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イラクの沙漠辺境地におけるキリスト教徒たち (英文)

シンジョン・シンプソン

ウズベキスタン南部スルハンダリヤ州, マチャイ渓谷の
先史時代洞窟遺跡踏査 (英文)

西秋良宏, オタベク・アリブジャノフ, アリシャル・ラジャボフ
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カレ・クルド洞窟: イラン中央高原の西縁における中期旧石器時代 (英文)

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ワディ・ヘダージャ 1 および 2: 発掘資料に基づく年代考証 (英文)

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CHRISTIANS ON IRAQ'S DESERT FRONTIER

St John SIMPSON*

“The Arabs to whom God has granted at this time the government of the world ... do not persecute the Christian religion; on the contrary they favour it, honour our priests and the saints of the Lord and confer benefits on churches and monasteries.”

This comment was made by the Nestorian patriarch Isho'yahb in the 650s AD and shortly after the Arab Conquest of the Sasanian empire. Two centuries later, a Nestorian chronicle stated that “The hearts of Christians rejoiced at the ascendancy of the Arabs. May God affirm and make it triumphant!” (Jenkins 2008, 104–105). There are many other such examples which could be used to illustrate the tolerance afforded to Christians after the Arab Conquest but, although the early development of Christianity in Iraq and the Persian Gulf are subjects which have attracted growing attention among scholars, there is a general mismatch between the archaeological evidence and the conclusions drawn by those who rely entirely on written sources and perceptions of the historical context. The dating of churches and other sites in the Najaf region of the Iraqi Western Desert are critical to this debate and under-appreciated by those unfamiliar with the archaeology of Iraq. The pioneering work carried out by David Talbot Rice at Hira is critically re-assessed here in the light of the important excavations directed by the late Professor Hideo Fujii at Ain Shai'a and independent investigations conducted by German and Iraqi expeditions at Qusair North.

This study re-analyses these archaeological remains, offers a systematic re-dating of all the known churches and monasteries from the Persian Gulf and presents the first detailed publication of a series of moulded stucco plaques from Hira which are held in the Ashmolean Museum in Oxford. It is dedicated to the late Jeremy Black who was deeply interested in this work and who first encouraged me to look into this subject.¹⁾

Introduction

Christianity in the Middle East did not die with the Arab Conquest but is at much greater risk now than at any period previously. The focus of attention on the archaeology of the Eastern Church has been in Turkey and the southern Levant where it is now recognised that many of the Byzantine churches and monasteries were neither destroyed in the Sasanian occupation of 614–630 or in the subsequent Muslim invasion of 636 (Avni 2010; cf. Schick 1995; Tsafrir ed. 1993). Many survived until at least the end of the seventh century, and re-analysis of finds from the North and South Churches at Nessana indicates that these were occupied as late as the ninth or tenth century (Magnes 2003, 177–85). The effects of plagues, invasions, earthquakes and other disasters on the population of Northern Syria in the sixth century have also been over-emphasised as catalysts of change (Magnes 2003, 195–214; cf. Kennedy 1985). In Iraq the revised dating of a number of archaeological surface

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1) This paper was originally conceived for, submitted to and accepted by editors of the memorial volume for Jeremy Black entitled *Your Praise is Sweet: A memorial volume presented to Jeremy Allen Black by colleagues, students and friends* but although proofs were corrected and it was cited as forthcoming by several authors (Kennet 2007; Carter 2008), it was unfortunately omitted from that publication. The illustrations have been reconstructed and the paper has been re-submitted with minor revisions and updates to the editors of this journal in view of the seminal work carried out by the Japanese archaeological expedition to Iraq at Ain Shai'a and other sites in the Iraqi Western Desert. I am also very grateful to my colleagues in the Kokushikan University for kindly hosting me at Kufa during my brief visit to Ain Shai'a in 1986.

survey pottery types again suggest a greater degree of stability and continuity after the Arab Conquest than previously hypothesised (Morony 1984; Simpson 1992, vol. I, 313–14, 317–18; cf. Adams 1981). The development of the Persian Church and associated finds have been extensively discussed elsewhere (e.g., Labourt 1904; van der Ploeg 1975/78; Lerner 1992; Russell 1992; Comneno 1997; Tubach 1999; Jullien, and Jullien 2002; Simpson 2005*a*; Gyselen 2006; Hauser 2007; Horn, and Hunter 2012; Payne 2014). Many of the stray finds or architectural fragments have been assumed to date to the Sasanian period yet small portable objects such as seals are not independently dated. Moreover, Fiey's (1965/69) survey of the development of Christianity in Iraq indicates that many of the recorded churches and monasteries were only founded in the seventh and eighth centuries and several scholars have used sources of this period to stress continuity rather than chaos after the Arab Conquest (e.g., Morony 1984; Villagomez 1998; Key Fowden 2004). A much higher level of caution is therefore necessary in attributing archaeological remains or isolated Christian finds to a Byzantine or Sasanian, rather than a later, date without very good reason. It is also often forgotten that archaeological paradigms are the product of the intellectual upbringing and experience of the excavator: "today's archaeologists, like their nineteenth-century predecessors, could not help but be products of their times and national traditions" (Silberman 1990, 248). The significance of these comments will now become apparent.

In the autumn of 1931, the Byzantinist David Talbot Rice (1903–1972) conducted a month-long season of excavations at the site believed to be that of the famous Lakhmid capital of Hira. This site is usually identified with a series of low scattered mounds separated by open spaces, covering an estimated area of some five square kilometres, and located some ten kilometres south-west of the present city of Kufa on the desert margin of southern Iraq (Figs 1–2). Talbot Rice excavated trenches in eleven different mounds in the north-east portion, two of which proved to belong to churches; he also tested the intervening flat areas which he concluded had been unoccupied. He argued a late Sasanian date for these churches, as well as a large building on Mound I which was variously interpreted as "a fort, small palace or large house". Talbot Rice's intention to continue these investigations was cut short by the increasing political disturbances which marked the end of the British Mandate in Iraq in 1932. In 2007, 2009 and 2010/11, rescue excavations were conducted on other mounds as a result of the construction of the International Airport at Najaf: several other large multi-room complexes were uncovered, in one case interpreted as a monastery and another as "a building with religious functions", and in each case associated with early Islamic glazed pottery, coins, glass and lamps, two Kufic inscriptions on stone and a dozen stucco plaques representing crosses (al-Ka'bī 2012; 2014). Given the importance of Talbot Rice's original findings and a widespread continuing assumption that these date to the Sasanian period, they are summarised below on the basis of his three published articles, with comments added where appropriate on the stratigraphy, architecture and date of the finds.²⁾

2) He published three articles on his excavations at Hira in the *Journal of the Royal Central Asian Society* (Talbot Rice 1932*a*), *Antiquity* (Talbot Rice 1932*b*) and *Ars Islamica* (Talbot Rice 1934). Talbot Rice had previously worked in Iraq as part of the Oxford–Field Museum excavations at Kish after graduating from Oxford in 1925. His work at Hira was under the general auspices of the Kish expedition but was funded by Gerald Reitlinger (1900–1978) who accompanied Talbot Rice in the field. Occasional references to two seasons of investigations at Hira are incorrect (e.g., Rousset 1994, 20). The year afterwards, he was appointed as one of the first lecturers in the newly endowed Courtauld Institute in London; he retained this until 1938, although he was appointed Watson Gordon Professor of Fine Art at Edinburgh University in 1934. His original plans and photographs remained in family hands and were illustrated by Erica Hunter in an unpublished British Institute for the Study of Iraq lecture entitled "Hira as a centre of Christianity during the Sassanid – Islamic periods" which was held at the British Academy on 15 December 2005. My thanks to my colleague Chris Entwistle for kindly checking filed correspondence between the Talbot Rice family and the Department of Britain, Europe and Prehistory in the British Museum, James Allan for kindly giving me access and permission to publish the finds from Hira, and Sue Gill and Derek Kennet for their very helpful comments on the original version of this paper.



Fig. 1 Map showing the location of Hira (Selby, Collingwood, and Bewsher 1885, sheet 3).



Fig. 2 Sketch plan showing the mounds at Hira (after Talbot Rice 1934, fig. 1).

The churches and associated finds from Hira

Talbot Rice excavated two churches on separated mounds designated Mounds V and XI. Both buildings were believed to date to the sixth or seventh century and had been reconstructed at least once before they fell into disrepair (Fig. 3). They were constructed with thick mudbrick walls coated on the inside with what was described as plain white lime-plaster³⁾ and apparently supporting a barrel-vaulted roof. This originally sprang from square pilasters and two rows of circular columns which separated the nave from the aisle, although these were either unexcavated or robbed out in the case of the Mound V church. The aisles in the Mound XI church were later divided by cross-walls, and low brick platforms or *bemas* added in the centre of each nave. The Mound V church had two doors in the north aisle and one door in the south aisle, whereas the Mound XI church had two in each, plus a square niche at the west end of the nave which may represent the secondary blocking of a door. The naves were floored with fired brick, although these were only partly preserved. In both churches the chancel appears to have been raised above the level of the nave at a secondary phase, and steps added with brick paving laid above the earlier plaster floors in one case. In both churches the flanking rooms at the east end remained at the same level as the nave and aisles. Brightly painted wall plaster of more than one phase, including several representations of crosses, was found at the east end of the Mound V chancel. The second church possessed five coats of white plaster and “elaborate wall-paintings”, including a cross (Fig. 4), and a unique draped figure with outstretched bare right arm which presumably represents an *orans* (Fig. 5b). The Mound XI church chancel possessed niched walls which presumably originally supported a squinched dome; a rectangular protruding altar or plinth (a secondary feature according to the plan) was found set against the east end. In both cases the chancels were flanked by a pair of rooms. The walls of these were generally bare although a red cross with splayed ends was found painted in the centre of the east wall of the southern chapel of the Mound XI church. The only apparent traces of reuse were “a few lines of Kufic” scratched on the walls of the Mound V church, although whether this was indeed Kufic rather than Syriac is unconfirmed.⁴⁾

The small finds found in these excavations were not fully published but they include a small cast copper alloy cross with flaring arms decorated with dotted circles and a suspension loop at the top (Fig. 6). Although this may represent a personal item, it might have belonged to a larger liturgical fitting such as a processional cross. It was suggested by Talbot Rice (1932*a*, 266) to “perhaps be of Byzantine workmanship” and similar examples have been found at Antioch and elsewhere (e.g., Russell 2000, 84–85, fig. 7). However, it is equally likely it was made in Mesopotamia

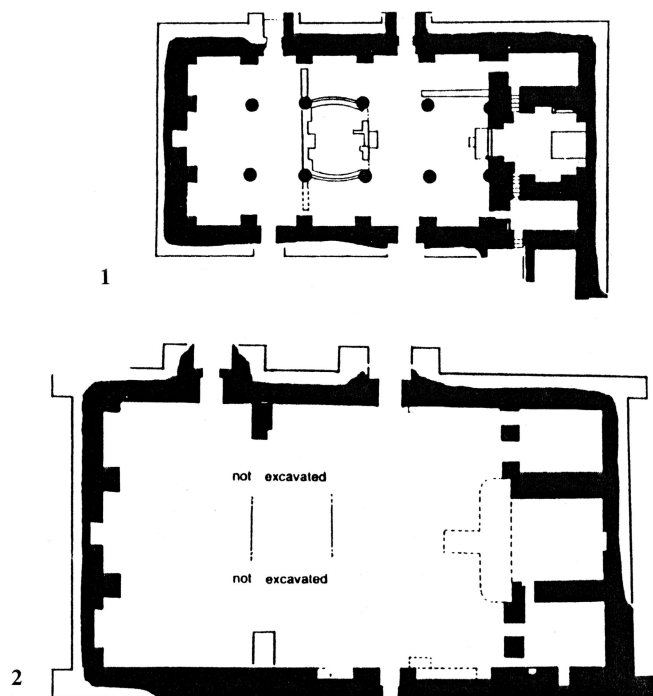


Fig. 3 Plans of the churches excavated on mounds V and XI at Hira (after Talbot Rice 1934, figs 5–6).

3) This is more likely to be gypsum plaster.

4) Syriac inscriptions were found on fallen wall-plaster at Ain Sha'ia (Hunter 1989) and others were found *in situ* in the unpublished Iraqi excavations at Qusair (Roaf, and Postgate 1981, 186).



Fig. 4 Painted wall plaster from Hira: fragment, cross with elongated lower arm and blobs at the corners, supported on an off-centre stepped cushion-like base, cross painted in dull and heavily faded ochreous reddish-brown pigment with ochreous yellow edging and bright blue blobs on the terminals, plain background; H 38, W 34.5, T 2 cm.; Mound XI church (AMO X6017 = not previously published).

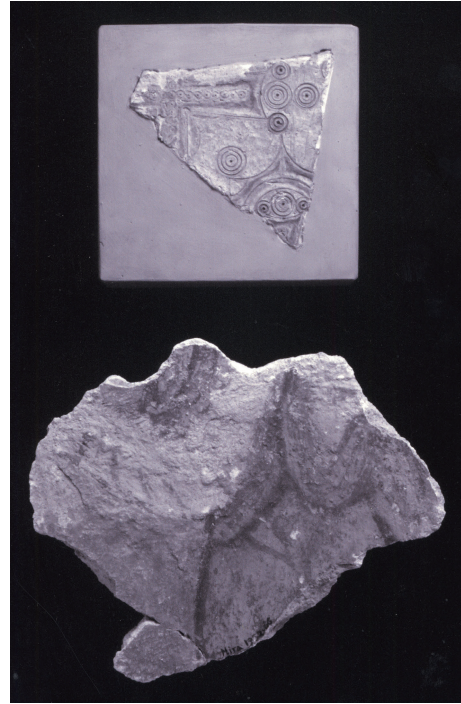


Fig. 5 Stucco and painted wall plaster from Hira: a, fragment, portions of two crosses with slightly flared arms with arrangements of three dotted circles at the end of each, one cross decorated inside with guilloche and outlined with deeper incised lines, the other below a grooved semi-circular arch with a pointed top, ochreous red pigment infilling all the incised decoration; H 8.2, W 8 cm.; Mound XI church; AMO, un-numbered = Talbot Rice 1932b, 283, fig. 3a, upside-down; 1934: fig. 24B); b, fragment, representing an orans with bare arms and purple drapery in purple with black highlighting on a red background; H 14, W 16.5, T 4 cm.; Mound XI church (AMO 1932.66 = not previously published).



Fig. 6 Copper alloy cross pendant; H 3 cm., W 1.9 cm. (AMO 1932.71).

where there was a substantial Christian population: the eastern manufacture and circulation of such items is indicated by a crucifix mould excavated in a late Sasanian context at Merv (Herrmann, and Kurbansakhatov *et al.* 1994, 68, pl. Vd; Simpson 1996, 31), a similar copper alloy pendant has been found in a late Sasanian or early Islamic context in the town-site of Qasr-i Abu Nasr in Fars (Whitcomb 1985, 178–79, fig. 66q; cf. also Potts 1994), and another recovered in rescue excavations carried out at Hira in 2010/11 (al-Ka'bi 2012, 62, fig. 4d; 2014, 94–95, fig. 13).

A small quantity of other objects was also

found, including six fragments of softstone containers now in the Ashmolean Museum, all carved by hand from grey-green or dark grey chlorite (Fig. 7).⁵⁾ These are non-ecclesiastical in function but, apart from one bowl rim from Mound I, their exact findspot is unrecorded. They include a

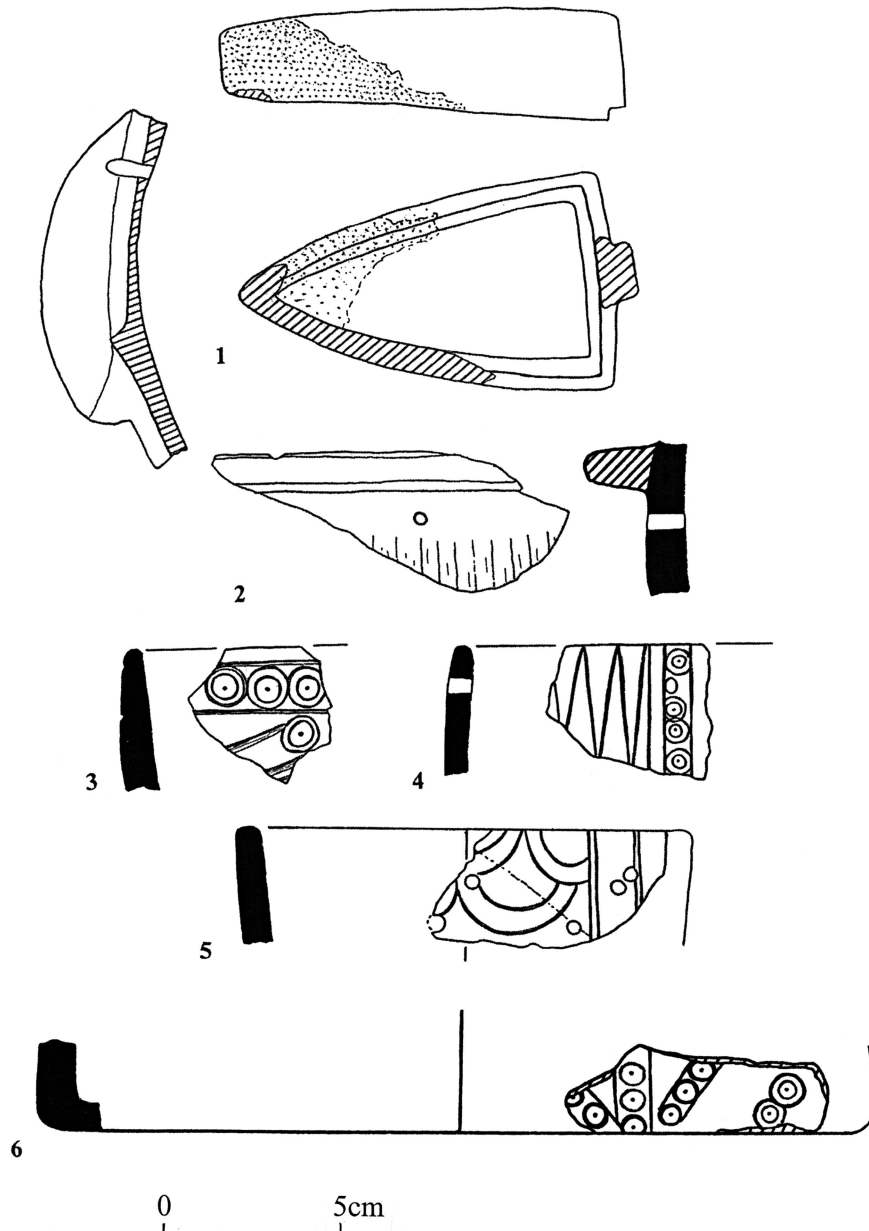


Fig. 7 Early Islamic chlorite objects from Hira: 1, triangular “boat-shaped” lamp, grey-green, partially chipped with heavy sooting around the pointed wick end indicated by stippling (AMO 1932.75); 2, cooking pot with ledge handle and faint vertical adze marks below, dark grey with partially sooted exterior and circular repair hole, 0.4 cm. across, below the handle (AMO un-numbered); 3, straight-sided bowl, grey-green with incised decoration, diameter uncertain, angle approx, Mound I (AMO un-numbered); 4, straight-sided bowl, grey-green with incised decoration and circular repair hole, 0.4 cm. across, diameter uncertain, angle approx (AMO 1932.76c); 5, straight-sided bowl, dark green with incised decoration, interior rim diameter 11–12 cm., multiple circular repair holes, 0.45 cm. across, some with iron staining (AMO 1932.76d); 6, straight-sided bowl, grey-green with incised decoration, exterior base diameter 21–23 cm. (AMO 1932.76a).

5) These are published here for the first time although they have been cited by several earlier scholars (Scanlon 1968, 8, 15, fig. 7a, n. 12; al-Rashid 1980, 263; Hallett 1990).

small triangular “boat-shaped” lamp identical to examples published from al-Rabadhah and many other sites, all of early medieval date (e.g., al-Rashid 1986, 79, fig. 158). Three bowl rims are closely paralleled by examples found at the eighth century site of Tulul al-Ukhaidhir in western Iraq (Finster, and Schmidt 1976, 113, fig. 53d): one was decorated on the exterior with dotted circles, and two (both with repair holes) were decorated with a combination of dotted circles, and swags or diagonal lines. Another fragment belonged to a base of a vessel decorated on the exterior with dotted circles. The last sherd belonged to a previously repaired and partially blackened cooking pot with a semi-circular horizontal ledge handle protruding above the remains of vertical adze marks on the exterior. This type is also familiar from eighth to ninth century contexts at sites ranging from Egypt to central Asia (Simpson in press).

The second group of finds relate more directly to the churches. They consist of a selection of plain white limestone and yellow, green, blue and gold-glass tesserae deriving from collapsed wall or ceiling mosaics, and several pieces of ostrich eggshell. One of the latter was covered with red paint on the interior and decorated on the exterior with a stepped merlon pattern immediately below the rim (Fig. 8). The use of the motif in this manner resembles a feature of some Samarra horizon glazed bowls and, further afield, so-called “Buff Ware” bowls excavated in ninth century contexts at Merv (Herrmann, and Kurbansakhatov *et al.* 1995, 45–48). The original function of this painted eggshell is uncertain but ostrich eggs excavated in Byzantine church contexts in the Negev were interpreted as having been “hung above the lamps, as is done today, to prevent rats getting down the chains to drink the oil” (Baly 1935, 180). This feature appears to have been later adopted in mosques as well as churches, and Buckingham (1827, vol. I, 191) commented on the “large ostrich eggs and lamps suspended from the roof” of the Mosque of Abraham in Urfa as well as similar sights in Jordan (Buckingham 1825, 13, 30). In Coptic churches these were suspended in front of the sanctuary screen and interpreted as symbolising God’s ever-vigilant eye and birth (Kamil 1990, 80). It is tempting to ascribe a similar function to these eggs from Hira, as well as others excavated in late Sasanian or early Islamic contexts at Ctesiphon (unpublished) and Qasr-i Abu Nasr (Whitcomb 1985, 220, fig. 74i).⁶⁾



Fig. 8 Painted ostrich eggshell fragment from Hira (AMO 1932.67).

