proceeded by way of Egypt to its destination.[7] There were palaces, called "Memnonia," and supposed to have been built by him, both in Egypt and at Susa;[8] and there was a tribe, called Memnones, near Meroë.[9] Memnon thus unites the Eastern with the Western Ethiopians; and the less we regard him as an historical personage, the more must we view him as personifying the ethnic identity of the two races.

The ordinary genealogies containing the name of Belus point in the same direction, and serve more definitely to connect the Babylonians with the Cushites of the Nile. Pherecydes, who is an earlier writer than Herodotus, makes Agenor, the son of Neptune, marry Damno, the daughter of Belus, and have issue Phœnix, Isæa, and Melia, of whom Melia marries Danaus, and

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[9] Hesiod. *Theogon.* 984: "Μέμνονα χαλκοκορυστήν, Αἰθιόπων βασιλῆα."

[1] Pind. *Nem.* iii. 62, 63.

[2] Ap. Strab. xv. 3, § 2.

[3] Herod. v. 54. Compare Strab. l. s. c.; Diod. Sic. ii. 22, § 3.

[4] Diod. Sic. l. s. c.; Pausan. x. 31, § 2; Cephalion ap. Euseb. *Chron. Can.* i. 15, § 5.

[5] Diod. Sic. ii. 22, § 4.

[6] Euseb. *Chron. Can.* ii. p. 278; Syncellus, *Chronograph.* p. 151, C. Compare Strab. xvii. 1, § 42; and Plin. *H. N.* v. 9.

[7] Demetrius ap. Athen. *Deipnosoph.* xv. p. 680, A.

[8] Herod. v. 53; Strab. xv. 3, § 2, xvii. 1, § 42; Diod. Sic. l. s. c.; Plin. *H. N.* l. s. c.

[9] Alex. Polyhist. Fr. 111; Plin. *H. N.* vi. 30.

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Isæa Ægyptus.[1] Apollodorus, the disciple of Eratosthenes, expresses the connection thus:—"Neptune took to wife Libya (or Africa), and had issue Belus and Agenor. Belus married Anchinoë, daughter of Nile, who gave birth to Ægyptus, Danaus, Cepheus, and Phineus. Agenor married Telephassa, and had issue Europa, Cadmus, Phœnix, and Cilix."[2] Eupolemus, who professes to record the Babylonian tradition on the subject, tells us that the first Belus, whom he identifies with Saturn, had two sons, Belus and Canaan. Canaan begat the progenitor of the Phœnicians (Phœnix?); who had two sons, Chum and Mestraïm, the ancestors respectively of the Ethiopians and the Egyptians.[3] Charax of Pergamus spoke of Ægyptus as the son of Belus.[4] John of Antioch agrees with Apollodorus, but makes certain additions. According to him, Neptune and Libya had three children, Agenor, Belus, and Enyalius or Mars. Belus married Sida, and had issue Ægyptus and Danaus; while Agenor married Tyro, and became the father of five children—Cadmus, Phœnix, Syrus, Cilix, and Europa.[5]

Many further proofs might be adduced, were they needed, of the Greek belief in an Asiatic Ethiopia, situated somewhere between Arabia and India, on the shores of the Erythræan Sea. Herodotus twice speaks of the Ethiopians of Asia,[6] whom he very carefully distinguishes from those of Africa, and who can only be sought in this position. Ephorus, as we have already seen, extended the Ethiopians along the whole of the coast washed by the Southern Ocean. Eusebius has preserved a tradition that, in the reign of Amenophis III., a body of Ethiopians migrated from the country about the Indus, and settled in the valley of the Nile.[7] Hesiod and Apollodorus, by making Memnon, the Ethiopian king, son of the Dawn (Ἠώς),[8] imply their belief in an Ethiopia situated to the east rather than to the south of Greece. These are a few out of the manly similar notices which it would be easy to produce from classical

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[1] Pherecyd. Fr. 40.
[2] Apollodor. *Bibliothec.* ii. 1, § 4.
[3] See the Fragments of Polyhistor in Müller's *Fr. Hist. Græc.* vol. iii. p. 212; Fr. 3.
[4] Charax ap. Steph. Byz. s.v. Αἴγυπτος.
[5] Johann. Antiochen. Fr. 6, § 15.
[6] Herod. iii. 94; vii. 70.
[7] Euseb. *Chron. Can.* ii. p. 278.
[8] Hesiod, l. s. c.; Apollod. iii. 12, § 4.

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writers, establishing, if not the fact itself, yet at any rate a full belief in the fact on the part of the best informed among the ancient Greeks.

The traditions of the Armenians are in accordance with those of the Greeks. The Armenian Geography applies the name of Cush, or Ethiopia, to the four great regions, Media, Persia, Susiana or Elymaïs, and Aria, or to the whole territory between the Indus and the Tigris.[9] Moses of Chorene, the great Armenian historian, identifies Belus, King of Babylon, with Nimrod;[1] while at the same time he adopts for him a genealogy only slightly different from that in our present copies of Genesis, making Nimrod the grandson of Cush, and the son of Mizraim.[2] He thus connects, in the closest way, Babylonia, Egypt, and Ethiopia Proper, uniting moreover, by his identification of Nimrod with Belus, the Babylonians of later times, who worshipped Belus as their hero-founder, with the primitive population introduced into the country by Nimrod.

The names of Belus and Cush, thus brought into juxtaposition, have remained attached to some portion or other of the region in question from ancient times to the present day. The tract immediately east of the Tigris was known to the Greeks as Cissia (*Κισσία*) or Cossæa (*Κοσσαία*), no less than as Elymaïs or Elam. The country east of Kerman was named Kusan throughout the Sassanian period.[3] The same region is now Beloochistan, the country of the Belooches or Belús, while adjoining it on the east is Cutch, or Kooch, a term standing to Cush as Belooch stands to Belus. Again, Cissia or Cossæa is now Khuzistan, or the land of Khuz (خوز), a name not very remote from Cush; but perhaps this is only a coincidence.

To the traditions and traces here enumerated must be added, as of primary importance, the Biblical tradition, which is delivered to us very simply and plainly in that precious document the 'Toldoth Beni Noah,' or 'Book of the Generations of the Sons of Noah,' which well deserves to be called "the most

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[9] Mos. Choren. *Geograph.* pp. 363-5.

[1] Mos. Choren. *Hist. Armen.* i. 6; pp. 19, 20.

[2] Ibid. i. 4; p. 12.

[3] *Journal of Asiatic Society*, vol. xv. p. 233.

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authentic record that we possess for the affiliation of nations."[4] "The sons of Ham," we are told, "were Cush, and Mizraim, and Phut, and Canaan. . . . . And Cush begat Nimrod. . . . . And the beginning of his kingdom was Babel, and Erech, and Accad, and Calneh, in the land of Shinar." Here a primitive Babylonian kingdom is assigned to a people distinctly said to have been Cushite by blood,[5] and to have stood in close connexion with Mizraim, or the people of Egypt, Phut, or those of Central Africa, and Canaan, or those of Palestine. It is the simplest and the best interpretation of this passage to understand it as asserting that the four races — the Egyptians, Ethiopians, Libyans, and Canaanites—were ethnically connected, being all descended from Ham; and further, that the primitive people of Babylon were a subdivision of one of these races, namely of the Cushites or Ethiopians, connected in some degree with the Canaanites, Egyptians, and Libyans, but still more closely with the people which dwelt anciently upon the Upper Nile.

The conclusions thus recommended to us by the consentient primitive traditions of so many races, have lately received most important and unexpected confirmation from the results of linguistic research. After the most remarkable of the Mesopotamian mounds had yielded their treasures, and supplied the historical student with numerous and copious documents bearing upon the history of the great Assyrian and Babylonian empires, it was determined to explore Chaldæa Proper, where mounds of less pretension, but still of considerable height,

[4] *Journal of Asiatic Society*, vol. xv. p. 230.

[5] "And Cush *begat* Nimrod," Gen. x. 8. Baron Bunsen says in one work, "Nimrod is called a Cushite, which means a man of the land of Cush" (*Philos. of Univ. Hist.* vol. i. p. 191), and proceeds to argue that he was only a Cushite "geographically," because he, or the people represented by him, sojourned for some time in Ethiopia. In another (*Egypt's Place*, &c., vol. iv. p. 412), he admits that this view contradicts Gen. x. 8, and allows that "the compiler of our present Book of Genesis" must have meant to derive Nimrod by descent from Ham; but this "compiler" was, he thinks, deceived by the resemblance of כוּשׁ to כּוּשׁ. Nimrod was not an Ethiopian, but a Cossian or Cossæan; *i.e.* (he says) a Turanian who conquered Babylon from the mountain country east of Mesopotamia. Of course, if we are at liberty to regard the "compiler" of Genesis as "mistaken" whenever his statements conflict with our theories, while at the same time we ignore linguistic facts, we may speculate upon ancient history and ethnography much at our pleasure.

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marked the sites of a number of ancient cities. The excavations conducted at these places, especially at Niffer, Senkereh, Warka, and Mugheir, were eminently successful. Among their other unexpected results was the discovery, in the most ancient remains, of a new form of speech, differing greatly from the later Babylonian language, and presenting analogies with the early language of Susiana, as well as with that of the second column of the Achæmenian inscriptions. In grammatical structure this ancient tongue resembles dialects of the Turanian family, but its vocabulary has been pronounced to be "decidedly Cushite or Ethiopian;"[6] and the modern languages to which it approaches the nearest are thought to be the Mahra of Southern Arabia and the Galla of Abyssinia. Thus comparative philology appears to confirm the old traditions. An Eastern Ethiopia instead of being the invention of bewildered ignorance,[7] is rather a reality which henceforth it will require a good deal of scepticism to doubt; and the primitive race which bore sway in Chaldæa Proper is with much probability assigned to this ethnic type.

The most striking physical characteristics of the African Ethiopians were their swart complexions, and their crisp or frizzled hair. According to Herodotus the Asiatic Ethiopians were equally dark, but their hair was straight and not frizzled.[8] Probably in neither case was the complexion what we understand by black, but rather a dark red-brown or copper-colour, which is the tint of the modern Gallas and Abyssinians, as well as of the Cha'b and Montefik Arabs and the Belooches. The hair was no doubt abundant; but it was certainly not woolly like that of the negroes. There is a marked distinction between the negro hair and that of the Ethiopian race, which is sometimes straight, sometimes crisp, but never woolly. This distinction is carefully marked in the Egyptian monuments, as is also the

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[6] Sir H. Rawlinson, in the author's *Herodotus*, vol. i. p. 442.

