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THE EVOLUTION OF THE MINARET

WITH SPECIAL REFERENCE TO EGYPT

By K. A. C. CRESWELL

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AN BERCHEM has justly remarked¹ that in a discussion of this question there are three aspects of the problem to be considered: (1) the functional (i.e., as a religious custom), (2) the architectural, and (3) the philological. We shall consider the last point first.

ORIGIN OF THE ARABIC TERMS EMPLOYED.—Three words have been employed to denote minarets: *mi'dhana* or *mīdhana*, *sauma'a*, and *manāra*. The first, properly pronounced *ma'dhana*, is derived from *adhān*, the call to prayer, and simply means the place where the *adhān* is pronounced.² *Sauma'a* appears to have been the name given by the Arabs to hermits' towers.³ For example, we read that the tower of the Church of John the Baptist at Damascus was occupied by a monk, who at first refused to leave when the Khalif al-Walīd commenced to demolish it, preparatory to building the Great Mosque⁴; and Ibn Jubayr speaks of a Moslem recluse who occupied the western minaret of the same mosque at the time of his visit.⁵ The word used in each case is *sauma'a*. All Syrian towers before the thirteenth century were square, and in this connexion it is specially interesting to find that this word is the term employed throughout North Africa, where the minarets are nearly always of this type.⁶

The third term, *manāra*, originally can only have meant "an object that gives light," and as such is used in Arab poetry for the oil-lamp or rush-light in the cell of the Christian monk.⁷ For the same reason it came to be applied to the Pharos⁸ and to light-houses generally,⁹ and then to mosque towers, our word "minaret" being merely a corruption of it.

THE EARLIEST MOSQUES LACKED MINARETS.—In the time of Muhammad no such thing as a

¹ In Diez, *Churasanische Baudenkmäler*, p. 133.

² Gottheil, *The Origin and History of the Minaret*, in the *Journ. Amer. Oriental Soc.*, Vol. XXX, p. 133.

³ Fraenkel, *Aramäische Fremdwörter im Arabischen*, pp. 269-271; and Gottheil, *loc. cit.*, pp. 136-137.

⁴ 'Ilmawī, Sauvaire's transl., in the *Journal Asiatique*, 9me série, t. VII. p. 189; and Ibn Shakīr, in Quatremère, *Sultans Mamlouks*, II (1), p. 264.

⁵ Quoted by Gottheil, *loc. cit.*, p. 137.

⁶ Doutté, in the *Revue Africaine*, 1899, p. 399 ff.; and Marçais, *Les Monuments arabes de Tlemcen*, p. 45.

⁷ Wellhausen, *Skizzen*, III, p. 200 f., quoted by Schwally in the *Z.D.M.G.*, LII, p. 146.

⁸ By Ibn Khordadbeh (849-885), Ya'qūbī (891), Ibn al-Faqīh (c. 903), Ibn Rosteh (c. 903), etc. See the collection of texts in Thiersch, *Pharos*, p. 40 ff.

⁹ For example, Muqaddasī (985) says that the coast of Palestine was provided with guard-houses (*ribāt*) garrisoned with levies, and that the war galleys of the Greeks used to come to these places, bringing prisoners of war for ransom; that whenever such a ship appeared the alarm was given by lighting the fire signal (*manāra*) of the *ribāt*, if it were night, etc. Muqaddasī, p. 117; Ranking's transl., p. 291; *Le Strange, Palestine under the Moslems*, p. 23; also quoted by Hartmann in *Memnon*, III, p. 220 f., and in his *Zum Thema; Minaret und Leuchtturm*, in *Der Islam*, I, pp. 388-390. See also Reitemeyer, *Beschreibung Ägyptens*, p. 109 n.; Gottheil, *loc. cit.*, pp. 132-133; and Van Berchem, in Diez, *Churasanische Baudenkmäler*, p. 113.

minaret was known. He and his followers, when they first came to Madina, prayed, according to Ibn Hishām, without any preliminary *adhān* or call to prayer¹⁰; but having heard that the Jews used a horn, and the Christians a *nāqūs*¹¹ or clapper (the so-called *ἄγρια ξύλα* or *σήμεντρον* a long, thin piece of wood struck with a flexible *wabīl*), they wanted something equivalent for their own use. The idea of calling to prayer is said, according to some traditions, to have been suggested to the Prophet by 'Umar, who found, when he communicated the decision, that he had just been anticipated by the Angel Gabriel.¹² Another tradition has it that 'Abdallah, son of Ziyād, had it revealed to him in a dream and informed the Prophet, who adopted it.¹³ Muhammad, therefore, ordered Bilāl, who was his herald, and who thus became the first mu'adhhdhin, to give the call to prayer.¹⁴ He was accustomed to pronounce it from the highest roof in the neighbourhood of the mosque,¹⁵ which was merely the courtyard of Muhammad's house.

The first mosque at Kufa and the first mosque at Basra were both built in the year 17 H. (638), but nothing is said about a minaret. At Fustāt, likewise, the first mosque of 'Amr had no minaret, and, in the time of the Umayyads, the poet al-Farazdaq speaks of the *adhān* as being chanted on the wall of every city.¹⁶

At Damascus the great *temenos*, which is now the Great Umayyad Mosque, had four square towers of no great height, one at each corner. These towers no doubt became the first minarets, as Ibn al-Faqīh (903) calls them minarets (*ma'dhana*), although he knew that they were older than Islam.¹⁷

The *nāqūs* until 53 H. (673) was used for the early morning call to prayer at Fustāt,¹⁸ but in that year the Khalif Mu'awiya ordered Maslama, Governor of Egypt, to enlarge the Mosque of 'Amr and "to build *sawāmi'* (pl. of *sauma'a*) for the *adhān*. So Maslama con-

¹⁰ Wüstenfeld's ed., p. 347; quoted by Gottheil, *loc. cit.*, pp. 133-134. Many traditions to the same effect are to be found in the *Musnad* of Ibn Hanbal (d. A.D. 855). See Caetani, *Amali dell' Islam*, IV, p. 208.

¹¹ The Aramaic *nākōsha*, still in use among the Nestorians.

¹² *Musnad*, quoted by Margoliouth, *Mohammed and the Rise of Islam*, p. 218.

¹³ *Musnad*, IV, p. 43; quoted by Margoliouth, *op. cit.*, p. 222.

¹⁴ Gottheil, *loc. cit.*, p. 134. See also Margoliouth, *op. cit.*, p. 222.

¹⁵ Ibn Hishām, p. 347, 1, 3 ff.; and Bukhārī, *Sahih*, I, p. 75; quoted by Schwally in the *Z.D.M.G.*, LII, p. 143; also an-Nawawī, quoted by Gottheil, *loc. cit.*, p. 134.

¹⁶ Quoted by Gottheil, *loc. cit.*, p. 135. Al-Farazdaq was born about 20 H. (640/1) and probably died in 114 (732/3). Having spent part of his life in Irāq, his remark presumably applies to Mesopotamia as well as Syria. That the first mosques were without minarets was recognized long ago by Lane, *Modern Egyptians* (1860 ed.), p. 584.

¹⁷ He says they "were originally watch-towers in the Greek days."

¹⁸ Maqrīzī, *Khitat*, II, p. 246.

structed four *sawāmi'* for the mosque at its four corners. He was the first one to construct them in it; there having been none before his time . . . the ladder (*sullam*), by means of which the muezzins mounted, was in the street until Khālīd ibn Sa'īd transported it inside the mosque."¹⁹ Similar places for the muezzins were added to the *masjids* of all the *khittats*, except those of Khaulan and Tujib, which, being near the mosques, did not need them.²⁰ Corbet says: "It is difficult to say what the exact form of these may have been. The name *sawāmi'*, given them by our authority (*Maqrīzī*), is neither of the words ordinarily in use for minaret. In all likelihood they were but something like sentry-boxes, perched on the roof at each corner; the germ of the future graceful sky-pointing minaret."²¹

The idea of having four places for the call to prayer constructed—one at each corner of the mosque—may have been suggested by the four towers at the corners of the *temenos* at Damascus, a possibility which is rendered still more probable by the fact that the Khalif who gave the order ruled from that city.²² A later Umayyad Khalif, al-Walīd, when he enlarged the mosque at Madina, endowed it also with a minaret at each corner.²³ Nor is it surprising to find that the Haram Area at Jerusalem had the same number—at least as early as 300 (913)²⁴—although it is scarcely probable that there

¹⁹ *Ibid.*; Lane, *Modern Egyptians* (1860), p. 584; Corbet, *History of the Mosque of Amr*, in the *J.R.A.S.*, 1890, pp. 771-772; and Butler, *Arab Conquest*, p. 343. Also *Abū l-Mahāsīn*, I, p. 77; Schwally, *Z.D.M.G.*, LII, p. 114; and Guest, in the *J.R.A.S.*, 1920, p. 632.

²⁰ Maqrīzī, *op. cit.*, I, p. 301, l. 20; Casanova's transl., III, p. 163; and Qalqashāndī, Wüstenfeld's transl., p. 62.

²¹ *Loc. cit.*, p. 722. See also Gottheil, *loc. cit.*, p. 138.

²² It is amusing to find Rivoira (*Moslem Architecture*, p. 92) putting the cart before the horse: "Walīd's mosque had four minarets placed at the angles of the outer wall. Two of them are the south-east and south-west corner towers of the original Christian building, the lowest parts of which still survive, and upon which Walīd built. The other two stand at the interior north-east and north-west angles, and were built by him. This arrangement was derived from the four corner turrets erected in 673, under Muawiyā's orders, in the mosque of Amr at Fustat." The italics are mine. No author makes any such statement—on the contrary, they attribute them to the days before Islam—and the Moslems did not even build on them, as they did on the other two.

²³ Ibn Batūta (ed. and transl. by Defrémery and Sanguinetti), I, p. 272. Apparently the mosque had been without minarets till then. Samhūdī, p. 141, l. 15, quoted by Schwally, *Z.D.M.G.*, LII, p. 143.

²⁴ Ibn 'Abd Rabīh, in Le Strange, *Palestine under the Moslems*, p. 163. This early authority has apparently been overlooked by Gottheil (*loc. cit.*, p. 138), as he states that Mujir ad-Dīn seems to be the first author to mention them. Ibn 'Abd Rabīh (c. 913) being an earlier authority than Muqaddasī (985), the silence of the latter, noted by Rivoira (*op. cit.*, p. 23), is without significance. The four he enumerates occupy the same position as those seen to-day, viz., one at the south-west corner, one at the north-west corner, one on the west side (i.e., three in a line), and one on the north side. This unusual arrangement is to be explained by the position of the Haram Area on the edge of the city. None of the present minarets is older than the fourteenth century.

were four in the time of 'Abd al-Malik, as stated by Mujir ad-Dīn.²⁵

Ramla was founded by Sulaymān at the order of his brother, the Khalif al-Walīd, in the latter's lifetime. Balādhurī says that Sulaymān built a palace (*qasr*) and began the building of the mosque, but succeeded to the Khalifate before it was completed (i.e., before

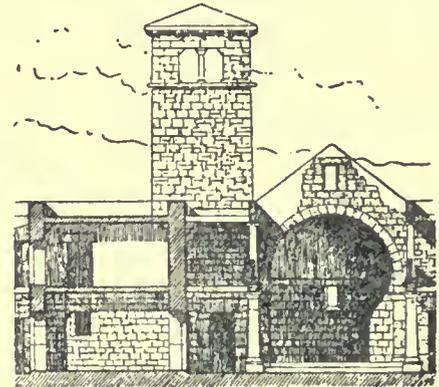


FIG. 1. CHURCH OF SS. SERGIUS AND BACCHUS, UMM AS-SURAB. [From Butler, *op. cit.*]

96 H. = 715), and that 'Umar ibn 'Abd al-'Azīz (99-101 H. = 717-720) finished it.²⁶ This gives 101 H. (720) as a limiting date for its minaret. Muqaddasī, however, who wrote a century later than Balādhurī, in his account of this mosque, known as the White Mosque, which he visited and admired, says that it was built by the Khalif Hishām (105-125 H. = 724-743). He mentions the minaret,²⁷ and although he does not describe it, we may confidently say that it was a square tower, as in another part of his book he expressly remarks, as one of the customs peculiar to Syria, that all the minarets were square.²⁸

That it should be so was quite natural, for the typical Syrian church tower of pre-Muslim times was of this type,²⁹ as may be seen from a number which have been preserved to the present day, of which the following typical examples may be cited:

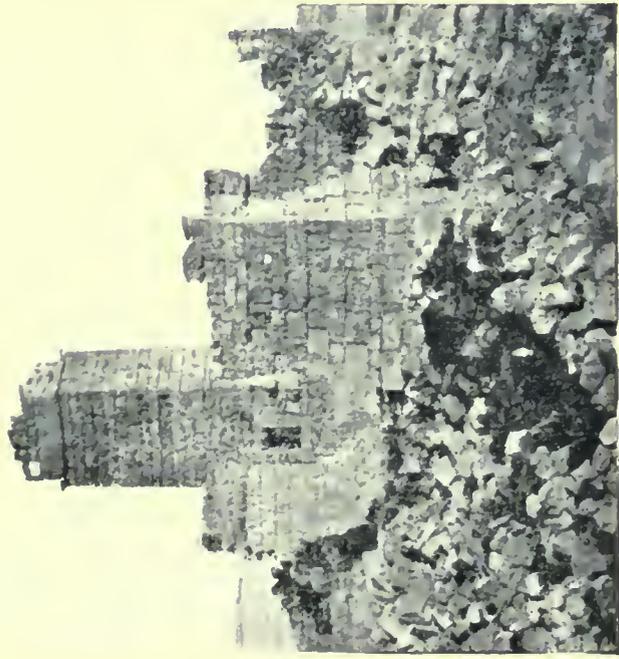
²⁵ p. 379; Sauvaire's transl., p. 125. Mujir ad-Dīn is a late compiler (wrote 1496), who must be used with caution when early dates are involved.