6) A number of (unpublished) fragments decorated with purple and black pigment and gilding were excavated during the 1931/32 season of excavations by the Deutschen Orient-Gesellschaft at al-Ma'aridh I at Ctesiphon. Ostrich eggshell has also been recognised on survey collections of early Islamic sites in Qatar (de Cardi ed. 1978, 185, 187), an exceptionally large ostrich egg decorated with gold was among booty said to have been looted in AH 460–61 [1068–69] from the Fatimid treasuries in Cairo (al-Qaddumi 1996, 240–41), and inscribed “ostrichicons” [sic] were found placed with Mamluk burials at the Red Sea port of Quseir al-Qadim (Johnson, and Whitcomb n.d., 39–40). The range of the Arabian ostrich is believed to have extended through the deserts of North Syria and as far as the Euphrates where Xenophon reported their speed exceeded that of horsemen who tried to ride them down (*Anabasis*, I.v.3), and archaeological finds are likely to be a touchstone of interaction with non-sedentarised populations on the desert margins of Arabia. The familiarity of bedouin with the ostrich finds its way into pre-Islamic Arab poetry, where comparison was made between the delicate complexion of a lovely woman with the smooth and brilliant surface of an ostrich egg and the Qur'an refers to “virgins with chaste glances and large, black eyes which resemble the hidden eggs of the ostrich” (quoted by Laufer 1926, 4). Unsurprisingly, direct evidence is less commonly found in Iran or other regions further removed from the Arabian peninsula. However, to these may be added representations of ostriches on a unique Sasanian or Sogdian gilt-silver bowl found at Qigexing in Xinjiang (Harper 2004), and T'ang dynasty records refer to gifts of ostrich eggs from the Sogdian cities of Bukhara and Samarqand (Schafer 1985, 258).

A few comments are necessary about Talbot Rice's other results before setting his churches into their wider context. The upper architectural phase on Mound I at Hira was almost entirely cleared, and revealed a large mudbrick structure with thirteen rooms arranged around a large open central courtyard and a pair of protruding semi-circular towers on the exterior of the north wall (Fig. 9). This was enclosed within a thick asymmetrical outer wall constructed of square reddish fired bricks ($26 \times 26 \times 4\text{--}5$ cm.) with square protruding buttresses at three corners; the fourth corner was rounded. The original entrance was not excavated but presumably lay immediately below the semi-circular towers and opened into a passage which led around to an inner entrance on the east side of the building within. A staircase immediately within this second entrance implies access onto a flat roof as the walls do not appear thick enough to have supported a second storey (cf. Talbot Rice 1932*b*, fig. 5; 1934, fig. 2). Although the published reports claim that the building was two-storey with the lower floor consisting of a basement, the latter simply represents the infilled remains of an earlier phase with blocked doors not recognised by the excavator. This is a common error of interpretation of excavated mudbrick buildings (Simpson 2004, 233–34). Likewise, the claim that the inner and outer walls belonged to different phases is unsupported by the published section which proves that they were constructed from the same horizon, and the size of the "Sasanian" fired bricks instead correspond to early Islamic sizes recorded on survey by Adams (1981, 239). Moreover, as many as 24 coins were recovered from this structure, one dating to AH 152 [769/80], two to AH 157 [773/74], one to AH 167 [783/84], and the remainder attributed to the same century, thus strongly supporting an eighth century date for this phase of the building. Large jars with barbotine decoration sunk into the infilled remains of the earlier level were apparently used as soak-away drains: the independent dating of these further support an eighth century dating of the second phase (Talbot Rice 1932*b*, pl. III). Equally importantly, elaborate stucco with vine scroll decoration partially enclosed within roundels was found decorating some of the door jambs, and the style of this closely compares with the earliest of the three styles found at Samarra (Talbot Rice 1932*b*, pls V–VI; cf. Creswell 1958, 289, Style A). The building on Mound I therefore appears to be an important residence dating to the second half of the eighth century, rather than being a multi-phase construction founded in the late Sasanian period as stated in the publication (Talbot Rice 1934, 52).

Domestic architecture with elaborately decorated stucco door jambs was encountered on Mounds II, III and IV. A well on the summit of Mound II contained a selection of fine incised jars and jugs which date to the eighth to ninth centuries, and a so-called "Sasano-Islamic" glazed jar with barbotine decoration was found in a Mound III house. Further eighth century coins, including two minted in AH 145 [762/63] and AH 163 [779/80], were found at Mounds III and IV although admittedly the contextual details are not described. Several different phases of "poor huts" were found in the uppermost levels of four trenches excavated across the summits of Mounds VIII–X, but the coins were not identified and pottery was said to be rare here. Finally, trial trenches excavated close to the northern and western edges of Mound VI yielded large amounts of fired brick rubble, and a small circular ashy mound designated Mound VII was interpreted as the site of a brick or lime kiln.

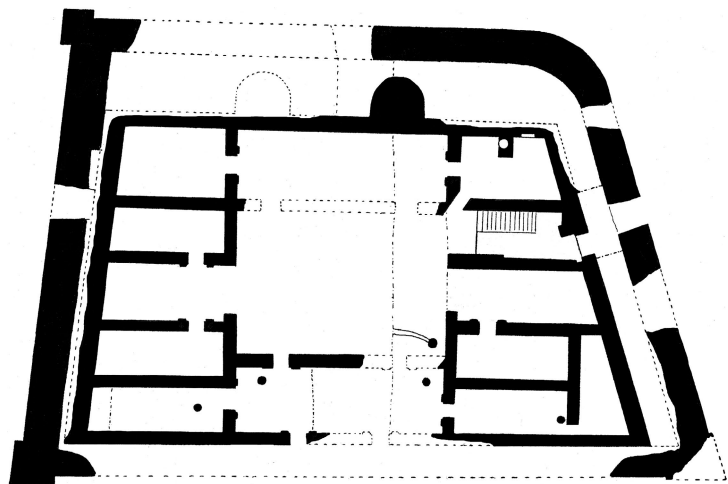


Fig. 9 Mound I at Hira (after Talbot Rice 1932*b*, pl. IV).

Hira in context: further discoveries of churches and monasteries from southern Iraq to central Asia

Talbot Rice's dating of the churches at Hira to the Sasanian period was clearly shaped by his Byzantine background and contemporary discoveries of a reportedly Sasanian church at Qasr al-bint al-Qadi in the round city of Veh Ardashir, opposite Ctesiphon (Reuther 1929: 449–51; cf. Kröger 2007), and Sasanian stuccoes at Kish (Langdon 1931; cf. Moorey 1978), Ctesiphon (Schmidt 1934; cf. Kröger 1982) and Tepe Hissar (Upham Pope 1932; cf. Kröger 1982). It is a standpoint which has not been challenged until now.

However, over the course of the subsequent sixty years, a large number of other churches – some constructed as integral parts of monastic foundations but others surrounded by settlements – have been discovered not only in this region of Iraq but also along the Persian Gulf, in northern Iraq and deep into central Asia (Figs 10–11). The first of these was a monastery on the barren rocky western side of Kharg island which was excavated by Roman Ghirshman in 1959/60, reported in preliminary form (Ghirshman 1960) and since published in greater detail by Steve *et al.* (2003). Ghirshman's first-hand experience of directing excavations at Susa, Eyvan-e Karkha and Bishapur, and a lifetime of working within Iran, strongly influenced his Sasanian attribution of the monastery

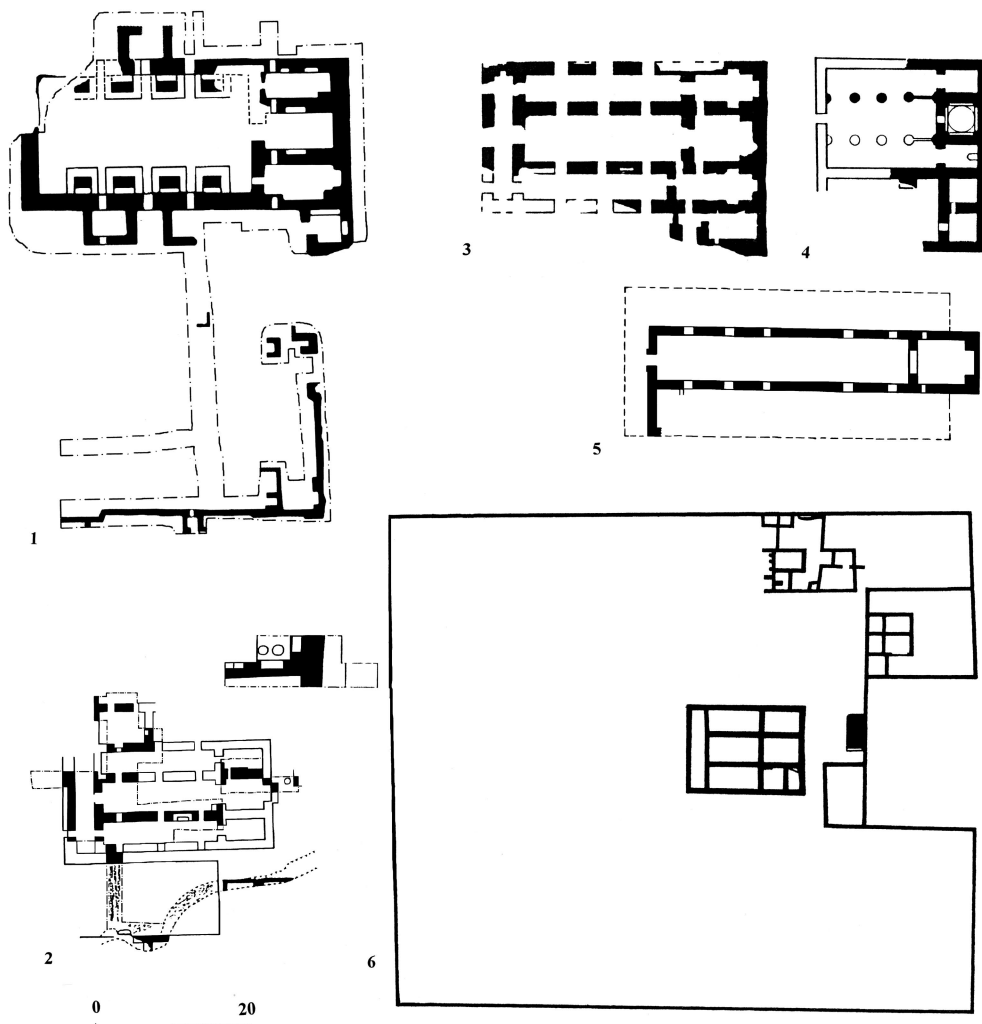


Fig. 10 Plans of excavated churches: 1, Veh Ardashir (after Kröger 2007, fig. 2), 2, Ain Shai'a (after Okada 1991, fig. 1), 3, al-Qusur (after Bernard, Callot, and Salles 1991, fig. 1), 4, Rahaliya (after Finster, and Schmidt 1976, fig. 13), 5, Qusair, Church A (after Finster, and Schmidt 1976, fig. 7), 6, Sir Bani Yas (after Elders 2003, 231, fig. 2).

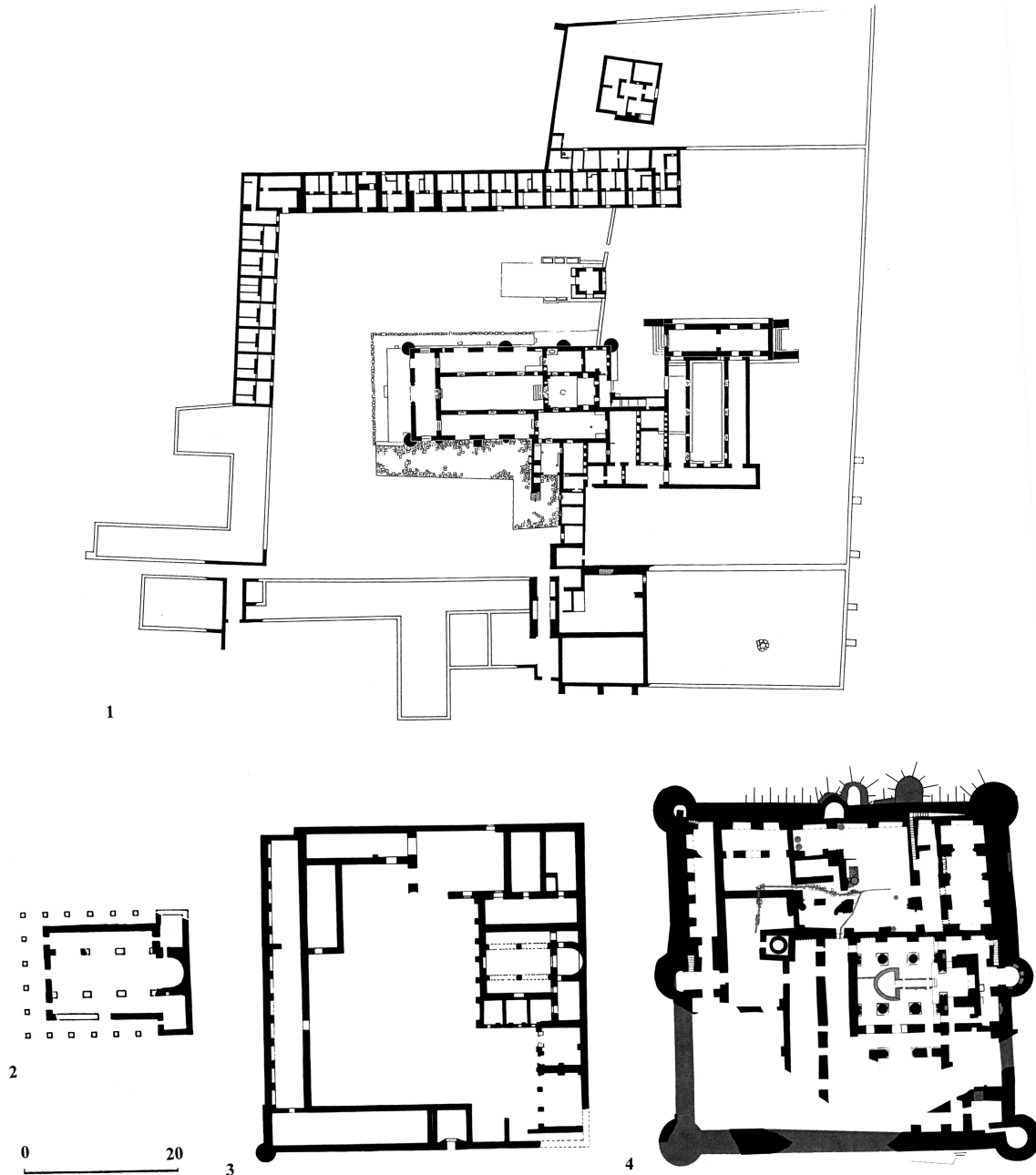


Fig. 11 Plans of excavated churches: Kharg island (after Steve *et al.* 2003, plan 11), 2, Qasr Serij (after Oates 1962, pl. XXVII), 3, Musaifnah (after Nejim 1987, 135), 4, Bazyan (after Amen Ali, and Déroche 2016, fig. 2).

on Kharg island. Later investigators have reiterated this date, both in the more recent final publication of this complex and the intervening secondary literature (e.g., Bowman 1974; 1974/75; Matheson 1979, 245–49; Lerner 1992, 528–29), and the same applies to churches on ‘Akkaz and Failaka which were excavated in 1993/96 and 1989/90 respectively. In the latter case, a fourth century foundation by one Abd Ishaw was suggested on the basis of a later Nestorian source although no inscriptions were found and it was admitted that “no Sasanian pottery” was present (Gachet 1998, 73–76; Bernard, and Salles 1991, 12; Bernard, Callot, and Salles 1991). The same source was independently used to interpret the date of foundation of a monastery excavated on the island of Sir Bani Yas between 1993 and 1996, and the associated stuccoes were used to support this date while admitting that the

pottery was later (King 1997; Elders 2003, 232; Hellyer 2001; cf. Carter 2008).⁷⁾ Langfeldt's (1994) description of the recent history of early Christian churches and tombstones found in the Eastern Province of Saudi Arabia underline the potential sensitivities of a post-Sasanian dating of churches in this region although whether these had an explicit effect on their dating is unclear.

Independently, German, Japanese and Iraqi archaeologists have investigated other early churches in the Iraqi Western Desert west of Kerbela since the 1970s. These include two in the walled town at Qusair which was investigated by an Iraqi team in the 1970s and again in 2009 (Roaf, and Postgate 1980/81, 186; cf. Finster, and Schmidt 1976, 27–39; al-Raheem 2016), a possibly late Sasanian building at Rahaliya (Finster, and Schmidt 1976, 40–43), and a monastery at Ain Shai'a which was investigated in 1986–1989 (Fujii *et al.* 1989).

There is also archaeological evidence for churches in northern Iraq, beginning in 1766 with Carsten Niebuhr's discovery of a church dedicated to Sergius on an important route connecting Mosul with Nisibin and which is still known as Qasr Serij (Niebuhr 1780: vol. II, 307, table XLIII.g; cf. Simpson 1994). Fiey (1958) summarised what was known about it in Syriac sources, and after a visit in 1956 David Oates published a reconstructed plan, showing it to be of basilical type and constructed of dressed limestone ashlar but later incorporated into a larger complex with the use of rubble and mortar indicating a medieval date for this (Oates 1962). In 1982, a joint Iraqi/French expedition completed the excavation of a second basilical church at Tell Musaifnah, on the right bank of the Tigris within the area of the Eski Mosul dam project. This was also of ashlar construction, was attributed a sixth or early seventh century date of foundation but remained in use throughout the medieval period when the church was part of a square walled complex (Nejim 1987). Between 1987 and 1990 a similar complex was excavated next to the pass at Bazyan which connects Kirkuk with Suleymaniyah, and has been re-investigated recently and re-interpreted on uncertain grounds as a late Sasanian foundation with later alterations converting it into a fort (Amen Ali 2008; Déroche 2013; Amen Ali, and Déroche 2016).

Finally, a ruined vaulted mudbrick structure at Kharoba-koshuk, some 15 kilometres north of Merv in south-west central Asia, was interpreted as early as 1954 as the site of a Nestorian church (Pugachenkova 1954). This was believed to be the sole example of such a building in south-west central Asia although the published reconstruction plans differ greatly and none are based on excavation (Puschnigg 1999). Finally, in 1953/54 and 1996/97, two further church complexes have been excavated at Ak-Beshim in Kyrgyzstan (Semenov *et al.* 2002).

Early church architecture

The development of early church architecture in Iraq and the Persian Gulf has been succinctly and ably reviewed by Okada (1991; 1992) and more recently summarised again by Cassis (2002a), De Langhe (2008), Horn, and Hunter (2012). The construction of North Syrian-type basilical churches in ashlar masonry at Qasr Serij and Musaifnah reinforce the westward cultural connections of northern Mesopotamia during the sixth to seventh centuries (De Langhe 2008; cf. Oates 1962; Nejim 1987) (Figs 12.2–3).⁸⁾ In contrast, the plans of the churches in the Iraqi Western Desert and Persian Gulf belong to a completely different architectural tradition characterised by the following features (Figs

7) These reports also mention a second monastic complex on the island of Marawah (MR-11) but this instead proved to be a fifth millennium BC settlement.

8) In both cases the dating is inferred rather than archaeologically proven. David Oates' soundings at Qasr Serij focused on the main portion of the church and have not been published in detail and the author observed later Islamic pottery on the surface. In the case of Musaifnah, the rubble and mortar ancillary buildings reported by Lerner are probably considerably later and in both cases the churches probably underwent a long period of later use and reuse, similar to that observed in the case of a medieval church excavated by Dr J.E. Curtis at Khirbet Deir Situn in the Eski Mosul dam project in northern Iraq (Curtis 1997) and hinted at by the architectural modifications to the fortified monastery at Bazyan (cf. Amen Ali 2008, 75; Déroche 2013, 340, 343).

11, 12.1, 12.4):

- square-ended domed chancels
- a separation of the nave from the aisles by dividing walls or rows of columns (the latter reminiscent of Sasanian palatial architecture)
- a shallow narthex-like rectangular room at the west end
- a typically “bent-axis” approach leading into each aisle through multiple doorways (at least some of which were closed with solid doors turning in sunken pivots)
- ancillary rooms often attached to the northern and south-east sides.

Some of these features are shared by the churches excavated at Qasr al-bint al-Qadi at Veh Ardashir (Reuther 1929, 564–65; Cassis 2002a) and Bazyan (Amen Ali 2008; Déroche 2013; Amen Ali, and Déroche 2016) (Figs 11.1, 12.4). Both of these are said to be late Sasanian foundations but the dating evidence from Bazyan has not been published and some of the published finds are certainly later, and a recent study of Qasr al-bint al-Qadi observes that there is Umayyad glassware present (Kröger 1982: 45–50, pls 11–12; 2007).⁹⁾ Both of these churches lack aisles or the narthex-like room at the west end; moreover, they possessed a straight east end but lacked solid altars, and the presence of four circular holes in the floor in front of the steps leading to the chancel at Qasr al-bint al-Qadi suggest these supported a wooden canopy or *ciborium* over a portable altar.

Despite the narthex-like vestibule at the west end of most of these churches, the principal direction of approach appears to have been from the south. At Kharg this was indicated by a paved area outside, with rows of identical monks’ cells lying on the western and northern sides of the courtyard (Steve *et al.* 2003, plan 11), and a path leading past a large water tank connected with the sandy beach (Bowman 1974/75, 50–54) (Fig. 11.1). Although less extensively excavated, a similar pattern also appears at Ain Sha’ia where a paved courtyard was found on the southern side of the church and the (unexcavated) monastic cells were presumed to lie on the northern side of the walled enclosure (Fujii *et al.* 1989, fig. 4) (Fig. 10.2). The published plan of Qusair North suggests a similar direction of access linking the southern side of Church A with a gate in the east wall (Roaf, and Postgate 1980/81, 186; cf. Finster, and Schmidt 1976, fig. 6; al-

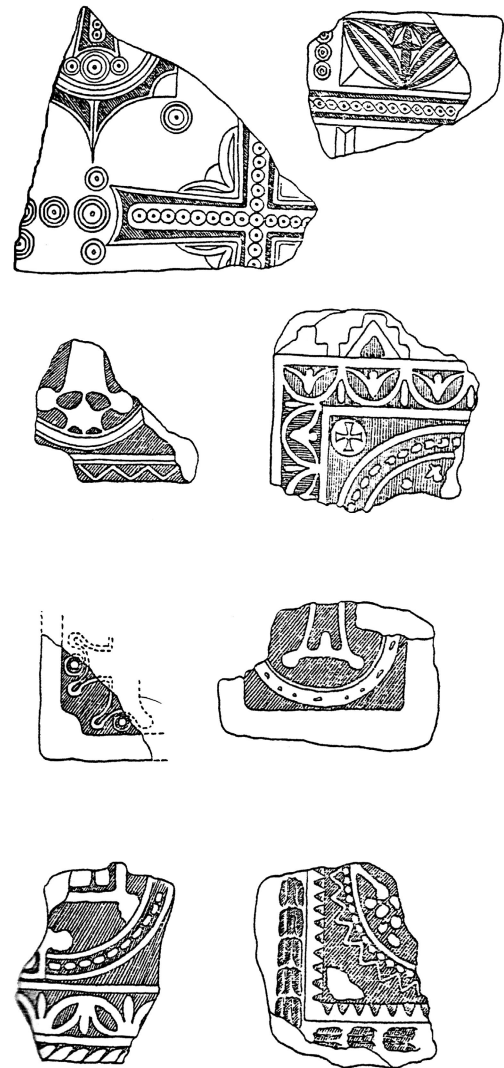


Fig. 12 Moulded stucco from Hira (after Talbot Rice 1932b, fig. 3).