[7] "The Bible mentions but one Kush, Æthiopia; an Asiatic Kush exists only in the imagination of the interpreters, and is the child of their despair." Bunsen, *Philosophy of Univ. Hist.* vol. i. p. 191. See on the other hand Sir H. Rawlinson's article in the *Journal of the Asiatic Society*, vol. xv. art. ii.; and compare especially Ezek. xxxviii. 5.

[8] Herod. vii. 70.

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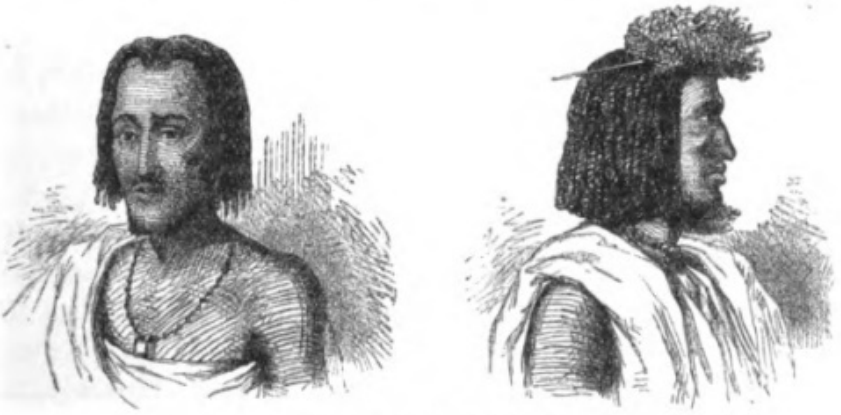
distinction between the Ethiopian and negro complexions; whence we may conclude that there was as much difference between the two races in ancient as in modern times. The African races descended from the Ethiopians are on the whole a handsome rather than an ugly people. Their figure is slender and well shaped; their features are regular, and have some delicacy; the forehead is straight and fairly high; the nose long, straight, and fine, but scarcely so prominent as that of Europeans; the chin is pointed and good. The principal defect is in the mouth, which has lips too thick and full for beauty, though they are not turned out like a negro's.[9] We do not



Ethiopians (after Prichard).

possess any representations of the ancient people which can be distinctly assigned to the early Cushite period. Abundant hair has been noticed in an early tomb;[1] and this in the later Babylonians, who must have been descended in great part from the earlier, was very conspicuous;[2] but otherwise we have as yet no direct evidence with respect to the physical characteristics of the primitive race.[3] That they were brave and warlike, ingenious, energetic, and persevering, we have ample evidence, which will appear in later chapters of this work; but we can do little more than conjecture their physical appearance, which,

[9] See Prichard's *Physical Hist. of Mankind*, vol. ii. p. 44.

[1] Loftus, *Chaldæa and Susiana*, p. 202.

[2] See the Cylinders, *passim;* and compare Herod. i. 195.

[3] Skeletons have been found in abundance, but they have undergone no scientific examination.

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however, we may fairly suppose to have resembled that of other Ethiopian nations.

When the early inhabitants of Chaldæa are pronounced to have belonged to the same race with the dwellers upon the Upper Nile, the question naturally arises, which were the primitive people, and which the colonists? Is the country at the head of the Persian Gulf to be regarded as the original abode of the Cushite race, whence it spread eastward and westward, on the one hand to Susiana, Persia Proper, Carmania, Gedrosia, and India itself; on the other to Arabia and the east coast of Africa? Or are we to suppose that the migration proceeded in one direction only—that the Cushites, having occupied the country immediately to the south of Egypt, sent their colonies along the south coast of Arabia, whence they crept on into the Persian Gulf, occupying Chaldæa and Susiana, and thence spreading into Mekran, Kerman, and the regions bordering upon the Indus? Plausible reasons may be adduced in support of either hypothesis. The situation of Babylonia, and its proximity to that mountain region where man must have first "increased and multiplied" after the Flood, are in favour of its being the original centre from which the other Cushite races were derived. The Biblical genealogy of the sons of Ham points, however, the other way; for it derives Nimrod from Cush, not Cush from Nimrod. Indeed this document seems to follow the Hamites from Africa—emphatically "the land of Ham"[4]—in one line along Southern Arabia to Shinar or Babylonia, in another from Egypt through Canaan into Syria. The antiquity of civilization in the valley of the Nile, which preceded by many centuries that even of primitive Chaldæa, is another argument in favour of the migration having been from west to east; and the monuments and traditions of the Chaldæans themselves have been thought to present some curious indications of an East African origin.[5] On the whole, therefore, it seems most probable that the race designated in Scripture by the hero-founder Nimrod,

[4] Ps. lxxviii. 51; cv. 23, 27; cvi. 22. Egypt is called *Chemi* in the native inscriptions.

[5] See the Essay of Sir H. Rawlinson, in the author's *Herodotus*, vol. i. p. 442, note (1st edition).

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and among the Greeks by the eponym of Belus, passed from East Africa, by way of Arabia, to the valley of the Euphrates, shortly before the opening of the historical period.

Upon the ethnic basis here indicated, there was grafted, it would seem, at a very early period, a second, probably Turanian, element, which very importantly affected the character and composition of the people. The *Burbur*, or *Akkad*, who are found to have been a principal tribe under the early kings, are connected by name, religion, and in some degree by language, with an important people of Armenia, called *Burbur* and *Urarda*, the Alarodians (apparently) of Herodotus.[6] It has been conjectured that this race at a very remote date descended upon the plain country, conquering the original Cushite inhabitants, and by degrees blending with them, though the fusion remained incomplete to the time of Abraham. The language of the early inscriptions, though Cushite in its vocabulary, is Turanian in many points of its grammatical structure, as in its use of post-positions, particles, and pronominal suffixes; and it would seem, therefore, scarcely to admit of a doubt that the Cushites of Lower Babylon must in some way or other have become mixed with a Turanian people. The mode and time of the commixture are matters altogether beyond our knowledge. We can only note the fact as indicated by the phænomena, and form, or abstain from forming, as we please, hypotheses with respect to its accompanying circumstances.

Besides these two main constituents of the Chaldæan race, there is reason to believe that both a Semitic and an Arian element existed in the early population of the country. The subjects of the early kings are continually designated in the inscriptions by the title of *kiprat-arbat*, "the four nations," or *arba lisun*, "the four tongues." In Abraham's time, again, the league of four kings seems correspondent to a fourfold ethnic division, Cushite, Turanian, Semitic, and Arian, the chief authority and ethnic preponderance being with the Cushites.[7]

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[6] See an Essay by the same writer in the fourth volume of the same work, pp. 250-254 (1st edition).

[7] Chedor-lao mer, by his leadership of the Elamites or Susianians, should be a Cushite; Tidal, king of nations, *i.e.* of

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The language also of the early inscriptions is thought to contain traces of Semitic and Arian influence; so that it is at least probable that the "four tongues" intended were not mere local dialects, but distinct languages, the representatives respectively of the four great families of human speech.

It would result from this review of the linguistic facts and other ethnic indications, that the Chaldæans were not a pure, but a very mixed people. Like the Romans in ancient and the English in modern Europe, they were a "colluvio gentium omnium," a union of various races between which there was marked and violent contrast. It is now generally admitted that such races are among those which play the most distinguished part in the world's history, and most vitally affect its progress.

With respect to the name of Chaldæan, under which it has been customary to designate this mixed people, it is curious to find that in the native documents of the early period it does not occur at all. Indeed it first appears in the Assyrian inscriptions of the ninth century before our era, being then used as the name of the dominant race in the country about Babylon. Still, as Berosus, who cannot easily have been ignorant of the ancient appellation of his race, applies the term Chaldæan to the primitive people,[8] and as Scripture assigns Ur to the Chaldees as early as the time of Abraham, we are entitled to assume that this term, whenever it came historically into use, is in fact no unfit designation for the early inhabitants of the country. Perhaps the most probable account of the origin of the word is that it designates properly the inhabitants of the ancient capital, Ur or Hur—*Khaldi* being in the Burbur dialect the exact equivalent of *Hur*, which was the proper name of the Moon God, and Chaldæans being thus either "Moon-worshippers," or simply "inhabitants of the town dedicated to, and called after, the Moon." Like the term "Babylonian," it would at first have designated simply the dwellers in the capital, and would subsequently have been extended to the people generally.

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the wandering tribes, should be a Scyth, or Turanian; Arioch recalls the term "Arian," while Amraphel is a name cast in a Semitic mould. See a note by Sir H. Rawlinson in the first volume of the author's *Herodotus*, vol. i. Essay vi. § 21, note [r] (second edition).

[8] Berosus, Fr. i. §§ 5, 6, 11, &c.

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A different theory has of late years been usually maintained with respect to the Chaldæans. It has been supposed that they were a race entirely distinct from the early Babylonians —Armenians, Arabs, Kurds, or Sclaves—who came down from the north long after the historical period, and settled as the dominant race in the lower Mesopotamian valley.[9] Philological arguments of the weakest and most unsatisfactory character were confidently adduced in support of these views;[1] but they obtained acceptance chiefly on account of certain passages of Scripture, which were thought to imply that the Chaldæans first colonised Babylonia in the seventh or eighth century before Christ. The most important of these passages is in Isaiah. That prophet, in his denunciation of woe upon Tyre, says, according to our translation,—"Behold the land of the Chaldæans; *this people was not*, till the Assyrian founded it for them that dwell in the wilderness; they set up the towers thereof, they raised up the palaces thereof; and he brought it to ruin;"[2] or, according to Bishop Lowth, "Behold the land of the Chaldæans. This people was of no account. (The Assyrians founded it for the inhabitants of the desert, they raised the watch-towers, they set up the palaces thereof.) This people hath reduced her and shall reduce her to ruin." It was argued that we had here a plain declaration that, till a little before Isaiah's time, the Chaldæans had never existed as a nation. Then, it was said, they obtained for the first time fixed habitations from one of the Assyrian kings, who settled them in a city, probably Babylon. Shortly afterwards, following the analogy of so many Eastern races, they suddenly sprang up to power. Here another

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[9] Gesenius, *Comment. in Esaiam*, xxiii. 13, and *Geschichte der Hebr. Sprache*, pp. 63, 64; Heeren, *Asiatic Nations*, vol. ii. p. 147; Niebuhr, *Lectures on Ancient History*, vol. i. p. 20, note; Winer, *Realwörterbuch*, vol. i. p. 218; Kitto, *Biblical Cyclopædia*, vol. i. p. 408, &c. Mr. Vaux (*Dict. of Antiquities*, vol. i. p. 601) with good reason questions the common opinion.