²⁶ p. 143; Hitti's transl., p. 220; Le Strange, *op. cit.*, p. 303.

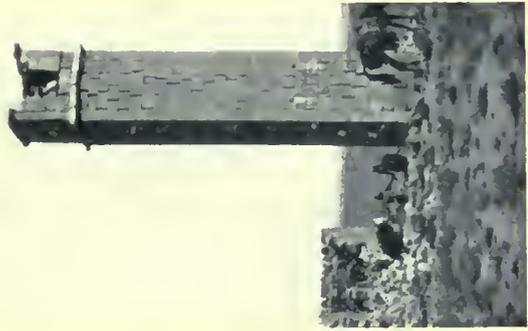
²⁷ p. 165; Ranking's transl., p. 271; Le Strange, *op. cit.*, p. 305. This mosque was a heap of ruins when Nāsir-i-Khusrau visited it in 1047, as a result of the earthquake of 1033. See Schefer's transl., p. 64.

²⁸ p. 182; Ranking's transl., p. 299; Le Strange, *op. cit.*, p. 21.

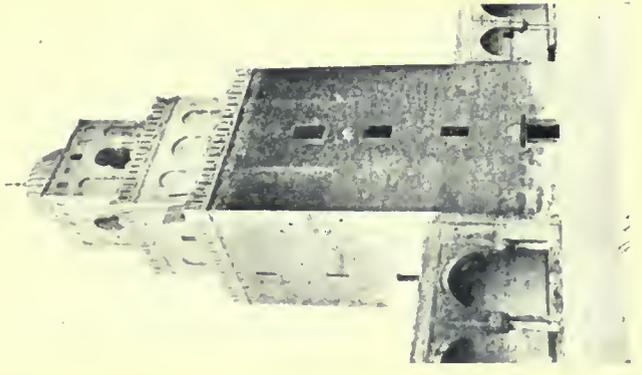
²⁹ It must not be supposed, however, that these towers contained bells, since there is no reason for believing that bells were used in churches at this time; but they may have contained their forerunner, the *σημαντήριον*, or *semanterium*, mentioned above, hence the name *σημαντήριον* under which they are known in early Christian literature. See Butler (H. C.), *Architecture and Other Arts*, p. 102; Thiersch, *Pharos*, p. 100; Hartmann, in *Memnon*, III, p. 220 f.; and in *Der Islam*, I, p. 388.



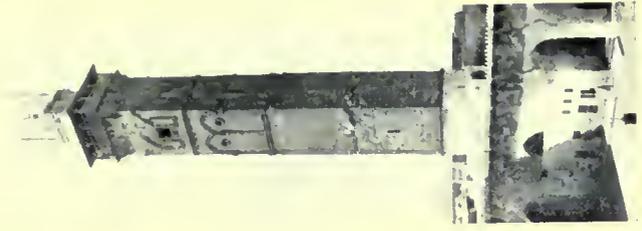
A—Monastery of St. George, Sameh
[From Butler, *op. cit.*]



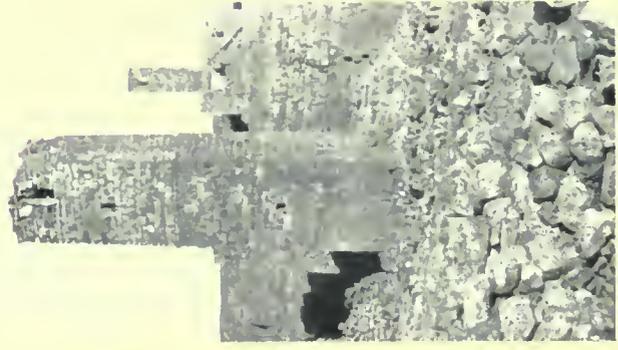
B—Umm ar-Rasās



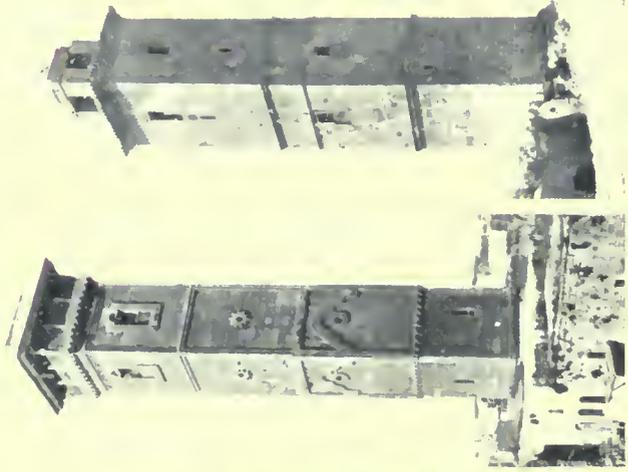
C—Mosque of Sidi 'Uqba,
Qairowan



D—Great Mosque,
Aleppo



E, F—



E—Mosque of al-Khidr, Bosra;
[From Brünnow and von Domaszewski, *op. cit.*]



G—Great Mosque in the Citadel, Aleppo; H—'Umar Mosque, Bosra

The Evolution of the Minaret, with special reference to Egypt—

A, B—



—C



D, E—



—F



A—Mosque of al-Guyūshī, Cairo; B—Mosque of Abū l'Ghadanfar, Cairo; C—Madrassa of Sultan Šālih, Cairo; D—Madrassa-Mausoleum of Fātma Khātūn, Cairo; E—Madrassa-Mausoleum of Sultan Qalāūn, Cairo; F—Madrassa of Salār and Sangar al-Gawli

- (1) QASR AL-BANĀT.—Convent with square tower about 23 m. high; built by Kyrios, probably the same architect whose name is found on four other churches, the dates of their inscriptions varying from A.D. 390 to 418.³⁰
- (2) UMM AS-SURĀB (in the Southern Haurān).—Church of SS. Sergius and Bacchus, with tall square towers; completely preserved except the roof [Fig. 1]. Built in A.D. 489.³¹
- (3) SAMEH (in the Southern Haurān).—Monastery of S. George, with square tower about 12 m. high; completely preserved [PLATE A]. Built A.D. 624-625.³²
- (4) UMM AR-RASĀS.—Square tower, 2.50 m. a side and about 12 m. high [PLATE B]. Alongside are the ruins of a building which Tristram (1872) believed to be a church, as he was able to distinguish an apse,³³ although Vincent maintains that it was a fort.³⁴ Brünnow and von Domaszewski say that the destroyed building was "gewiss die Kirche."³⁵ A Greek cross is carved on the east and west faces of the tower.

Another Umayyad minaret is that still standing in the Mosque of Sidi 'Uqba at Qairowān. According to al-Bakrī (d. 1094), it was built by the Governor of Ifrikiya at the order of the Khalif Hishām (724-743).³⁶ Al-Bakrī (d. A.D. 1094) expressly says that this was the minaret standing in his day, and his measurements (60 cubits by 25 cubits) agree closely with the present structure. No author speaks of its being rebuilt, and no one has disputed that this is the minaret seen to-day, with the exception of the top storey, which, according to Rivoira, was added at the commencement of the nineteenth century.³⁷ It is a tall, square, slightly tapering tower, about 10½ m. a side and about 26 m. high [PLATE C]. The entrance from the *sahn* is covered by a lintel—a carved fragment of Roman origin—with a slightly horse-shoed relieving arch, recalling exactly the same treatment over the entrance to the tower at Shaykh 'Alī Kāsūn, near Hamā.³⁸ It is difficult to imagine how Thiersch can say (p. 124) that "die Ähnlichkeit des Minarets mit dem alten dreigeschossigen Pharos ist in die Augen springend." The octagonal and circular storeys are wanting, and the top storey, as we have seen, is a modern addition. One cannot claim, as Thiersch does, that every minaret with storeys which are successively square, octagonal, and circular is a direct descendant of the Pharos, and then claim the same thing for another minaret, all the storeys of which are square in plan. Even the proportions observed for the lower storeys in each case are not similar, as Thiersch maintains: in the Pharos the base of the lower storey is to its height as 5 : 12, whereas at Qairowān the proportion (scaled off Saladin's photograph) is roughly 5 : 9. On

³⁰ Butler, *Ancient Architecture in Northern Syria*, pp. 214-223, Ill. 219, and Pl. xx.

³¹ Butler, *Ancient Architecture in Southern Syria*, pp. 95-99 and Ill. 78.

³² *Ibid.*, pp. 83-86 and Ill. 64-65.

³³ *Land of Moab*, pp. 145-146, with plate. Described also in Buckingham, *Arab Tribes*, p. 99.

³⁴ *Revue Biblique*, 1898, p. 434.

³⁵ *Die Provincia Arabia*, II, p. 70 and Fig. 653.

³⁶ Al-Bakrī, p. 23; trad. de Slane (1913 ed.), p. 53.

³⁷ Rivoira, *Moslem Architecture*, pp. 28-29, and 37-38.

³⁸ Butler, *Ancient Architecture in Northern Syria*, Fig. 2.

the other hand, the resemblance of Sidi 'Uqba's minaret to Syrian church towers (some of which taper, e.g., Sameh) and tower houses needs no emphasizing.

LATER SYRIAN MINARETS.—We can now confidently say that the idea of the minaret arose in Syria under the Umayyad dynasty, and that the first minarets were derived architecturally from the Syrian church tower.³⁹ In addition to this the Syrian minaret was destined to remain true to its traditions for many centuries, as may be seen from the following sequence:

DAMASCUS.—The northern minaret of the Great Mosque, seen by Muqaddasi, which occupied the site of the present *Ma'dhanat al-'Arūs* (Minaret of the Bride). It is not possible to determine the date of this minaret, which Muqaddasi (985) refers to as *muhdaiha*.⁴⁰ I therefore suggest c. A.D. 900. Whether it was built by al-Walid or shortly before Muqaddasi's visit does not concern us here.

HOMS.—Square minaret with Kufic inscription and a date = A.D. 980.⁴¹ Known as *al-ma'dhanat al-maktūma*. Built, according to Herzfeld, by Abū l-Fawaris Beljur.⁴²

ALEPPO.—The beautiful minaret of the Great Mosque [PLATE D], dated 482 (1089/90).⁴³

BOSRA.—Mosque of al-Khidr, dated 528 (1134),⁴⁴ with square minaret [PLATE E].