9) Given the conclusions drawn in this paper, the earliest suggested date of foundation to the sixth century should be treated with caution. Italian excavations to the south of this part of Veh Ardashir indicate that the lower-lying areas of the city-site were largely abandoned during the sixth century and the standard of living went into decline (Negro Ponzi 1967, 47). It seems likely that this building was therefore founded in a relatively open and quiet, rather than dense urban, environment and the shape of the mound contours on the published plan (confirmed by what can still be seen on Google Earth) when combined with the presence of an outer courtyard wall suggest it was an outlying monastery rather than a parochial church. An early Arabic source refers to how “Mar Abba the Catholicos expanded it and enlarged its sanctuary. He spent a considerable amount from the money of of the faithful ‘Abd-al-Masih of Hira”, and the latter is also attested as founding a monastery at Hira (al-Ka’bī 2012: 65).

Raheem 2016, 73, fig. 3) (Fig. 10.5), and the same seems to apply to the church at Qasr al-bint al-Qadi (Fig. 10.1). The importance of this southern direction of access is underlined by two other constructed features in those churches which have been completely excavated. In the Ain Sha'ia, 'Akkaz and al-Qusur churches, single cist tombs were found constructed part-way along the north wall of the southern aisles, a position which implies prominent visibility and suggests that they may have served as reliquaries (Fujii *et al.* 1989, 38–39, figs 5, 7, pl. 6a; Gachet 1998, 73; Bernard, Callot, and Salles 1991, 155, fig. 1); two tombs were found in the same location in the church at Bazyan although assumed on unspecified grounds to be later insertions (Amen Ali, and Déroche 2016, 12). Secondly, the three moulded stucco plaques depicting crosses which were found in the churches at al-Qusur and 'Akkaz were found either next to the entrance to the southern chapel from the adjacent aisle or within the chapel (Bernard, Callot, and Salles 1991, 155; Gachet 1998, 73).

The use of moulded stucco (discussed below) within almost all of these churches is clearly part of a long tradition of architectural decoration beginning in the Parthian period and continuing throughout Iraq, Iran and central Asia as an alternative to carved masonry or wooden panelling. Evidence for wall-paintings was also found in the chancels of the churches at Ain Sha'ia and Mound V at Hira, but mosaic tesserae have only been found at Hira and the original context of these is unclear as they were surface finds. Fragments of painted and gilded decorative stucco were found in the church at Veh Ardashir, along with a unique red and blue painted stucco figure of a standing male figure, presumably representing the patron saint. By comparison with Byzantine churches, there is a significant lack of evidence for window-glass, either in the form of the glass or the metal or stucco grilles into which this was set, which suggests that different lighting systems and thus visual effects might have been used within these eastern churches.

Later Nestorian, or more accurately East Syriac, church design suggests that the standardised provision of a pair of rooms flanking the chancel might represent the *bit gaza* (treasury and vestry) on the north and the *bit qanki* (baptistery and oven for baking the sacred bread) on the south (Drower 1956, 17). The latter might account for the drain found in one corner of the southern chapel in the al-Qusur church (cf. Bernard, Callot, and Salles 1991, 154, fig. 11). In several cases there is evidence for the blocking of doorways or their alteration into niches, and at Ain Sha'ia the addition of a platform within the northern aisle recalls the addition of the *bemas* in the central naves of both churches at Hira (Fujii *et al.* 1989, 40, fig. 5, pl. 9b), although the churches at Hira and Bazyan are alone in providing evidence for centrally placed *bemas* (Cassis 2002*b*; Amen Ali 2008, 75, figs 2–3). These low platforms were reserved for the clergy to perform the Liturgies of the Word prior to re-entering the sanctuary along a narrow defined corridor (*shqaqona*) for the Liturgy of the Eucharist and are considered to be an important characteristic of churches within the Syriac speaking region. Finally, a small room in the south-east corner of the church at Sir Bani Yas was interpreted as possibly having been used as the equivalent of a “bell tower” where prayer times were announced by the beating of clappers with access to the roof gained by means of a ladder (Elders 2003, 231). However, it is difficult to interpret safely the interior arrangement of these churches in the light of later practice, particularly given the variation between Nestorian and Jacobite churches, the uncertainty as to which church was represented by the excavated remains, and the regularity with which a building could pass from one community to another.

Other features have been regarded as evidence for secondary re-use of the church at al-Qusur. These included a feature found in the south-eastern room which was interpreted as the emplacement for a grinder, but comparison with the plan of the church at Sir Bani Yas instead suggests that it may be the central support for a spiralling wooden staircase (Bernard, Callot, and Salles 1991, 156, fig. 13; cf. Elders 2003, 231). In addition, several gaming-boards found scratched on the floors were interpreted as evidence for secondary reuse of the building (Bernard, Callot, and Salles 1991, 159, fig. 14a–b). One of these was used for “Nine Men’s Morris”, which has a wide distribution

throughout the Middle East, Caucasus and central Asia during the medieval period. The second consisted of a board with 3 rows of 16 squares: the exact game played on this board is unknown but it appears to fit within a family attested from Iraq and Iran where variants include boards with 3×8 or 3×9 arrangements (e.g., Curtis, and Finkel 1999; Gibson *et al.* 1975, 42, fig. 37: 1; Simpson 2005*b*). However, rather than simply being later additions, they probably reflect graffiti left by the congregation as similar boards are commonly found in Western churches, and the ringing of the bell at the moment of the elevation of the Host at the Eucharist was designed to halt talking and playing during this part of the service (cf. Drower 1956, 162).¹⁰ It should be remembered that churches were (and are) social hubs as well as places of worship.

The stucco plaques

A large number of moulded stucco plaques were found in the Hira churches (Figs 13–14). Thirteen exist in the Ashmolean Museum, some of which can be identified as coming from the Mound XI church. All were moulded from white plaster with a thin fine surface layer, but each was made using a different mould. Traces of matt-red and black pigment are visible on two examples; the same colours have been noted on plaques from Ain Sha'ia (Okada 1990), Bazyan (Amen Ali 2008, 76; personal observation) and Nineveh (Simpson 2005*a*), although the wall-mounted plaques from the other churches lacked any visible traces of pigment. Only the pigment on the Nineveh plaque has been analysed and shown to be vermilion,¹¹ but the other pigments are likely to derive from haematite (ochre) and lamp-black as these were the commonest source of red and black colouring in antiquity. Most of the fragments from Hira represent a cross with flared or expanding arms decorated with circular blobs at the corners (Fig. 13), a feature of plaques found at all the sites. In one case the cross is supported on a stepped base (Fig. 14.b); this is also a feature of plaques from Ain Sha'ia (Okada 1990), al-Qusur (Bernard, and Salles 1991, fig. 2 = Bernard, Callot, and Salles 1991, fig. 17), Kharg island (Steve *et al.* 2003, 116, pl. 9: 2–3, Type 2), Bazyan (Amen Ali 2008, fig. 10) and more recent excavations at Hira in 2007 (al-Ka'bī 2012, 61, 65, fig. 4a; 2014, 91–93, figs 1–7). Two others have pairs of ribbon-like streams flowing upwards from the base of the cross (Fig. 14.c–d), and one of these also has a scallop-shell motif placed directly below the cross. Similar flowing streams also feature on stucco plaques from Ain Sha'ia (Okada 1990), 'Akkaz (Gachet 1998, 73, fig. 14), al-Qusur (Bernard, and Salles 1991, fig. 2), Kharg island (Steve *et al.* 2003, 117–20, pl. 10: 1, Type 4), Susa (Djafar-Mohammadi, and Chevalier 2001, 143, no. 54), Bazyan (Amen Ali 2008, fig. 10), recent excavations at Hira (al-Ka'bī 2012, 61, 65, fig. 4b; 2014, 93–94, figs 7, 9–10), and a pottery plaque from a similar, circa tenth century, church excavated at Ak-Beshim in Kyrgyzstan (Semenov *et al.* 2002, fig. 54). Moreover, the same design recurs at the centre of a painted plaster lintel buried below the floor of a later medieval church excavated at Tell Tuneinir in north-east Syria, where associated charcoal yielded two radiocarbon dates of 651–686 and 654–690 respectively (Fuller, and Fuller 1994, 44). The tops of five of these crosses at Hira were enclosed within semi-circular arches, often decorated with a row of blobs representing pearl beading, and similar features were found on plaques excavated at Ain Sha'ia (Okada 1990), Bazyan (Déroche 2013, fig. 4), Nineveh (Simpson 2005*a*; cf. also Potts 1999, 429, pl. 11.2) and more recent excavations at Hira (al-Ka'bī 2012, 65, fig. 4a; 2014). In another case at Hira, this arch was supported by a pair of incised spiral-fluted columns (Fig. 14.c). A similar arrangement occurs on a fragmentary plaque excavated in the church at 'Akkaz (Gachet 1998, 73, fig. 14), and on two moulded pottery plaques, one excavated at Nishapur (Wilkinson 1969, 85, fig. 8; 1974, 335, 362, no. 200) and the other

10) My thanks to Sue Gill for this important observation.

11) This was identified by the late Janet Ambers in the Department of Scientific Research at the British Museum (AR2006/91). The analysis was carried out by Raman spectroscopy using a Dilor Infinity with green (532 nm) and near infrared (785 nm) lasers. Spectra produced were identified by comparison with reference spectra from an in-house database.



Fig. 13 Moulded stucco plaques from Hira (*a-f*: left to right, top to bottom): a, fragment, top right corner, semi-circular pearled arch with toothed edge within a rectilinear toothed frame, moulded from fine white plaster with thicker coarse matrix behind; H 7.5, W 7, T 2.2 cm. (AMO, un-numbered = Talbot Rice 1932*b*, 283, fig. 3h, upside-down); b, fragment, top right corner, right tip of the upper flared arm of a cross, below a pearled semi-circular arch within a petalled rectilinear frame, and a miniature roundel containing an equal-armed cross in the corner; H 7.9, W 7, T 2 cm. (AMO 1932.61e = part of the same plaque as Talbot Rice 1932*b*, 283, fig. 3e); c, fragment, top left corner, upper portion of a cross with flared arm and blobs at the corners, below a dotted semi-circular arch within a plain rectilinear frame, moulded from fine white plaster detached from the coarser plaster matrix behind; H 7, W 9.5, T 3 cm. (AMO, un-numbered = Talbot Rice 1932*b*, 283, fig. 3f, upside-down); d, fragment, top, upper portion of a cross with flared arm and blobs at the corners, moulded in deep relief with uneven back; H 9, W 7.5, T 3.5 cm. (AMO 1932.59, X4014 = not previously published); e, fragment, top right, tips of the upper and right portions of a cross with straight arms and blobs at the corners, below a semi-circular pearled and grooved arch within a rectilinear frame decorated with a row of equally spaced floral motifs; H 5, W 8, T 1.8 cm. (AMO 1932.61a = possibly part of the same plaque as Talbot Rice 1932*b*, 283, fig. 3g, upside-down); f, fragment, top right corner, tips of the upper and right portions of a cross with flared arms and blobs at the corners, within a plain rectilinear frame; H 5, W 4.5, T 1.2 cm. (AMO 1932.61d = Talbot Rice 1932*b*, 283, fig. 3d, upside-down).



Fig. 14 Moulded stucco panels from Hira (*a-f*: left to right, top to bottom): a, fragment, bottom, tip of the lower portion of a cross with flared arms with blobs at the corners, within a plain rectilinear border with a separate rectangle placed immediately below the arm of the cross; H 4.5, W 7.5, T 1.2 cm. (AMO 1932.61c = not previously published); b, fragment, bottom, stepped base of a cross, within a rectilinear decorated border; H 5, W 5.5, T 1 cm. (AMO, un-numbered = not previously published); c, fragment, bottom left, lower portion of a cross with flared arms above a pair of tendril-like ribbons rising from the base of the cross, with incised spiral-fluted columns originally supporting an arch at the top, within a rectilinear border, dark surfaces possibly from ancient sooting; H 7.5, W 7, T 1.5 cm.; Mound V church (AMO 1932.61g = Talbot Rice 1932*b*, 283, fig. 4c); d, fragment, bottom left corner, lower portion of a cross with flared arms with blobs at the corners above a pair of tendril-like ribbons rising from the base of the cross, with a scallop shell below the centre and within a plain rectilinear border, very smooth rounded edges and back; H 7, W 7, T 1.5 cm. (AMO 1932.61b = Talbot Rice 1932*b*, 283, fig. 4a); e, fragment, bottom, petalled motif within rectilinear borders decorated with dotted circle and guilloche, and possible traces of black pigment infilling the incised decoration; H 5, W 6.2 cm. (AMO 1932.63 = Talbot Rice 1932*b*, 283, fig. 3b); f, fragment, edge, rectilinear frame decorated with guilloche, and traces of red pigment infilling the decoration, moulded from very fine white plaster front detached from the coarser plaster matrix behind; H 4, W 3.7, T 0.8 cm. (AMO 1932.64a = not previously published).

found on the surface of the city-site of Gyaur-Kala at Merv (Pilipko 1968).

In summary, two types of plaque with similar iconography appear to exist: one was originally set into the walls whereas the second was used as a form of portable icon (Okada 1990). In Iraq and the Persian Gulf the tradition was to manufacture these plaques from stucco, whereas in Khurasan and deeper into central Asia the preferred alternative was to make these from moulded and fired clay, and examples of these are now attested from Nishapur, Merv and Ak-Beshim (see above). The iconography of these plaques belongs within a widespread Christian tradition of using elaborately decorated crosses to symbolise the glory of God, and the overall schemes bear comparison with Coptic funerary stelae found in Egypt. The blobbed flaring arms are typical of crosses found in Byzantine art and glyptic from both the Byzantine and Sasanian sides of the political border (e.g., Lerner 1977; Spier 2007, nos 909–30; Bonhams 2010, 167, lot 297). The stepped base of one cross belongs to a type known as a Calvary or Golgotha-type cross owing to its schematic representation of the hill of Calvary; the scallop-shell was commonly employed in Christian art to symbolise baptism and Resurrection, as well as being a sign of pilgrimage in later European art and literature. The arch above the crosses is believed to symbolise the entrance of the Holy Sepulchre or the Gate of Heaven, and is also represented on pilgrim-bottles (Okada 1990, 110). The pairs of tendril-like streams flowing upwards from the base of the cross are a regular feature of Byzantine as well as Eastern Church art, particularly from the seventh century onwards. However, within the Iranian world they had the added resonance of the Sasanian concept of *xwarneh*, or divine glory, as represented by the wings or flowing ribbons typically attached to figures or animals (Compareti 2010; Soudavar 2003). Other Late Antique variations included the use of acanthus or split-palmette motifs to embellish the cross (Talbot Rice 1950).

In addition to these moulded plaques, several of the churches have produced evidence for other decorated stuccoes. A horizontal arrangement of roundels enclosing alternating and heavily stylised rosette, clustered grape and acanthus patterns below a row of stepped merlons were a feature of the architectural decoration in the Kharg island monastery. These are almost identical to a pair of moulded friezes found in the chancel of the church near al-Jubayl (Langfeldt 1994, figs 8–9), and sufficiently close to fragments found in the monastery church at Sir Bani Yas (Elders 2003, 231, 235) to suggest a similar date for all three complexes. At Kharg they were compared to versions of palmette and petalled motifs on Sasanian stuccoes from Ctesiphon and Kish, unprovenanced Sasanian silverwares and stuccoes from Nizamabad (Hardy-Guilbert in Steve *et al.* 2003, 121–29, pls 11–12). However, these parallels are not totally convincing evidence for dating and the building in question at Nizamabad may be post-Sasanian (Kröger 1982, 149). Moreover, the palmette friezes at Kharg are closely paralleled by identical elements integral to the composition of a carved stone column from the first mosque at Wasit (Steve *et al.* 2003, pl. 12: 1–3; cf. Kröger 1982, 158, pl. 66: 3), and closely related elements occur on Umayyad stuccoes from Tulul al-Ukhaidhir (Finster, and Schmidt 1976, taf. 36–43) and the Dar al-Imara at Kufa (al-Janabi 1982, fig. 48). The square panels with floral patterns are a derivative and heavily debased version of a type seen in the late Sasanian villas at Ctesiphon but which continue later (Steve *et al.* 2003, pl. 10: type 6; cf. Kröger 1982, pls 38–39, 51). The survival of late Sasanian decorative motifs on stucco, as in other media, is confirmed by the remains from Chal Tarkhan in northern Iran which are generally attributed to the late seventh or early eighth century (Thompson 1976).

Dating

Dating the different churches and monasteries relies on archaeological grounds. Unsurprisingly, almost none yielded coins or large quantities of datable pottery sealed within floors, yet they can be dated through association with finds from their immediate environs. This is particularly important in the case of the Kharg island monastery where the church and its surroundings were planned as

a single cohesive unit, but it also applies to the other sites discussed here.

Talbot Rice's reports indicate the discovery of eighth century coins at a number of the mounds at Hira, although none are specifically referred to from the churches. Nevertheless the greater loss of small change in domestic contexts is hardly surprising. The pottery and glassware from the site have been discussed in detail by Rousset (1994; 2001) and these confirm that the mounds date between the mid-eighth and early ninth centuries. This is supported by the chlorite bowls, lamp and cooking pot illustrated above. There is one other vessel excavated at Raqqa which demonstrates the high political connections of the local Christian population of Hira. This was an unglazed pottery bowl inscribed in Arabic with the following: "Made by Ibrahim the Christian, out of the things [made] at al-Hira for the Amir Sulayman son of the Prince of the Believers [the Caliph]". This is dated to the mid-eighth century on the basis that it refers to the son of the caliph al-Mansur who reigned from AH 136–158 [754–775] (Gray *et al.* 1976, 213). This is the earliest known dated Islamic moulded pottery vessel although similar styles have been excavated at Banbhore (Khan *et al.* 1964, 53, pl. XIX) and Susa (Djafar-Mohammadi, and Chevalier 2001, 96, no. 5).

The apparent absence of pottery from the two churches excavated at Hira matches a feature of similar churches excavated on the Persian Gulf islands of 'Akkaz, Failaka and Kharg. There is no evidence for a Sasanian – let alone earlier – settlement in this part of the site which is assumed to be the historically attested Lakhmid capital of Hira. A dispersed rather than conventional urban context with settlement concentrated around a number of fortified *qasrs* is suggested by al-Baladhuri's description of this place from the time of the Islamic Conquest: "We then came to al-Hirah whose people had fortified themselves in al-Kasr al-Abyad, Kasr ibn-Bukailah and Kasr al-'Adasiyin. We went around on horseback in the open spaces among their buildings, after which they made terms with us" (Hitti 2002, 391). Talbot Rice's (1934) suggestion that the early site of Hira may lie further to the south and east remains to be tested by future fieldwork and an alternative possibility is that it lies south-west of Najaf.¹²⁾ Subsequent Iraqi excavations of the very extensive nearby Partho-Sasanian cemeteries at Abu Skhair and Umm Khashm have been posited as cemeteries for the pre-Islamic city of Hira (al-Haditti 1995; cf. Negro Ponzi 2005).¹³⁾

At Ain Sha'ia the quantity of pottery recovered from infilling between early floor levels in a room (designated Room 3) next to the northern aisle of the church included early incised and chattered "Thinware" of a type well-known from Hira as well as a Samarran context at 'Ana (Fujii *et al.* 1989, 39, 50–51, figs 8, 16; cf. Rousset 1994, 27–30; Northedge *et al.* 1988, 82, 90, fig. 40: 1–3). The complex then underwent a number of structural alterations during the first half of the ninth century before being abandoned.

The church at al-Qusur on Failaka lacks evidence for extensive re-modelling or re-plastering and thus appears to have been relatively short-lived although unpublished evidence of an earlier phase has been reported. It was surrounded by a compact village settlement, including some 140 small

12) Evidence for pottery manufacture at Hira was found in 1990 during a preliminary survey by Olivier Lecomte (Rousset 1994; 2001).

13) It was Jeremy Black who kindly introduced me to the late Majid al-Haditti, the excavator of Umm Khashm, and both kindly arranged my visit to the site in October 1986. A short report followed in the "Excavations in Iraq" section of the journal *Iraq* 49 (Simpson 1987), followed by an extended and illustrated version intended for *Iraq* but eventually published in *Mesopotamia* (al-Haditti 1995) and another preliminary report in *Sumer* (al-Shams 1987/88). Sadly, the excavations at this site were interrupted by the 1990 Gulf War, the excavator has since died, the site has been looted and partly occupied by a village, and some of the excavated finds dispersed as a result of looting of Misan museum and the Kufa storage depot in 1991 (Baker, Matthews, and Postgate 1993, 134–35 = Umm Khashm 14, 62, 135); other pieces excavated at Abu Skhair were likewise dispersed following the looting of Basrah Museum during this period (Baker, Matthews, and Postgate 1993, 63 = Abu Skhair 1, 19). This or other similar cemetery sites are a likely possible source for certain types of glassware which have since circulated on the art market but been loosely assigned a "Syrian" provenance. Since the nineteenth century, early European travellers and archaeologists have speculated whether there was a tradition in Mesopotamia as early as the third millennium BC of transporting their dead to communal places of burial as a forerunner of the continuing practice at major Shi'a centres of pilgrimage. In each case these ideas have been disproven by excavation yet a stronger case might be made for these late pre-Islamic cemeteries situated along the middle Euphrates.

houses constructed within individual enclosures with personal wells (Patitucci, and Uggeri 1984; Kennet 1991; al-Mutairi 2012, 268). The plan and arrangement of these are strongly suggestive of a recently sedentarised population, although rather similar structures excavated near the church at al-Khawr on Sir Bani Yas were interpreted as monastic cells (Elders 2003, 232). The pottery assemblage from al-Qusur included early Eggshell Ware, "Sasano-Islamic Turquoise Glazed Ware" and a single sherd of "Samarra ware", and thus appears to date principally to the second half of the eighth century, but continuing until the early ninth century.¹⁴⁾ Several sherds of the same types were found on floors in the church, including a pre-abandonment horizon.