[1] As that Nebuchadnezzar *might* be the Sclavonic sentence *Nebye kad zenur tzar*, or "De cœlo missus dominus,"—that Merodach might be the Persian *mardak*, "homunculus," &c. (See Prichard's *Phys. Hist. of Mankind*, vol. iv. pp. 563, 564.) A more refined argument was that of Gesenius, "that the construction of the names was according, not to Semitic, but to Medo-Persian principles;" but, being based upon pure conjectures as to the possible etymology of the words, it was really worthless.

[2] Isaiah xxiii. 13.

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passage of Scripture was thought to have an important bearing on their history. "Lo! I *raise up* the Chaldæans," says Habakkuk, "that bitter and hasty nation, which shall march through the breadth of the land to possess the dwelling places that are not theirs. They are terrible and dreadful; their judgment and their dignity shall proceed of themselves; their horses also are swifter than the leopards, and are more fierce than the evening wolves: and their horsemen shall spread themselves, and their horsemen shall come from far; they shall fly as an eagle that hasteth to eat; they shall come all for violence; their faces shall nip as the east wind, and they shall gather the captivity as the sand. And they shall scoff at the kings, and the princes shall be a scorn unto them; they shall deride every stronghold; they shall heap dust and take it."[3] The Chaldæans, recent occupants of Lower Mesopotamia, and there only a dominant race, like the Normans in England or the Lombards in North Italy, were, on a sudden, "raised up"—elevated from their low estate of Assyrian colonists to the conquering people which they became under Nebuchadnezzar.

Such was the theory, originally advanced by Gesenius, which, variously modified by other writers, held its ground on the whole as the established view, until the recent cuneiform discoveries. It was, from the first, a theory full of difficulty. The mention of the Chaldæans in Job,[4] and even in Genesis,[5] as a well-known people, was in contradiction to the supposed recent origin of the race. The explanation of the obscure passage in the 23rd chapter of Isaiah, on which the theory was mainly based, was at variance with other clearer passages of the same prophet. Babylon is called by Isaiah the "*daughter* of the Chaldæans,"[6] and is spoken of as an ancient city, long "the glory of kingdoms,"[7] the oppressor of nations, the power that "smote the people in wrath with a continual stroke."[8] She is "the lady of kingdoms,"[9] and "the beauty of the Chaldees' excellency."[1] The Chaldæans are thus in Isaiah, as elsewhere

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[3] Habakkuk i. 6-10.
[4] Job i. 17.
[5] Gen. xi. 28 and 31.
[6] Isaiah xlvii. 1 and 5.
[7] Isaiah xiii. 19.
[8] Ibid. xiv. 6.
[9] Ibid. xlvii. 5.
[1] Ibid. xiii. 19.

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generally in Scripture, the people of Babylonia, the term "Babylonians" not being used by him; Babylon is their chief city, not one which they have conquered and occupied, but their "daughter"—"the beauty of their excellency;" and so all the antiquity and glory which is assigned to Babylon belong necessarily in Isaiah's mind to the Chaldæans. The verse, therefore, in the 23rd chapter, on which so much has been built, can at most refer to some temporary depression of the Chaldæans, which made it a greater disgrace to Tyre that she should be conquered by them. Again, the theory of Gesenius took no account of the native historian, who is (next to Scripture) the best literary authority for the facts of Babylonian history. Berosus not only said nothing of any influx of an alien race into Babylonia shortly before the time of Nebuchadnezzar, but pointedly indentified the Chaldæans of that period with the primitive people of the country. Nor can it be said that he would do this from national vanity, to avoid the confession of a conquest, for he admits no fewer than three conquests of Babylon, a Midian, an Arabian, and an Assyrian.[2] Thus, even apart from the monuments, the theory in question would be untenable. It really originated in linguistic speculations,[3] which turn out to have been altogether mistaken.

The joint authority of Scripture and of Berosus will probably be accepted as sufficient to justify the adoption of a term which, if not strictly correct, is yet familiar to us, and which will conveniently serve to distinguish the primitive monarchy, whose chief seats were in Chaldæa Proper (or the tract immediately bordering upon the Persian Gulf), from the later Babylonian Empire, which had its head-quarters further to the north. The people of this first kingdom will therefore be called Chaldæans, although there is no evidence that they applied the name to themselves, or that it was even known to them in primitive times.

The general character of this remarkable people will best

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[2] Berosus, Fr. 11 and 12.

[3] See Niebuhr, *Lectures on Ancient History*, vol. i. p. 20, note; and Prichard, *Physical History of Mankind*, vol. iv. pp. 563, 564.

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appear from the account, presently to be given, of their manners, their mode of life, their arts, their science, their religion, and their history. It is not convenient to forestal in this place the results of almost all our coming inquiries. Suffice it to observe that, though possessed of not many natural advantages, the Chaldæan people exhibited a fertility of invention, a genius, and an energy which place them high in the scale of nations, and more especially in the list of those descended from a Hamitic stock. For the last 3000 years the world has been mainly indebted for its advancement to the Semitic and Indo-European races; but it was otherwise in the first ages. Egypt and Babylon—Mizraim and Nimrod—both descendants of Ham—led the way, and acted as the pioneers of mankind in the various untrodden fields of art, literature, and science. Alphabetic writing, astronomy, history, chronology, architecture, plastic art, sculpture, navigation, agriculture, textile industry, seem, all of them, to have had their origin in one or other of these two countries. The beginnings may have been often humble enough. We may laugh at the rude picture-writing, the uncouth brick pyramid, the coarse fabric, the homely and ill-shapen instruments, as they present themselves to our notice in the remains of these ancient nations; but they are really worthier of our admiration than of our ridicule. The first inventors of any art are among the greatest benefactors of their race; and the bold step which they take from the unknown to the known, from blank ignorance to discovery, is equal to many steps of subsequent progress. "The commencement," says Aristotle, "is more than half of the whole."[4] This is a sound judgment; and it will be well that we should bear it in mind during the review, on which we are about to enter, of the language, writing, useful and ornamental art, science, and literature of the Chaldæans. "The child is father of the man," both in the individual and the species; and the human race at the present day lies under infinite obligations to the genius and industry of early ages.

[4] Arist. *Eth. Nic.* i. 7, ad fin.

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CHAPTER IV.

LANGUAGE AND WRITING.

"Γράμματα καὶ γλῶσσα Χαλδαίων."—DAN. i. 4. (Sept. vers.)

IT was noted in the preceding chapter that Chaldæa, in the earliest times to which we can go back, seems to have been inhabited by four principal tribes. The early kings are continually represented on the monuments as sovereigns over the *Kiprat-arbat*, or "Four Races." These "Four Races" are called sometimes the *Arba Lisun*, or "Four Tongues," whence we may conclude that they were distinguished from one another, among other differences, by a variety in their forms of speech. The extent and nature of the variety could not, of course, be determined merely from this expression; but the opinion of those who have most closely studied the subject appears to be that the differences were great and marked—the languages in fact belonging to the four great varieties of human speech—the Hamitic, Semitic, Arian, and Turanian.

The language which the early inscriptions have revealed to us is not, of course, composed equally of these four elements. It does, however, contain strong marks of admixture. It is predominantly Cushite in its vocabulary, Turanian in its structure. Its closest analogies are with such dialects as the *Mahra* of Arabia, the *Galla* and *Wolaitsa* of Abyssinia, and the ancient language of Egypt, but in certain cases it more resembles the Turkish, Tatar, and Magyar (Turanian) dialects; while in some it presents Semitic and in others Arian affinities. This will appear sufficiently from the following list:—

Dingir or *Dimir*, "God." Compare Turkish *Tengri*.
Atta, "father." Compare Turkish *atta*. *Etea* is "father" in the Wolaitsa (Abyssinian) dialect.
Sis, "brother." Compare Wolaitsa and Woratta *isha*.

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Tur, "a youth," "a son." Compare the *tur-khan* of the Parthians Turanians), who was the Crown Prince.
E, "a house." Compare ancient Egyptian *é*, and Turkish *ev*.
Ka, "a gate." Compare Turkish *kapi*.
Kharran, "a road." Compare Galla *kara*.
Huru, "a town." Compare Heb. עִיר.
Ar, "a river." Compare Heb. נהר, Arab. *nahr*.
Gabri, "a mountain." Compare Arabic *jabal*.
Ki, "the earth."
Kingi, "a country."
San, "the sun."
Kha, "a fish" (?).
Kurra, "a horse." Compare Arabic *gurra*.
Guski, "gold." Compare Galla *werke*. *Guski* means also "red" and "the evening."
Babar, "silver," "white," "the morning." Compare Agau *ber*, Tigre *burrur*.
Zabar, "copper." Compare Arabic *sifr*.
Hurud, "iron." Compare Arabic *hadid*.
Zakad, "the head." Compare Gonga *toko*.
Kat, "the hand." Compare Gonga *kiso*.
Si, "the eye."
Pi, "the ear." Compare Magyar *fül*.
Gula, "great." Compare Galla *guda*.
Tura, "little." Compare Gonga *tu* and Galla *tina*.
Kelga, "powerful."
Ginn, "first."
Mis, "many." Compare Agau *minch* or *meneh*.
Gar, "to do."
Egir, "after." Compare Hhamara (Abyssinian) *igria*.

The grammar of this language is still but very little known. The conjugations of verbs are said to be very intricate and difficult, a great variety of verbal forms being obtained from the same root, as in Hebrew, by means of preformatives. Number and person in the verbs are marked by suffixes—the third person singular (masculine) by *bi* (compare Gonga *bi*, "he"), or *ani* (compare Galla *enni*, "he"), the third person plural by *bi-nini*.

The accusative case in nouns is marked by a postposition, *ku*, as in Hindustani. The plural of pronouns and substantives is formed sometimes by reduplication. Thus *ni* is "him," while *nini* is "them;" and *Chanaan*, *Yavnan*, *Libnan*, seem to be plural forms from *Chna*, *Yavan*, and *Liban*.