MA'ARRAT AN-NU'MAN.—Great Mosque with square minaret [PLATE F], dated 575 (1179).⁴⁵

DAMASCUS.—Great Mosque; northern minaret (*ma'dhanat al-'Arūs*), built between 1187 and 1193.

ALEPPO.—Minaret of the Jāmi' al-Dabbāgha al-'Atīqa, built c. 1200, according to Herzfeld.⁴⁶

ALEPPO.—Great Mosque in the Citadel, with square minaret [PLATE G]; mosque dated 610 (1213/4).⁴⁷

BOSRA.—Umar Mosque; square minaret [PLATE H], forming one with the masonry of the mosque; latter was restored, according to an inscription, in 618 (1221).⁴⁸

This type even penetrated into the northern part of Mesopotamia, which, as we shall presently see, had its own type of minaret. Three examples of this intrusion may be cited:

RAQQA.—Square minaret in mosque outside the walls.⁴⁹

HARRAN.—Great Mosque, with minaret—a tall square shaft—near the centre of the north side (recalling the arrangement at Damascus).⁵⁰

³⁹ Goltheil, *op. cit.*, p. 138, and Thiersch, *op. cit.*, pp. 99-110, are in agreement on this point.

⁴⁰ p. 159; Ranking's transl., p. 261; Le Strange, *op. cit.*, p. 229.

⁴¹ Van Berchem and Fatio, *Voyage en Syrie*, I, p. 166.

⁴² Sarre and Herzfeld, *Archäologische Reise*, II, p. 355. In 1919 I sought for this minaret and was shown the place where it had stood. I was told that it had been pulled down during the war, according to some on account of its being in a dangerous condition, but, according to others, for the sake of its stone.

⁴³ Abū l-Fidā, III, p. 268; and Herzfeld, in Djemal Pascha, *Alte Denkmäler aus Syrien*, text to Taf. 39.

⁴⁴ Brünnow and von Domaszewski, *op. cit.*, III, pp. 13 and 210, and Figs. 886-887; also Butler, *Ancient Architecture in Southern Syria*, p. 292 and Ill. 205.

⁴⁵ Sarre and Herzfeld, *Archäologische Reise*, II, p. 355.

⁴⁶ Mshattā, Hira und Bādiya, in the *Jahrb. der preussischen Kunstsammlungen*, XLII, p. 143 and Taf. 10a.

⁴⁷ Bischoff, *Tuhaf al-ambā' fi ta'rikh Halab*, p. 135; and van Berchem, *Inschriften aus Syrien*, p. 40.

⁴⁸ Brünnow and von Domaszewski, *op. cit.*, III, pp. 25-29, 210, and Figs. 903-905; and Butler, *op. cit.*, pp. 289-292, Ill. 254-258, and Pl. xviii.

⁴⁹ See Miss Bell, *Amurath to Amurath*, pp. 55-56 and Fig. 35; and Herzfeld, in Sarre and Herzfeld, *Archäologische Reise*, II, pp. 354-355 and Abb. 327-329.

⁵⁰ See Sachau, *Reise*, p. 221; Preusser, *Nordmesopotamische Baudenkmäler*, p. 60 and Taf. 73; and Strzygowski, in van Berchem and Strzygowski, *Amida*, pp. 332-333 and Abb. 281.

DIYARBEKR.—Square Syrian type of minaret, with inscription in the name of the Inālid Inalldi, who reigned 503-536 (1109-1141).⁵¹

NORTH AFRICAN MINARETS.—The example set by the minaret of Sidi 'Uqba, and the Syrian influences carried to Spain by 'Abd ar-Rahmān, the last of the Umayyad dynasty, who fled from Damascus and founded a new Umayyad dynasty at Cordova, caused the Syrian type of minaret to prevail for several centuries in Spain and North Africa; and although there is only the presumption that the first minaret of the Great Mosque at Cordova, built in A.D. 793-796,⁵² was square in plan, we are expressly told that the minaret of the Great Mosque at Madinat az-Zahra, 329 (941),⁵³ and the new minaret built at Cordova in 334 (945/6)⁵⁴ were of that type, which was repeated in A.D. 1007 in the Qala'a of the Beni Hammad⁵⁵; in the tower of Hasan at Rabāt, 591-594 (1195-1198)⁵⁶; in the Kutubīya at Marrākesh, 593 (1197)⁵⁷; and in the Giralda at Seville, finished in the same year.⁵⁸ At the commencement of the fourteenth century we find the same type still persisting in the Mosque of al-Mansūra at Tlemcen.⁵⁹ This theory of the Umayyad origin of North African and Spanish minarets, which was first enunciated by Marçais⁶⁰ in 1906, has since been accepted by

⁵¹ Van Berchem and Strzygowski, *Amida*, Pl. viii; and Bell, *Ukhaidir*, p. 158 n.

⁵² *Al-Bayano'l Mogrib*, Fagnan's transl., II, p. 380. It was overthrown by the earthquake of A.D. 880; Rivoira, *op. cit.*, pp. 355 and 364.

⁵³ The mosque was completed 23 Sha'bān, 329 (January 23, 941), and the minaret was a square tower, 10 cubits a side and 40 cubits high. Al-Makkari, Gayangos' transl., I, pp. 237-238.

⁵⁴ Al-Makkari says that 'Abd ar-Rahmān rebuilt the minaret in this year, but Gayangos in his notes says that an inscription still preserved on one of the interior walls of the tower bore the date 354 (965), which is four years after the accession of al-Hakim II. *Op. cit.*, pp. 224-225 and 499. Its original height was 72 cubits. See also van Berchem's translation in Thiersch, *op. cit.*, p. 127, n. 2.

⁵⁵ De Beylié, *La Koloa des Beni-Hammad*, pp. 80-84, Figs. 63-73, and Pl. ix. The date given above is that of the foundation of the town, which was abandoned in A.D. 1099 and pillaged for building materials in 1148. *Ibid.*, pp. 1-2. See also Saladin, *Bulletin archéologique*, 1904, pp. 243 ff., and in the *Nouvelles Archives des Missions scientifiques*, XVII, pp. 8-10 and Pl. iii.

⁵⁶ Dieulafoy, "La Mosquée d'Hassān," in the *Mém. de l'Acad. des Inscr. et Belles-Lettres*, XLII, Pl. 2 and 6; de la Nèzière, *Monuments mauresques du Maroc*, Pl. xxxix; and for the date, the *Roudh el-Kartas*, pp. 151 and 179; Beaumier's transl., pp. 323-324 and 386; and Dieulafoy, *loc. cit.*, pp. 293-298.

⁵⁷ De la Nèzière, *op. cit.*, Pl. iii; and, for the date, *Roudh el-Kartas*, pp. 151 and 179; Beaumier's transl., pp. 323 and 386.

⁵⁸ Junghändel and Gurlitt, *Baukunst Spaniens*, Taf. 64; Thiersch, p. 128 and Abb. 153, 156, and 158; Uhde, *Baudenkmale in Spanien*, Taf. 57; and, for the date, *Roudh el-Kartas*, pp. 151 and 179; Beaumier's transl., pp. 324 and 386.

⁵⁹ Marçais, *Monuments arabes de Tlemcen*, Pl. xiii-xiv; and Thiersch, *op. cit.*, p. 134 and Abb. 163-165. Mansūra was founded by Abū Ya'qūb in 702 (1302/3), and the minaret bears an inscription in his name, but he is referred to as "deceased." He died in 706 (1306), so the minaret must be a little later. See Brosselard, "Inscriptions arabes de Tlemcen," in the *Revue Africaine*, 1859, pp. 335-336; and Marçais, *op. cit.*, pp. 197-198.

⁶⁰ *Revue Africaine*, L, p. 37.

Choisy⁶¹ and Thiersch.⁶²

Before leaving the question, however, one must admit that although the square type, judging by existing monuments, appears to have been the invariable rule, yet two anomalies existed, if we can accept the evidence of early travellers: (1) Al-Bakrī (d. 1094) says that at Ajedabīya in Barca, the Great Mosque, which had been founded by Abu l-Qāsim (934-946), had an octagonal minaret (*sauma'a mulhammana*).⁶³ (2) The Shaykh al-Tijāni, who travelled in Tunis between 706 and 708 H. (1306-1309), says that the minaret of the mosque of Tripoli had been built in 300 (912), and that its lower half was round, the upper half octagonal.⁶⁴ This type cannot be matched by any existing example, and Thiersch is not justified in calling it "ein . . . Minaret, mit echt ägyptischen Formenwechsel,"⁶⁵ as the circular part in those Egyptian minarets which we shall presently study always comes above the octagonal, which in its turn rests on a square lower storey.

EGYPTIAN MINARETS.—We are now in a position to study the origin and evolution of the Egyptian minaret, an important question, for minarets are one of the glories of the Moslem architecture of Egypt, and excel all others in beauty.

The Pharos theory, which has received wide acceptance,¹ was started over forty years ago by Dr. A. J. Butler, who wrote: "I was one day looking at a minaret in Cairo, and having Abdellatif's account of the Pharos fresh in mind I was struck by the remarkable coincidence between the details of the minaret before me and those of the Pharos in his description. He says the Pharos stood at that epoch [c. 1200] in four storeys, the first square, the second octagonal, the third round, and lastly a lantern. The minaret also rose in four stages, square, octagonal, round, and on top a lantern or small cupola. Since then I have noticed dozens of other minarets with the same four divisions in the same order, and have no hesitation in saying that Abdellatif's description of the Pharos is, in all except absolute altitude, the typical description of the early minaret," and he goes on to say that the Pharos is the origin of the form taken by the minaret in Cairo.²

⁶¹ *Histoire de l'architecture*, II, p. 127.

⁶² *Op. cit.*, pp. 128-129.

⁶³ p. 5; trad. de Slane's (éd. 1913), p. 15.

⁶⁴ *Rihla* trad. Rousseau, *Journal asiatique*, Ve sér., t. I (1852), p. 154. See also *Istibsar*, trad. Fagnan, p. 58.

⁶⁵ *Op. cit.*, p. 126.

¹ E.g., Choisy, *Histoire de l'architecture*, II, p. 127; Kay, in the *J.R.I.B.A.*, Third Series, Vol. IV., p. 63; and van Berchem, *C.I.A.*, I, p. 481; etc. Gottheil accepts it more or less, *loc. cit.*, p. 148.

² *Athenaeum*, November 20, 1880, p. 681; reaffirmed in his *Arab Conquest of Egypt*, p. 398.

Before proceeding farther we must summarize what is known of the Pharos. The most elaborate and exhaustive study of it is that which has been made by Thiersch,³ who has utilized every possible source of information, not only the

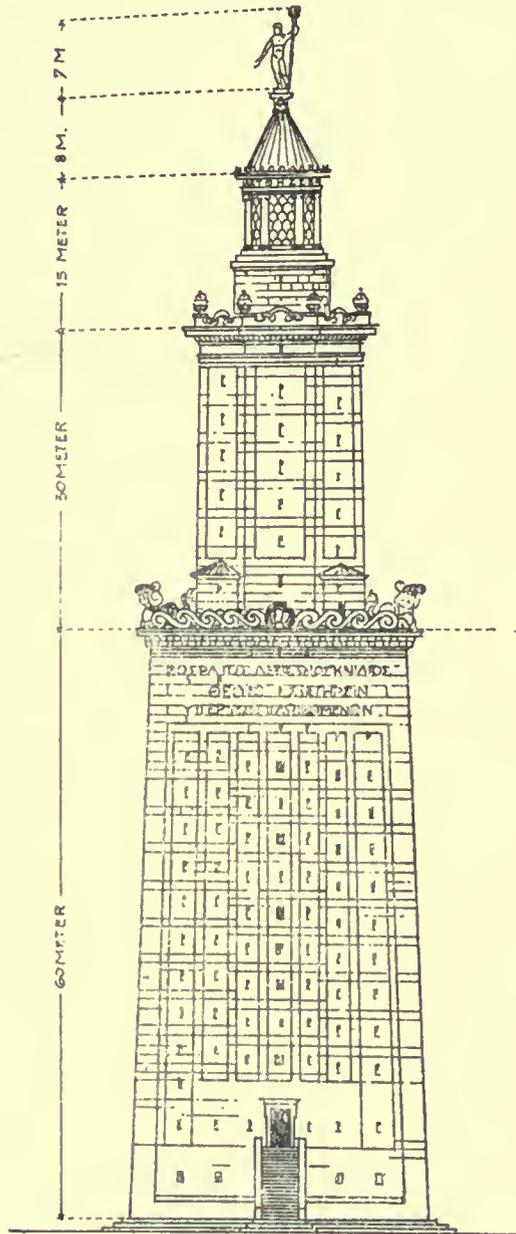


FIG. 2. THE PHAROS, AS RESTORED BY THIERSCH.

texts—Greek, Latin and Arabic—but reproductions on coins, in mosaics, etc. The results of his researches were embodied by him in a drawing (FIG. 2), which shows the Pharos as a tower 124 m. (nearly 400 feet) in height; with a lower storey square in plan and 60 m. in height, surmounted by an octagonal storey of 30 m. and a circular lantern of 15 m., the

³ *Pharos, Antike, Islam und Occident*, Leipzig and Berlin, 1909.

balance being made up by the covering of the lantern and a figure of Neptune.