At Kharg, 98 diagnostic sherds of pottery were recorded from the monastery complex. Although this is a very small assemblage, it closely resembles that found at al-Qusur which dates from the second half of the eighth and early ninth centuries. Several sherds impressed with small stylised circular stamps were interpreted as evidence for possible Sasanian-period activity at both sites (Hardy-Guilbert, and Rougeulle in Steve *et al.* 2003, 131, pl. 17: 7; cf. Patitucci, and Uggeri 1984, 380–81, tav. LVI–LVIII). However, Sasanian die-stamps were almost invariably larger, carved from wood rather than pottery, contain more complex and often figural designs, and are in any case typical of northern and central Iraq rather than southern Iraq or the Persian Gulf (Simpson 1997). These particular stamps instead belong to a type attested from eighth to ninth century contexts, not only at al-Qusur (Bernard, and Salles 1991, 16, fig. 6: 16–17; Kennet 1991, 102, fig. 5: nos 1030–35), but also at Hulayla (Sasaki, and Sasaki 1998, 136, 142, 144, figs 18, 24, 26), Arad on Bahrain (Kervran, Hiebert, and Rougeulle *et al.* 2005, pl.75b–e), Siraf (Tampoe 1989, fig. 30, nos 856–57), Ain Sha'ia (Fujii *et al.* 1989, 79–80, 85, figs 37: 4–6, 41: 14, pl. 22g), Tulul al-Ukhaidhir (Finster, and Schmidt 1976, 93, 105: fig. 49, pl. 49a–d), Wasit (Safar 1945, fig. 16, nos 36–39) and levels IV and V at Tell Abu Sarifa (Adams 1970, 101–102, fig. 9; cf. Adams 1981, 238).

The church at 'Akkaz was not well preserved but associated finds include a hoard of fifteen copper coins issued by the Abbasid caliph al-Mansur in Baghdad in AH 157/773 which were found in the Kuwaiti excavations in a context corresponding to the church floor (Bresc 2011; cf. Gachet 2011, 140). The deposits underlying the church were investigated but no earlier phases were found. Although total excavation is the only means of satisfactorily determining whether or not an earlier structure existed, particularly in the case of church archaeology where the building may be enlarged or constructed on an adjacent plot, the results suggest that these buildings effectively belonged to a single period.

The date of the church (or monastery) at Sir Bani Yas has attracted much speculation and a sixth century date widely cited (Hellyer 2001; Elders 2003), but a study of the pottery by R.A. Carter demonstrates a single-period assemblage of the late seventh and eighth centuries (Carter 2008), and this is confirmed by the author's analysis of the glass (Phelps, Simpson and Freestone 2018).

No excavated finds have been published from the church at al-Jubayl but Pringle observed the close similarity of the triple attached pilasters to a feature of the Umayyad building at Khirbat al-Kharranah in Jordan (al-Mutairi 2012, 286, fig. 7.19). Moreover, an unpublished surface collection of pottery and glass made around the church consist of "Sasano-Islamic Turquoise Glazed Ware" and suggest that it probably dates to the same period as the others and there is no evidence to support a late pre-Islamic date.¹⁵⁾

The alleged Sasanian date of foundation of the church at Bazyan is uncertain and rests on unpublished pottery and a coin from an unspecified context (Déroche 2013, 330, 343). In contrast, the identity of the painted gypsum plaques and similarity of the plan to discoveries in southern Iraq

14) This is somewhat narrower than the date-range proposed by Patitucci and Uggeri (1984), who believed the site dated between the second half of the seventh and the ninth or tenth century. The revised dating of the disputed sherds in question has been discussed in more detail by Kennet (2007).

15) For this and other information about the site I am grateful to Mrs Carol Read.

suggest that it may instead date to the seventh or eighth century, continuing at least until the ninth century but more likely as a fortified monastery rather than simply a fort as suggested in the literature (cf. Déroche 2013, 343). Unfortunately, few other finds have been published so far but these include two simple cruciform bone and copper alloy pendants (Amen Ali 2008, 76, fig. 9; Amen Ali, and Déroche 2016, 15, fig. 6), a small plain swinging copper alloy censer (Amen Ali 2008, 76, fig. 7), and five so-called “incense holders” which are typical of early medieval sites and probably used as miniature mortars (Amen Ali 2008, 76, fig. 8; cf. Rogers 1977, 242–43).

The two church complexes excavated at Ak-Beshim are closely comparable to the church at Ain Shai’a: they are dated by associated Turgesh and Kara-khanid coins and glazed pottery to the eighth and tenth to early eleventh centuries respectively (Semenov *et al.* 2002). The Kharoba-koshuk building has been recently investigated and consolidated but its plan, date and function remain ambiguous. Surface finds of Sasanian copper coins of the reigns of Kavad I (498–531), Khusrau I (531–579) and Hormazd IV (579–590) are likely to derive from disintegrated mudbricks in which they were accidentally incorporated, rather than the use of the building (Loginov, and Nikitin 1993, 285, 289, 291). A small number of fragmentary ninth century and later splash-glazed wares have also been collected from the surface, and a selection of Seljuk sherds from an undefined context published by Casellato *et al.* (2007). At Merv itself, the remains of an oval building raised on a high platform with rectangular cells arranged around a central room was identified by Soviet excavators as a Christian monastery or hostelry; the identification was based on crosses incised into wall-plaster (Dresvyanskaya 1974). The proposed fifth century date may be revised to the sixth century in the light of more recent investigations at the site but the identification of the building’s function remains tenuous.

In contrast, none of the above sites have yielded diagnostic Sasanian pottery, glassware or small finds. Thus, for instance, there are none of the deep basins, dipper jugs, casseroles or rusticated “smeared wares” typical of southern Mesopotamian pottery assemblages and which are also attested from other sites in the Persian Gulf (cf. Simpson 1992, vol. I, 277–97). Likewise, “Fine Orange Painted Ware” is absent, as are the equally distinctive reddish “clinky” wares (cf. Kennet 2004). These Sasanian types are relatively well defined through surveys and excavations in Iraq and south-east Arabia, and are recognisable even when fragmented. Moreover, there are none of the distinctive mould-blown re-blown ribbed glass bottles, beakers, bowls or other types of glassware which are commonly found at Sasanian sites across Mesopotamia (cf. Simpson 2014). The circulation of Sasanian glass in the Persian Gulf is confirmed by excavated finds from the site of Kush in Ras al-Khaimah (Keller forthcoming) and in graves on Bahrain (Andersen 2007) and in the Eastern Province of Saudi Arabia (Zarins, Mughannam, and Kamal 1984, 42, pl. 50.10). The absence of all these types is conclusive evidence that these complexes post-date their use.

Conclusions

There is no evidence to confirm a Sasanian date of foundation or use for any of the churches or monasteries considered in this paper although a late Sasanian date is highly probable for Qasr Serij and possibly Musaifnah in northern Iraq. In the remaining cases, the early dating assumed by many investigators has been based on historical assumption and circular arguments. The archaeological evidence instead consistently indicates construction during the seventh century with activity continuing into the eighth and abandonment in the latter half of the eighth and early ninth centuries. In historical terms, these buildings were therefore founded in the early Islamic period and gradually abandoned by or during the early Abbasid period. This archaeological pattern corresponds very closely to the situation in Egypt and parts of the Levant and a period when the Christian Church underwent a revival of fortunes in Iraq and Iran. Contrary to popular belief, the period immediately after the Arab Conquest was a time of religious tolerance as Christians were regarded as People of

the Book and this status suited their new rulers as they paid a higher tax as non-Muslims. This is not to deny the significance of the Persian Church in the Sasanian period but its limited archaeological visibility up until now raises important questions over its architectural manifestations. It is tempting to interpret the seventh century church plans as being derived from an earlier Eastern Church tradition, as argued by Cassis (2002*a*) and others, but this remains to be proven.

Other archaeological evidence suggests that the desert frontier of Iraq and the Persian Gulf region enjoyed a boom in the Umayyad and early Abbasid periods, and this partly corresponds to a wider pattern of sedentarisation of bedouin extending in an arc around the desert fringes to Jordan and the Negev. It is within this context of local economic prosperity that we should instead seek an explanation for the prominence of the Eastern Church. This was a period when the only schools were Christian, and thus the teaching of medicine, astronomy and philosophy were in the hands of the Eastern Church (Every 1980, 75–84). Gropp (1991) and others have argued that in the Persian Gulf the Nestorian Church enjoyed the profits of the archaeologically attested pearling and Indian Ocean trade (cf. Kennet 2004; Carter 2005): the growth of monasteries relied heavily on the patronage of the mercantile elite whereby they “endowed the monastery with its property, namely by donating the profits of a trading enterprise. The monastery then invested the capital in landed property and the adornment of the church” (Payne 2011, 106). The remarkable similarities in size, plan and decoration between the churches excavated in the Iraqi Western Desert, Persian Gulf and Central Asia imply formal connections and the movement of master-builders and moulds throughout this region: Payne’s (2011) analysis of the diffusion of coenobitic monasticism and connection between Egyptian, north Mesopotamian and Persian Gulf monastic movements offers clues as to why. It might be added that there is no convincing evidence that any of these buildings changed their function in their later phases. The apparent absence of traces of violent destruction or iconoclastic defacement implies that they may have been abandoned rather than destroyed, and the absence of human remains inside the repositories in the churches at Ain Sha’ia, ‘Akkaz, al-Qusur and Bazyan suggests that the priests had time to remove the relics. The latest finds from these complexes imply that most were abandoned in the first half of the ninth century, although the complex at Sir Bani Yas had already been abandoned and those at Musaifnah and Bazyan may have continued a little later. As such, these developments hint at declining influence of the Eastern Church and growing Islamisation of this region during the Abbasid period which is best exemplified by the construction of the massive Congregational Mosque at Siraf in the early ninth century (Whitehouse 1980).

This paper began by commenting on how archaeological interpretations are often influenced by the contemporary intellectual framework. In the case of almost all the early churches so far investigated in Iraq, the Persian Gulf and central Asia, the suggested dating has been too early but by placing them in a Sasanian, rather than an early medieval or “early Islamic”, context the historical interpretations have been fundamentally skewed. The re-attribution of these monuments to the first centuries after the Arab Conquest raises important questions over the status of the Eastern Church at this period. Fiey (1965/69; 1969; 1970) proposed that this was a period of growth in power of the Church in both Iraq and the Persian Gulf. It would be wrong to talk of a vacuum but the impression is that the Church felt sufficiently comfortable politically to invest heavily in infrastructure. The similarity of the plans, building proportions and décor suggest a well-established architectural tradition and travelling builders. The origins of this tradition may well be sought in Iraq and Iran in the Sasanian period but proof of this hypothesis is yet to be found. In the meantime, further attention might instead be paid to the location and economy of these different monastic and parochial Christian communities, their role within an economic boom period in the development of eastern Arabia, why they were gradually abandoned and how this might correlate to increasing Islamisation in the ninth century.

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PREHISTORIC CAVES AND ROCKSHELTERS IN THE MACHY VALLEY, SURKHANDARYA, SOUTH UZBEKISTAN

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1. INTRODUCTION

This paper reports the results of a prehistoric survey conducted by an Uzbek-Japanese archaeological mission in July to August, 2015. The primary objective of this project was to investigate the Paleolithic population dynamics in Uzbekistan using multidisciplinary approaches. This research particularly focused on the Middle and Upper Paleolithic, when one of the most important anthropological events took place: the Neanderthals and their contemporary populations were replaced by anatomically modern humans, who originated in Africa and penetrated Eurasia during the Middle Paleolithic onwards. Uzbekistan is a focal research field for this transition, having yielded a corpus of important human fossil remains from Teshik Tash, Obi Rahmat, and Anghilak [Movius 1953; Viola *et al.* 2004; Glantz *et al.* 2008]. However, the currently available data is insufficient for reconstructing their occurrences, particularly in terms of chronometric data. Along with re-examination of the extant sites, it is also necessary to look for new sites to establish a reliable chronological framework for anthropological and archaeological finds from the Middle and Upper Paleolithic sites.

Our research in the 2013 and 2014 seasons was conducted in the Kashkadarya Valley, where the Middle Paleolithic sites of Anghilak and Aman Kutan are situated [Nishiaki *et al.* 2014, 2016]. In the 2015 season, we chose to focus our research in Surkhandarya Province situated south of the Kashkadarya Valley. The region includes the Machay Valley, where the well-known Neanderthal site of Teshik Tash is situated. The 2015 season of field investigations involved a site reconnaissance survey to examine the potential of this valley for further Paleolithic research (Fig. 1).

2. SURVEY OF THE MACHY VALLEY (TURGAN DARYA), SURKHANDARYA

2.1 Survey region

The Surkhandarya Province is at the southeastern end of Uzbekistan, facing the borders with Tajikistan to the east, Turkmenistan to the west, and Afghanistan to the south (Fig. 1). It also represents the southwestern end of the Alay Mountains, extending westward from the Tian Shan Mountain Range. Along the southern boundary of Surkhandarya is the watercourse of the Amdarya Valley, into which several large and small tributaries run from the north. The largest tributary is the Surkhana Darya. Situated to its west is the smaller Machay Valley, the location of the 2015 survey. Running from northeast to southwest (Fig. 2), the valley ranges in altitude between approximately 1000 to 2500 meters above sea level (masl).

Numerous caves are present in the region (Figs. 2 and 3), and three prehistoric caves have

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been known since the 1930s, Teshik Tash, Amir Temir, and Machay Cave. The best-known cave is Teshik Tash (Fig. 3: 17), where the excavations by A. P. Okladnikov in 1938 and 1939 yielded well-preserved remains of a Neanderthal boy [Okladnikov 1949; Movius 1953]. The results of the excavation of Amir Temir suggested that it may have contained Middle Paleolithic artifacts comparable to the latest assemblage of Teshik Tash, and Machay also may have contained Middle Paleolithic layers [Movius 1953: 17]. Machay Cave was extensively excavated later in the 1970s [Islamov 1975], and these caves were reexamined by a Russian team in the 2000s [Derevianko 2010].

While this valley has been investigated repeatedly, we decided to visit these sites and investigate the surrounding region once again considering that no other valley in this region has yielded such a rich array of information on the Middle Paleolithic. New research of known sites by various teams using modern research strategies not available in early excavations should yield fresh insights on the Paleolithic occupations of this region.

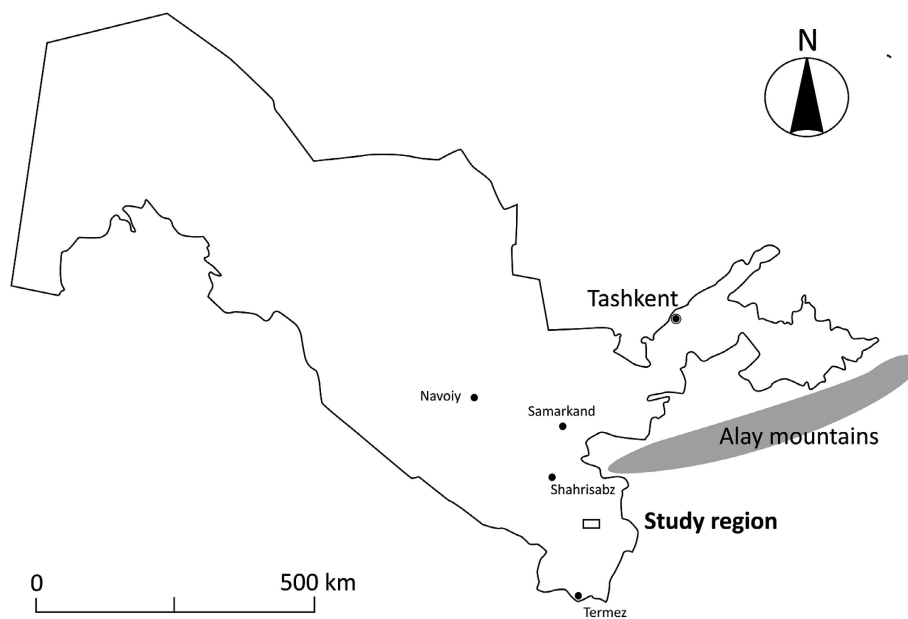


Fig. 1 Map of Uzbekistan showing the survey region of 2015 season

2.2 Survey method

The base camp for the survey was located in the village of Machay (Fig. 2). Numerous caves and rockshelters are situated along the valley's small tributaries. Many sites are situated on the left bank of the valley where limestone beds are the primary formations. In contrast, the right bank further to the west contains a limited distribution of limestone caves. This contrast is explained by the geological formation of the right bank that is dominated by reddish-brown, easily eroded sandstone beds, in which Paleolithic caves, if any, may not have been preserved.

The survey was conducted principally on foot. Following the local guides, known caves and rockshelters were visited, followed by a survey of the vicinity to identify new caves. Geographic coordinates were recorded for all visited caves using a handheld GPS navigator (GPSMAP 60CSx, Garmin Ltd.). Preliminary measurements were also taken using a laser rangefinder (TruPulse 200TM, Laser Technology, Inc.). When sediments were recognized within a cave, we opened one or two small sounding pits (50 × 50 cm up to 2 × 2 m) to examine the stratigraphy. The sediments were dry-sieved with a 3 mm mesh to collect small lithic and faunal remains.

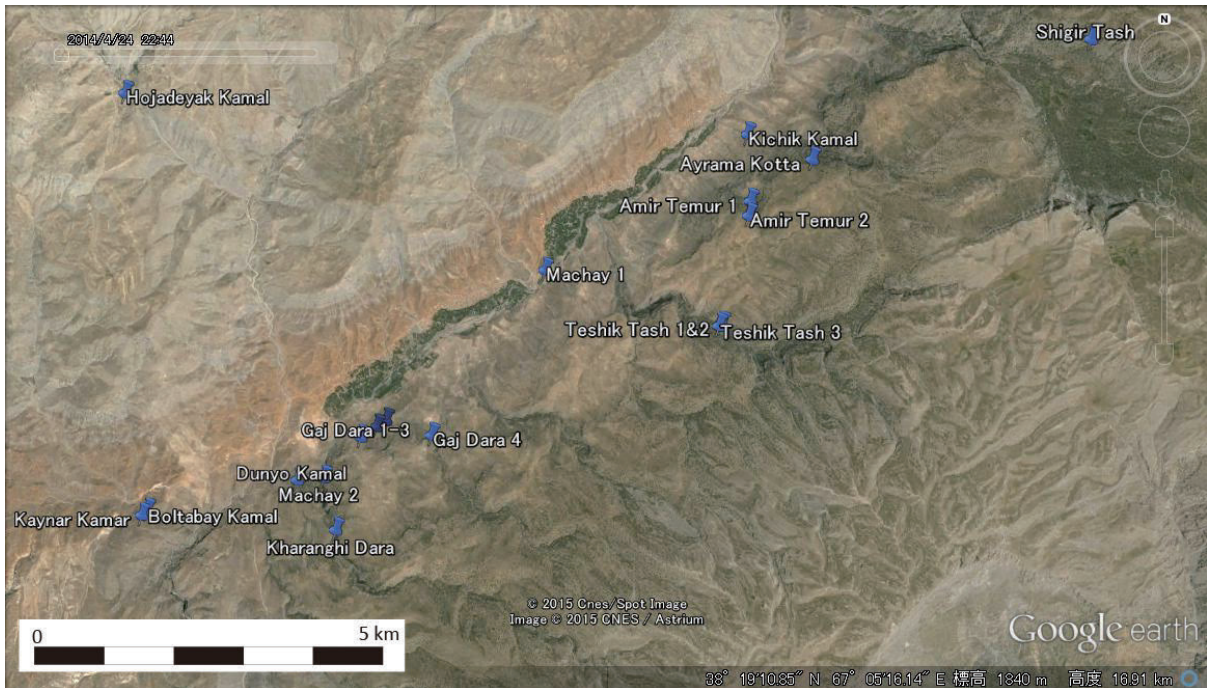


Fig. 2 Satellite image showing the location of caves recorded during the survey

2.3 Survey results

A total of 19 caves and rockshelters were recorded during the survey (Fig. 3; Table 1). These caves can be categorized into three groups: Group 1, previously reported prehistoric caves (Teshik Tash 1–3, Amir Temir 1–2, and Machay 1–2); Group 2, a newly discovered prehistoric cave (Kaynar Kamar); and Group 3, newly discovered caves without evidence of prehistoric occupation (Kharanghi Dara, Shigir Tash, Boltabay Kamal, Dunyo Kamal, Hojadeyak Kamal, Gaj Dara 1–4, Kichi Kamal, and Ayrama Kotta). The reexamination of the Group 1 caves and intensive research at the newly discovered Group 2 cave are regarded as particularly valuable.

Group 1

The previously known caves were our first objective to investigate their geomorphological setting, as well as the possibility of re-investigation. Firstly, we refer to the well-known site of Teshik Tash. The Russian investigations documented that the site represents a group of three caves in close proximity within a single valley [Derevianko 2010: 20–21; Fig. 4]. For the convenience of description, we refer to the cave with Neanderthal remains as Teshik Tash 1 (Fig. 3: 17) and to the others as Teshik Tash 2 and 3 (Fig. 3: 18, 19). Our visit to Teshik Tash 1 confirmed that this important cave no longer had archaeological deposits; all deposits had been removed during or after the excavations, leaving no potential for further investigation. Teshik Tash 2 is about 100 m downstream from Teshik Tash 1. Although it has a larger roofed area, the inner cave surface sharply descends along the valley at approximately 25 degrees. This cave, with rich deposits, was examined by the Russian team in the 2000s and the Uzbek team in 2014. We examined the stratigraphy of the trenches left by these previous soundings. A succession of limestone gravel layers and clayey-brown sediments with only a small amount of rubble were recognized in the 3 m stratigraphy. However, no traces of *in situ* human activities, such as hearths, were identified. The surface sampling yielded only a small amount of artifacts made of siliceous limestone. Teshik Tash 3 is located further downstream about 300 m from Teshik Tash 1, also on the left bank of the valley. It is the second largest cave in this complex. This cave was extensively excavated in 1938 and later. Our surface survey yielded



Fig. 3 General views of the recorded caves. 1: Kharanghi Dara, 2: Machay 1, 3: Machay 2, 4: Shigir Tash, 5: Boltabay Kamal, 6: Kaynar Kamar, 7: Dunyo Kamal, 8: Hojadeyak Kamal, 9: Gaj Dara 1, 10: Gaj Dara 2, 11: Gaj Dara 3, 12: Gaj Dara 4, 13: Kichik Kamal, 14: Ayrama Kotta, 15: Amir Temir 1, 16: Amir Temir 2, 17: Teshik Tash 1, 18: Teshik Tash 2, 19: Teshik Tash 3



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Fig. 3 Continued



17



18



19

Fig. 3 Continued

Table 1 List of caves registered in the study region during the 2015 season

#	Cave	Latitude	Longitude	Altitude	Height	Width	Depth	Notes
1	Kharanghi Dara	38°17'746" N	67°02'541" E	1520	12	61	15	Sterile; modern hunting station
2	Machay 1	38°19'813" N	67°04'643" E	1358	5.8	19.5	8	Mesolithic; Antique
3	Machay 2	38°18'147" N	67°02'385" E	1372	2.9	7.3	5.9	Antique
4	Shigir Tash	38°21'519" N	67°09'944" E	2230	–	–	–	Sterile
5	Boltabay Kamal	38°17'879" N	67°00'561" E	1323	15.1	32	10.7	Sterile
6	Kaynar Kamar	38°17'841" N	67°00'508" E	1329	14	76	7	Antique; Neolithic/Mesolithic
7	Dunyo Kamal	38°18'124" N	67°02'102" E	1277	32	67	10	Sterile
8	Hojadeyak Kamal	38°21'218" N	67°00'383" E	1452	5	36.6	12.5	Sterile
9	Gaj Dara 1	38°18'473" N	67°02'761" E	1345	–	–	–	Sterile
10	Gaj Dara 2	38°18'557" N	67°02'921" E	1357	7	20	1	Antique
11	Gaj Dara 3	38°18'605" N	67°03'015" E	1370	3	15	1.5	Antique
12	Gaj Dara 4	38°18'492" N	67°03'500" E	1489	3.8	30.4	6	Sterile
13	Kichik Kamal	38°20'887" N	67°06'704" E	1464	3.1	22	2.7	Sterile
14	Ayrama Kotta	38°20'657" N	67°07'318" E	1782	2.7	25	7.8	Sterile
15	Amir Temir 1	38°20'331" N	67°06'703" E	1741	3	42	20	Antique
16	Amir Temir 2	38°20'213" N	67°06'681" E	1831	2	26	14	Antique
17	Teshik Tash 1	38°19'372" N	67°06'409" E	1930	7	10	23	Middle Palaeolithic
18	Teshik Tash 2	38°19'372" N	67°06'409" E	1875	13.2	49	14.8	Middle Palaeolithic?
19	Teshik Tash 3	38°19'357" N	67°06'384" E	1831	6	16.5	13	Middle Palaeolithic?

virtually no reliably identifiable Paleolithic artifacts.