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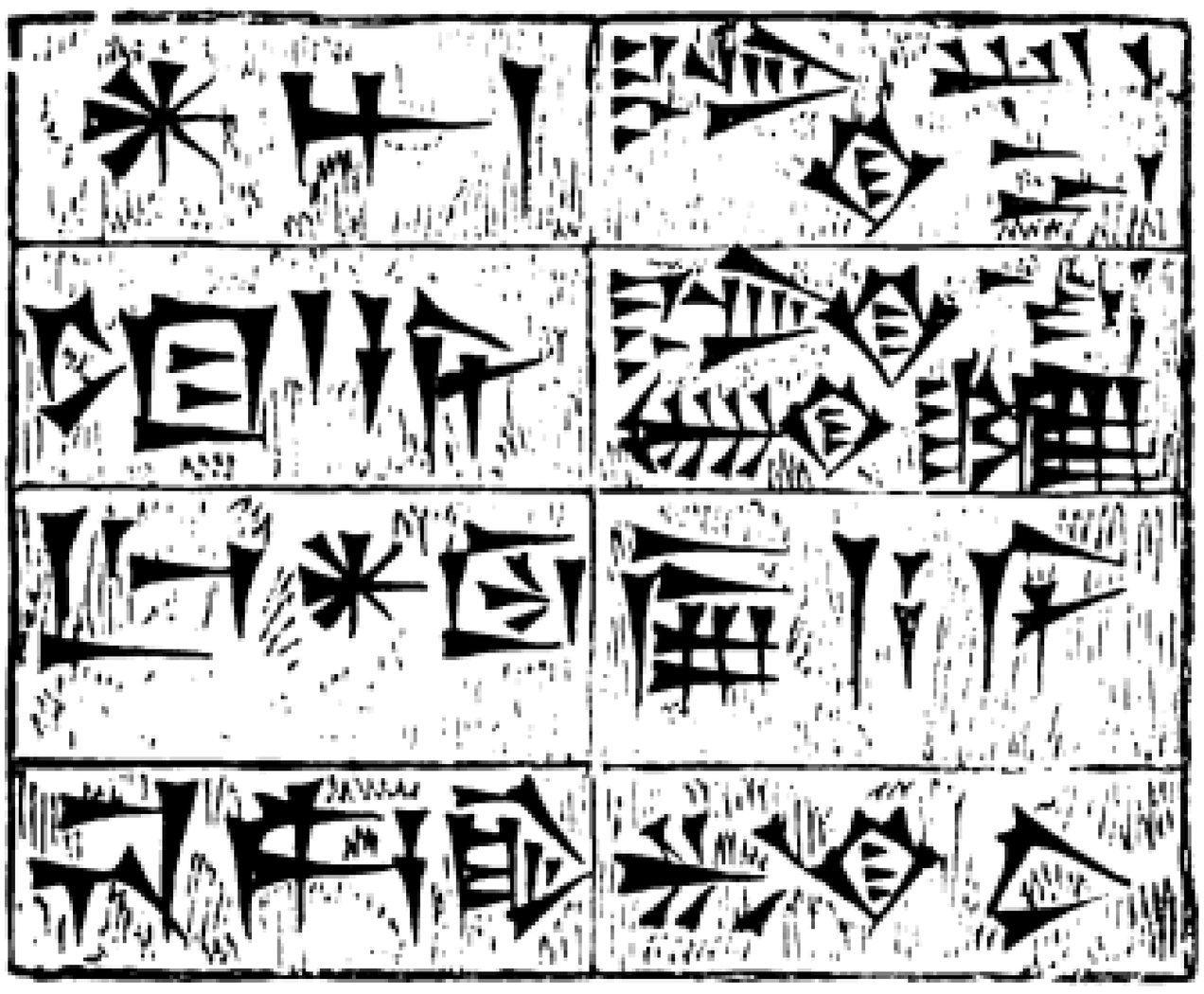
A curious anomaly occurs in the declension of pronouns.[1] When accompanied by the preposition *kita*, "with," there is a *tmesis* of the preposition, and the pronouns are placed between its first and second syllable; e.g. *ni*, "him"—*ki-ni-ta*, "with him." This takes place in every number and person, as the following scheme will show :—

	1st person.	2nd person.	3rd person.
Sing.	*ki-mu-ta* (with me)	*ki-zu-ta* (with thee)	*ki-ni-ta* (with him)
Plur.	*ki-mi-ta* (with us)	*ki-zu-nini-ta* (with you)	*ki-nini-ta* (with them)

N.B.—The formation of the second person plural deserves attention. The word *zu-nini* is, clearly, composed of the two elements, *zu*, "thee," and *nini*, "them"—so that instead of having a word for "you," the Chaldæans employed for it the periphrasis "thee-them"! There is, I believe, no known language which presents a parallel anomaly.

Such are the chief known features of this interesting but difficult form of speech. A specimen may now be given of the mode in which it was written. Among the earliest of the monuments hitherto discovered are a set of bricks bearing the following cuneiform inscription :—



[1] There is, I believe, a near parallel to this peculiarity in the Ostiak. [It has been compared with our own use of such an expression as "to us-ward;" but here "to" and "ward" are really separate prepositions, both having the same meaning, and the phrase is merely pleonastic. There is no reason to believe that *ki* and *ta* have separately the meaning of "with."]

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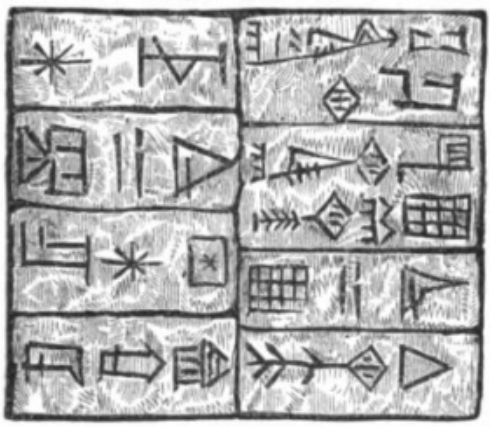
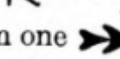
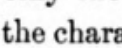
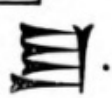
This inscription is explained to mean:—"Beltis, his lady, has caused Urukh (?), the pious chief, King of Hur, and King of the land (?) of the Akkad, to build a temple to her." In the same locality where it occurs,[2] bricks are also found bearing evidently the same inscription, but written in a different manner. Instead of the wedge and arrow-head being the elements of the writing, the whole is formed by straight lines of almost uniform thickness, and the impression seems to have been made by a single stamp.



This mode of writing, which has been called without much reason "the hieratic,"[3] and of which we have but a small number of instances, has confirmed a conjecture, originally suggested by the early cuneiform writing itself, that the characters were at first the pictures of objects. In some cases the pictorial representation is very plain and palpable. For instance, the "determinative" of a god—the sign, that is, which marks that the name of a god is about to follow, in this early rectilinear writing is , an eight-rayed star. The archaic cuneiform keeps closely to this type, merely changing the lines into wedges, thus , while the later cuneiform first unites the oblique wedges in one  , and then omits them as unnecessary, retaining only the perpendicular and the horizontal ones  . Again, the character representing the word "hand" is, in the rectilinear writing , in the archaic cuneiform , in the later cuneiform  . The five lines (after-

[2] The bricks in question were found at Warka, the ancient *Huruk* or Erech. (See Loftus, *Chaldæa and Susiana*, p. 169.)

[3] See Oppert's *Expédition scientifique en Mésopotamie*, tom. ii. p. 62.

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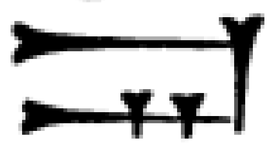
wards reduced to four) clearly represent the thumb and the four fingers. So the character ordinarily representing "a house"  is evidently formed from the original , the ground-plan of a house; and that denoting "the sun" , comes from , through , and , the original being the best representation that straight lines could give of the sun. In the case of *ka*, "a gate," we have not the original design; but we may see posts, bars, and hinges in , the ordinary character.[4]

Another curious example of the pictorial origin of the letters is furnished by the character , which is the French *une*, the feminine of "one." This character may be traced up through several known forms to an original picture, which is thus given on a Koyunjik tablet . It has been conjectured that the object here represented is "a sarcophagus."[5] But the true account seems to be that it is a *double-toothed comb*, a toilet article peculiar to women, and therefore one which might well be taken to express "a woman," or more generally the feminine gender. It is worth notice that the emblem is the very one still in use among the Lurs, in the mountains overhanging Babylonia.[6] And it is further remarkable that the phonetic power of the character here spoken of is *it* (or *yat*)—the ordinary Semitic feminine ending.

The original writing, it would therefore seem, was a picture-writing as rude as that of the Mexicans. Objects were themselves represented, but coarsely and grotesquely—and, which is especially remarkable, without any curved lines. This would

[4] It has been conjectured that the ideograph for "king," which stands as the first character in the first and second compartments of the second column in the inscription given above (p. 63), is derived from a rude drawing of a bee, the Egyptian emblem of sovereignty. (See Ménant, *Briques de Babylone*, p. 20.)

[5] Oppert, tom. ii. p. 66.

[6] See the *Journal of the Geographical Society*, vol. ix. p. 58, where, in speaking of the devices on the tombs of the Lurs, Sir H. Rawlinson notes "the double-toothed comb" as the distinctive mark of the female sex.

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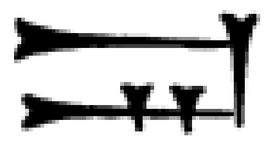
seem to indicate that the system grew up where a hard material, probably stone, was alone used. The cuneiform writing arose when clay took the place of stone as a material. A small tool, with a square or triangular point,[7] impressed, by a series of distinct touches, the outline of the old pictured objects on the soft clay of tablets and bricks. In course of time simplifications took place. The less important wedges were omitted. One stroke took the place of two, or sometimes of three. In this way the old form of objects became, in all but a few cases, very indistinct; while generally it was lost altogether.

Originally each character had, it would seem, the phonetic power of the name borne by the object which it represented. But, as this name was different in the languages of the different tribes inhabiting the country, the same character came often to have several distinct phonetic values. For instance, the character  , representing "a house," had the phonetic values of *é*, *bit*, and *mal*, because those were the words expressive of "a house," among the Hamitic, Semitic, and Arian populations respectively. Again, characters did not always retain their original phonetic powers, but abbreviated them. Thus the character which originally stood for *Assur*, "Assyria," came to have the sound of *as*, that denoting *bil*, "a lord," had in addition the sound of *bi*, and so on. Under these circumstances it is almost impossible to feel any certainty in regard to the phonetic representation of a single line of these old inscriptions. The meaning of each word may be well known; but the articulate sounds which were in the old times attached to them may be matter almost of conjecture.