This wonderful tower remained intact until the commencement, if not the end of the eighth century, when the whole of the upper part was thrown down by an earthquake in 180 (796/7), and only the square part was left standing.⁴ Ibn Tūlūn built a dome on what remained, nevertheless Ma'sūdi speaks of it as half ruined when he first saw it in 332 (943).⁵ When he was in Cairo in Ramadān 344 (December 955—January, 956) there was a serious earthquake, and 30 cubits of the Pharos fell. Thiersch now interpolates two restorations, but his arguments are not very convincing and he admits, on the strength of Idrisi's account, that at the beginning of the twelfth century the Pharos consisted of the original first storey of 60 m. surmounted by a much smaller square shaft of 20 m.⁶ Its ruin was complete when Ibn Batūta visited it for the second time in 750 (1349).⁷

Thiersch devotes the second part of his great work to an elaborate development of Butler's theory, which *à priori* has nothing against it. What is more likely than that a tower 124 m. high, which stood intact until the eighth century, which had been regarded since its completion as one of the Wonders of the World, and which was well known throughout the Arabic speaking world, even after its destruction, as so many authors have devoted more or less space to a description of it,⁸ should have exercised an influence on the evolution of the minaret, in Egypt at least? Yet as an actual fact we shall see that minarets with storeys successively square, octagonal and circular are almost the rarest type, and that *those which are of this type* were evolved gradually from elements which had no connexion with the Pharos.

Let us now make an independent study of the minarets of Egypt, a study which can only be profitably made if we arrange *all* the exist-

⁴ The date of the earthquake of 180 H. is given by Ibn al-Athir, VI, p. 104, and Ibn Adhari, *al-Bayana'l-Mogrib*, I, p. 80; Fagnan's transl., I, p. 107; but Ma'sūdi (*Ta'ribih*, in de Goeje, *B.G.A.*, VIII, pp. 46-48; Carra de Vaux transl., pp. 71-73, extracted by Thiersch, *op. cit.*, p. 41), who was in Cairo during the earthquake of 344 H. (see below) does not mention the earlier one expressly, he merely says that the Pharos of his day was of reduced height, owing to the successive effect of earthquakes and rain. In another work (*Les Prairies d'or*, text and transl., by Barbier de Meynard, II, pp. 434-436, extracted by Thiersch, pp. 40-41), he relates how an envoy sent by the Emperor of the Greeks, had persuaded the Khalif al-Walid to order a search for treasure beneath the Pharos, whereby much damage was done to it, the object of the trick being to remove a hostile watch tower, which would always give warning of the approach of the enemy's fleet. The whole account has a very legendary appearance, and 180 H. may be taken as the starting point of the gradual decay of the Pharos.

⁵ *Les Prairies d'or*, II, p. 436.

⁶ Pp. 43 and 58-59.

⁷ Text and translation by Defrémery and Sanguinetti, I, p. 29.

⁸ For a tabulated list see Thiersch, *op. cit.*, p. 38.

ing examples in strict chronological order. Thiersch's list, I must remark, is very incomplete and contains a number of erroneous dates.⁹ The earliest, that of Ibn Tūlūn, was originally a spiral, circular in plan, with a staircase outside, a type derived from Sāmarrā. Of the two minarets of al-Hākīm's mosque, that at the north corner is a tall cylindrical shaft on a nearly cubical base, the other a tall square shaft, surmounted by a series of receding octagonal courses; the original finials of both have disappeared. Here I propose to interpolate the minaret of the Mosque of Sarī ibn Māni, which, according to the *Kawākib as-Saiyāra* of Ibn az-Zaiyāt, was the oldest mosque in the Qarāfa; he says that the minaret was square.¹⁰ Then comes the minaret of the Mosque of al-Guyūshī 478 (1085),¹¹ a tall square shaft with a domed lantern [PLATE II, A] precisely the Syrian church tower and Syrian minaret type, except that in Syria, at Aleppo and Ma'arrat an-Nu'mān, for example [PLATE I, F] the little domed lantern has a base much smaller than the shaft, and is almost concealed by a wooden-roofed gallery which runs round it. Our next example in Cairo is the minaret attached to the little mausoleum of Abū l-Ghadānfar, 552 (1157). Here we have the tall square shaft surmounted by the same small lantern which, however, is now for the first time decorated with a little fluting [PLATE II, B]. Our next example, that of the Madrasa of Sultan Sālih, 641 (1243/4), also consists of a tall square shaft, surmounted by a lantern which has become much more elaborate, thanks to the addition of stalactites [PLATE II, C], but which nevertheless is clearly derived from that of al-Guyūshī through the intermediate stage observed in Abū l-Ghadānfar. Thus is explained the evolution of the typical minaret finial of this period, and the transition and evolution is so gradual and so obvious that we can unhesitatingly reject Rivoira's far-

fetched theory of an Indian origin.¹² The square and circular storeys of cube and dome have, however, become elongated, and it is this very elongation, becoming more and more pronounced at the expense of the tall, square shaft, which ultimately culminates, as we shall presently see, in a minaret which may be described as having storeys successively square, octagonal and circular in plan. The three panels which decorate the shaft of Sālih's minaret are a feature also found in that of Abū l-Ghadānfar, which still preserves this form of decoration (two panels) on its north-western face. Between these two we have the less perfectly-preserved minaret of Sayedna Huseyn, 634 (1237), which also consists of a tall square shaft, decorated with three panels; unfortunately the original upper part has been replaced by a late Turkish structure. Of about the same date as Sultan Sālih's minaret is the Mabkhāra of the Zāwiyat al-Henūd, a tall square shaft with a similar finial, say A.D. 1250. *Mabkhāra* or censer is the name given in Cairo to this type of finial, which is not found elsewhere. The minaret which rose over the main entrance of the Mosque of Bibars I, 667 (1269), in so far as it stood in Jomard's day, was no exception to the rule, as his drawing shows the lower part of a square tower decorated with three panels, presumably keel-arched.¹³ Next comes the minaret of Fātma Khātūn, 683 (1284), of which only the square shaft remains [PLATE II, D], and then that of Sultan Qalāūn, 684 (1285), which, like most things he built, is a departure from the normal [PLATE II, E]. The top storey of this minaret was rebuilt by an-Nāsir Muhammad in 703 (1303-1304), the original one having fallen in the great earthquake of that year. The next minaret, that of the almost destroyed mosque of al-Baqli, built at the end of the thirteenth century, is likewise a tall, square shaft, with, however, a mean finial of late date. The minaret of the Madrasa of an-Nāsir Muhammad, finished in 703 (1303/4), consists also of a tall, square shaft, surmounted with a rich stalactite cornice, which was evidently copied a few years later by Bibars al-Gāshankir. The octagonal story is, however,

⁹ E.g., Upper part of Ibn Tūlūn's minaret, c. 1010, should be 1206; Mashhad (should be mosque) of the Emīr al-Guyūsh, middle of the eleventh century, should be 1085; Mausoleum (should be Madrasa) of Sultan Sālih, 1250, should be 1243/4; Mosque of Sultan an-Nāsir, c. 1310, should be 1318; Mosque of al-Māridānī, 1308, should be 1340. He is also somewhat omnivorous, as he includes the tall narrow fluted dome of the Mausoleum of Yūnus ad-Dawadār (Abb. 120), evidently taking it for a *mabkhāra*. Nevertheless, we must pay our respect to his industry in an unfamiliar field.

¹⁰ I owe this reference to Mr. Rhuvon Guest. As for the date, I place it here in spite of Ibn az-Zaiyāt's statement (Guest, *J.R.A.S.*, 1920, p. 630) that it had been built in 51 H. (671) for two reasons: (1) because his statement is flatly contradicted by Maqrīzī who says, as we have seen (p. 4 above) that minarets were only introduced in 53 H. (673); and (2) because nearly all the buildings in the Qarāfa mentioned by Maqrīzī belong to the Fātimide period. See Guest and Richmond, *Misr in the Fifteenth Century*, in the *J.R.A.S.*, 1903, p. 811.

¹¹ For the dates of all the Egyptian minarets dealt with here see my *Brief Chronology of the Muhammadan Monuments of Egypt*, in the *Bull. de l'Institut français d'archéologie orientale*, Tome XVI (1919).

¹² *Moslem Architecture*, p. 164. He says, speaking of the finials of Bibars II, and Sultan Sālih, that "both were derived from the no less bizarre forms found in Indian buildings, such as the temple of the Sun at Osia in the State of Jodhpur, belonging to a group of sacred edifices dating from the VIII century, and the shrine of Muktesvara at Bhuvanavar, in the district of Puri in Orissa, one of the earliest religious structures in that reign, dated between the IX or X and the XIII centuries." Now the minaret finials in question consist of two elements; (1) a fluted dome, keel-arched in section, and (2) applied decoration in the form of stalactites; both these elements are sufficiently Cairene for their combination to need no explanation; moreover domes, whether keel-arched or fluted, or keel-arched and fluted, are unknown in India.

¹³ See the *Description de l'Égypte, état moderne*, Atlas, I, pl. 27. The upper part of these panels has not been preserved.

later, judging by the decoration at the apex of the keel-arched panels; as for the finial, it is obviously late Turkish.

We now come to an important landmark, the minaret of Sangar al-Gawli, 703 (1303/4), which exhibits a marked elongation of the two top storeys at the expense of the shaft; moreover, the lantern, instead of being octagonal, with a dome circular in plan above it, is itself circular and the octagon forms a separate storey [PLATE II, F]. We can only now for the first time say that we have a minaret of the square-octagonal-circular type. Now not only is it clear from this series that this type was gradually evolved step by step from the Guyūshī or Syrian type, during a period of over two centuries, and that it did not spring into being fully developed, like Athene in full armour from the head of Zeus, as it would have done had it been copied from a pre-existing model; we must bear in mind that the upper part of its alleged model, the Pharos, had ceased to exist for at least a century and a half, and that little more than its lower storey remained. We have, therefore, a double reason for rejecting the Pharos theory. Twelve years later we have the minaret of the Emīr Sunqur Sa'dī, which is of similar type. Leaving aside the minarets of the Mosque of an-Nāsir Muhammad in the Citadel, which are an anomaly,¹⁴ the series culminates in the minaret of the Khānqā of the Emīr Qūsūn, 735 (1335/6), which may be described as the perfected example of the type [PLATE III, J] and, curiously enough, it is the last example also.

After this rather a curious thing happens; the square shaft shortens so much that only its bevelled-off top corners show above the roof of the mosque, and the visible part of the minaret commences with an octagonal shaft, as is the case with the minarets [PLATE III, H, K, J] of al-Māridānī and Aqbughā, 740 (1340), Sheykhūn, 750 (1349) and 756 (1355), and Sarghatmish, 757 (1356). The square shaft is really no shaft at all, it should rather be regarded as a re-inforcement of the wall of the mosque, which otherwise would not be broad enough to take it; and the three last-mentioned minarets should be regarded as octagonal minarets surmounted with a small lantern, which is no longer a mabkhāra but a little dome supported on columns.

Evidently there has been a disturbing influence; we must, therefore, carry our researches farther afield—to Persia and Mesopotamia—in an effort to localize this new influence and determine its origin.