Also representing Group 1, Amir Temir is situated at one of the most significant headwalls of the Machay Valley (Fig. 5). The headwall is located at the end of a large fissure overlooking the valley source, which is comprised of high limestone cliffs more than 100 m high on both sides. There are at least two large caves on this cliff: Amir Temir 1 and 2 (Fig. 3: 15. 16). Natural water pools are present in both year-round. While both caves contain a certain amount of sediments, the one reported by Okladnikov is Amir Temir 2. According to the description by Okladnikov, the lowest horizon of the cave deposits, more than 1 m from the surface, was assigned to the Middle Paleolithic. Our examination showed that the corresponding part of this horizon is comprised of several geologically discernible layers, all of which contain abundant limestone rubble. However, reliable traces of primary human activities, such as the hearths reported by Okladnikov [Movius 1953], were not identified. Flaked limestone pieces similar to those illustrated by Okladnikov were also recovered, but the assemblage contained few artifacts.

There are at least two more caves known near the village of Machay. We provisionally refer to Machay 1, discovered in the 1930s and excavated in 1970–71 by I. Islamov [1975], and Machay 2, discovered by A. Rajabov and B. Sayfullayev in 2014 (Fig. 2; cf. Rajabov 2017). Machay 1 opens at the top of a steep slope facing the main stream of the Machay Valley to the south (Fig. 3: 2). Okladnikov mentioned that an elongated triangular point reminiscent of the Paleolithic was recovered from this cave in the 1930s [Movius 1953: 17]. However, the later extensive excavations conducted by Islamov [1975] revealed that this cave is principally a Mesolithic site. To confirm this interpretation, we examined the remaining deposits. The central part of the cave floor is covered with large rocks that have fallen from the roof (Fig. 6). Therefore, as only narrow areas on both sides of the cave were available for examination, we opened two sounding pits. However, none of them reached intact deposits due to either a tremendous quantity of accumulated rubble or the thorough excavations conducted in 1970–71.

Machay 2 is situated about 2 km southwest of the village (Fig. 3: 3). It is a low vaulted cave with a narrow terrace of 7×3 m. The cave mouth is nearly closed with fallen rocks. The renovated research by the Uzbek team in 2014



Fig. 4 The valley of Teshik Tash



Fig. 5 The valley of Amir Temir



Fig. 6 Investigations at Machay Cave 1

concentrated on the terrace, where a small test pit was opened. Results showed that the remaining sediments in the terrace were thin, less than 30 cm. A small quantity of possible lithic artifacts of unknown periods was recovered. We removed part of the fallen rocks from the cave mouth and opened a new pit of 50 × 50 cm in the interior area. The stratigraphy of only ca. 50 cm shows that the upper half was filled with abundant limestone rubble, and the lower half contained finer clay sediments. Although Rajabov (2017) reports on Upper Paleolithic artifacts from this cave, no stone artifacts or charcoal remains were recovered in either of these two layers of our pit. However, some potsherds of the Antique period collected on the surface indicate that this cave was certainly used in the past.

Group 2

This group contains only one cave, called Kaynar Kamar, which is the single cave site confirmed during the survey to have substantial prehistoric occupational records. It was discovered when we were guided to Boltabay Kamal Cave, located at a tributary of the Machay Valley west of the Machay village. The tributary runs through a deep and narrow gorge and opens into a hilly area at its source, where this rockshelter is situated (Fig. 7). A permanent water source is located nearby.



Fig. 7 Distant view of the rockshelter of Kaynar Kamar

This rockshelter, whose floor is approximately 15 m above the riverbed of the tributary, has a roofed area of 70 m long and 7 m wide at its maximum. We opened two trenches, A and B (Fig. 8). Trench A, measuring 2 × 2 m, was set up close to the wall, while Trench B (1 × 2 m) was located closer to the terrace edge. The latter trench is also closer to the spring. The sediments were dry-sieved with a 3 mm mesh. The excavations of Trench A reached a depth of around 2 m, but did not reach bedrock. The area closer to the cliff contained numerous fallen rocks, while the opposite side contained well-stratified sediments with less rubble. The stratigraphy shows that the upper part, about 1 m thick, contained potsherds and other artifacts dating to the Antique period, but the lower part was aceramic. The aceramic layer contained flint artifacts and numerous animal bones in association with a few patches of ash and charcoal.

On the other hand, Trench B was excavated down to ca. 1.5 m deep, without reaching bedrock. As in Trench A, the upper part contained Antique remains, and the lower part was aceramic. The aceramic deposits were composed of at least two layers, both of which contained lithic artifacts and animal bone remains but no hearth or ash concentrations. In addition, the lithic artifacts show weathered surface conditions, seeming to be secondary deposits, originating from an area somewhere closer to the wall.

The lithic assemblages of Trench A and B, both limited in number, exhibit different technological features (Fig. 9). While the Trench A assemblage consists of amorphous flakes and flake tools, that from Trench B is quite microlithic, containing a small number of bladelets and retouched bladelets. These observations suggest that the our soundings in Trench B may have reached the Neolithic or Mesolithic, and those in Trench A a more recent period in prehistory. Needless to say, the precise assessment of their chronological and cultural positions should be discussed when the sample size increases after future excavations. It should also be noted that virgin soil or bedrock has not been reached in either of these trenches.

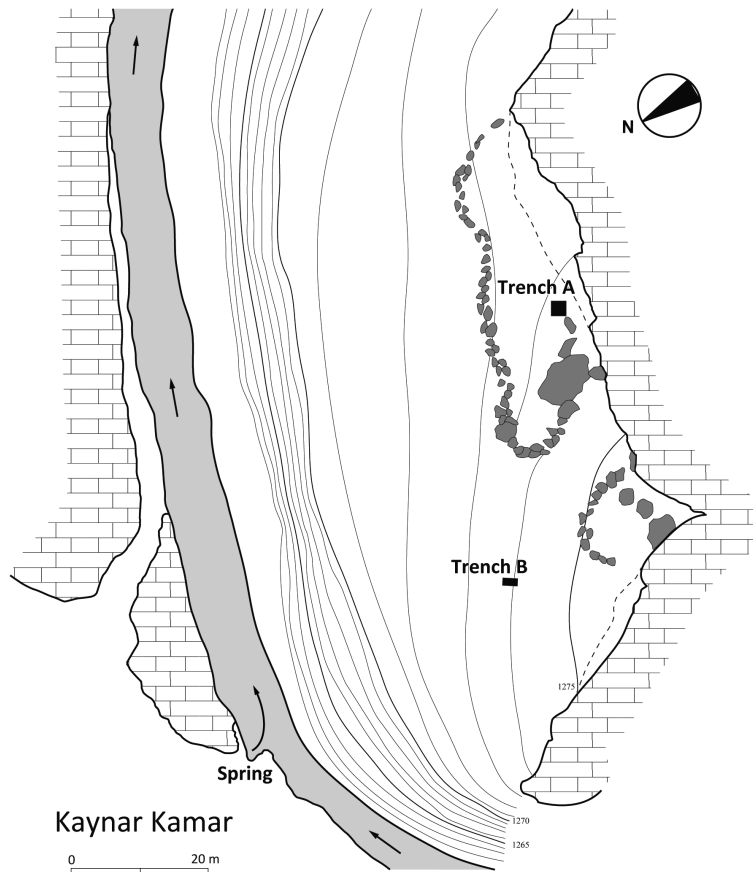


Fig. 8 The location of test pits at Kaynar Kamar



Fig. 9 Lithic artifacts recovered from Kaynar Kamar. Top: Trench A, bottom: Trench B.

Group 3

The last group represents caves newly discovered but without evidence of prehistoric occupations, constituting the largest group among the survey sites. Those caves include caves displaying

geomorphological settings comparable to those of the known prehistoric caves, such as Teshik Tash. Nevertheless, prehistoric remains were not recognized. This observation suggests that prehistoric occupational traces at these caves, if any, have disappeared due to local geological factors, including strong water flows brought by seasonal heavy rain and snow, and tectonic processes characteristic of this part of the mountain range encompassed in an active orogenic system (Nishiaki *et al.* 2016: 10). The Group 3 caves indeed display rather fresh physical conditions, such as rugged wall surfaces and extensive limestone rubble on the floors, indicating that erosional processes continue today [see Movius 1953: 17]. This interpretation partly explains why no new cave sites have been discovered in this valley since the 1930s, despite repeated field surveys conducted by different teams. Thus, it seems not to be an easy task to discover Paleolithic cave sites in this valley.

3. CONCLUSIONS

Our survey in the Machay Valley aimed to visit previously known and unknown caves to evaluate the potential of this valley for more intensive prehistoric investigations in the future. Results suggest that many of the caves in this valley have endured a considerable amount of erosion, which likely removed traces of Paleolithic human occupation. The erosion seems to have occurred due to active tectonic processes, as well as fluvial processes generated by extensive snow and rainfall in the mountain ranges of this part of Uzbekistan.

In this context, the previously known caves of Teshik Tash, Amir Temir, and Machay were especially attractive for research. However, our survey shows that they have insufficient anthropogenic deposits available for further investigation. Consequently, it is important that the rockshelter of Kaynar Kamar was newly discovered as a prehistoric site worthy of future investigation. This is the first discovery of a new cave site in the Machay Valley since the 1930s. Our preliminary excavations have yielded cultural layers, perhaps from the Neolithic/Mesolithic or later periods. Although no evidence of Paleolithic occupation has been obtained, such evidence may exist in the lower deposits not excavated this season. Regardless, the discovery of a Neolithic/Mesolithic cultural sequence is in itself significant if it can be confirmed, given the sparse research history of this period in Uzbekistan. It would also make a substantial contribution to a better understanding of the Paleolithic population history of this region with a longer chronological perspective.

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The field research by the joint prehistoric project organized by the State Museum of History of the Republic of Uzbekistan and the University Museum, University of Tokyo, Japan, was carried out between July 22 and August 10, 2015. Research in a new region inevitably required a new set of logistical arrangements. We would like to express our deepest gratitude to all of the institutions and individuals providing assistance that resulted in successful fieldwork. First, we would like to acknowledge the Ministry of Culture and Sports and the Institute of Archaeology, National Academy of Sciences, Republic of Uzbekistan, which generously granted us permits for the fieldwork. Likewise, we owe much gratitude to the State Museum of the History of Uzbekistan, represented by Director Dr. Jannat Khamidovna Ismailova, for its continuous understanding and support of our project. Last but not least, we wish to thank the great local inhabitants of the village of Machay, the location of our base camp, for their exceptional hospitality. In particular, Mr. Bekzod Boyturayev and his family provided us with every practical and logistical assistance whenever necessary. They provided a workforce as well. Without their collaboration, our fieldwork would not have been satisfactorily completed. Financial support for the present study was provided by the University Museum, University of Tokyo, and the Ministry of Education, Culture, Sports, Science and Technology, Japan (#1802).

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QALEH KURD CAVE: A MIDDLE PALEOLITHIC SITE ON THE WESTERN BORDERS OF THE IRANIAN CENTRAL PLATEAU

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1 Introduction

Until a few years ago, our Paleolithic knowledge of the central plateau was limited to the accidental discovery of lithics in a few open-air sites [Malek Shahmirzadi 1994; Biglari 2003; Vahdatinasab *et al.* 2009]. At the same time, several places have been discovered and even excavated in other parts of Iran, such as Alborz and Zagros.

As a consequence, over the past decade, a lack of goal-oriented research on the central plateau has created a misleading and incomplete perspective of its Paleolithic archaeology. Therefore, investigations have begun into the possibility of recovering any remains left as a result of human activity in the area during the Paleolithic period. So far, this new research has enabled us to identify some sites with Paleolithic remains. It has also helped us to reassess the previous belief that Paleolithic sites were absent from this region.

The main reason behind such a belief was the major geomorphological differences with areas such as Zagros and Alborz; this resulted in previous researchers forming the hypothesis that as the geomorphological elements of the central plateau did not show any signs of cave formations or rock shelters, it was, therefore, not suitable for the presence of hunter and gatherers.

Moreover, archaeological investigations in the region are skewed mostly to later periods. So, in the majority of the archaeological studies, the Paleolithic era has not been of equal importance as the Neolithic era onwards. On the other hand, archaeological studies on Neolithic and Chalcolithic villages of the area and, in particular, excavations in two or three places in different parts of the central plateau indicate the extent to which geomorphology has changed over time and have shown that Holocene deposits cover vast parts of the area (Tehran, Qom, and Qazvin) [Annells *et al.* 1975; De Morgan 1907; Kaboli 1999; Negahban 1972; Tehrani Moghaddam 1992, 1997].

Hence, it seems that the identification of places with pre-Neolithic remains was never expected nor assumed.

2 Paleolithic era in the central plateau and the Qazvin region

Unlike the Zagros region and even northern Alborz, the number of Paleolithic sites in the central plateau is relatively few (Fig. 1).

Zagros had tangible environmental potential as a strategic location for hunting, with the presence of caves, rock shelters, and inter-mountain valleys or canyons, as well as abundant water resources, and, most importantly, adequate sources of chert stones, which made it desirable for human occupation. However, a higher concentration of Paleolithic investigations in the region can also be seen as a reason for the presence of a greater concentration of Paleolithic sites in comparison with other areas in Iran.

However, we cannot deny the great potential of past and current research and discoveries in

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the Paleolithic caves and open-air sites in the Zagros region. They not only represent the unique potential of Paleolithic studies in Iran but also of the prehistoric era in general.

Unlike studies conducted in the Zagros region, Paleolithic research in the central plateau has not ever been goal oriented, except in a few cases [Asgari Khaneghah *et al.* 2005; Berillon *et al.* 2006, 2007; Biglari 2004; Chevrier *et al.* 2006, 2010; Heydari-Guran 2014: 147–156; Heydari-Guran *et al.* 2009; Heydari-Guran *et al.* 2015; Conard *et al.* 2007; Heydari-Guran and Ghasidian 2011; Rezvani and Vahdatinasab 2010). As mentioned above, the known Paleolithic sites were mostly identified or studied as a result of accidental visits and no deliberate Paleolithic research had been planned [Eskandari *et al.* 2010; Malek Shahmirzadi 1994; Mafi and Akhoundi 2009; Mireskandari 1993; Masoumi *et al.* 2010; Kaboli 1999: 64–65; Ganjavi 2000; Rieben 1955; Sharifi 2002; Smith 1986: 20; Vahdatinasab *et al.* 2007, 2009; Vita-Finzi 1968].

An overview of the discoveries of the Paleolithic sites in the central plateau indicates that despite the significance and potential of the area for hunter and gatherer communities, not enough effort has gone into studying and learning about this period as the majority of studies usually has focused on husbandry practices and on later periods.

Taking a quick look at the known sites, it seems that this evidence is mostly scattered on the surface and, like the majority of the open-air sites of Iran, they do not perhaps contain any archaeological deposits.

This results in only a little knowledge being gleaned, limited only to techno-typological analyses of the surface lithics and, therefore, we remain unaware of other aspects of cultural sequences, livelihoods, and the environmental context of the Paleolithic settlements in the Iranian central plateau.

In spite of all the above-mentioned problems, however, Qaleh Kurd Cave, which contains archaeological deposits in the mountainous area of Qazvin, seems to be promising as an important and noteworthy site.

3 Qaleh Kurd Cave

Qaleh Kurd Cave (N: 35° 47' 48.98", E. 48° 51' 23.35") is situated in the rural district of Avaj town in Boeein Zahra county, Qazvin province, at an elevation of 2100 m above sea level. The cave is located 1.5 km from a village with the same name and about 20 km from the tomb-towers of Kharghan (Figs. 1 and 2). Prior to our visit, available information on the cave was limited to caving groups visits, which resulted in the preparation of a detailed topographic map by a foreigner caving group, Neven Bočić and his colleagues, in 2008 during their international speleological expedition to Iran (ISEI).

According to Bočić, the cave dates from the Oligo-Miocene and Tertiary geologic eras. The cave was created by the erosion of the limestone of the Qom formation (from a personal conversation with Neven Bočić).

The cave opening, which is 22.60 m wide, 5.60 m high, and 25.10 m deep, overlooks a very wide valley through which a seasonal river flows. It is about 140 m above the river bed. The cave has only one entrance, which is not much higher than the level of the surrounding terrain (Figs. 3–5). Outside the cave entrance, a wall has been built of medium and large-sized rubble stones without the use of mortar.

Inside the main entrance, there is a tunnel or chamber measuring about 20 m. One has to crouch to pass through it. The chamber floor is covered with big stones, some of which have seemingly been removed from illegal pits.

The first chamber opens to a wider space, in which a deep hole can be seen. After descending from a cavity of about 15 m, the main central chamber, measuring more than 1000 sq m, appears to connect to a number of different chambers. Each one contains multiple stalagmites and stalactites.

Therefore, it seems that cave chambers were never used for settlement purposes as they appear

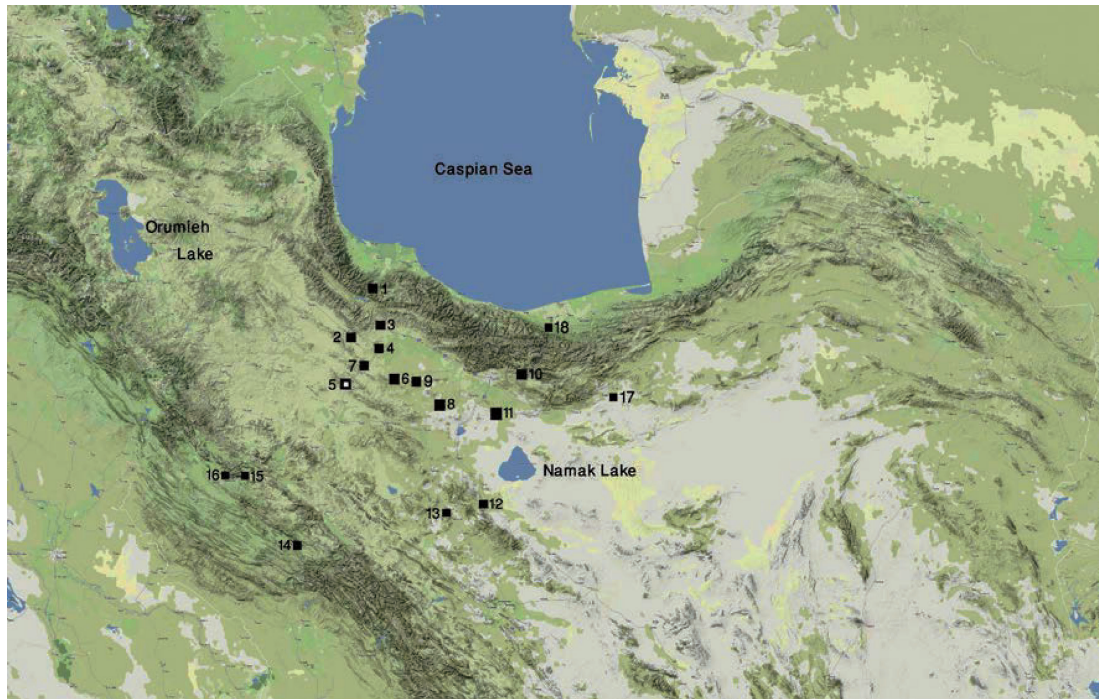


Figure 1: Distribution of some Paleolithic sites in the Iranian central plateau and the Zagros and Alborz mountains: 1. Ganj Par [Biglari *et al.* 2004], 2. Khalesh [Alibaigi and Khosravi 2009; Alibaigi *et al.* 2010; 2012], 3. Kuhin (Kuhgir) [Mireskandari 1993], 4. Nargeh [Biglari 2003], 5. Qaleh Kurd Cave, 6. Boeein Zahra (Sepid Dasht) [Vahdatinasab *et al.* 2009], 7. Ezhdeha Kouh [Ganjavi 2000], 8. Zavieh [Conard *et al.* 2007], 9. Arasanj [Maesoumi *et al.* 2010], 10. Damavand [Berillon *et al.* 2007], 11. Masile [Malek Shahmirzadi 1994], 12. Kashan (Geleh and Sefid-Ab) [Biglari 2004], 13. Tapeh Mes [Eskandari *et al.* 2010], 14. Kunji Cave [Baumler and Speth 1994], 15. Bisotun Cave [Coon 1957], 16. Warwasi rock shelter [Dibble and Holdaway 1993], 17. Mirak [Rezvani and Vahdatinasab 2010], 18. Garm Roud [Berillon *et al.* 2006]