The Chaldæan characters are of three kinds—letters proper, monograms, and determinatives. With regard to the letters proper, there is nothing particular to remark, except that they have almost always a syllabic force. The monograms represent in a brief way, by a wedge or a group of wedges, an entire word, often of two or three syllables, as Nebo, Babil, Merodach, &c.

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[7] Tools with a triangular point, made in ivory, apparently for employment in cuneiform writing, have been found at Babylon. (See Oppert, tom. ii. p. 63.)

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The determinatives mark that the word which they accompany is a word of a certain class, as a god, a man, a country, a town, &c. These last, it is probable, were not sounded at all when the word was read. They served, in some degree, the purpose of our capital letters in the middle of sentences, but gave more exact notice of the nature of the coming word. Curiously enough, they are retained sometimes, where the word which they accompany has merely its phonetic power, as (generally) when the names of gods form a part of the names of monarchs.

It has been noticed already that the chief material on which the ancient Chaldæans wrote was moist clay, in the two forms of tablets and bricks. On bricks are found only royal inscriptions, having reference to the building in which the bricks were used, commonly designating its purpose, and giving the name and titles of the monarch who erected it.[8] The inscription does not occupy the whole brick, but a square or rectangular space towards its centre. It is in some cases stamped, in some impressed with a tool. The writing—as in all cuneiform inscriptions, excepting those upon seals—is from left to right, and the lines are carefully separated from one another. Some specimens have been already given.[9]

The tablets of the Chaldæans are among the most remarkable of their remains, and will probably one day throw great additional light on the manners and customs, the religion, and even, perhaps, the science and learning, of the people. They are small pieces of clay,[10] somewhat rudely shaped into a form

[8] See above, page 64, where the translation of an inscription is given. Other translations of the brick legends belonging to the same king are the following :—

1. On a brick from *Mugheir* (Ur) :—"Urukh, king of Ur, is he who has built the temple of the Moon-God."

2. On a brick from the same :—"The Moon-God, his lord, has caused Urukh, king of Ur, to build a temple to him, and has caused him to build the enceinte of Ur."

3. On a brick from the same :—"The Moon-God, brother's son (?) of Anu, and eldest son of Belus, his lord, has caused Urukh, the pious chief, king of Ur, to build the temple of *Tsingathu* (?), his holy place."

4. On a brick from *Senkareh* :—"The Sun-God, his lord, has caused Urukh, the pious chief, king of Ur, king of the land (?) of the Akkad, to build a temple to him."

5. On a brick from *Niffer* :—"Urukh, king of Ur, and king of the land (?) of the Akkad, who has built the temple of Belus."

[9] See above, pp. 63, 64.

[10] The size varies from an inch to four or five inches in length, the width being always less. The envelope is of very thin clay, and does not much add to the bulk.

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resembling a pillow, and thickly inscribed with cuneiform characters, which are sometimes accompanied by impressions of the cylindrical seals so common in the museums of Europe. The seals are rolled across the body of the document, as in the accompanying woodcut. Except where these impressions occur, the clay is commonly covered on both sides with minute writing.

Chaldæan tablet (after Layard).

What is most curious, however, is that the documents thus duly attested have in general been enveloped, after they were baked, in a cover of moist clay, upon which their contents have been again inscribed, so as to present externally a duplicate of the writing within; and the tablet in its cover has then been baked afresh. That this was the process employed is evident from the fact that the inner side of the envelope bears a cast, in relief, of the inscription beneath it. Probably the object in view was greater security—that if the external cover became illegible, or was tampered with, there might be a means of proving beyond a doubt what the document actually contained. The tablets in question have in a considerable number of cases been de-

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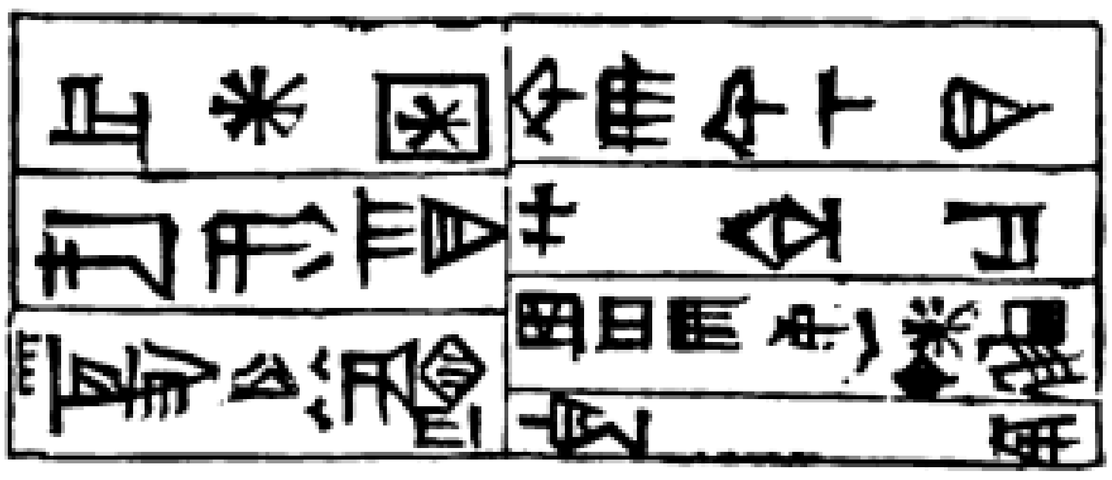
cyphered; they are for the most part deeds, contracts, or engagements entered into by private persons and preserved among the archives of families.

Besides their writings on clay, the Chaldæans were in the habit, from very early times, of engraving inscriptions on gems. The signet cylinder of a very ancient king exhibits that archaic formation of letters which has been already noted as appearing upon some of the earliest bricks. That it belongs to the same period is evident, not only from the resemblance of the literal type,[1] but from the fact that the same king's name appears upon both. This signet inscription—so far as it has been hitherto decyphered—is read as follows:—"The signet of Urukh, the pious chief, king of Ur, ... High-Priest (?) of . . . . Niffer." Another similar relic, belonging to a son of this monarch, has the inscription, "To the manifestation of Nergal, king of Bit-Zida, of Zurgulla, for the saving of the life of Ilgi, the powerful hero, the king of Ur, ... , son of Urukh. . . . . May his name be preserved."[2] A third signet, which belongs to a later king in the series, bears the following legend: "——sin, the powerful chief, the king of Ur, the king of the Kiprat-arbat (or four races) . . . . . his seal." The cylinders, however, of this period are more usually without inscriptions, being often plain,[3] and often engraved with figures, but without a legend.



[1] We have only a representation of this inscription, the cylinder itself being lost. The representation will be found in Sir R. Ker Porter's *Travels*, vol. ii. plate 79, No. 6.

[2] I am indebted for the translation of this legend to Mr. George Smith, of the British Museum.

[3] *As. Soc. Journ.* vol. xv. pp. 272, 273.

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CHAPTER V.

ARTS AND SCIENCES.

"Chaldæi cognitione astrorum sollertiaque ingeniorum antecellunt."
CIC. *de Div.* i. 41.

AMONG the arts which the first Ethiopic settlers on the shores of the Persian Gulf either brought with them from their former homes, or very early invented in their new abode, must undoubtedly have been the two whereby they were especially characterised in the time of their greatest power—architecture and agriculture. Chaldæa is not a country disposing men to nomadic habits. The productive powers of the soil would at once obtrude themselves on the notice of the new comers, and would tempt to cultivation and permanency of residence. If the immigrants came by sea, and settled first in the tract immediately bordering upon the gulf, as seems to have been the notion of Berosus,[1] their earliest abodes may have been of that simple character which can even now be witnessed in the Affej and Montefik marshes—that is to say, reed cabins, supported by the tall stems of the growing plants bent into arches, and walled with mats composed of flags or sedge.[2] Houses of this description last for forty or fifty years,[3] and would satisfy the ideas of a primitive race. When greater permanency began to be required, palm-beams might take the place of the reed supports, and wattles plastered with mud that of the rush mats; in this way

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[1] Berosus, Fr. 1, § 3.

[2] Layard, *Nineveh and Babylon*, pp. 554, 555; Loftus, *Chaldæa and Suriana*, p. 91; *Journal of Geographical Society*, vol. xxvi. p. 137.

[3] "We were conducted to the *muthif* or reception-hut of the chief, which resembled the other habitations of the place, but was of gigantic size, forty feet long and eighteen feet high. It boasted the almost fabulous age for a reed building (if the Arabs might be credited) of no less than half a century, and appeared likely to last as long again." (Loftus, *Chaldæa and Suriana*, p. 92.)

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habitations would soon be produced quite equal to those in which the bulk of mankind reside, even at the present day.

In process of time, however, a fresh want would be felt. Architecture, as has been well observed, has its origin, not in nature only, but in religion.[4] The common worship of God requires temples; and it is soon desired to give to these sacred edifices a grandeur, a dignity, and a permanency corresponding to the nature of the Being worshipped in them. Hence in most countries recourse is had to stone, as the material of greatest strength and durability; and by its means buildings are raised which seem almost to reach the heaven whereof they witness. In Babylonia, as it has been already observed,[5] this material was entirely wanting. Nowhere within the limits of the alluvium was a quarry to be found; and though at no very great distance, on the Arabian border, a coarse sandstone might have been obtained, yet in primitive times, before many canals were made, the difficulty of transporting this weighty substance across the soft and oozy soil of the plain would necessarily have prevented its adoption generally, or, indeed, anywhere, except in the immediate vicinity of the rocky region. Accordingly we find that stone was never adopted in Babylonia as a building material, except to an extremely small extent; and that the natives were forced, in its default, to seek for the grand edifices, which they desired to build, a different substance.

The earliest traditions,[6] and the existing remains of the earliest buildings, alike inform us that the material adopted was brick. An excellent clay is readily procurable in all parts of the alluvium; and this, when merely exposed to the intense heat of an Eastern sun for a sufficient period, or still more when kiln-dried, constitutes a very tolerable substitute for the stone employed by most nations. The baked bricks, even of the earliest times, are still sound and hard; while the sun-dried bricks, though they have often crumbled to dust or blended together in one solid earthen mass, yet sometimes retain their shape and original character almost unchanged, and offer a

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[4] Stieglitz, quoted in Smith's *Dictionary of Greek and Roman Antiquities*, ad voc. ARCHITECTURE. [5] See above, p. 38. [6] Gen. xi. 3.