PERSIAN MINARETS.—In the study of Persian minarets the end of the first quarter of the thirteenth century is a convenient point at which to stop, as the appalling state of Persia during

¹⁴ Probably due to the influence of his Mongol wife.

the terrible and devastating Mongol inroads was such that all monumental building must have practically ceased. As an actual fact, I find that in a chronological card index, which I have made of nearly 300 dated Persian monuments, only five fall between 623 (1226), the date of the famous mihrāb of the Meydān Mosque at Kashān,¹ and 1300 A.D.

The series of existing Persian minarets begins with the great tower which presumably belonged to the mosque known as the Celestial Bride, built at Ghazna by the Seljūq Sultan Mahmūd in 1024, after his return from a successful campaign in India.² Until recently, the only information which we had concerning this important monument, was the short description of Vigne, and the sketch which he made during his visit in 1836.³ Ghazna, however, was visited by Diez and Niedermayer in 1916, and by Godard in 1923 (*Flury and Godard, in Syria, VI, pp. 58-90*), and thanks to their publications, we now have more detailed information.⁴ The tall lower storey is

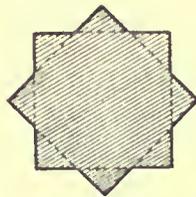


FIG. 3. CROSS SECTION OF MAHMUD'S MINARET.

about 70 feet in height and of curious cross-section, being that formed by setting two equal and concentric squares at 45° (FIG 3). Above this portion was a cylindrical shaft, the whole measuring 140 feet when Vigne saw it. To-day, only the lower storey and a fragment of the upper remains.

A second minaret similar to the above stands about 400 yards from it. It bears a Kufic inscription in the name of Sultan Mās'ūd III (1099-1124).⁵

No other minaret with lower storeys similar to these is known.

Our next example in point of date is the so-called Mil-i-Nadīri (*mīl* = Indian club), 13 miles west of Shurgaz. It is a slightly tapering cylindrical shaft without socle, 14 feet in diameter at the base and now reduced to 55 feet in height. From a somewhat ambiguous reference in Sir Percy Sykes' *Ten Thousand Miles in Persia* (p. 418), it would appear that it was built by

¹ For this wonderful mihrāb of lustre tiles, the finest thing of its kind, see Madame Dieulafoy, *La Perse*, pp. 204-205, and illus. on p. 206; *Burlington Magazine*, XXIII, pp. 84-87, with coloured plate; Creswell, *The Mihrab from Kashan*, *ibid.*, p. 302; *The Catalogue of the Preece Collection*, Plate I, and relative text; and Migeon and Rivière, *La céramique dans l'art musulman*, pl. 77.

² Ferishta, Briggs' transl., I, p. 61.

³ See Vigne, *Ghuzne, Kabul, and Afghanistan*, pp. 128-130, and woodcut on p. 125; republished by Thomas, *Pathan Kings*, p. 9; Fergusson, *Handbook of Architecture*, I, p. 415; his *History of Indian and Eastern Architecture* (revised edition), pp. 191-194; and Sarre, *Denkmäler persischer Baukunst*, p. 76 and Abb. 95.

⁴ See Diez, *Persien*, pp. 164, 166-167 and Taf. 72; and Niedermayer and Diez, *Afghanistan*, p. 67 and Taf. 124.

⁵ Diez, *op. cit.*, pp. 162-163, 166-167 and Taf. 71; see also sources cited for Mahmūd's minaret.

Malik Kāward, who was killed in 466 (1073).⁶

The Minār-i-'Alī, built by Malik Shāh⁷ (1072-1092), in the Gulbān quarter at Isfahān, is a slender tapering cylindrical shaft, 52 m. in height, with a stalactite cornice. There is no socle.⁸

These four minarets apparently bear no signs of having been attached to any structure. This is not surprising as the same remark applies to the Malwiya tower at Sāmarrā and the minaret of the Mosque of Abū Dilif, as well as to the minaret of Ibn Tūlūn at Cairo. They therefore probably stood free outside the mosques which they served, or if there were *ziādas*, in the *ziāda* on the side opposite the direction of Mekka, like the three minarets just mentioned.⁹

We now come to an interesting example, interesting because it must have been built on the corner of the mosque which it served. This is the Minār Chehil Duchterān, dated 501 (1107),¹⁰ which stands in the Jewish quarter at Isfahān. It is about 35 m. in height, and consists, according to Diez, of a cylindrical shaft on an octagonal lower storey, of which five sides are faced and the remaining three bonded into a wall ("drei Seiten in die angrenzende Mauer eingebaut sind"). I take this to mean that two walls take off at right angles, exactly as in the case of the minaret at Sinjar (FIG. 4).

The cylindrical free standing type, however, persisted, and we have a series of five dated examples, the minaret of the village of Khosraugird, near Sebzewar, 28.50 m. in height [PLATE III, M], dated 505 (1111)¹¹; the minaret of the Mosque of Chehil Sitūn at Damghān, dated 530 (1136), according to Diez¹²; the famous Minār Kalān, at Bokhāra, 65 m. in height, dated 542 (1147)¹³;

⁶ See also his *Fourth Journey in Persia*, in the *Geographical Journal*, Vol. XIX, pp. 159-160; and Diez *op. cit.*, p. 59.

⁷ Houtum-Schindler, *Eastern Persian Irak*, p. 123.

⁸ See Madame Dieulafoy, *La Perse*, p. 273, with illus.; also Sarre, *op. cit.*, p. 75.

⁹ From this point of view the minarets of al-Hākīm may be regarded as a transition between the free-standing type and the type which springs from the masonry of the mosque. For a study of them see my *Great Salients of the Mosque of al-Hākīm*, in the *J.R.A.S.*, 1923, pp. 573-584, and, for their ornament, Flury, *Die Ornamente der Hakim- und Azhar-Moschee*, Heidelberg, 1912.

¹⁰ Diez, *op. cit.*, pp. 168-169, and Taf. 38.

¹¹ Khanikoff, *Mémoire sur la partie méridionale de l'Asie centrale*, pp. 87-88; O'Donovan, *The Merv Oasis*, I, p. 428; Curzon, *Persia*, I, pp. 269-270, with illustration; Yate, *Khurasan and Sistan*, p. 398; Sarre, *op. cit.*, p. 112 (quoting O'Donovan); Diez, *Churasanische Baudenkmäler*, pp. 48-49, and Taf. 12 (left) and 13 (2); and his *Persien*, p. 79, 166, 167, and Taf. 19 (right) and 20-21. The square plinth, according to Yate, is due to Nāsir ad-Dīn Shāh. I have made a point of illustrating this minaret in order to expose the following nonsense: "This Mesopotamian type (Sāmarrā), however, was the forerunner of the square-based minaret surmounted by a spiral cylinder with an octagonal base, like the two ancient minarets in the mosque of Hakim (they are not of this type as we have seen); and also of the other form with a square base supporting a spiral column—an early example of which is afforded by the minaret of Khosraugird—" Rivoira, *op. cit.*, p. 174.

the minaret at Kasimābād in Sistan, dated 559 (1163/4)¹⁴; and the minaret at Semnān, built, according to Diez, in 566 (1170/1).¹⁵ All these are tapering cylindrical shafts without socle.

So much for dated examples. Of the same type—tapering cylindrical shafts without socle—are the following ten examples:—Saveh: 14 m. left, with two bands of Kufic¹⁶; Tebbes: Minār Kabu, 120 feet (33.80 m.) in height, with Kufic inscription¹⁷; Kunja Urgenj (Old Khiva): minaret 180 feet (50.70 m.) in height, with Kufic inscription¹⁸; and another at the same place 80 feet (22.50 m.) in height¹⁸; Rahgird: 36 feet (10.10 m.) in height¹⁹; Sengbest: 22 m. in height, with stalactite cornice and bands of inscription²⁰; Bostam: (height not stated), with stalactite cornice²¹; the minaret of Firuzābād, near Kishmar: 70 feet (19.70 m.) in height, with a band of Kufic;²² Damghān: minaret of Great Mosque, 31 ells in height²³; and the minaret at Mestorjān (north of the Atrek river), 26 m. in height.²⁴

¹⁴ *Persien*, pp. 166-167; see also pp. 79 and 80; Khanikoff, *op. cit.*, pp. 74-75; Sarre, *op. cit.*, p. 112 and Taf. LXXXIII (right) and Abb. 151; and Thiersch, *Pharos*, p. 149 and Abb. 207.

¹⁵ For the date see Burnes, *Travels into Bokhara*, I, p. 303; see also Schuyler, *Turkistan*, II, p. 92; Skrine and Ross, *Heart of Asia*, pp. 373-374; Schwarz, *Turkestan*, p. 210 and Abb. 77; Sarre, *op. cit.*, pp. 159-160 and Taf. 123 (he suggests the thirteenth century without discussing Burnes' statement); Thiersch, *Pharos*, p. 144 and Abb. 198; Olufsen, *The Emir of Bokhara*, p. 417 and illus. on p. 371; Diez, *Persien*, pp. 166-167; and Höver, *Kult-Bauten des Islam*, Abb. 49.

¹⁶ For the date see Tate, *Inscriptions from Seistan*, in the *J.R.H.S.*, XXXVI (1904), p. 171; see also his *Seistan*, p. 22, and plates facing pp. 22 and 270; and his *Frontiers of Baluchistan*, plate to face p. 224 (gives date as 1156); Huntingdon, *Pulse of Asia*, plate to face p. 320; and Diez, *op. cit.*, pp. 166-167.

¹⁷ *Persien*, pp. 166-167; he quotes Khanikoff, but I have failed to verify the reference—Khanikoff, *op. cit.*, p. 75, does not suggest a date. Illustrated in Sarre, *op. cit.*, p. 122, Abb. 152; Curzon, *Persia*, I, p. 291, says that it belongs to the Masjid-i-Juma', now in ruins.

¹⁸ Madame Dieulafoy, *La Perse*, p. 171 and illus. on p. 173, and Diez, *Persien*, pp. 166-167.

¹⁹ Sven Hedin, *Overland to India*, II, p. 36 (says that it was attributed by the inhabitants to 'Amr ibn Leyth, the Saffāride); Sykes, *Fifth Journey in Persia*, in the *Geographical Journal*, 1896, p. 563; and Diez, *op. cit.*, pp. 166-167 (calls it "seldschuqish").

²⁰ Lansdell, *Russian Central Asia*, II, pp. 342-343, with illus.; Olufsen, *op. cit.*, p. 228, and illus. on p. 227; and Diez, *op. cit.*, pp. 166-167.

²¹ Houtum-Schindler, *op. cit.*, pp. 129-130.

²² Yate, *Khurasan and Sistan*, pp. 38-39; Sykes, *Fifth Journey*, *loc. cit.*, p. 577; Diez, *Churasanische Baudenkmäler*, pp. 52-54, Abb. 22, and Taf. 14 (4), 15 (1) and 16; and his *Persien*, pp. 78 and 166-167.

²³ Fraser, *Journey into Khorasan*, p. 340; Khanikoff, *op. cit.*, pp. 79-80; Sarre, *op. cit.*, p. 117 and Taf. LXXXVIII; Thiersch, *Pharos*, p. 149 and Abb. 210; and Diez, *Persien*, pp. 166-167.

²⁴ Sykes, *Sixth Journey*, *Geographical Journal*, XXXVII, p. 160; Diez, *Churasanische Baudenkmäler*, pp. 50-51, 79 and Taf. 10-11; and his *Persien*, pp. 166-167, plates 19 (left) and 38.

²⁵ Fraser, *op. cit.*, p. 314; Khanikoff, *op. cit.*, p. 74; Sarre, *op. cit.*, p. 112 and Taf. LXXXIII (left); and Diez, *Persien*, pp. 79, 80 and 166-167.

²⁶ Petermann's *Mittheilungen*, 1878, p. 16; and Diez, *Persien*, pp. 168-169.