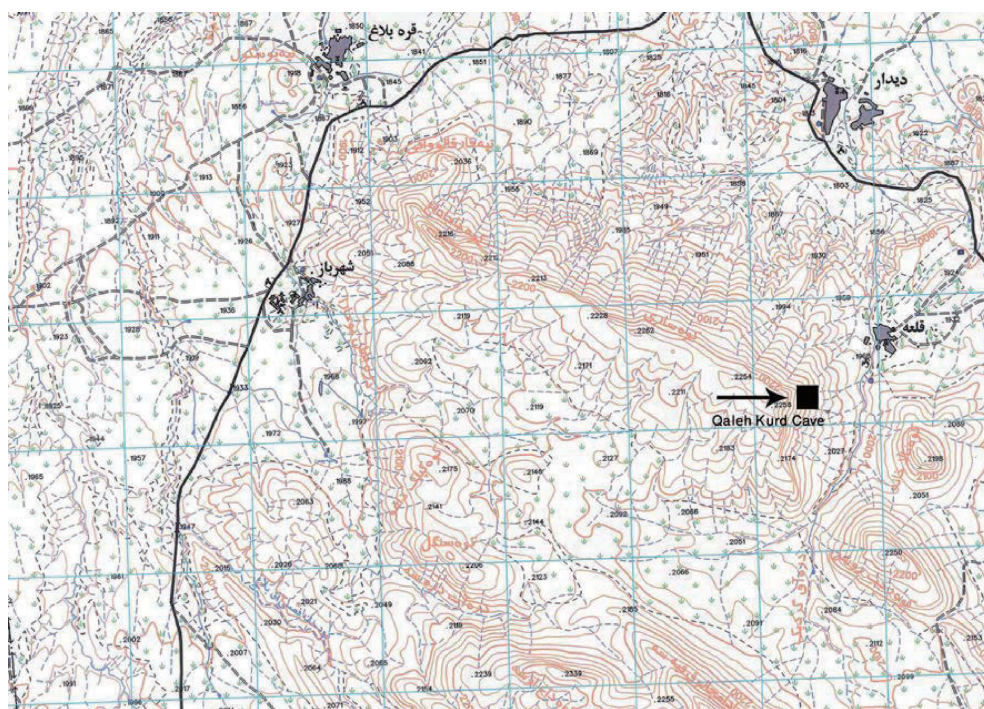


Figure 2: The location of Qaleh Kurd Cave in the southwest of Qazvin province



Figure 3: A view of Qaleh Kurd Cave



Figure 4: The entrance to Qaleh Kurd Cave from the inside

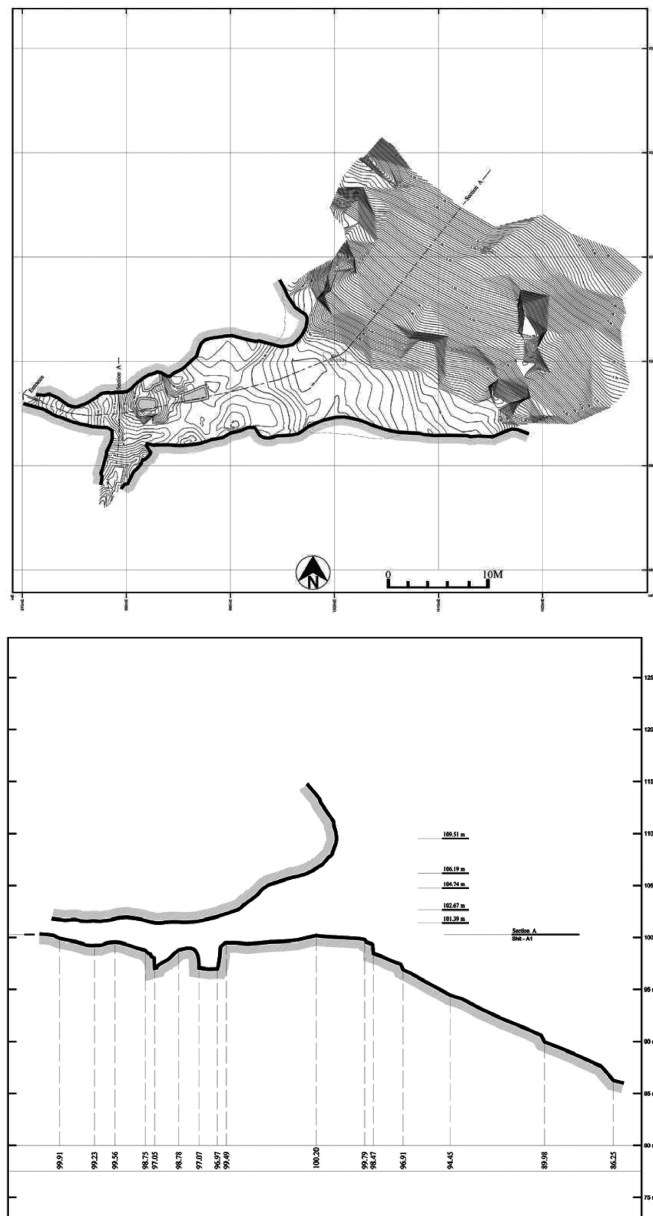


Figure 5: The plan and profile of Qaleh Kurd Cave

not to have been used over time. This, however, could be due to a lack of archeological evidence inside the cave. In order to be sure about the possible presence of human settlement, this chamber was also visited and investigated using caving equipment.

The investigation indicates that only the entrance area of the cave was used in the past and no evidence of human activity in the main chamber was found.

In front of the chamber, there are huge stones that seem to be the result of geologic activities or the destruction and falling away of some parts of the rocky ceiling for unknown reasons. There are many stones of different sizes along the corridor leading to the main chamber of the cave.

The digging of three pits in the first chamber and the cave entrance by looters resulted in archaeological remains and cultural deposits being revealed and accumulating beside the pits (Fig. 6). Inside the pits, grey layers of occupational sediments, and lithics are visible. Prior to the digging of the illegal pits, the floor of the cave's entrance was completely flat and used by local ranchers. Among the sediment we collected were some lithics. The depth of the illegal pits varies from 70 cm to 2 m. However, the main feature of this area is the presence of archaeological deposits of more than 2 m depth.



Figure 6: Illegal excavations at the entrance of the cave and the resulting archaeological deposits

4 Lithic artifacts

Following an exploration of the cave, especially the soil of the illegal pits, a number of lithics and some pieces of Islamic pottery were collected. The destructive activities that occurred made systematic sampling impossible; of course, we took into account that selected sampling might indicate different findings to the lithic assemblage.

However, a small assemblage was randomly collected in front of the opening and the slope of the cave; moreover, selected samples were taken from the deposits and the illegal pits. The collected assemblage contains 35 pieces. In order to produce these, small ranges of raw material were used. The pieces mostly (57.68%) constitute brown, light brown, cream, dark and light green, gray, and light gray cherts of medium and high quality; a lesser percentage (22.85%) is of limestone of medium quality and dark, light gray, and grayish green in color. It seems that hard stones such as andesite were used to produce lithics.

The assemblage contains three Mousterian points (one has some fractures and the other was later reused as a denticulated piece), a broken Levallois point, four single side scrapers, three double side scrapers, one convergent scraper, four simple blades, two Levallois flakes, one retouched flake, seven simple flakes, and nine debitage samples (Figs. 7–9 and Tables 1–3). In addition, two sandstone pebbles with traces of erosion on their surface were also found. It seems that these might have been used as pounders or hammers (Fig. 10). There was no core in the assemblage, but a variety of debitage and debris would indicate that at least a part of the reduction process took place on the site.

On the surface of some lithics, traces of cortex can be seen. Based on this, it can be said that the sources of raw materials were lime rubble stones as well as roundish medium and large cortical nodules of diameters of between 14 cm and 17 cm. However, the nodules have a better flaking quality and might have easily been accessed. The overall dimensions of the product types in the assemblage

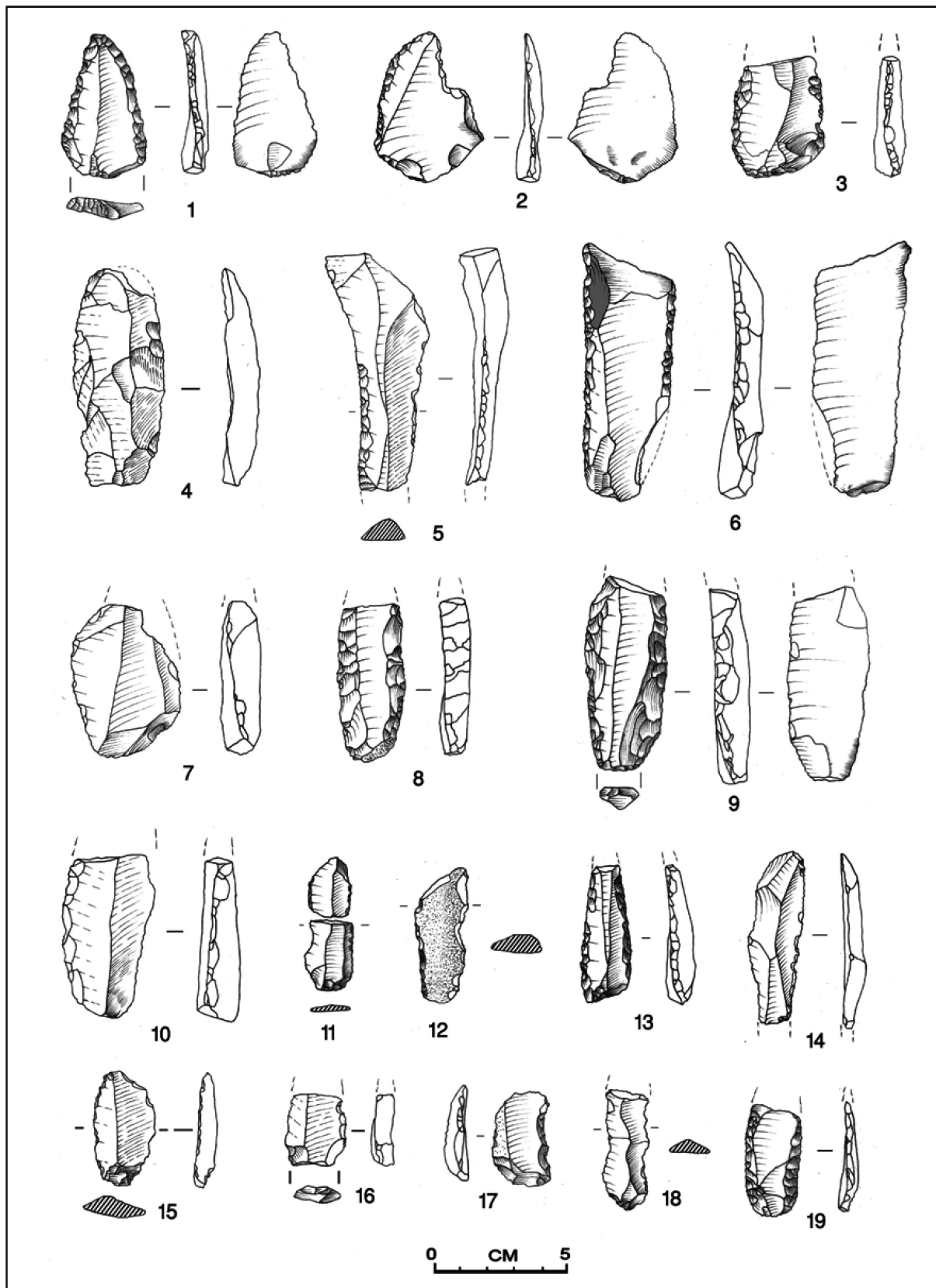


Figure 7: Drawings of some of the lithic artifacts from Qaleh Kurd Cave. For the details of each artifact, see Table 3. Drawing By Ali Imani Zoghi.

Table 1: Raw material types used for the lithic artifacts collected at Qaleh Kurd Cave

Raw Material	Number	Percent
Chert	24	67.6
Limestone	8	22.3
Andsite	2	5.7
Volcanic rock	1	2.9

Table 2: General categories of the lithic artifacts collected at Qaleh Kurd Cave

Type	Number	Percent
Tools	19	51.0
Flakes	7	18.1
Hammer stones	2	5.4
Debitage	9	24.6

Table 3: Catalogue of the lithic artifacts illustrated in Fig. 7

No in Fig. 3	Types	Length (mm)	Width (mm)	Thickness (mm)	Raw material	Color	Quality	Cortex/Percent	Notes
1	Mousterian point	51	25	5	Chert	Brown	Medium	–	Retouched
2	Mousterian point	58	40	8	Chert	Light brown	Medium	–	Retouched (notch)
3	Mousterian point	40	32	10	Chert	Light grey	Medium	–	Broken
4	Flake	82	34	12	Volcanic rock	Reed	Low	20%	–
5	Side scraper	105	3	15	Limestone	Light green	Medium	35%	Retouched
6	Single side scraper	93	32	10	Limestone	Grayish green	Medium	5%	Retouched
7	Flake	58	40	15	Chert	Dark green	Medium	5%	Inversely retouched
8	Double side scraper	55	24	8	Chert	Cream	Medium	3%	Retouched
9	Double side scraper	68	28	11	Chert	Green	Higher	–	Retouched
10	Side scraper	63	33	14	Limestone	Light grey	Medium	–	Retouched
11	Simple blade	50	18	4	Chert	Green	Higher	–	Unretouched
12	Scraper	53	17	4	Chert	Light brown	Medium	48%	Retouched
13	Convergent scraper	47	16	9	Chert	Greyish brown	Medium	–	Retouched
14	Flake	64	18	7	Chert	Greyish brown	Medium	–	Simple
15	Flake	43	23	7	Limestone	Buff	Low	–	Simple
16	Blade?	25	22	7	Chert	Light Green with reddish streaks	Medium	–	Broken/retouched
17	Retouched flake	35	20	7	Chert	Green with reddish streaks	Medium	10%	Retouch
18	Flake	47	15	4	Chert	Brown	Medium	–	Unretouched
19	Double side scrapers	41	20	4	Chert	Greyish brown	Medium	2%	Retouched



Figure 8: Some of the stone tools from Qaleh Kurd Cave, 1-3: side scraper; 4. Mousterian point

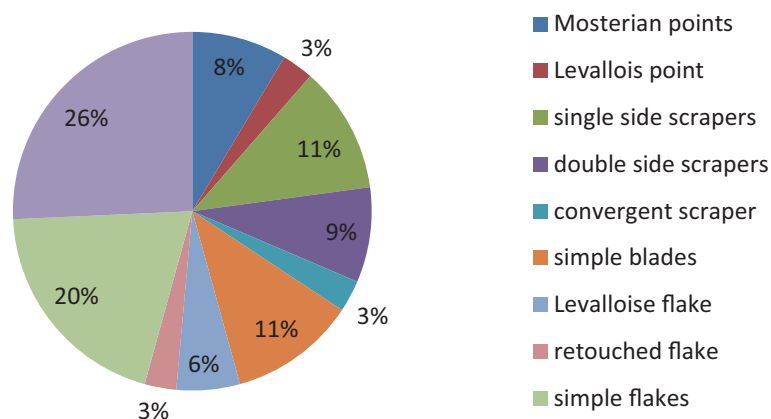


Figure 9: Composition of the lithic assemblage from Qaleh Kurd Cave



Figure 10: Two samples of hammer stones

are medium and in some cases, large. Such a situation could be due to the size and dimensions of the raw materials or even be related to the function of the lithics. A lack of heavy retouching and a smaller percentage of retouched artifacts perhaps indicate easy access to the raw materials.

5 Conclusion

Paleolithic sites in the central plateau of Iran indicate that the majority of attributed documents are surface assemblages which, like most of the open sites of Iran, contain no archaeological deposits. This resulted in our information being limited to a techno-typological analysis of the lithic industries of these sites and we are unaware of other aspects, such as the cultural sequences, livelihoods, or environmental conditions of the Paleolithic settlements in the area.

Therefore, the discovery of the Qaleh Kurd Cave with Middle Paleolithic remains in the mountainous area of the southwestern part of Qazvin province is very important and noteworthy.

The cave displays rather different lithics from some Middle Paleolithic open-air sites, such as Nargeh, Kuhin, Sepid Dasht, and Arasanj, in the western parts of the Iranian central plateau. It appears that Mousterian points and a number of scrapers and simple blades show high similarities to the Zagros caves and rock shelters. This issue might have been due to substantial functional differences between caves and rock shelters and the open-air sites, the settlement dates, the subsistence patterns, and the

different activities that took place on the sites, et cetera.

The important point is the evidence of a Middle Paleolithic settlement in this cave. So far, few sites above 2000 m in the Iranian heights have been reported. The ones that have include Humian 1 in Kud Dasht [Bewely 1984], the open-air sites of Chakhmaghli and Chal Tape near Takht-e Suleiman [Heydari-Guran *et al.* 2009; Heydari and Ghasidian 2004], and the open-air sites of the Kuhrang area in the mountains of Bakhtiari [Roustaei 2010].

1. Despite the large distance between the Qaleh Kurd cave and the Mirak site in northeastern Iran, there are many obvious techno-typological similarities between these two localities.
2. Herbert Wright believes that the permanent snow line during the last glacial maximum (LGM) was 1800 m in the Zagros [Wright 1962]. Therefore, the discovery of shelters with Paleolithic deposits at altitudes above 1800 m is of significance in understanding the landscapes and the subsistence strategy. However, the possibility of using such localities during the interglacial period has to be taken into account.

Further paleo-environmental research and excavations will show how hunter-gatherers occupied elevated places in the Pleistocene (probably the interglacial period), what was the preferred environment, and what was the climate in the region.

The recent evidence from the margins of the central plateau and from the Khorrmadareh Valley [Alibaigi *et al.* 2010, 2012; Biglari 2003; Ganjavi 2000; Mafi and Akhoundi 2009; Mireskandari 1993; Sharifi 2002; Vahdatinasab *et al.* 2009], located between the central plateau and northwestern Iran, underline the importance of the area and its frequent occupation as a connecting route at different times from the Paleolithic periods onwards [see Vahdati Nasab *et al.* 2012].

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WADI HEDAJA 1 AND 2: A CHRONOLOGICAL ASSESSMENT BASED ON UNEARTHED ARTIFACTS

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1. Introduction

We have surveyed the Bronze Age cairn fields at Mt Bishri in central Syria in our previous work [Adachi 2013; Adachi and Fujii 2009, 2010a, 2010b, 2015, 2016; Fujii 2008, 2009; Fujii *et al.* 2009a, 2009b; Fujii and Adachi 2010] (Figs. 1 and 2) with the following results: 1) cairn fields at Mt Bishri were constructed during the Early and Middle Bronze Age, 2) their construction can be divided into four phases, and 3) these cairns were connected with the presence of large pastoral nomad groups. The four phases of cairn construction seen in this area can be summarized as Phase 1, during which cairns comprise a large cist with external, internal, and peripheral walls; Phase 2, during which cairns comprise a large cist but no peripheral wall; Phase 3, during which cairns comprise a small cist without external and internal walls; and Phase 4, during which cairns have no cist (Fig. 3) [Fujii and Adachi 2010: Fig. 8].

Although eight carbon (C)¹⁴ data points are available to evaluate the age of Phase 1 cairns, no such data are presently available for Phase 2, Phase 3, or Phase 4. It is therefore necessary to examine the objects that have been unearthed from these latter three phases both typologically and morphologically to clarify the date range evidenced by their techno-typological sequence.

In one example, a bird-shaped faience amulet and a toggle pin with a disc-shaped head were associated in a burial cairn 09 (henceforth BC-09) within the Wadi Hedaja 1 cairn field (henceforth Wadi Hedaja 1). However, as previous studies have suggested that the ages of these two objects are inconsistent (Adachi and Fujii 2008, 2010a), they are reexamined in this study, alongside a small jar with a straight neck that was also collected from BC-09 within the Wadi Hedaja 2 cairn field (henceforth Wadi Hedaja 2). On the basis of a typological and morphological analysis of this small jar, we present a redefined chronological assessment of these artifacts placing both BC-09 from Wadi Hedaja 1 and BC-09 from Wadi Hedaja 2 within Phase 2 of the Bishri Cairn Chronology (Fig. 3). As a result, eight C¹⁴ data points ranging between approximately 1950 calBC and 1600 calBC have been generated thus far for Phase 1 [Nakamura 2010: 127–128]. The aim of this paper is therefore to refine the dating of the Bishri Cairn Chronology by examining the objects that have been unearthed to date from Phase 2.

2. Wadi Hedaja 1

(1) The Bronze Toggle Pin and Bird-Shaped Faience Amulet from BC-09

Wadi Hedaja 1 was discovered in 2007 and excavated in 2008. This field comprises 14 cairns, including BC-09, where the bird-shaped faience amulet and toggle pin were unearthed, within the western part of segment A (Fig. 4). As the BC-09 cairn includes a large cist with interior and exterior walls but no peripheral counterpart, we have chronologically arranged this type within Phase 2 of the Wadi Hedaja 1 techno-typological sequence (Figs. 3 and 5).

Although heavily disturbed, the cist infills of this cairn were nevertheless relatively hard and indicate that it had not been recently looted by the time of excavation. However, the bird-shaped faience amulet was found above the inside wall of this cist (Fig. 5), likely moved from the floor because of looting-related disturbance.

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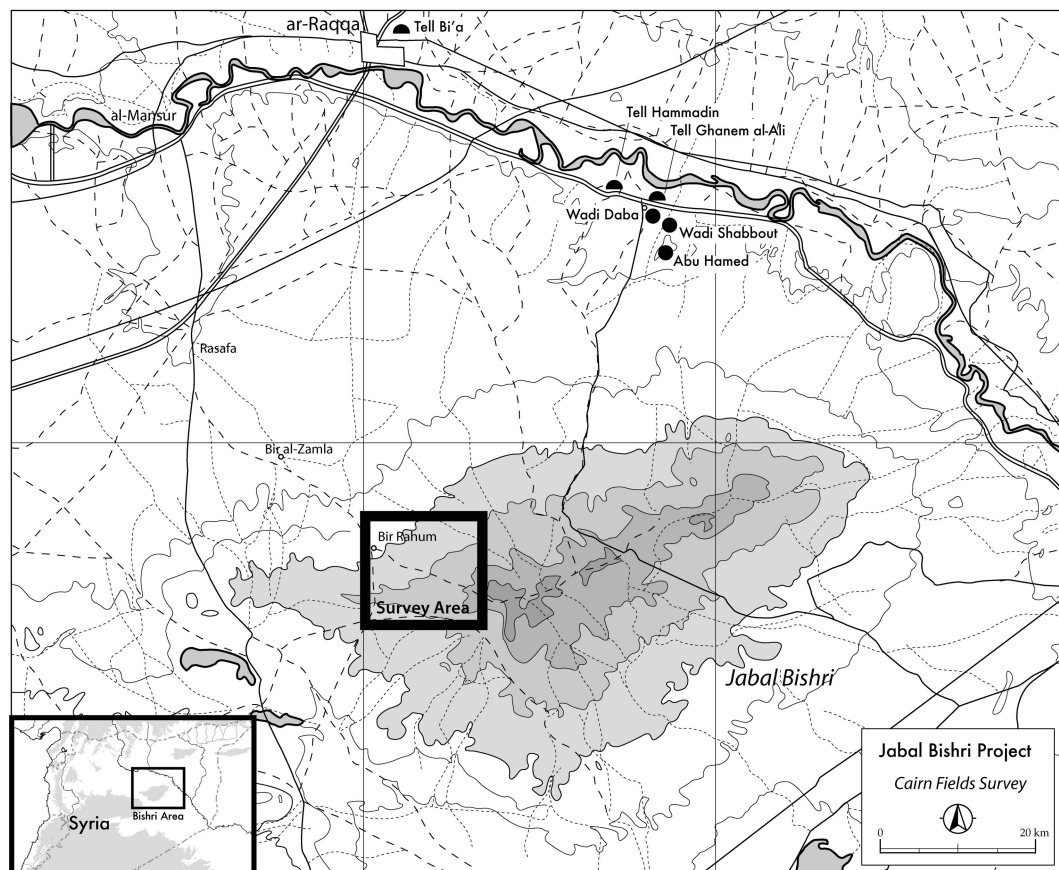


Fig. 1: Topographical map to show Mt Bishri and the area studied in this research [redrawn from Fujii and Adachi 2010: Fig. 1].