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stubborn resistance to the excavator.[7] In the most ancient of the Chaldæan edifices we occasionally find, as in the Bowariyeh ruin at Warka,[8] the entire structure composed of the inferior material; but the more ordinary practice is to construct the mass of the building in this way, and then to cover it completely with a facing of burnt brick, which sometimes extends to as much as ten feet in thickness. The burnt brick was thus made to protect the unburnt from the influence of the weather, while labour and fuel were greatly economised by the employment to so large an extent of the natural substance. The size and colour of the bricks vary. The general shape is square, or nearly so, while the thickness is, to modern ideas, disproportionately small; it is not, however, so small as in the bricks of the Romans. The earliest of the baked bricks hitherto discovered in Chaldæa are 11¼ inches square, and 2¼ inches thick,[9] while the Roman are often 15 inches square, and only an inch and a quarter thick.[1] The baked bricks of later date are of larger size than the earlier; they are commonly about 13 inches square, with a thickness of three inches.[2] The best quality of baked brick is of a yellowish-white tint, and very much resembles our Stourbridge or fire brick; another kind, extremely hard, but brittle, is of a blackish blue; a third, the coarsest of all, is slack-dried, and of a pale red. The earliest baked bricks are of this last colour.[3] The sun-dried bricks have even more variety of size than the baked ones. They are sometimes as large as 16 inches square and seven inches thick, sometimes as small as six inches square by two thick.[4] Occasionally, though not very often, bricks are found differing altogether in shape from those above described, being formed for special purposes. Of this kind are the triangular bricks used at the corners of walls, intended to give greater regularity to the angles than would otherwise be attained;[5] and the wedge-shaped bricks,

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[7] *Journal of the Asiatic Society*, vol. xv. pp. 263 and 405.

[8] This ruin is carefully described by Mr. Loftus in his *Chaldæa and Susiana*, pp. 167-170.

[9] *Journal of the Asiatic Society*, vol. xv. p. 261.

[1] Wyttenbach, *Guide to the Roman Antiquities of Treves*, p. 42.

[2] Rich, *First Memoir*, p. 61.

[3] Loftus, p. 130.

[4] *Journal of Asiatic Society*, vol. xv. pp. 263, 264.

[5] Ibid. p. 266.

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formed to be employed in arches, which were known and used by this primitive people.[6]

The modes of applying these materials to building purposes were various. Sometimes the crude and the burnt brick were used in alternate layers, each layer being several feet in thickness;[7] more commonly the crude brick was used (as already noticed) for the internal parts of the building, and a facing of burnt brick protected the whole from the weather. Occasionally the mass of an edifice was composed entirely of crude brick; but in such cases special precautions had to be taken to secure the stability of this comparatively frail material. In the first place, at intervals of four or five feet, a thick layer of reed matting was interposed along the whole extent of the building, which appears to have been intended to protect the earthy mass from disintegration, by its projection beyond the rest of the external surface. The readers of Herodotus are familiar with this feature, which (according to him) occurred in the massive walls whereby Babylon was surrounded.[8] If this was really the case, we may conclude that those walls were not composed of burnt brick, as he imagined, but of the sun-dried material. Reeds were never employed in buildings composed of burnt brick, being useless in such cases; where their impression is found, as not unfrequently happens, on bricks of this kind, the brick has been laid upon reed matting when in a soft state, and afterwards submitted to the action of fire. In edifices of crude brick, the reeds were no doubt of great service, and have enabled some buildings of the kind to endure to the present day. They are very strikingly conspicuous where they occur, since they stripe the whole building with continuous horizontal lines, having at a distance somewhat the effect of the courses of dark marble in an Italian structure of the Byzantine period.

Another characteristic of the edifices in which crude brick is thus largely employed, is the addition externally of solid and massive buttresses of the burnt material. These buttresses have

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[6] Loftus, p. 133; *Journal of Asiatic Society*, l. s. c. The "moulded semicircular bricks" found at Warka (Loftus, p. 175) are probably of the Babylonian, not the Chaldæan, period.

[7] *Journal of the Asiatic Society*, vol. xv. p. 263.

[8] Herod. i. 179.

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sometimes a very considerable projection; they are broad, but not high, extending less than half way up the walls against which they are placed.

Two kinds of cement are used in the early structures. One is a coarse clay or mud, which is sometimes mixed with chopped straw; the other is bitumen. This last is of excellent quality, and the bricks which it unites adhere often so firmly together that they can with difficulty be separated.[9] As a general rule, in the early buildings, the crude brick is laid in mud, while the bitumen is used to cement together the burnt bricks.

These general remarks will receive their best illustration from a detailed description of the principal early edifices which recent researches in Lower Mesopotamia have revealed to us. These are for the most part temples; but in one or two cases the edifice explored is thought to have been a residence, so that the domestic architecture of the period may be regarded as known to us, at least in some degree. The temples most carefully examined hitherto are those at Warka, Mugheir, and Abu-Shahrein, the first of which was explored by Mr. Loftus in 1854, the second by Mr. Taylor in the same year, and the third by the same traveller in 1855.

Bowariyeh.

The Warka ruin is called by the natives Bowariyeh, which signifies "reed mats," in allusion to a peculiarity, already noticed,

[9] Loftus, *Chaldæa and Susiana*, p. 169.

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in its construction. It is at once the most central and the loftiest ruin in the place. At first sight it appears to have been a cone or pyramid; but further examination proves that it was in reality a tower, 200 feet square at the base, built in two stories, the lower story being composed entirely of sun-dried bricks laid in mud, and protected at intervals of four or five feet by layers of reeds, while the upper one was composed of the same material, faced with burnt brick. Of the upper stage very little remains; and this little is of a later date than the inferior story, which bears marks of a very high antiquity. The sun-dried bricks whereof the lower story is composed, are "rudely moulded of very incoherent earth, mixed with fragments of pottery and freshwater shells," and vary in size and shape, being sometimes square, seven inches each way; sometimes oblong, nine inches by seven, and from three to three and a half inches thick.[1] The whole present height of the building is estimated at 100 feet above the level of the plain. Its summit, except where some slight remains of the second story constitute an interruption, is "perfectly flat," and probably continues very much in the condition in which it was when the lower stage was first built. This stage, being built of crude brick, was necessarily weak; it is therefore supported by four massive buttresses of baked brick, each placed exactly in the centre of one of the sides, and carried to about one-third of the height. Each buttress is nineteen feet high, six feet one inch wide, and seven and a half feet in depth; and each is divided down the middle by a receding space, one foot nine inches in width. All the bricks composing the buttresses are inscribed, and are very firmly cemented together with bitumen, in thick layers. The buttresses were entirely hidden under the mass of rubbish which had fallen from the building, chiefly from the upper story, and only became apparent when Mr. Loftus made his excavations.[2]

It is impossible to reconstruct the Bowariyeh ruin from the facts and measurements hitherto supplied to us; even the height

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[1] Loftus, *Chaldæa and Susiana*, p. 168.
[2] See this traveller's account of his labours (*Chaldæa and Susiana*, pp. 167-170).

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of the first story is at present uncertain;[3] and we have no means of so much as conjecturing the height of the second. The exact emplacement of the second upon the first is also doubtful, while the original mode of access is undiscovered; and thus the plan of the building is in many respects still defective. We only know that it was a square; that it had two stories at the least; and that its entire height above the plain considerably exceeded 100 feet.

Mugheir Temple.

The temple at Mugheir has been more accurately examined. On a mound or platform of some size, raised about twenty feet above the level of the plain, there stands a rectangular edifice, consisting at present of two stories, both of them ruined in parts, and buried to a considerable extent in piles of rubbish composed of their *débris*. The angles of the building exactly face the four

[3] The whole building is said to be 100 feet above the surface of the plain; but we are not told what is the height from the plain of the mound or platform upon which the temple stands; nor what height the fragment of the second story attains. All that can be gathered from Mr. Loftus is that the first story was *at least* 46 feet high.

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cardinal points.[4] It is not a square, but a parallelogram, having two longer and two shorter sides. The longer sides front to the north-east and south-west respectively, and measure 198 feet; while the shorter sides, which face the north-west and south-east, measure 133 feet. The present height of the basement story is 27 feet; but, allowing for the concealment of the lower part by the rubbish, and the destruction of the upper part by the hand of time, we may presume that the original height was little, if at all, short of 40 feet. The interior of this story is built of crude or sun-dried bricks of small size, laid in bitumen; but it is faced throughout with a wall, ten feet in thickness, composed of red kiln-dried bricks, likewise cemented with bitumen. This external wall is at once strengthened and diversified to the eye by a number of shallow buttresses or pilasters in the same material; of these there are nine, including the corner ones, on the longer, and six on the shorter sides. The width of the buttresses is eight feet, and their projection a little more than a foot. The walls and buttresses alike slope inwards at an angle of nine degrees. On the north-eastern side of the building there is a staircase nine feet wide, with sides or balustrades three feet wide, which leads up from the platform to the top of the first story. It has also been conjectured that there was a second or grand staircase on the south-east face, equal in width to the second story of the building, and thus occupying nearly the whole breadth of the structure on that side.[5] A number of narrow slits or air-holes are carried through the building from side to side; they penetrate alike the walls and buttresses, and must have tended to preserve the dryness of the structure.

The second story is, like the first, a parallelogram, and not of very different proportions.[6] Its longer sides measure 119 feet, and its shorter ones 75 feet at the base. Its emplacement upon the first story is exact as respects the angles, but not central as regards the four sides. While it is removed from the south-

[4] Loftus, *Chaldæa and Susiana*, p. 128. According to Mr. Loftus, this emplacement "is observable in all edifices (temples ?) of true Chaldæan origin."

[5] Loftus, *Chaldæa and Susiana*, p. 129.

[6] The proportions of the lower stage are almost exactly as 3 to 2. Those of the upper are as $3\frac{1}{10}$ to 2.

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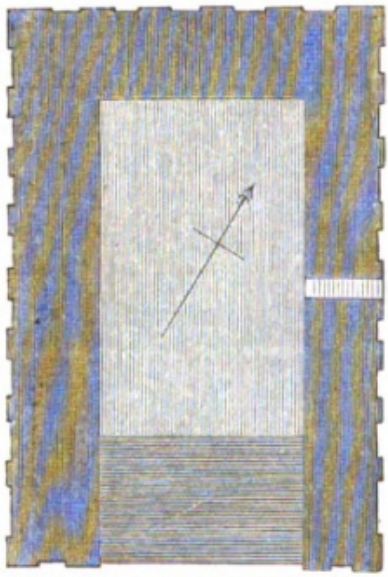
eastern edge a distance of 47 feet, from the north-western it is distant only 30 feet. From the two remaining sides its distance is apparently about 28 feet. The present height of the second story, including the rubbish upon its top, is 19 feet; but we may reasonably suppose that the original height was much greater. The material of which its inner structure is composed, seems to be chiefly (or wholly) partially-burnt brick, of a light red colour, laid in a cement composed of lime and ashes. This central mass is faced with kiln-dried bricks of large size and excellent quality, also laid, except on the north-west face,[7] in lime mortar. No buttresses and no staircase are traceable on this story; though it is possible that on the south-east side the grand staircase may have run the whole height of both stories.