Of the octagonal-cylindrical type, recalling the Minār Chehil Duchterān at Isfahān, there are three undated (probably twelfth century) examples:—(1) at Termes, on the Amu Darya²⁵; (2) at Kerat, an octagonal shaft 15 m. in height, surmounted by a cylindrical upper storey of 9 m.²⁶ [PLATE III, N]; and (3) at Sirvān, a fluted shaft on an octagonal base, total height 94 feet (29 m.).²⁷

The last dated example of the twelfth century is at Nakhchivān, where the entrance to the tomb-enclosure of Mumine Khātūn is flanked by two minarets which, like the last fifteen examples, are plain cylindrical shafts without socle. An inscription round the portal names the Atabeg Muhammad, son of Ildegis as the builder, which fixes the date between 1172 and 1185.²⁸ The arrangement of two minarets placed so as to flank a great entrance arch was new, but it was destined to spread widely in Persia, India and Asia Minor.

For the first quarter of the thirteenth century we have three examples as follows: (1) Kashān: tall cylindrical shaft without socle, leaning slightly and 47 m. in height, with stalactite cornice at the top; three bands of inscription but without decoration in fayence mosaic. For this reason it may possibly belong to the previous century²⁹; (2) Nagar: some 30 feet of a minaret, form not stated, but probably cylindrical; mihrāb of mosque dated 615 (1218)³⁰; (3) Kashān: minaret of the Great Mosque, cylindrical shaft without socle, decorated with remains of fayence mosaic.³¹

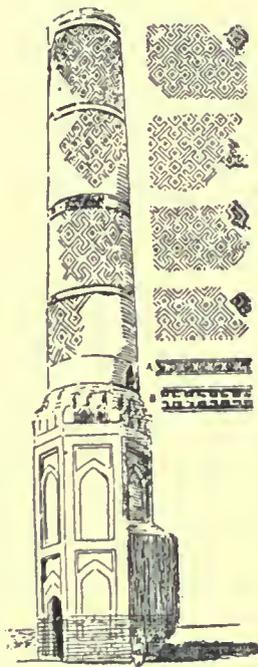


FIG. 4. IRBIL:
MINARET OF KOKBURI.
[From Sarre and
Herzfeld, *op. cit.*]

²⁵ Sarre, *op. cit.*, p. 160 and Abb. 229; and Diez, *Persien*, pp. 166-167.

²⁶ Sykes, *Fifth Journey*, *loc. cit.*, 1906, p. 582; Diez, *Churasanische Baudenkmäler*, pp. 49-50, Taf. 12 (right) and 13 (1, 3 and 4); and his *Persien*, pp. 59, 77-78 and 166-167.

²⁷ Khanikoff, *op. cit.*, p. 134; and Diez, *Persien*, pp. 79 and 166-167.

²⁸ Madame Dieulafoy, *La Perse*, pp. 24-25, with plate; Jacobsthal, *Mittelalterliche Backsteinbauten in Nachtschewan*, *Deutsche Bauzeitung*, 1899, p. 21 and Abh. 3; Sarre, *op. cit.*, pp. 14-15 and Abb. 9; and Thiersch, *Pharos*, p. 161 and Abb. 241.

²⁹ Madame Dieulafoy, *op. cit.*, p. 198, with illustration; D'Allemagne, *Du Khorassan*, IV, p. 33, with illustration; and Diez, *Persien*, pp. 166-167. The earliest example of the use of fayence mosaic is the Mausoleum of Mumine Khātūn at Nakhchivān.

³⁰ Sykes, *Ten Thousand Miles in Persia*, pp. 426-427.

³¹ Madame Dieulafoy, *op. cit.*, p. 199, with illustration.

After this I have no record of a Persian minaret until 715 (1315) at Natanz, form not stated.³²

To summarize; Persian minarets, down to the early part of the thirteenth century, may be divided into three groups: (1) the two at Ghazna, which had no descendants; (2) the tapering cylindrical shaft, the most prevalent type; and (3) the octagon-cylinder type, the only one apparently which did not stand free. The latter in fact seems to have been evolved to stand at the corner of a mosque enclosure as at Isfahān and, as we shall presently see, at Sinjar. Finally at the end of the twelfth century we have, for the first time, a pair of minarets flanking a great entrance arch, a type which became very popular in certain areas.

Let us now turn to Mesopotamia. Apart from Sāmarrā the series begins in the twelfth century,³³ which provides eight early examples as follows; the first and third may be regarded as dated.

- (1) MOSUL.—Minaret of the Great Mosque, 2 tall, cylindrical shaft on a lower storey, 8.80 m. square and 15 m. high; total height 45 m. The style of the brickwork pointing to the twelfth century, and the mosque having been built by Nūr ad-Dīn in 543 (1148), the minaret may be definitely regarded as of that date.³⁴
- (2) MOSUL.—Minaret in the Citadel; of square section up to old roof-level of mosque, then cylindrical and slightly tapering. Of about the same date as the last, according to Herzfeld.³⁵
- (3) RAQQA.—Tall, cylindrical shaft on cubic socle, standing free near the north-western corner of the *sahn*. Curious treatment of windows resembles that at Abū Huraira and Bālis (for which see below). Total height about 25 m. Almost certainly due to Nūr ad-Dīn who, according to an inscription on the façade of the sanctuary, restored the mosque in 561 (1166).³⁶
- (4) ABŪ HURAIRA.—Cylindrical shaft on cubic scale; the curious treatment of the windows resembles that at Raqqa and Bālis, the latter of which was built between 589 and 615 (see below). Herzfeld therefore attributes it to Nūr ad-Dīn (1146-1172).³⁷
- (5) TĀŪQ (south of Kerkuk).—Octagonal lower storey with arched panels, surmounted by a tall, cylindrical shaft, the inner staircase starts from the base of the cylindrical part, where there is a door, at present without means of access. I presume, although neither Miss

³² Houtum-Schindler, *op. cit.*, p. 102.

³³ Unless the minaret at Mujdah (near Ukhaidir) is earlier, as suggested by Miss Bell, *Ukhaidir*, p. 39-40. It has a base 4.35 m. square and 2.85 m. high, above which is a circular shaft. Although Miss Bell does not say so, it would appear from her photograph (*ibid.*, Plate 47(1)) that a wall originally took off to the right. May we not conclude that this minaret once formed the corner of the mosque which it served, and that this type formed the transition between the free standing cylindrical shaft and the later cylindrical shaft with lower octagonal storey attached to the corner of its mosque? Miss Bell's silence is not fatal to this suggestion as she fails to mention the fact that two walls take off from the minaret at Tāūq, although her photograph (Plate 48 (1)) distinctly shows a ragged edge at the right side of the octagonal lower storey.

³⁴ Von Oppenheim, *Vom Mittelmeer zum persischen Golf*, II, pp. 176-177 and plate facing p. 172 (to right—not the minaret to the left, erroneously reproduced as such by Thiersch, Abb. 231); Bell, *Amurath to Amurath*, pp. 259-260; and Sarre and Herzfeld, *Archäologische Reise*, II, pp. 228-231, Abb. 238-241, and Taf. IX and XC (left).

³⁵ Sarre and Herzfeld, *op. cit.*, pp. 231-232, and Abb. 242.

³⁶ *Ibid.*, p. 361, Abb. 338-340, and Taf. LXVII-LXVIII.

³⁷ *Op. cit.*, I, p. 133 and Abb. 55-57.

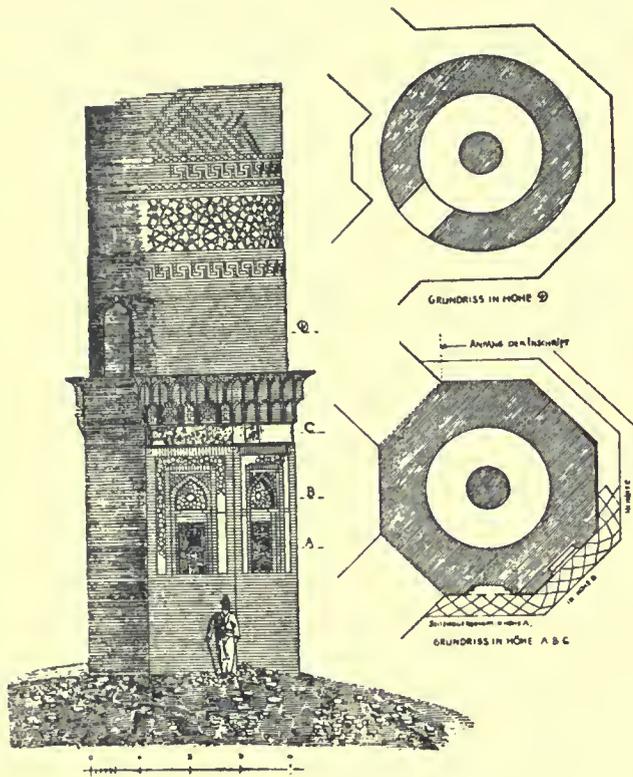


FIG. 5. SINJAR: REMAINS OF MINARET.
[From Sarre and Herzfeld, *op. cit.*]

Bell nor Herzfeld say so, that the two sides of the mosque took off from the octagonal part at right angles, and that the door was entered from the roof of the mosque. Herzfeld places it after the minaret of the Great Mosque at Mosul, and before that at Irbil, i.e., between 543 (1148) and 586 (1190).³⁸

- (6) IRBIL (ARBELA).—Cylindrical shaft on octagonal lower storey, from which traces of two walls take off at right angles [PLATE IV, A and FIG. 4]. There is little doubt that it was built by Muzaffar ad-Dīn Kōkbūri, between 586 (1190) and 608 (1211/2), probably at the commencement of this period.³⁹
- (7) SINJAR.—Cylindrical tower on octagonal lower storey from which the traces of two walls take off at right angles [FIG. 5]. Dated Muharram 598 (October 1201).⁴⁰ This is the earliest example of a minaret decorated with fayence mosaic.⁴¹
- (8) ABU SUDAIR.—Octagonal lower storey (all left), with two walls taking off at right angles. Herzfeld suggests that it dates from the early part of the thirteenth century.⁴²

This series teaches us that although the cylindrical shaft was as popular in Mesopotamia as

³⁸ Miss G. L. Bell, *Ukhaidir*, p. 40 and Plate 48 (1); and Sarre and Herzfeld, *op. cit.*, II, pp. 318-319, and Abb. 299. Miss Bell's plate is not very sharp, but there appears to be a ragged edge at the right side of the octagon, which I take to be the remains of the take-off.

³⁹ Thiersch, *op. cit.*, p. 148 and Abb. 203; Sarre and Herzfeld, *op. cit.*, II, pp. 314-318, Abb. 295-298, and Taf. CXXXVII; and Diez, *Persien*, p. 77.

⁴⁰ For the date, etc., see Sarre and Herzfeld, *op. cit.*, I, pp. 9-10; II, p. 308, Abb. 284 and Taf. IV, LXXXIV-LXXXVI and CXXXVII. See also Thiersch, *op. cit.*, p. 148 and Abb. 204; and Diez, *Persien*, p. 77.

⁴¹ The earliest example of a building so decorated is the mausoleum of Mumine Khātūn, at Nakhchivan, dated 582 (1186). For references see above, n. 29.

⁴² Sarre and Herzfeld, *op. cit.*, I, p. 246, Abb. 129, and Taf. XXXVI.

in Persia (which is, of course, what we should expect, for the two areas, with the exception of the north-western part of the former, march together architecturally), yet the free standing minaret was less usual. Of these seven minarets only two—those at Raqqa and Abū Huraira—were free standing; the others must have formed one with the mosque. As for the form chosen for the lower part, we find two types (a) a square shaft which was really nothing more than a thickening of the boundary wall of the mosque to enable it to take the base of the cylinder, and (b) the more elegant solution, in which the cylindrical shaft rests on an octagonal lower storey, from which two walls take off at right angles; that is to say, the minaret is set on one of the corners of the mosque, which is beautified and sufficiently re-inforced at the same time. This solution, first seen in Isfahān in 501 (1107/8) was adopted in Mesopotamia at Irbil between 543 (1148) and 586 (1190), at Sinjar in 598 (1201), and also apparently at Tāūq.