At the same time, the bronze toggle pin from this cairn was unearthed within the constructed layer between the inside and outside walls of the cist (Fig. 5). We therefore consider that this toggle pin was discarded for some reason during construction. We consider the relative dating of this artifact in this paper because it has a clearer archaeological context than the bird-shaped amulet.

(2) The Toggle Pin with a Disc-shaped Head

The toggle pin artifact that was unearthed from BC-09 is a special type because it has a disc-shaped head. The diameter of this disk is 0.9 cm; one section of the pin is round on its proximal end and oval-shaped distally. This specimen becomes slightly wider approximately 2.0 cm from its proximal end, and is perforated by a small hole in its widest section while the distal region is curved and has been broken. The toggle pin is approximately 6.4 cm in length (Fig. 6: 1).

It is noteworthy that a similarly shaped toggle pin was also unearthed associated with a bronze battle axe from a grave (G200) in the Chagar Bazar layer I (Fig. 6: 2). This grave was excavated by Mallowan [1947] and has been dated to between 1700 BC and 1600 BC. In later work, Curtis [1983] focused on the objects from this grave as part of a study on bronze battle axes; for the first time, he described the bronze pin from this grave as a toggle pin with a disc-shaped head and suggested that this kind of element had developed from the toggle pins with dome-shaped heads that are known from the Early Bronze IV in Syria and Palestine. Curtis [1983] also dated this Chagar Bazar toggle pin to between 2000 BC and 1800 BC, and suggested the presence of two distinct groups with disc-shaped heads, perforated and unperforated toggle pins.

A number of other perforate toggle pins with disc-shaped heads have also been collected from

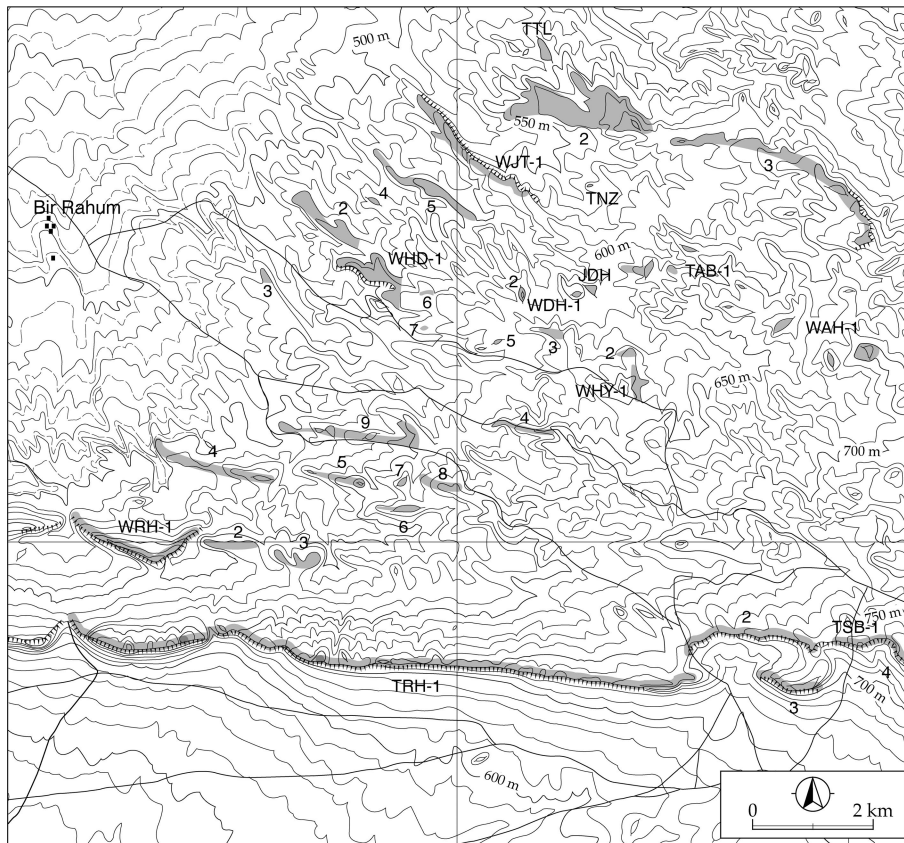


Fig. 2: Distribution of Bronze Age cairn fields within the area studied in this research [redrawn from Fujii and Adachi 2010: Fig. 2]. Abbreviations: TTL, Tell Tleha; WJT, W Jal al-Tur; WHD, W Hedaja; TNZ, Tell Nazha; JDH, Jal Daher; WDH, Wadi Daher; TAB, Tell Abrak; WAH, W Ahmar; WHY, W Hayuz; WRH, W Rahum; TRH, Tor Rahum; TSB, Tor Subiai.

the sites of Mishrife (Fig. 6: 3), Selenkahiye (4), Halawa (5), Qara Quzaq (6), Birecik Cemetery (7), and Byblos (8), while unperforated ones are known from Brak (9 and 10), Mersin (11), and Qara Quzaq (12), as well as from Birecik Cemetery (13 and 14). The object from Byblos has been dated to ca. 1750 BC [Tufnell and Ward 1966], while the toggle pin from Mersin has been dated to between 2000 BC and 1750 BC [Garstang 1953].

Curtis [1983] also suggested that unperforated toggle pins with disc-shaped heads can be dated to the Late Bronze Age while perforated examples with disc-shaped heads pertain to the early half of the second millennium BC. As the toggle pin from BC-09 is very similar to the one from Chagar Bazar, we can assume that both objects belong to the same period; as noted above, the toggle pin with a disc-shaped head from Chagar Bazar has been dated to between 2000 BC and 1800 BC.

Recently, however, Squadrone [2015: 324] demonstrated that perforated and unperforated toggle pins with disc-shaped heads from both Qara Quzaq and Birecik Cemetery can be dated to the early half of the third millennium BC. These new data mean that, in future research, the origin of toggle pins with disc-shaped heads must be taken into account.

(3) The Bird-shaped Faience Amulet

An additional question is the age of the bird-shaped faience amulet. This artifact is made from whitish-blue faience, is partly covered with a bluish-green glaze (Fig. 7: 1), is larger than the other objects discussed below, and is mostly unimpaired, about 1.7 cm in length, 1.9 cm in height, and 0.8 cm in width. This object is swollen in shape and includes no detailed expressions (e.g. tail, legs, and

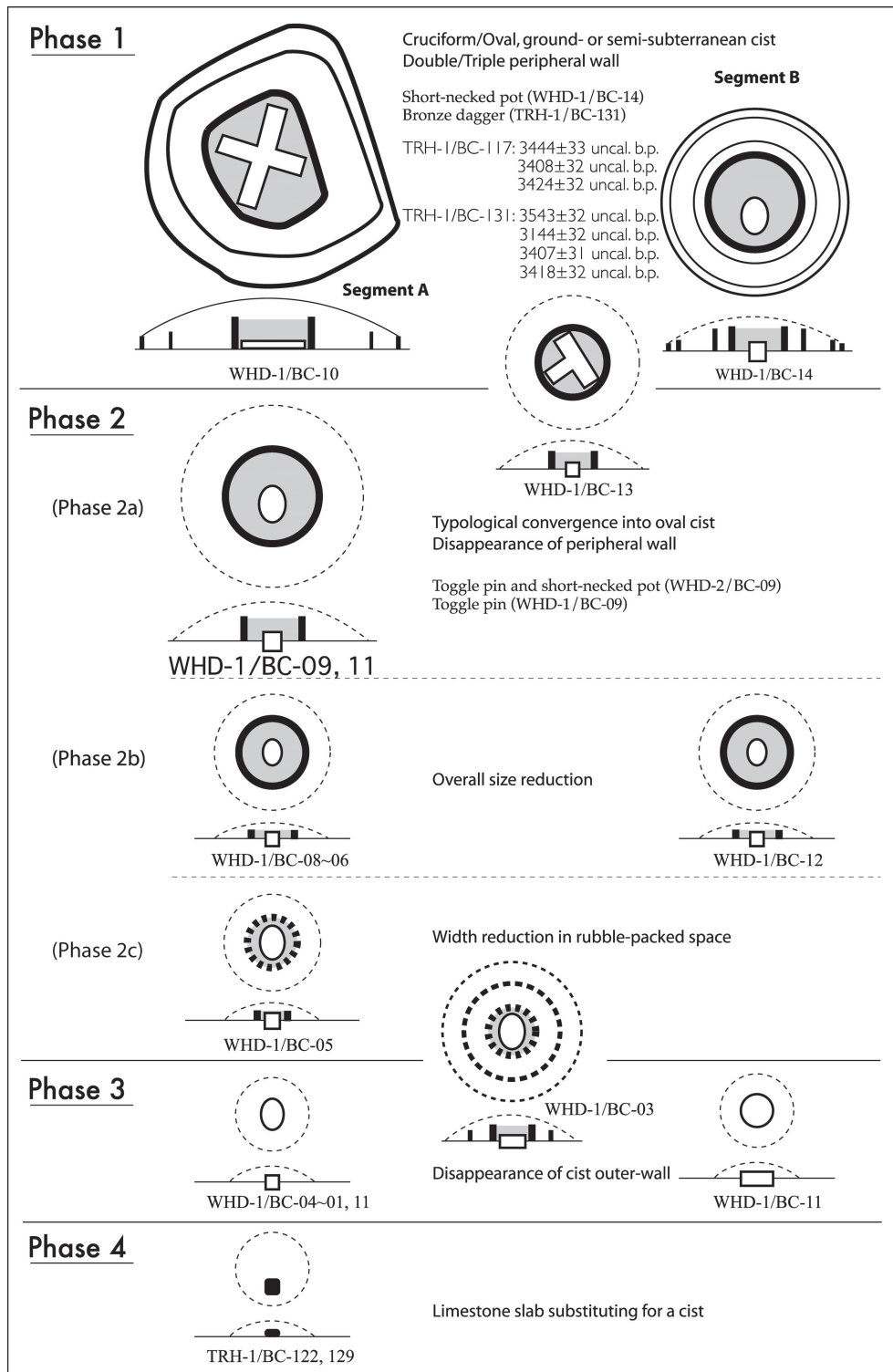


Fig. 3: Techno-typological sequences of Wadi Hedaja 1 [Fujii and Adachi 2010: Fig. 8].

wings), although its head is large, and the mouth and eyes are expressed by incised lines. This amulet might depict some kind of waterfowl as two further lines are also present in the lower part of the body, and a small additional hole, 0.2 cm in diameter, is perforated into the front central portion of this specimen.

Similar bird-shaped faience amulets have also been unearthed from the Bronze Age and Iron

Age in western Asia; Limper [1988], for example, collected a number of examples while examining objects from Uruk and suggested that bird-shaped amulets made of frit or faience were distributed across this region during the latter half of the second millennium BC [Limper 1988: 32].

The previous studies have suggested that toggle pins can be dated to the early half of the second millennium BC and that their bird-shaped counterparts can be dated to the latter half of the second millennium BC. This chronological difference makes it difficult to be certain about the dating of BC-09 in Wadi Hedaja 1. We therefore compared the bird-shaped amulet with similar artifacts from Tell Bi'a and Selenkahiye in order to further elucidate the age of this artifact. The results of this analysis suggest that the techno-typological sequence from Wadi Hedaja 1 can be dated to the early half of the second millennium BC.

Limper [1988] published a voluminous study on the ornaments from Uruk in which she referred to this bird-shaped amulet. We therefore compare specimens from Tell Bi'a and Selenkahiye, Central Syria, with Limper's study in order to further confirm the dating of the BC-09 bird-shaped amulet from Wadi Hedaja 1.

(4) The Miniaturization of Bird-shaped Amulets

The oldest amulet amongst the collection discussed by Limper [1988] was unearthed at Nuzi in northern Mesopotamia and dates to the 15th century BC; this example is 1.0 cm long and has a large eye and a long tail (Fig. 7: 6). Two similar bird-shaped amulets unearthed from Babylon come from the early Kassite period (dated to between the 15th century BC and the 14th century BC) (Fig. 7: 7 and 8). These artifacts are smaller than those collected from BC-09, Tell Bi'a and Selenkahiye; one is abstract in form and includes two body perforations (Fig. 7: 8).

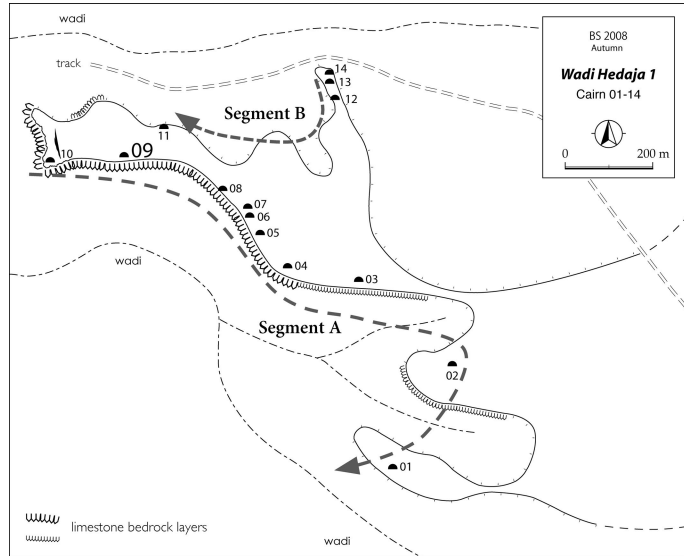


Fig. 4: Site map of Wadi Hedaja 1 [redrawn from Fujii and Adachi 2010: Fig. 4].

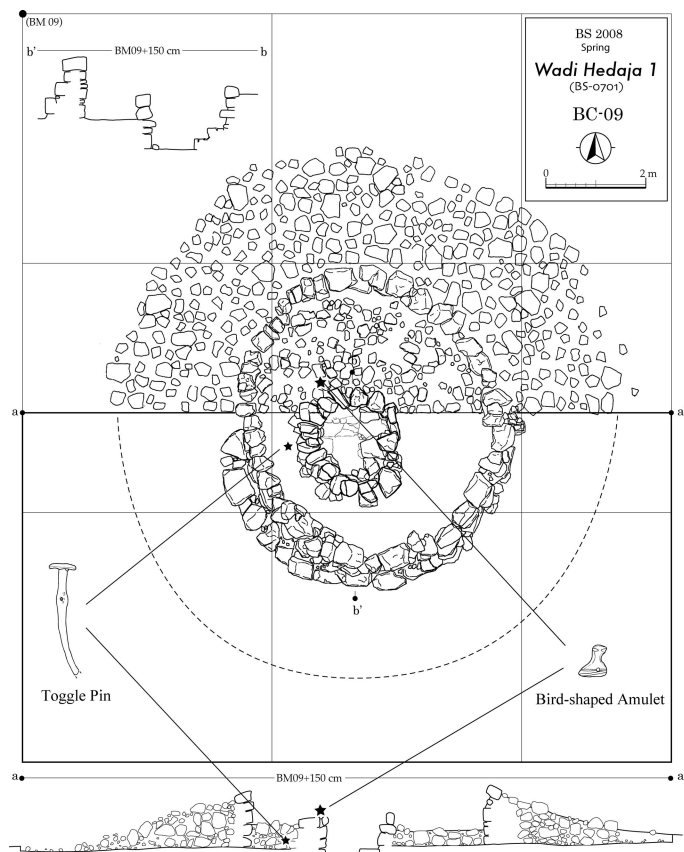


Fig. 5: Excavated positions of the toggle pin and the bird-shaped amulet from BC-09, Wadi Hedaja 1 [Adachi and Fujii 2010a: Fig. 5].

(dated to between the 15th century BC and the 14th century BC) (Fig. 7: 7 and 8). These artifacts are smaller than those collected from BC-09, Tell Bi'a and Selenkahiye; one is abstract in form and includes two body perforations (Fig. 7: 8).

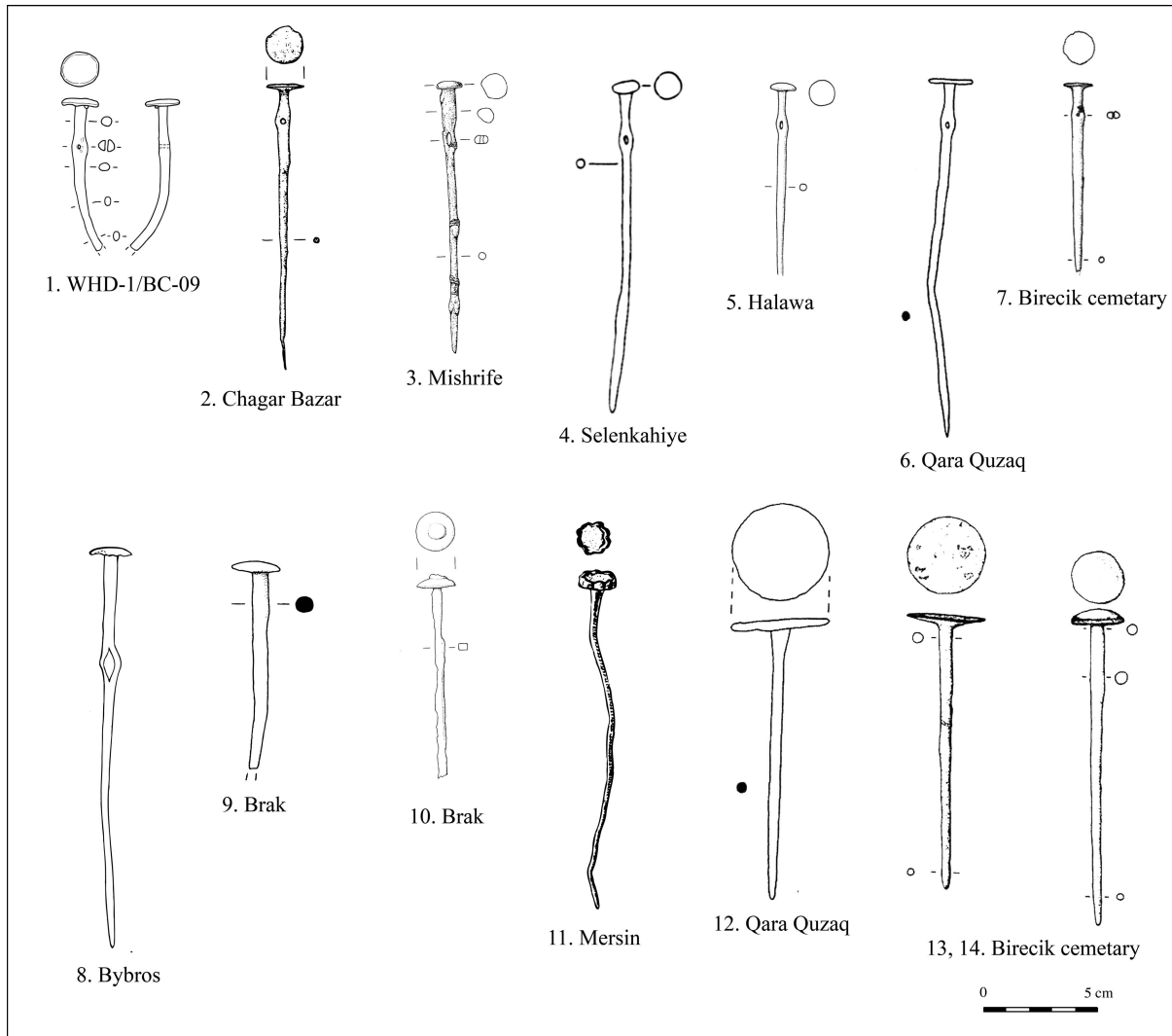


Fig. 6: Toggle pins with disc-shaped heads [redrawn from Adachi and Fujii 2008: Fig. 4]. 1, Wadi Hedaja 1, BC-9; 2, Curtis 1983: Fig. 1; 3, Novák and Pfälzner 2002: Abb. 21; 4, van Loon and Meijer 2001: Fig. 4A.8B:7; 5, Orthmann 1989: Abb 27: 7; 6, Montero 2001: Fig. 7: i; 7, Squadrono 2007: Fig. 13:3:3; 8, Tufnell and Ward 1966: Fig. 10.42; 9, Oates *et al.* 2001: p. 577: 101; 10, Oates *et al.*, 1998: p. 267: 24; 11, Garstang 1953: Fig. 149.12; 12, Montero 2001: Fig. 9: c; 13, Squadrono 2007: Fig. 13:3:1; 14, Squadrono 2015: Pl. 1:18.

Although not included in Limper's collection, a further bird-shaped amulet unearthed from Ur in southern Mesopotamia has also been dated to the Kassite period (Fig. 7: 9). Because this artifact is small (1.5 cm in length) and has two body perforations, it is similar to the amulet from Babylon.

A further example of a bird-shaped amulet unearthed from Choga Zanbil in southwest Iran also has two body perforations (Fig. 7: 10). This artifact has been dated to the 13th century BC and is 1.2 cm in length.