Ground-plan of Mugheir Temple.

According to information received by Mr. Taylor from the Arabs of the vicinity,[8] there existed, less than half a century ago, some remains of a third story, on the summit of the rubbish which now crowns the second. This building is described as a room or chamber, and was probably the actual shrine of the god in whose honour the whole structure was erected. Mr. Taylor discovered a number of bricks or tiles glazed with a blue enamel, and also a number of large copper nails, at such a height in the rubbish which covers up much of the second story, that he thinks they could only have come from this upper chamber. The analogy of later Babylonian buildings, as of the Birs-Nimrud and the temple of Belus at Babylon,[9] confirms this view, and makes it probable that the early Chaldæan temple was

[7] On this side the material used is bitumen. (See Mr. Taylor's article in the *Journal of the Asiatic Society*, vol. xv. p. 261.)

[8] *Journal of the Asiatic Society*, vol. xv. p. 264.

[9] Herod. i. 181.

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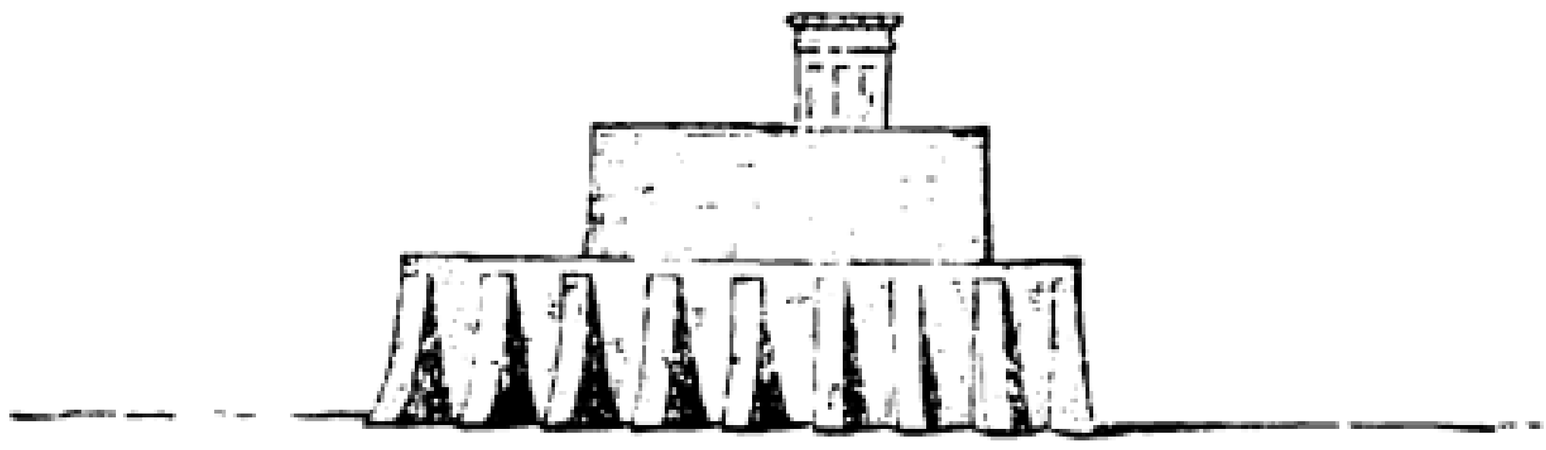
a building in three stages, of which the first and second were solid masses of brickwork, ascended by steps on the outside, while the third was a small house or chamber highly ornamented, containing the image and shrine of the god.



Mugheir Temple restored.

In conclusion, it must be observed that only the lower story of the Mugheir temple exhibits the workmanship of the old or Chaldæan period. Clay cylinders found in the upper story inform us that in its present condition this story is the work of Nabonidus, the last of the Babylonian kings; and most of its bricks bear his stamp. Some, however, have the stamp of the same monarch who built the lower story;[1] and this is sufficient to show that the two stories are a part of the original design, and therefore that the idea of building in stages belongs to the first kingdom and to primitive times. There is no evidence to prove whether the original edifice had, or had not, a third story; since the chamber seen by the Arabs was no doubt a late Babylonian work. The third story of the accompanying sketch must therefore be regarded as conjectural.

It is not necessary for our present purpose to detain the reader with a minute description of the ancient temple at Abu-Shahrein. The general character of this building seems to have very closely resembled that of the Mugheir temple. Its angles fronted the cardinal points; it had two stories, and an ornamented chamber at the top; it was faced with burnt brick, and strengthened by buttresses; and in most other respects followed the type of the Mugheir edifice.[2] Its only very notable peculiarities are the

[1] *Journal of the Asiatic Society*, vol. xv. p. 264, note.

[2] See Mr. Taylor's description in the *Journal of the Asiatic Society*, vol. xv. pp. 405-408.

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partial use of stone in the construction, and the occurrence of a species of pillar, very curiously composed. The artificial platform on which the temple stands is made of beaten clay, cased with a massive wall of sandstone and limestone, in some places twenty feet thick. There is also a stone, or rather marble, staircase which leads up from the platform to the summit of the first story, composed of small polished blocks, twenty-two inches long, thirteen broad, and four and a half thick. The bed of the staircase is made of sun-dried brick, and the marble was fastened to this substratum by copper bolts, some portion of which was found by Mr. Taylor still adhering to the blocks.[3] At the foot of the staircase there appear to have stood two columns, one on either side of it. The construction of these columns is very singular. A circular nucleus composed of sandstone slabs and small cylindrical pieces of marble disposed in alternate layers, was coated externally with coarse lime, mixed with small stones and pebbles, until by means of many successive layers the pillar had attained the desired bulk and thickness. Thus the stone and marble were entirely concealed under a thick coating of plaster; and a smoothness was given to the outer surface which it would have otherwise been difficult to obtain.

The date of the Abu-Shahrein temple is thought to be considerably later than that of the other buildings above described;[4] and the pillars would seem to be a refinement on the simplicity of the earlier times. The use of stone is to be accounted for, not so much by the advance of architectural science, as by the near vicinity of the Arabian hills, from which that material could be readily derived.[5]

It is evident, that if the Chaldæan temples were of the character and construction which we have gathered from their remains, they could have possessed no great architectural beauty, though they may not have lacked a certain grandeur. In the dead level of Babylonia, an elevation even of 100 or 150 feet must have been impressive;[6] and the plain massive-

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[3] *Journal of Asiatic Society*, vol. xv. p. 406, note.

[4] See below, chapter viii. p. 166.

[5] Supra, ch. i. p. 25.

[6] Mr. Loftus says—"I know of nothing more exciting or impressive than

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ness of the structures no doubt added to their grand effect on the beholder. But there was singularly little in the buildings, architecturally viewed, to please the eye or gratify the sense of beauty. No edifices in the world—not even the Pyramids—are more deficient in external ornament. The buttresses and the air-holes, which alone break the flat uniformity of the walls, are intended simply for utility, and can scarcely be said to be much embellishment. If any efforts were made to delight by the ordinary resources of ornamental art, it seems clear that such efforts did not extend to the whole edifice, but were confined to the shrine itself—the actual abode of the god—the chamber which crowned the whole, and was alone, strictly speaking, "the temple."[7] Even here there is no reason to believe that the building had externally much beauty. No fragments of architraves or capitals, no sculptured ornaments of any kind, have been found among the heaps of rubbish in which Chaldæan monuments are three-parts buried. The ornaments which have been actually discovered, are such as suggest the idea of internal rather than external decoration; and they render it probable that such decoration was, at least in some cases, extremely rich. The copper nails and blue enamelled tiles found high up in the Mugheir mound, have been already noticed.[8] At Abu-Shahrein the ground about the basement of the second story was covered with small pieces of agate, alabaster, and marble, finely cut and polished, from half an inch to two inches long, and half an inch (or somewhat less) in breadth, each with a hole drilled through its back, containing often a fragment of a copper bolt. It was also strewn less thickly with small plates of pure gold, and with a number of gold-headed or gilt-headed nails,[9] used apparently to attach the gold plates to the internal plaster or wood-work. These fragments seem to attest the high

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the first sight of one of these great Chaldæan piles, looming in solitary grandeur from the surrounding plains and marshes." (*Chaldæa and Susiana*, p. 113.)

[7] See Herod. i. 181, where the stages (πύργοι) are carefully distinguished from the temple (νηός) at the summit.

[8] See above, p. 78.

[9] *Journal of Asiatic Society*, vol. xv. p. 407.

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ornamentation of the shrine in this instance, which we have no reason to regard as singular or in any way exceptional.

The Chaldæan remains which throw light upon the domestic architecture of the people are few and scanty. A small house was disinterred by Mr. Taylor at Mugheir, and the plan of some chambers was made out at Abu-Shahrein; but these are hitherto the only specimens which can be confidently assigned to the Chaldæan period. The house stood on a platform of sun-dried bricks, paved on the top with burnt bricks. It was built in the form of a cross, but with a good deal of irregularity, every wall being somewhat longer or shorter than the others. The material used in its construction was burnt brick, the outer layer imbedded in bitumen, and the remainder in a cement of mud. Externally the house was ornamented with perpendicular stepped recesses,[1] while internally the bricks had often a thin coating of gypsum or enamel, upon which characters were inscribed. The floors of the chambers were paved with burnt brick, laid in bitumen. Two of the doorways were arched, the arch extending through the whole thickness of the walls; it was semicircular, and was constructed with bricks made wedge-shaped for the purpose. A good deal of charred date-wood was found in the house, probably the remains of rafters which had supported the roof.[2]

Terra cotta cone. Actual size.

The chambers at Abu-Shahrein were of sun-dried brick, with an internal covering of fine plaster, ornamented with paint. In one the ornamentation consisted of a series of red, black, and white bands, three inches

[1] Loftus, *Chaldæa and Susiana*, p. 133. [2] *Journal of As. Soc.* vol. xv. pp. 265, 266.