So many octagonal storeys having been built, one of which, as we have seen, attains the respectable height of 15 m. (just over 49 feet), it would be scarcely surprising to find octagonal minarets, pure and simple, appearing about this time, and in this region. This is precisely what we do find, and the next two minarets in our series, those of 'Ānah⁴³ and Bālis (the earliest dated example), are both octagonal. The ornament of the minaret of 'Ānah connects it with Imām Dūr and with the monument known as al-Arba'in at Takrīt, and it may be safely placed in the twelfth century. The minaret at Bālis [PLATE IV, 8] carries the type to the eastern frontier of Syria. It consists of a tall octagonal shaft on a cubic socle, 3.60 m. a side, the total height being 21 m. The transition between the octagonal shaft and the cubic socle is effected by a chamfer. There are four bands of inscription, one stating that it was built by al-Malik al-'Ādil Abū Bakr,⁴⁴ the brother of Saladin. There is no date, but the fact that he reigned from 589 (1193) to 613 (1218) is sufficient for our purpose. Lest the Mesopotamian inspiration of this minaret should be doubted, as it is only about 70 miles east of Aleppo, I would point out that it is built of brick, a material practically unknown in Northern Syria,⁴⁵ and that the curious treatment of the window slits is

⁴³ 'Ānah is on the Euphrates, about 80 miles N.W. of Hit, and the minaret stands on the Island of Lubād at the lower end of the town. See Viollet, *Palais de al-Moutasim*, p. 8 and Plate IV (3); Miss Bell, *Amurath to Amurath*, p. 96 and Fig. 56; and Sarre and Herzfeld, *op. cit.*, pp. 319-321, Abb. 300-301, and Taf. CXXXVII.

⁴⁴ Sarre and Herzfeld, *op. cit.*, I, pp. 2-3, 124-126, Abb. 1, 2, 4, 5, and Taf. 1.

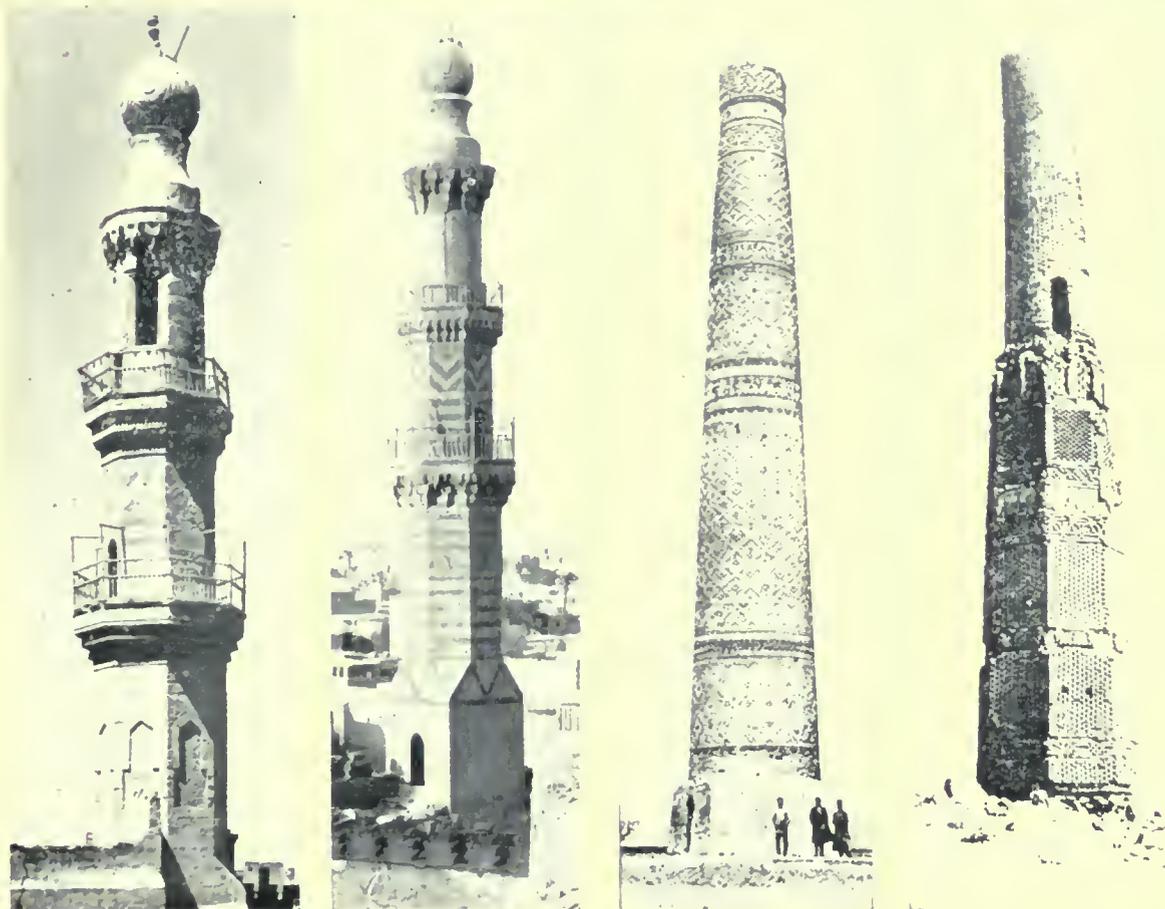
⁴⁵ Qasr ibn Wardan, A.D. 561, and the great *costrum* at Anderin, dated A.D. 564, are the only examples known. See the remarks of Butler, *Ancient Architecture in Syria*, Sect. B: *Northern Syria*, pp. 42-45.

G, H—



—J

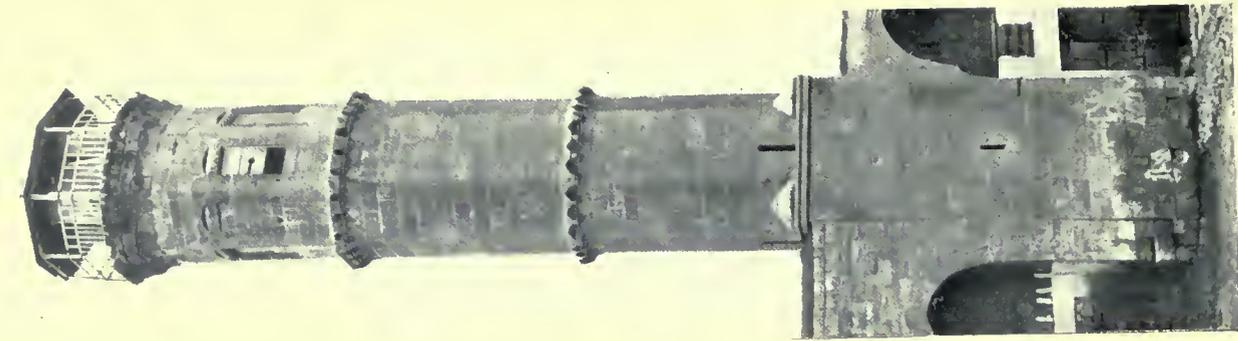
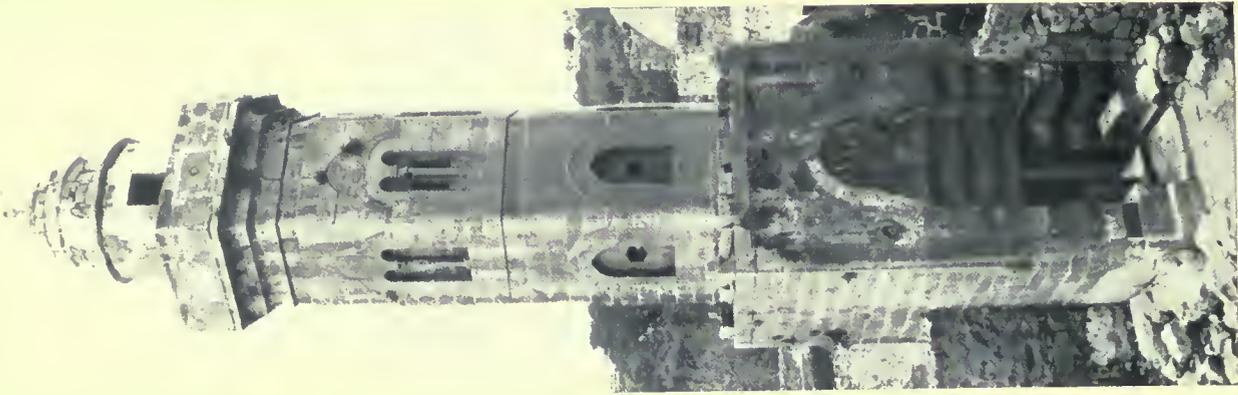
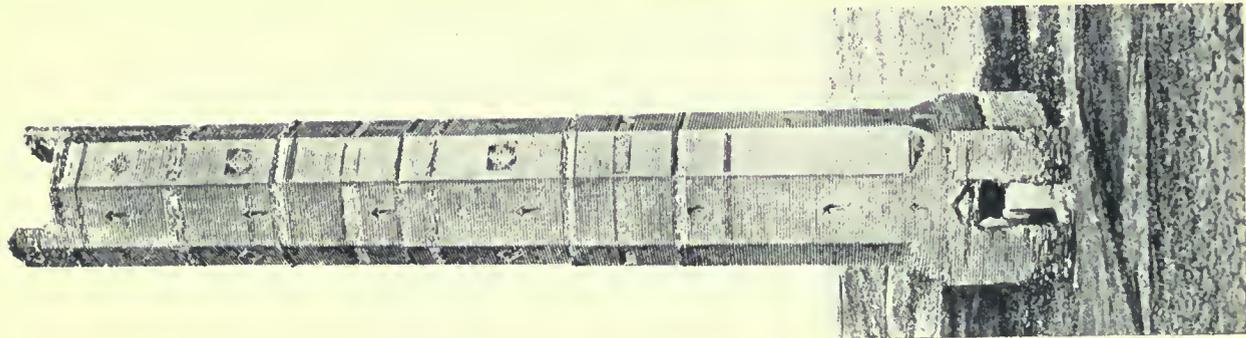
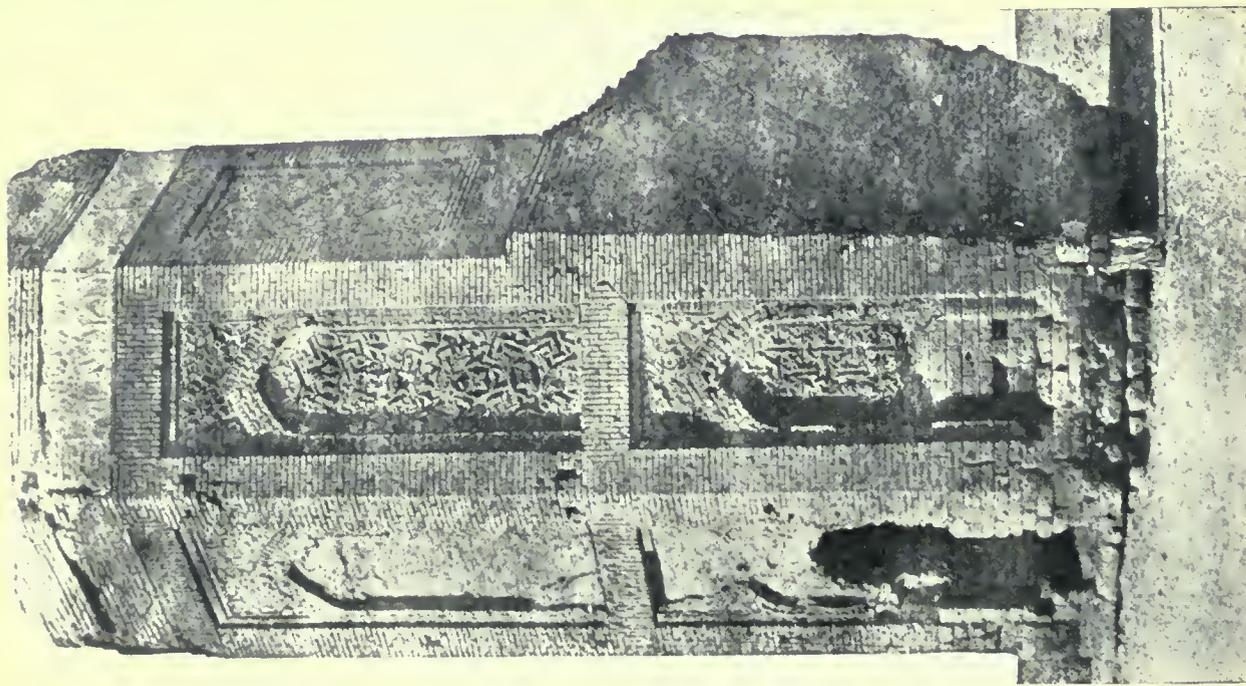
K, L—



—M, N

G—Madrasa-Mausoleum of the Emīr Sunqur Sa'di; H—Mosque of al-Māridānī, Cairo; J—Khānqā of the Emīl Qūsūn; K—Mosque of Sheykhūn, Cairo; L—Madrasa of Sarghatmish, Cairo; M—Minaret, Khosraugird; N—Minaret, Kerat. The last two from Diez, *Chur-anischer Baudenkmäler*.]