Currently available data therefore allows us to recognize that small bird-shaped amulets with two body perforations were present in both southern Mesopotamia and southwestern Iran during the latter half of the second millennium BC. Indeed, a similar example that dates from roughly the same time has also been unearthed at Tell Imlihiye in the Hamlin basin (Fig. 7: 11); this specimen is 0.9 cm in length and includes vague impressions of both a wing and a tail on a body, and another similar specimen has also been collected from Tell Alalakh in northwestern Syria and has been dated to the 12th century BC (Fig. 7: 12). This example is 1.1 cm in length and has no wing or tail on

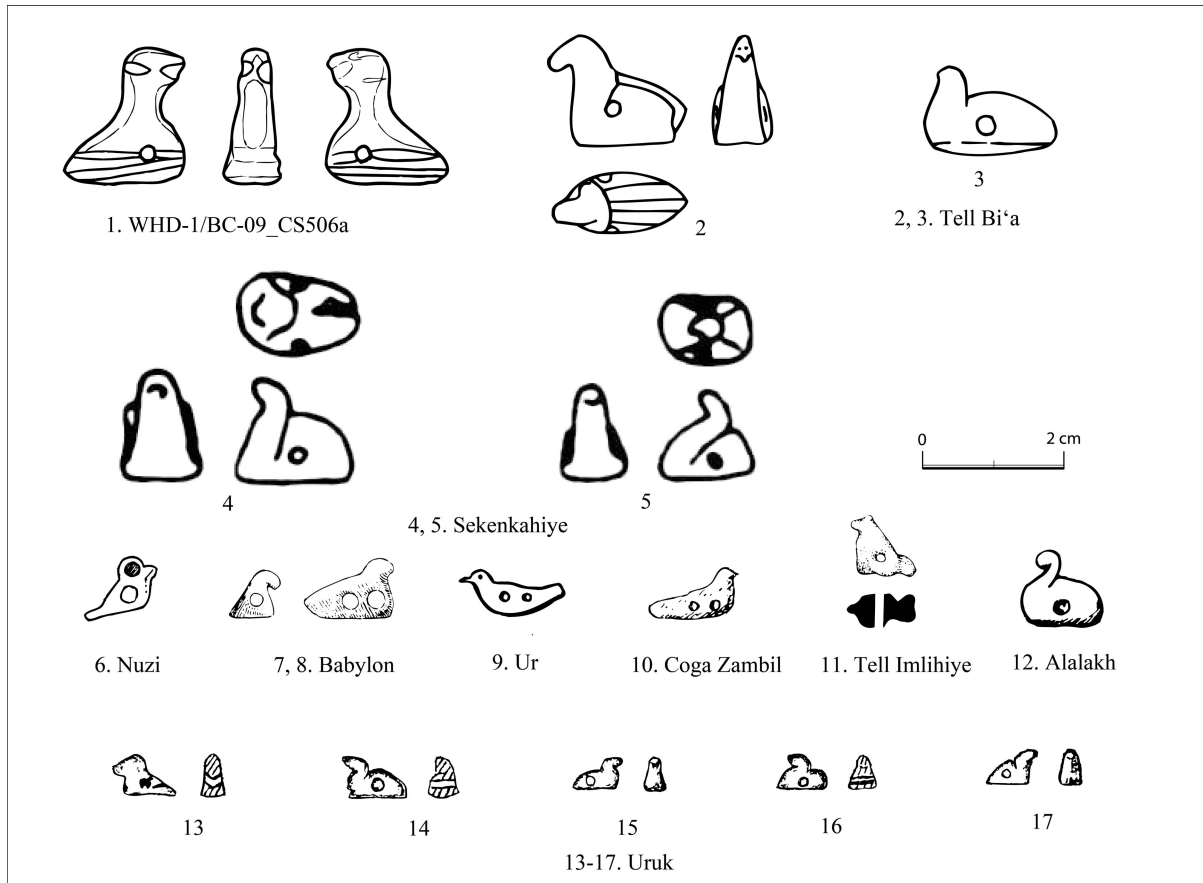


Fig. 7: Bird-shaped amulets [redrawn from Adachi and Fujii 2010a: Fig. 8]. 1, Wadi Hedaja 1, BC-09; 2 and 3, Bia, Strommenger and Kohlmeyer 1998, Taf. 41, 145; 4 and 5, van Loon and Meijer 2001: Fig. 4A.8A: 24; 6, Nuzi, Starr 1937, Pl. 120.ss; 7 and 8, Babylon, Reuther 1968, Taf. 48; 9, Ur, Woolley 1965, Pl. 36.U7507; 10, Coga Zambil, Limper 1988: Abb. 26; 11, Tell Imlihiye, Boehmer and Dammer 1985, Taf. 24; 12, Alalakh, Limper 1988, Abb. 26; 13 through 17, Uruk, Limper 1988, p. 122.

the body.

The bird-shaped amulets that are known from the latter half of the second millennium BC are mostly small; the majority of examples are approximately smaller than those from BC-09, Tell Bi'a and Selenkahiye. We therefore suggest that, from a morphological perspective, examples of these artifacts with two body perforations appeared during the latter half of the second millennium BC.

It is clear that further miniaturization of these artifacts also occurred during the first millennium BC (Fig. 7: 13–17), evidenced, for example, by a typical set of five amulets from Uruk. These specimens have been dated to the Neo-Babylonian period, range between 0.7 cm to 0.9 cm in length, have no wing or tail expressions on their bodies, and have heads that face diagonally upward.

(5) Dating the BC-09 Bird-shaped Amulet from Wadi Hedaja 1

Four bird-shaped amulets have so far been unearthed from Tell Bi'a and Selenkahiye (Fig. 7: 2–5). The graveyard in Bi'a is divided into seven groups (Grabgruppe 1–7), including groups 1–6 which have been dated to the Early Bronze Age III-IVa, and group 7 which has been dated to the Early Bronze Age IVb. As one amulet has so far been collected from group 4 (Fig. 7: 2), we can assume that this artifact can be dated to the Early Bronze Age IVa (latter half of the third millennium BC), while another amulet was found on the surface of graveyard U (Friedhof U) at Tell Bi'a (Fig. 7: 3). As groups 1–7 occur within graveyard U, this amulet can probably be dated to the Early Bronze

Age III-IV [Strommenger and Kohlmeyer 1998: 110]; although this specimen is a little smaller than its counterpart from BC-09 and has a simplified head, the two amulets from Tell Bi'a are approximately similar in size to the specimen from BC-09 and are similar in terms of hole balance and perforation position.

The series of tombs at Selenkahiye can be divided into early and late graves; the known bird-shaped amulets were derived from tomb J, one of the late examples [van Loon and Meijer 2001: 4A190]. The series of late graves at Selenkahiye have been dated to between 2250 calBC and 2000 calBC [van Loon and Meijer 2001: 5A.226].

The available evidence therefore suggests that the four bird-shaped amulets so far collected from Tell Bi'a and Selenkahiye can be dated to the Early Bronze Age III-IV, inconsistent with Limper's [1988] suggestion that these artifacts were broadly distributed across Syria and Mesopotamia during the latter half of the second millennium BC. It is noteworthy that the four amulets collected from Tell Bi'a and Selenkahiye are about the same size as the example from BC-09, and that these five amulets are much larger than those Limper [1988] reported from Syria and Mesopotamia. It is therefore plausible to suggest that the large bird-shaped amulets discussed in this paper with lengths greater than 1.5 cm are older than their counterparts collected from the latter half of the second millennium BC.

(6) Discussion

There are two main outcomes of this study: 1) The perforated toggle pin with the disc-shaped head can be dated to between ca. 3000 BC and 1800 BC, and; 2) The large bird-shaped amulets greater than 1.5 cm in length are older than the objects collected by Limper [1988]. It is clear, in particular, that the BC-09 amulet is distinct from the objects collected by Limper [1988] and that it belongs to within the group of larger objects known from sites of this age. We therefore propose that the bird-shaped amulet from BC-09 can be dated to the same period as examples from Tell Bi'a, specifically to the latter half of the third millennium BC or later.

We now consider the dating of Phase 2 within the techno-typological sequence at Wadi Hedaja 1 in light of this new hypothesis. The C14 dates that have been generated for the cairns from Phase 1 [Nakamura 2010] suggest dates between approximately 1950 calBC and 1600 calBC. We therefore suggest that Phase 2 can also be dated to the early half of the second millennium BC, and therefore assume that the bird-shaped amulet from BC-09 can be dated to around the same time.

In the next section and below, we examine the dating of a short necked jar collected from BC-09 at Wadi Hedaja 2 to confirm the date range of the techno-typological sequence at Wadi Hedaja 1 and 2.

3. Wadi Hedaja 2

(1) A Small Jar with a Straight Neck from BC-09

We utilize a collection of small jars with straight necks from reported Bronze Age sites in this section to develop a chronological definition of this small jar group. Although our survey of the Bishri cairn fields has so far yielded just a handful of pottery examples, a number of almost complete jars have nevertheless been unearthed from BC-09 at Wadi Hedaja 2 as well as at BC-14 at Wadi Hedaja 1 [Fujii and Adachi 2010: fig. 7-1, 2]. Because the small jar with a straight neck from BC-09 was carefully produced, has a very thin wall, and is made of fine paste, we suggest that it was imported from another region.

It is noteworthy that BC-09 is located in the middle of Wadi Hedaja 2 (Fig. 8), and that the largest cairn within this site is BC-16, 16.0 m in diameter, and the second largest is BC-15, 6.5 m in diameter. Our focus, BC-09, is the third largest in size, 5.0 m in diameter, and all other cairns in the area range between 2 m and 4 m in diameter. The finds published to date from BC-09 include

pottery as well as a bronze toggle pin [Fuji and Adachi 2010: Fig. 7–12]. We augment this collection with a bronze arrowhead as well as some shell and stone beads from other cairns at the Wadi Hedaja 2 site.

The pottery recovered from the lower layer within the cist at BC-09 is clearly grave goods (Fig. 9). The internal and external surfaces of this piece of pottery are light brown in color, while the paste is fine and comprises a small amount of white and brown grit less than 0.5 mm in diameter; this specimen is 6.6 cm in height, 7.9 cm in rim diameter, and 9.6 cm in body diameter, and has a straight neck and sprayed rim. The body of the piece is slightly carinate, gradually narrowing from the body into a disc-shaped base (Fig. 10: 1).

(2) Similar Examples from Syria

A number of specimens similar to the pottery from BC-09 have also been excavated from the Syrian Middle Bronze Age.

Hammam et-Turkman (Fig. 10: 2)

This site is located in the middle section of the Khabur river, and has yielded an example of similar pottery from the VIIC period. This period has been dated to between 1700 calBC and 1600 calBC [Akkermans and Schwartz 2003: fig. 9.2]; the form of this similar pottery piece corresponds almost exactly with the example from BC-09 [van Loon 1988: Pl. 127–59] and has been described as a goblet [van Loon 1988: 409].

Tell Bi'a/ Tuttul (Fig. 10: 3–8)

This site is located at the confluence between the Euphrates and Balikh rivers, and has yielded a number of early and Middle Bronze Age palaces and tombs. Similar examples to those discussed above have been classified into pottery groups (i.e., Gräber Gruppe 8–11) and dated to the early half of the second millennium BC [Strommenger and Kohlmeyer 1998: 121–122]. Indeed, on the basis of a pottery analysis carried out at Tell Bi'a by Einwag [1988, 2002] Ceramic Complex 7

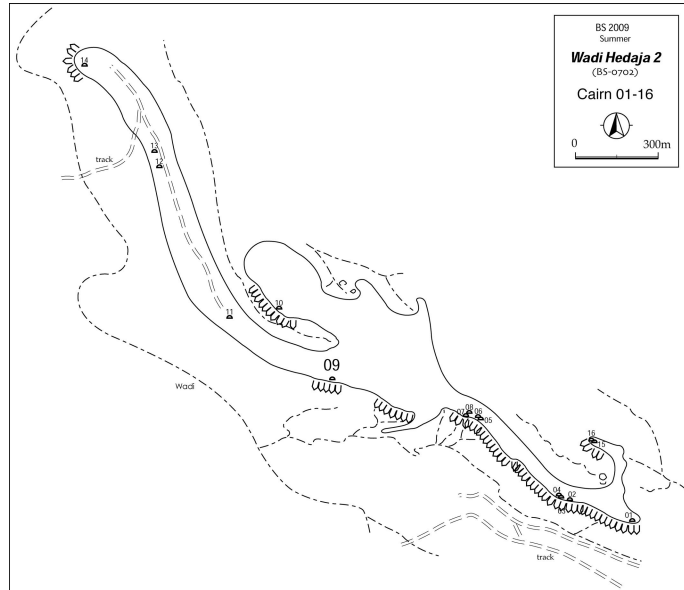


Fig. 8: Site map of Wadi Hedaja 2 (Adachi 2013: Fig. 4).

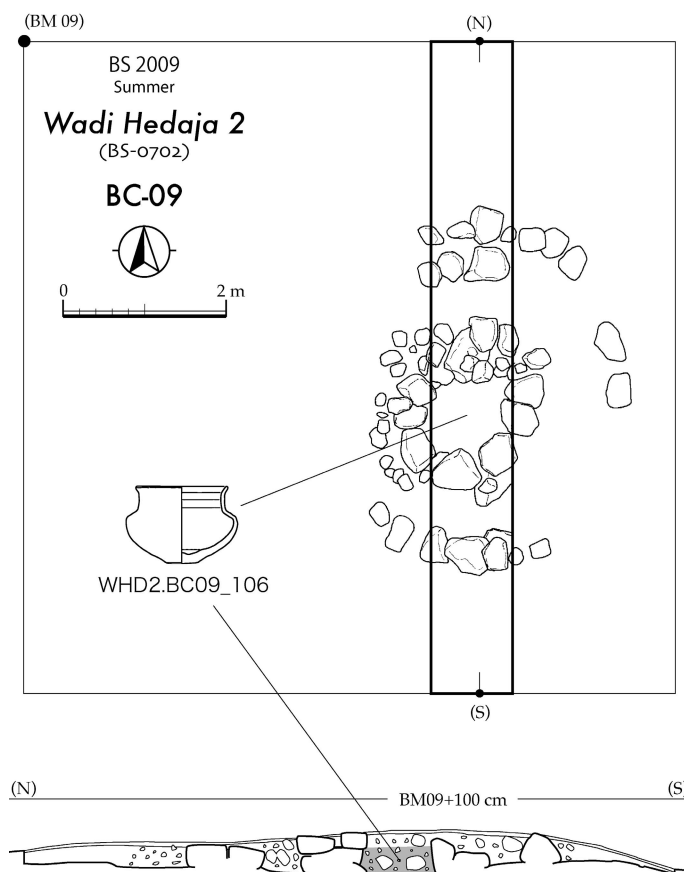


Fig. 9: Excavated positions of the small jar with a straight neck from BC-09, Wadi Hedaja 2 (Adachi 2013: Fig. 5).

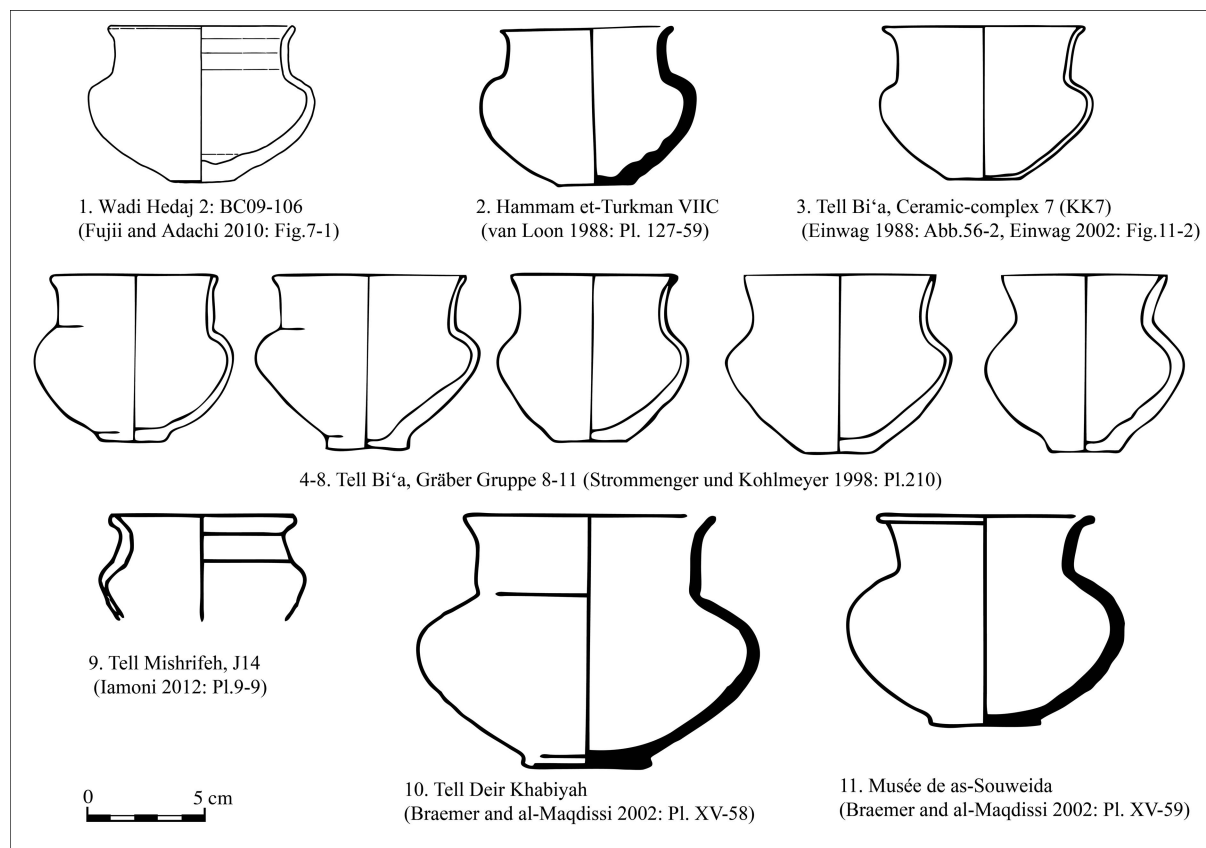


Fig. 10: Small jars with a straight neck during the Middle Bronze Age in Syria [redrawn from Adachi 2013: Fig. 6].

includes a number of similar examples to those excavated from BC-09 [Einwag 1988, 2002: abb. 56–2, fig. 1–2]. As Einwag [2002: 146] defined Ceramic Complex 7 as a link between Jahdun-Lim and Zimri-Lim at Mari, this complex can therefore be dated to ca. 1800 calBC.

Tell Mishrifeh/Qatna (Fig. 10: 9)

This site is located near the Orontes river in western Syria, has yielded a similar example to that known from Phase 14 (J14) within the central Operation J [Iamoni 2012: pl. 9–9], and can therefore be dated to the end of the Middle Bronze Age IIA [Iamoni 2012: 169], the 18th century BC. Although the example from this site has a slightly thicker wall and is smaller in size than the pottery from BC-09, it does correspond in form to with the locality under discussion. This example has been described as a biconical cup with a flared rim [Iamoni 2012: Table IV-1].

Tell Deir Khabiyah (Fig. 10: 10)

A similar example of pottery from a Middle Bronze Age II layer was collected from this site, 20 km to the southwest of Damascus. This example is a little larger than the pottery from BC-09 and has a distinct disc-shaped base; this example was described as a bols à profil en S [Braemer and al-Maqdissi 2002: Pl. XV-58].

An Example in As-Suwayda National Museum (Fig. 10: 11)

The As-Suwayda Governorate controls the southernmost region of Syria. Although the As-Suwayda National Museum houses another similar example of pottery, this specimen has a round body and so does not correspond precisely with the artifact from BC-09. This As-Suwayda example was collected from the Middle Bronze Age of Syria and was also described as a bols à profil en S [Braemer and al-Maqdissi 2002: Pl. XV-59].

(3) Conclusions

A number of similar examples to the BC-09 pottery specimen that correspond almost exactly in form have also been collected from the sites of Tell Bi'a and Hammam et-Turkman in Syria. These sites, however, do not correspond in age as they have been dated to approximately 1800 calBC and to between 1700 calBC and 1600 calBC, respectively. Nevertheless, although incompletely shaped, the Tell Mishrifeh example does closely resemble the specimen from BC-09, even though it has been dated to the 18th century BC. It is important that the Tell Mishrifeh pottery bridges the gap between the Tell Bi'a and Hammam et-Turkman specimens; on this basis, it is possible to conclude that the small jar group encompasses an age range between 1800 calBC and 1600 calBC.

4. Dating the Bishri cairn chronology

Our analysis of the toggle pin and bird-shaped amulet from Wadi Hedaja 1 does not lead to an exact date for Phase 2, but the small jar with a straight Neck from Wadi Hedaja 2 has enabled us to date Phase 2. Available evidence shows that Phase 2 within the Bishri Cairn Chronology can be dated to between 1800 calBC and 1600 calBC, as similar pottery examples to BC-09 have been

	W.Syria	Ebla	Hama	Mishrifeh	Middle Eupharates	Tell Ali al-Hajj	Bishri	Tell Bi'a	Mari	Hammam et-Turkman	Jazirah
2500BC	EB IIIb							Schicht 15-21 KK1	Tombeau 300 Ishtar Palace c Ishtar Palace b		Early Jazirah IIIb
			K		Ph.4	Abu Hamad		Gräber Gruppe 1 Schicht 11-14 Gräber Gruppe 2	Ishtar Palace a		
	EB IVa	IIB 1		G11-13	Ph.5			Gräber Gruppe 3 Schicht 5-10 KK2			Early Jazirah IVa
						XI		Gräber Gruppe 4 Gräber Gruppe 5 Gräber Gruppe 6	Tombe 1082	VI	Early Jazirah IVb
	EB IVb (EB-MB)	IIB 2	J 6-8		Ph.6	X		Gräber Gruppe 7	Shakkanaku level, Place P-O		Early Jazirah V
2000BC			J 1-5			IX					
	MB IA	IIIA1	H 5	G10				Younger Palace early KK4-7	Shakkanaku period (Plais Royal)		Old Jazirah I
	MB IB	IIIA2	H 4 H 3			VIII VII a-d	Phase 1	(Gräber Gruppe 8-11) Younger Palace late KK7	Yahdun-lim	VIIA	Old Jazirah II
	MB IIA	IIIB1	H 2 H 1	T16-15; J16-14		VI	Phase 2		Zimrilim	VII B	
	MB IIB	IIIB2		T Eastern Palace; J13-11		Vb Va	Phase 3		Hana period (Grand Plais Royal amorrite)	VII C	Old Jazirah III
1500BC	MB III		G 2	J10-T12;			Phase 4				
	LB I			T10-9; K14 K13							

Fig. 11: Chronology of the Early and Middle Bronze Age, Syria [redrawn from Fujii and Adachi 2010: Fig. 13] [Akkermans and Schwartz 2003; Cooper 2006; Einwag 1998; Hempelmann 2002; Iamoni 2012: 169; Pons 2001; Lebeau 2000; Falb *et al.* 2005; Riis and Buhl 2007; Weiss 1990].

unearthed from sequences of the same age in Syria. Indeed, C-14 dates generated from Phase 1 encompass the period between 1950 calBC and 1600 calBC [Nakamura 2010: 127–128]; thus, as the pottery from BC-09 cannot be dated definitively to before 1800 calBC, we must consider that Phase 1 approximately encompasses the period between 1950 calBC and 1800 calBC, and therefore that Phase 1 and Phase 2 must have lasted between 150 years and 200 years. No evidence is presently available that can be used to elucidate the durations of Phase 3 and Phase 4; however, if the duration of Phase 1 and Phase 2 are applied to these latter phases, it is possible that the end of Phase 4 must have been during the latter half of the second millennium BC.

However, we conclude by suggesting that Phase 4 had ended by 1500 calBC (Fig. 11) in this region discussed in this report, because most of the known cairns from this phase as well as Phase 3 are much smaller than those from Phase 1 and Phase 2, and because no additional artifacts have been unearthed from the latter two periods [Fujii and Adachi 2010]. We also suggest that Bishri burial customs declined rapidly over the course of Phase 3 and Phase 4.

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