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in breadth; in another was represented, but very rudely, the figure of a man holding a bird on his wrist, with a smaller

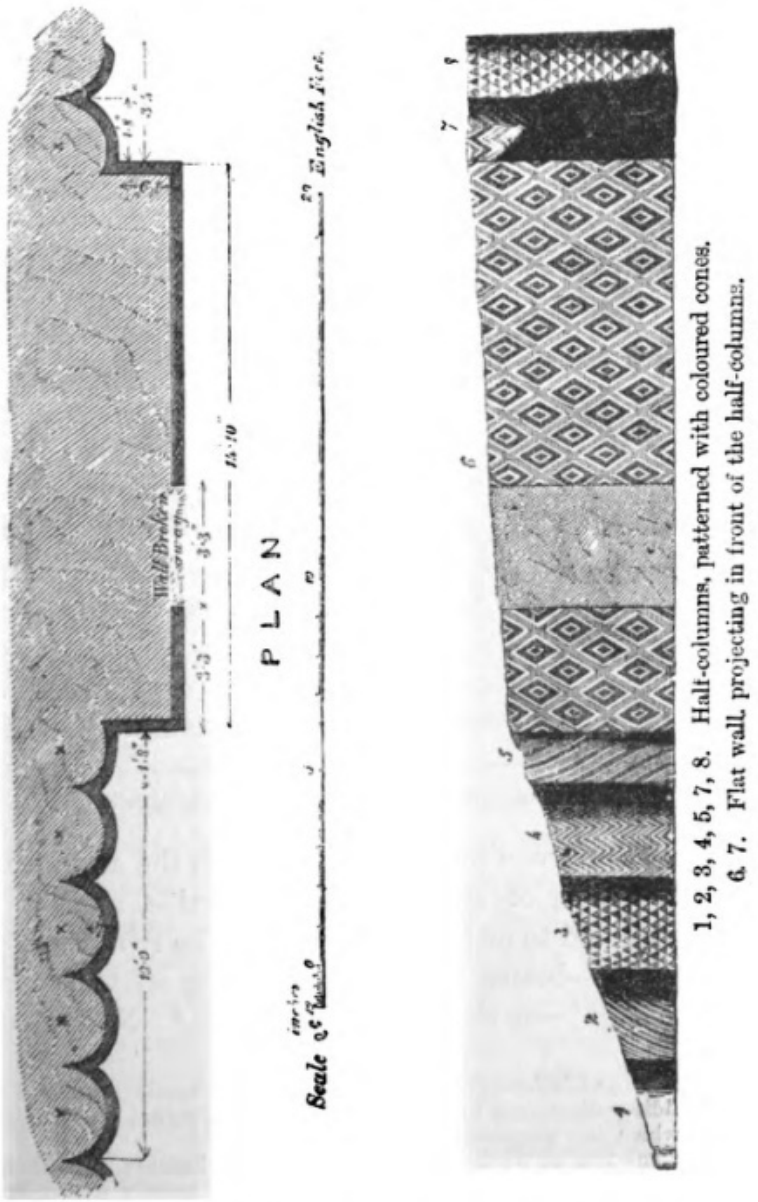

figure near him, in red paint. The favourite external ornamentation for houses seems to have been by means of coloured

[1] *Journal of Asiatic Society*, vol. xv. pp. 408, 410.

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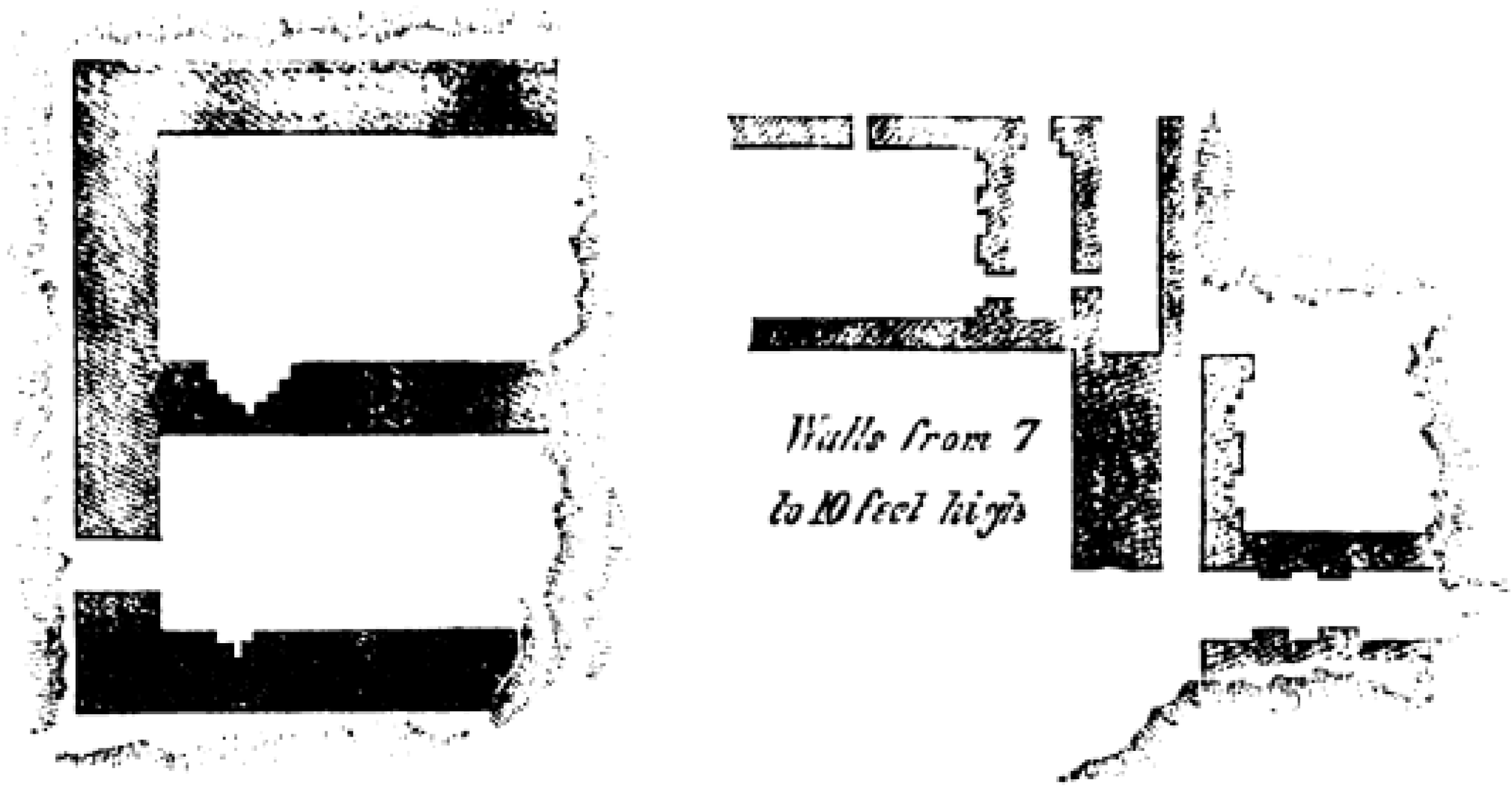
cones in terra cotta, which were imbedded in moist mud or plaster, and arranged into a variety of patterns.[4]

But little can be said as to the plan on which houses were built. The walls were generally of vast thickness, the chambers long and narrow, with the outer doors opening directly into them. The rooms ordinarily led into one another, passages being rarely found. Squared recesses, sometimes stepped or



Ground-plan of chambers excavated at Abu-Shahrein.

dentated, were common in the rooms; and in the arrangement of these something of symmetry is observable, as they frequently correspond to or face each other. The roofs were probably either flat—beams of palm-wood being stretched across from wall to wall[5]—or else arched with brick.[6] No indication

[4] Loftus, *Chaldæa and Susiana*, pp. 188, 189. The building discovered by Mr. Loftus (from which the representation on p. 83 is taken) was at Warka, and therefore might perhaps not be *Chaldæan*. The vast number of similar cones, however, which occur at Abu-Shahrein (*Journal of As. Soc.* vol. xv. p. 411) and other purely Chaldæan ruins, sufficiently indicate the style of ornamentation to belong to the first empire.

[5] Mr. Taylor found remnants of these at Mugheir. (*Journal of As. Soc.* vol. xv. p. 266.)

[6] Mr. Loftus believes that Chaldæan buildings were usually roofed in this way. (*Chaldæa and Susiana*, pp. 182, 183.) Mr. Taylor also believes that some of the chambers which he excavated must have been domed. (*Journal of As. Soc.* vol. xv. p. 411.)

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of windows has been found as yet; but still it is thought that the chambers were lighted by them,[7] only they were placed high, near the ceiling or roof, and thus do not appear in the existing ruins, which consist merely of the lower portion of walls, seldom exceeding the height of seven or eight feet. The doorways, both outer and inner, are towards the sides rather than in the centre of the apartments—a feature common to Chaldæan with Assyrian buildings.

Next to their edifices, the most remarkable of the remains which the Chaldæans have left to after-ages, are their burial-places. While ancient tombs are of very rare occurrence in Assyria and Upper Babylonia, Chaldæa Proper abounds with them. It has been conjectured, with some show of reason, that the Assyrians, in the time of their power, may have made the sacred land of Chaldæa the general depository of their dead,[8] much in the same way as the Persians even now use Kerbela and Nedjif or Meshed Ali as special cemetery cities, to which thousands of corpses are brought annually.[9] At any rate, the quantity of human relics accumulated upon certain Chaldæan sites is enormous, and seems to be quite beyond what the mere population of the surrounding district could furnish. At Warka, for instance, excepting the triangular space between the three principal ruins, the whole remainder of the platform, the whole space within the walls, and an unknown extent of desert beyond them, are everywhere filled with human bones and sepulchres.[1] In places coffins are piled upon coffins, certainly to the depth of 30, probably to the depth of 60 feet; and for miles on every side of the ruins the traveller walks upon a soil teeming with the relics of ancient, and now probably extinct, races. Sometimes these relics manifestly belong to a number of distinct and widely separate eras; but there are places where it is otherwise. However we may account for it—and no account has been yet given which is altogether satisfactory—it seems clear, from the comparative homogeneousness of the remains in some places, that they belong to a single race, and if not to a single period,

[7] Loftus, p. 182. [8] Ibid. p. 199. [9] Ibid. pp. 54 and 65. [1] Ibid. p. 190.

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