Plate III. The Evolution of the Minaret, with special reference to Egypt—II



A—Minaret of Kökbūri, lower storey, Irbil; B—Minaret of al-Malik al-'Ādil, Bālis; C—Minaret of Sheykh 'Alī Bakkar, Hebron; D—Mosque of Altumbughā
 [From Sarre and Herzfeld, *op. cit.*] [From Sarre and Herzfeld, *op. cit.*]

Plate IV. The Evolution of the Minaret, with special reference to Egypt—III

identical to that employed at Raqqa and Abū Huraira.

Whether this octagonal minaret was evolved as suggested or not,⁴⁶ it is in any case the disturbing influence which we are seeking, a disturbing influence brought in from Mesopotamia by the Ayyūbides and maintained by them. It is this disturbing influence, and not the influence of Egypt, as suggested by Thiersch,⁴⁷ which explains the minaret built at Salkhad in 630 (1232/3) by 'Izz ad-Dīn Aybek, the son of al-Malik Mu'azzam 'Isa and grandson of al-'Ādil.⁴⁸ It is a tall octagonal shaft, a completely Syrianized version of that at Bālis, that is to say, it

⁴⁶ Thiersch (*op. cit.*, p. 175) would have it that the octagonal minaret was derived from octagonal church towers built before the days of Islam, but this theory rests on a nebulous basis, as of the only two examples he can cite—the polygonal tower of the Church of St. John the Baptist at Damascus and the minaret of the Great Mosque at Urfa—the first is imaginary, the second of quite uncertain date. The former rests on the statement of al-'Ilmawi, that al-Walid, when he commenced to destroy the church, preparatory to the construction of the Great Mosque, mounted the *dāt al-adāle*, etc., Sauvaire emends the text to read *dāt al-asabe'*, which he translates by polygonal minaret (he does not venture to say octagonal), but the whole matter, even the signification of the term he proposes, is highly conjectural. (See Littmann's note in Wulzinger and Watzinger, *Damascus*, II, p. 148n.). The octagonal minaret of the Great Mosque at Urfa may or may not be pre-Muhammadan; Rivoira (*Moslem Architecture*, p. 134) suggests the twelfth century, and the presence of a deep joggled voussoir over the lintel of its doorway is very much against a pre-Muhammadan date.

⁴⁷ *Pharos*, p. 110. He says it is "Kaum ohne ägyptische Beeinflussung zu denken," which is absurd, as no such thing as an octagonal minaret or even an octagonal storey, had been evolved in Egypt at this time. Errors of this sort are the result of failing to use one's material in strict chronological order. His Syrian examples are enumerated anyhow, and he handles the minaret of mud-brick over the Bāb Sharqi at Damascus before that of the Great Mosque at Aleppo, which is the oldest minaret in Syria. The same absence of system mars his study on the mosque plan (Kapital VI (2)), where we find the following amazing order:—Mosque of 'Amr; Mosque of the Thousand Columns, Alexandria; Mosque of al-Muayyad (1420); Uzbak (1475/6); Barsbay at al-Khānqā (1437); Māridānī (1340); Bibars I (1269)! How can one follow evolution on these lines? Gottheil in his otherwise admirable essay on the origin of the minaret, is guilty of the same fault when he comes to the question of Egyptian minarets; he discusses them in the following order, or disorder, Qalāūn (1284), Barqūq (1410), Hasan (1362), Muhammad an-Nāsir (1318 or 1335), Qāyt-Bāy (1474), al-Muayyad (1420), and al-Azhar (1501-1516).

⁴⁸ The inscription is given by von Oppenheim, *Vom Mittelmeer zum Persischen Golf*, I, pp. 206-207, with an illustration. He read the date as 603 (1206/7), but Wetzstein (*Reisebericht*

is built of stone, it is divided into storeys by Syrian mouldings, and the window-slits are covered, Syrian fashion, by an arcuated lintel. This influence also explains the octagonal minaret over the entrance to the shrine of Sheykh 'Alī Bakkar at Hebron [PLATE IV, c], built at the commencement of Ramadān 702 (April 19, 1303),⁴⁹ and the minaret of the Mosque of Altunbughā al-Māridānī at Aleppo [PLATE IV, d], built in 718 (1318).⁵⁰

Now is it not significant that what I have described as a disturbing influence first appears in Cairo in the Mosque built by this very same Emīr in 739 (1340)? Here we see the square lower portion, hitherto so prominent, reduced to a mere pier, reinforcing the boundary wall of the mosque, the minaret proper, a tall octagonal shaft, still retaining at mid-height the gallery which previously marked the transition from square to octagon in earlier minarets, but without the *mabkhāra*, which disappears for ever, to give place to a light open pavilion, supported on columns [PLATE III, h]. The minarets of Sheykh-hūn, 750 (1349) and 756 (1355), Sarghatmish, 757 (1356), Sultan Hasan, 764 (1362/3), Tatar al-Hegaziya, 761 (1360) and Sultan Sha'bān 770 (1368-9), closely follow the new pattern [PLATE IV]. Thus by merely arranging our material in strict chronological order, we are brought to a conclusion diametrically opposed to that of Thiersch, who argues that the octagonal Palestinian minaret came from Egypt (*op. cit.*, pp. 119-122). Our conclusion is that the octagonal type of minaret came from Syria to Egypt and that in its evolution the Pharos played no part.

I append herewith a tabulated statement of minarets arranged by countries and in chronological order, so that the various types and their evolution can be seen at a glance.

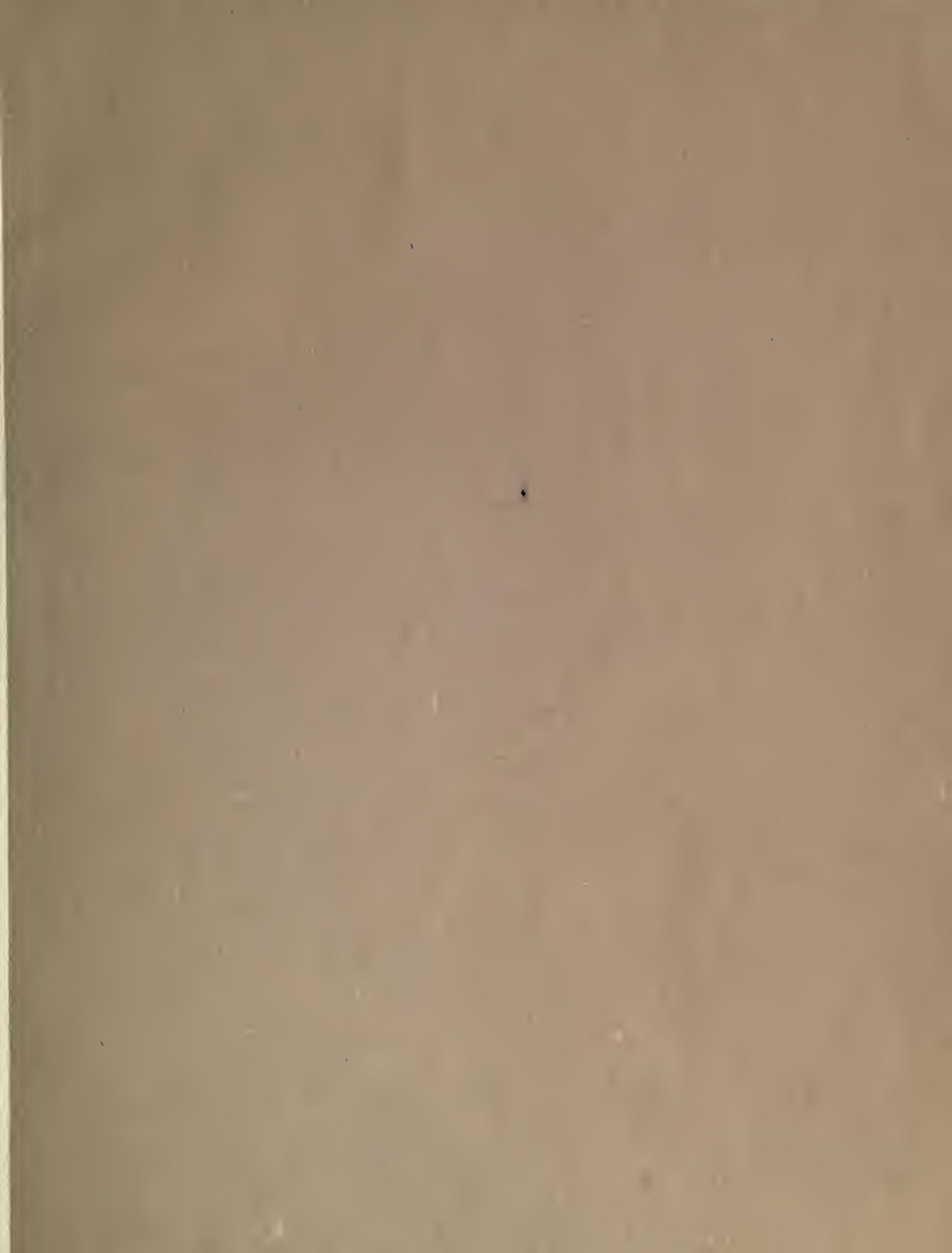
über Hauran und die Trachonen, p. 70) and Dussaud (*Mission dans les régions désertiques de la Syrie moyenne*, in the *Nouvelles Archives des Missions scientifiques*, X, p. 732) read it as 630 (1233/4), which must be the correct version, as Salkhad was only given to 'Izz ad-Dīn in fee in 608 (1211/2). He is mentioned as "Lord of Salkhad and Zara" in 636 (1238) and died 646 (1248/9). See Littmann's article *Aibeg* in the *Encyclopædia of Islam*, I, pp. 208-209.

⁴⁹ Mujir ad-Dīn, p. 493; Sauvaire's transl., p. 292.

⁵⁰ Bischoff, *Tuhaf al-anbā' fi ta'rikh Halab*, p. 146.

591/4 (1195/8)	RABĀT	do.	do.	BOSRA : Deir al-Muslim	do.	SAVEH	Tapering cylinder
593 (1197)	MARRĀKESH (Kutubiya)	do.	do.			TEBBES KUNJA URGENJ (1)	do.
	SEVILLE :	do.	do.			do.	do.
	Giralda					do.	do.
	Not continued here						
XIIIth century						*RAQQA	Square tower
						*HARRAN : G.M.	do.
do.						RAHGIRD BOSTAM DAMGHĀN :	? Tapering cylinder do.
do.						G.M.	
do.						KERĀT	15 m. octagonal, then cylindrical
do.						SENGBEST FIRUZĀBĀD	Tapering cylinder do.
do.						(Kishmar)	
do.						MESTORJĀN	do.
do.						SIRVĀN	Octagon. and cyl.
do.						TERMES, on the Amu Darya	do.
c. 1200						*ĀNAH	Free standing octagon
598 (1201)						SINJAR	Cyl. on octagon ; 2 walls take off
Early XIIIth cent.						ABŪ SUDAIR	Octagonal base ; 2 walls take off
610 (1213/4)						Not continued here	
589-615 (1193-1218)							
615 (1218)							
618 (1221)							
630 (1232/3)							
634 (1237)							
641 (1243/4)							
648 (1246)							
c. 1250							
? 655 (1257)							
667 (1269)							
683 (1284)							
684 (1285)							
End of XIIIth cent.							
702 (1303)							
703 (1303)							
703 (1303/4)							

* Intrusions from Syria



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